

FESTO

Automation Technology



Pneumatic and electrical components

The Festo product range – always available online or offline

Find your perfect solution quickly –

in our Online Shop → www.festo.com or in the digital product catalogue on DVD



Our Online Shop offers you advantages around the clock
→ www.festo.com

- The online advantage: always up to date, more engineering tools, the spare parts catalogue and our Support Portal
- Select products with ease and confidence
- Price and delivery time always up to date
- Quick ordering – instant confirmation
- Optimum planning reliability – you have an overview of all delivery dates and orders. Includes order tracking and delivery status display, even for orders not made via the Online Shop
- Fast data exchange – share baskets with colleagues/customers/suppliers with access to the Online Shop
- Error-free procurement – give your purchaser parts lists as a CSV file
- Easy editing – conveniently download order confirmations, delivery notes and invoices
- Easy reordering – reorder previous orders with just a few clicks
- Greater organisation and transparency – create stock labels using our free Label Designer. Includes a product picture and further details such as optimum ordering quantity for stock goods

You can find details about our Online Shop here → www.festo.com/ols

Or select products offline quickly and with confidence – using the Festo product catalogue on DVD

System requirements

Minimum configuration

- Intel Pentium IV, 2.4 GHz+ or AMD 2400 xp+
- 1 GB RAM
- DVD-ROM drive
- Screen resolution set to 1024 x 768 pixels
- Operating system: Microsoft Windows 7
- Browser: Microsoft Internet Explorer 11

Recommended configuration

- PC, no more than 4 years old
- Laptop, no more than 2 years old
- Dual-core CPU with 2 GHz
- 2 GB RAM
- DVD-ROM drive
- Screen resolution set to 1280 x 1024 pixels
- Operating system: Microsoft Windows 7/8/10 (32 or 64 bit) incl. all Windows updates
- Browser: Microsoft Internet Explorer 11

Installation instructions

1. Insert the DVD-ROM into the drive.
If the setup program starts automatically, continue with Step 5.
If not:
2. Select the **Run** command from the Start menu.
3. Enter the drive letter of your DVD-ROM drive followed by **setup.exe**.
For example: **d:\setup.exe**
4. Then click on **OK** or **Enter**.
5. Follow the instructions.

For further information (installation in a network, FAQs), please read **Info_en.pdf** on the CD or write to us: dkl@festo.com

Exclusion of liability

Festo provides this software to support you in the selection and ordering of Festo products. The data/results generated using the software are exclusively intended as a non-binding product description and do not constitute warranted properties. Festo accepts no liability for damages caused through the use of this software, in particular in relation to consequential damage, whether material damage or financial loss, directly related to the use of this DVD-ROM, unless the result of gross negligence or intent. Excluded from this is damage to health, body or life, as well as in case of violation of essential obligations, which are paramount for achieving the contract purpose, whereby the liability in the latter case is limited to the amount of the typically foreseeable damage.

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Colour key

- Grey text on the product pages:
You will find these products online;
see description → 17
- Blue type code on the product pages:
Type code for Internet searches

★ Products for easy selection,
quick ordering and delivery

Example

ADN-...-EL

online: → [adn](#)

→ www.festo.com/catalogue/adn

★ 174376 FNC-32

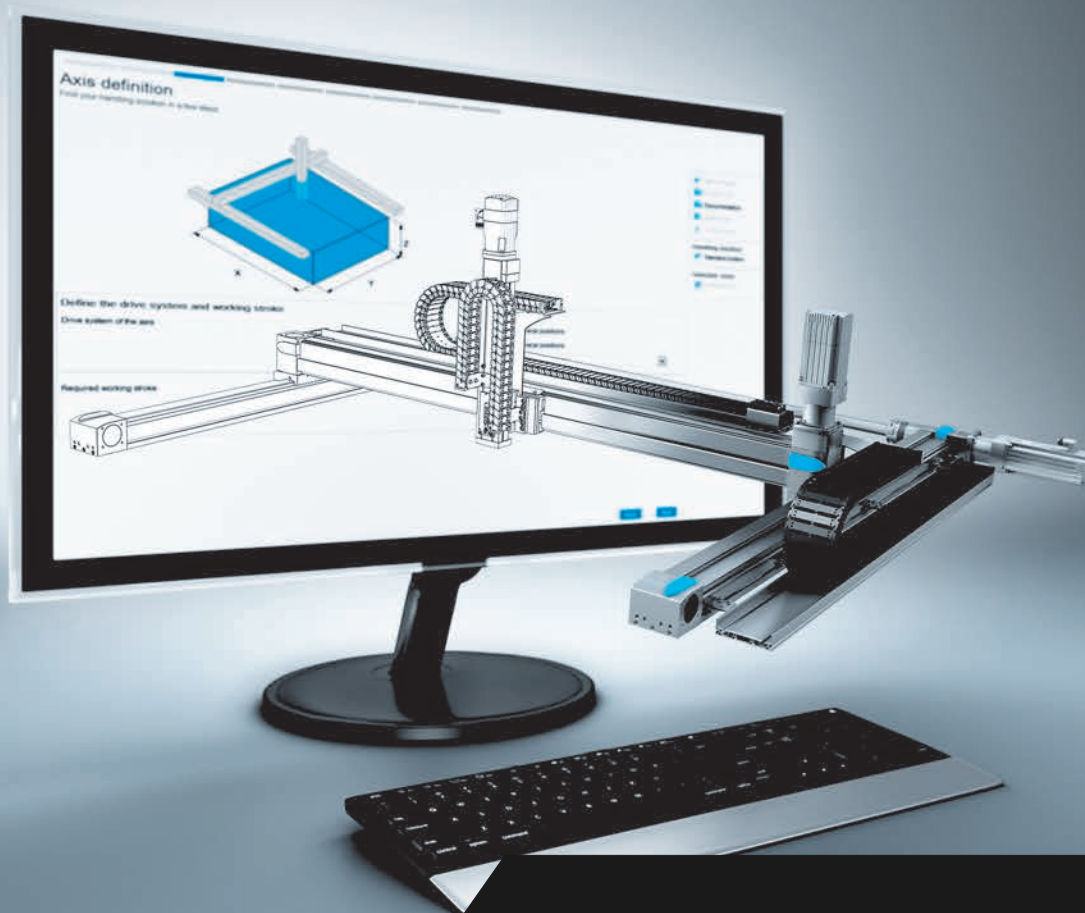
FESTO

Automation Technology



Pneumatic and electrical components

Editorial

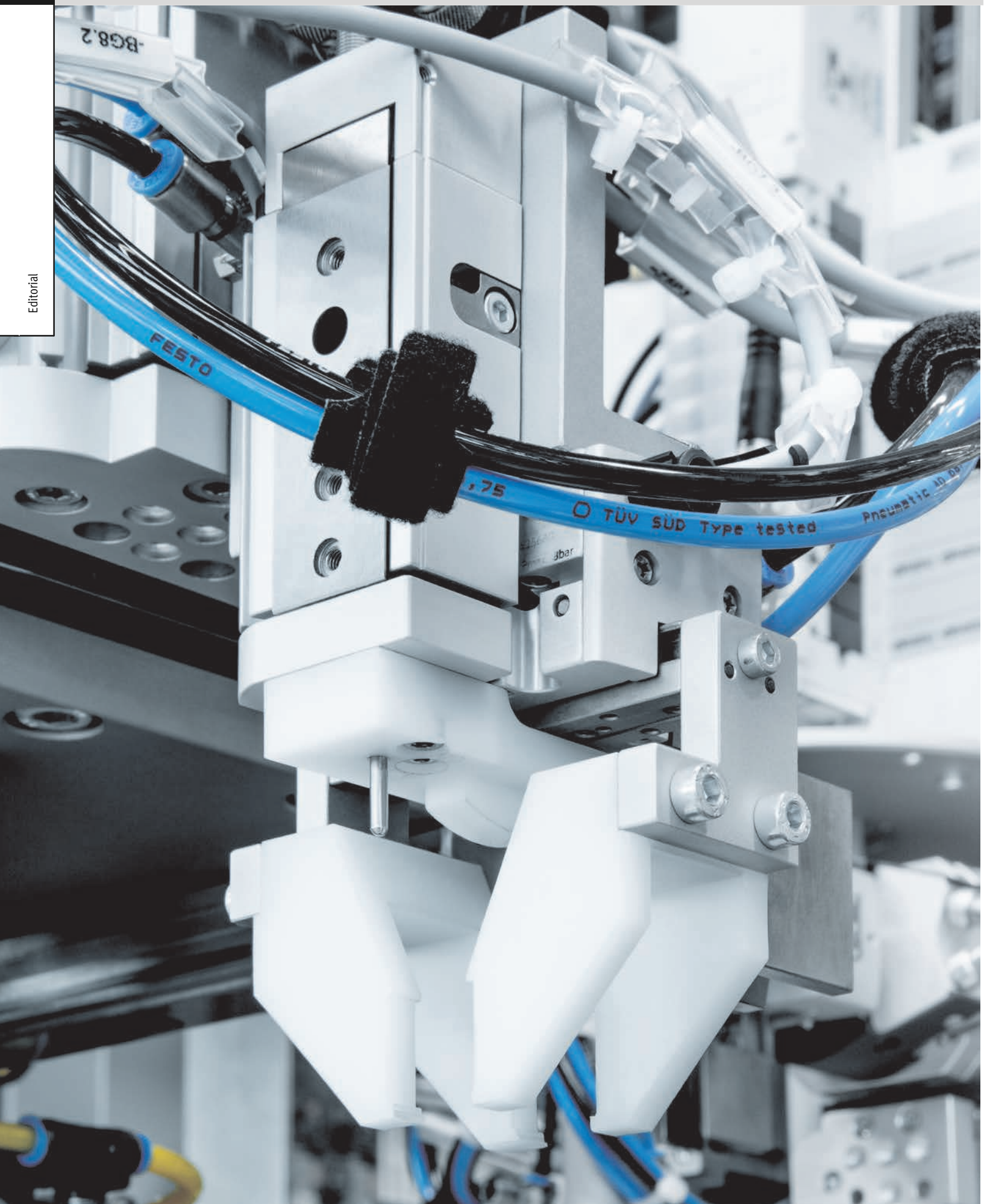




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Preface





Dr Ansgar Kriwet,
Member of the Management Board, Sales, Festo AG

Dear customers,

Are you ready to join us on the digital journey along the entire machine and system cycle? We will show you digital solutions that will make you even more productive.

We will assist you from the first learning experience in Industry 4.0, because the digital transformation affects all manufacturing companies in equal measure. We must learn together and find intelligent basic and further training concepts. We will guide you on the path of digital transformation with personal expertise and digital learning and training tools.

Our goal is to make you more productive. To do this, we would like to show the way and support you in the future, from planning and design to commissioning and system operation, with products from Festo – with a consistent look and feel and an integrated database.

Intuitively finding the right automation solution, sizing it and commissioning it immediately with the right tools: Festo Cloud services enable efficient engineering throughout the entire system cycle, always with data adapted to your configuration. For example, circuit diagram macros appropriate to the configuration can be generated and integrated directly into the system diagrams using the Festo circuit diagram service.

The goal of automation has always been to achieve the greatest possible standardisation in the production process. Digitised solutions reinforce this approach and add a key aspect to standardisation: maximum flexibility. The Festo Motion Terminal, for example, makes batch sizes of 1 or larger possible, without time lost due to increased production. It ensures extremely stable processes, since incorrect adjustment of settings is no longer possible, for example.

Smartenance, the digital maintenance manager for production managers and system operators, finally makes maintenance management paperless. Smartenance provides you with a clear schedule and evaluation for your system maintenance and offers a fast and easy transition to digital maintenance – for all system manufacturers.

However, we are also continuously further developing the classic components in our core product range. This range of over 2000 products is available for fast and reliable delivery, even in large quantities. Take for example the slide unit DGST, the most compact on the market. Or the new service units MS2 – so compact in size, light in weight and high in flow rate that they can also be used on robot arms.

We have one goal: our solutions have to make your processes even faster, more efficient and more flexible. Both now and in the future. We are the engineers of productivity.

I hope you enjoy browsing through our new catalogue – and that you find lots of clever solutions to make your company fit for the future.

Best regards,

Dr Ansgar Kriwet

Partner for maximum productivity

You want to make your applications more productive.
You are looking for efficient solutions.
We are entering the digital future with you.

→ **WE ARE THE ENGINEERS
OF PRODUCTIVITY.**

Festo: a partner in dialogue, a partner for maximum productivity.

Best products. Best solutions. Best services. That is our claim. In this context, there is much more you can expect from us to permanently increase your productivity.





Build with engineering excellence.

Use our ingredients for quick and easy engineering: extremely simple and suitable product selection, smart engineering and simulation processes, also with a digital twin, and a unique Product Key for complete product information. And procurement? It couldn't be easier.

Operate your systems smartly.

Connectivity to the cloud ensures reliable processes with greater productivity. Condition monitoring lets you see immediately when a service or repair is due - our MyDashboards will tell you. And with the Smartenance digital maintenance manager you have the servicing of all systems under control - even third-party systems.

Prepare to be inspired.

What does the automation of tomorrow look like? What are the trends? And what will make my production highly flexible, while also offering standardisation? You can find the answers right now with our Festo Motion Terminal VTEM, the first app-controlled pneumatic component. Future Concepts and our bionic studies show you how the world of tomorrow might look.

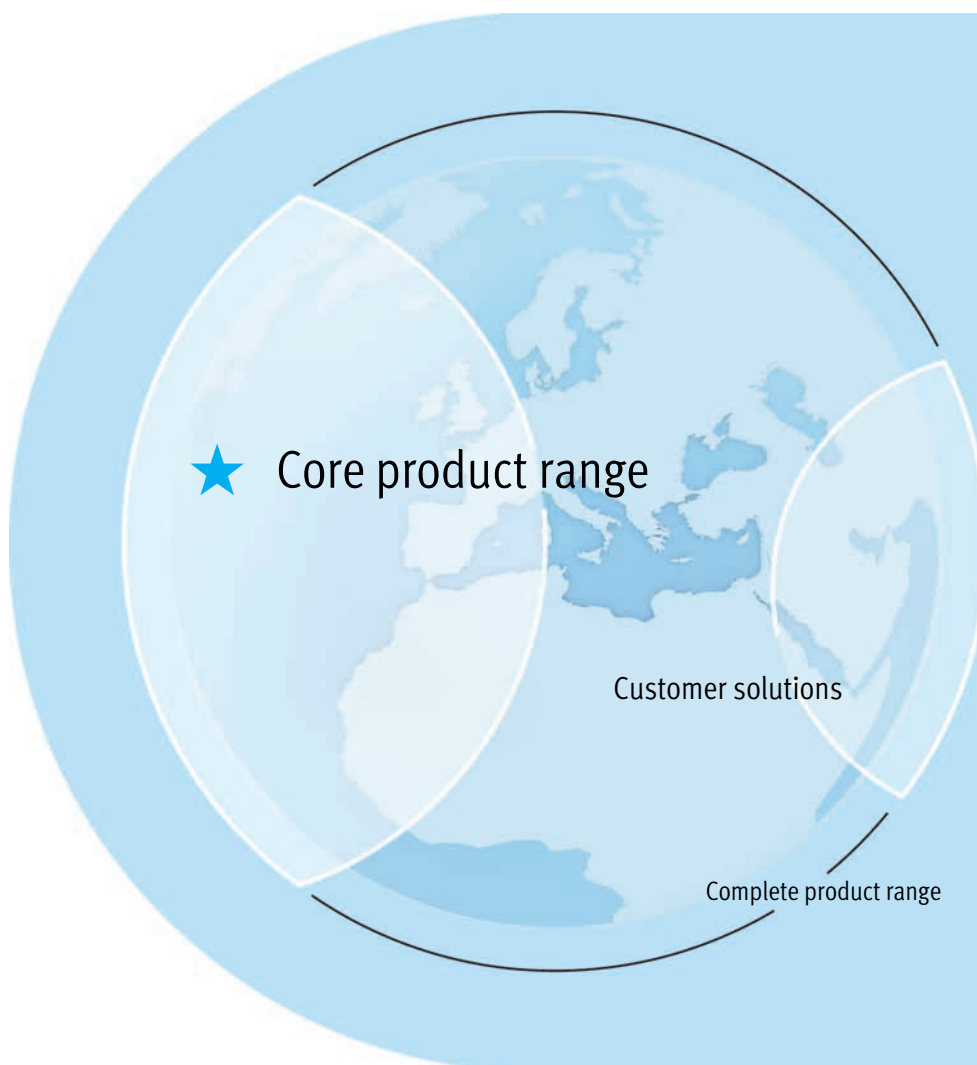
Never stop learning.

The market and global competition are accelerating steadily - and require constant learning if you want to maintain your competitive edge. You and your employees will benefit from the offer of Festo Didactic. Knowledge that pays off.

Innovations for simpler automation

You rely on factory automation.
You rely on process automation.
We are technology and training.

→ **WE ARE THE ENGINEERS
OF PRODUCTIVITY.**



Product range

The rapid changes of our time are challenging and we have to continually adapt processes, functional concepts and solutions. Mastering this challenge technically and economically will become a core competency in the coming years. Only then can we keep up with general developments. Many tasks can be solved with simple means, some only with special approaches: our range is designed to support with all aspects.

1

Core product range

Our core product range offers you special advantages – selected products for 80% of automation applications. They can be ordered using a part number and are especially attractively priced.



- **Generally ready for dispatch from the Festo factory in 24 hours**
- In stock worldwide in 13 service centres
- Over 2200 products

Look for the star!

2

Complete product range

You will find solutions for more specific requirements in our complete product range, which we will deliver on the indicated date. This part of the range is not separately identified.

3

Customer solutions

If you cannot find the right products for your task in our range, our specialists in the "customer solutions" area are at your disposal.

Your partner for all automation questions.

Contact us → www.festo.com

Digitalisation – megatrend for productivity

The virtual and real worlds are continuing to converge – and leading to Industry 4.0. Increasing digitalisation is one of the basic prerequisites for this process. Festo is driving this process forward in the field of automation – and we invite our customers to undertake this journey together with us.



The future: smart products – smart offering

Digital products can do more and more – and are masters at integrating additional functions. Smart products optimise themselves, adapt to external influences and identify themselves. The digital twin is accessed via the Product Key. These are the prerequisites for highly flexibly and extremely fast and adaptive production.

This also includes a tailored digital offering in the form of software, apps and firmware along our customer journey. Festo is making every effort in this area. Engineering tools such as FluidDraw or EPLAN Schematic Solutions ensure seamless, error-free documentation. Condition monitoring of components or solutions takes place via dashboards that output all relevant parameters – including on the go. This makes it possible to reconcile maximum system availability and optimum maintenance planning. Huge savings potential can be realised with Smartenance, our digital maintenance manager with reminder functions and proof for audits, including for non-Festo products.

Your entry into the digital world? CPX/MPA as an example

The advantages of digitalisation are clearly demonstrated by a valve terminal MPA ordered and configured in the Online Shop and the CPX automation platform with decentralised intelligence. It features numerous approaches from integrated industries. It is documented electromechanically and pneumatically in no time at all with Schematic Solutions and FluidDraw from the App World, so that a digital twin is immediately available. In addition, the Product Key as a data matrix code on the product ensures that important information is easy to retrieve during commissioning and maintenance.

An additional, configurable OPC UA interface connects the CPX/MPA to the IoT gateway that transfers the data to the Festo Cloud. Festo MyDashboards visualise this data, for example for condition monitoring. Smartenance is used for maintenance planning, including for the entire system or production line.

Only this combination of classic hardware and software-controlled elements boost the automation productivity and flexibility. We are happy to share this expertise with our customers.

You can find out more about digitalisation under the Festo Motion Terminal in Chapter 10 from page 1156.



Automation x3

Editorial





Factory automation

... for maximum productivity

In everyday factory operations, typical tasks such as gripping, moving and positioning part components, modules or complete products are carried out by Festo automation technology.

Fully integrated competitive edge

Our components and systems are used in production and assembly in a wide range of industry sectors, including the automotive, packaging and electronics industries.

The corresponding service and appropriate training make us the No. 1 partner for our customers across their entire value chain.



Process automation

... for safety during operation

Regulating and controlling fluids, gases and solids are typical process automation tasks. The main fields of application are in water and wastewater technology, the pharmaceutical sector, the chemical industry and food and beverage production. However, our solutions are also used in many factories, for example in cooling circuits and ventilation systems.

Tailored industry solutions

Together with and for our customers, we develop tailored automation solutions for controlling and regulating fluids, gases and solids. We provide support in all project phases from development through to commissioning.



Electric automation

... seamless connectivity in factory and process automation

One automation platform for factory and process automation

Our CODESYS controllers, primarily the modular control system CPX-E and the control platform CPX with protection to IP65 create unique advantages and set new standards in factory and process automation.

This includes a cost-effective overall concept, technical synergies and the advantages of decentralised installation as well as connecting to Industry 4.0, the IoT and the Festo Cloud thanks to OPC UA.

A comprehensive platform for electric automation

Automation in core and secondary machine processes: from electromechanics and rotary modules, servo motors and servo drives, complete positioning systems and motion control solutions to complete handling systems and decentralised control solutions as well as the Multi-Carrier System – and always with the appropriate Festo Automation Suite sizing and engineering software.

Includes intelligent connectivity with various communication tools as well as the direct and complete integration of our servo drives in higher-level control concepts from globally controller manufacturers.

Easy selection

Quick order placement for selected basic designs

We make it easy for you!

We have compiled a globally standardised core product range that not only offers you faster and easier selection, but also fast delivery.

It has been selected by Festo experts based on actual customer requirements and covers the main applications of automation technology, while offering the best possible value for money.

Products with the star: easy selection and fast delivery

You can recognise these outstanding products at a glance: they are marked in the catalogues with a ★ star.

Quick and easy to order

Preconfigured to ensure the best possible value for money, these products can be ordered quickly and easily either via the order code, which is based on the features, or the unique part number.

High level of availability

In stock and generally ready for immediate dispatch: these products are available in no time at all.¹⁾

More variety or individually configured? No problem!

If your requirements go beyond the main applications of automation technology or if you need individually configurable products such as valve terminals, you can choose from the full spectrum of Festo's automation portfolio with all of its technological diversity.

– Each product in this catalogue is presented as part of a product range overview, e.g. the ISO valve terminal VTSA → page 1141

– Make your selection using the configurator in our digital product catalogue – offline on the DVD or online at

→ www.festo.com/catalogue/..., enter the type code, e.g. **vtsa**

– You can also place the order from the configurator.

Further information on how to quickly find the optimal solution

→ page 17, 19 and 20.

1) Special features are explicitly stated.



You can benefit from these advantages whenever you need core pneumatic and electrical functions. Wherever you see this symbol in our printed or electronic catalogue, it identifies a selected product which is perfect for the main applications of automation technology. The stars will help you to find what you are looking for more quickly and place orders more easily. These star products are generally in stock and ready for immediate delivery.

At a glance:

- + Fast: generally ready for dispatch in 24 hours
- + Superb: Festo quality at an attractive price
- + Easy: just a few clicks to place an order online

Quick order placement for selected basic designs

You will find the order code for each product on the product pages.

The appropriate accessories for each product are presented in tabular format at the end of each product description.

It couldn't be easier:

to get the correct order code, complete the fields in the first row from the left to the right. Follow the connecting line from each field to the column with the associated sizes and variants and make your selection.

There are three types of fields:

- + Mandatory data with predefined content **1**:
in the example on the right, the basic design AEN is specified.
- + Mandatory data (empty field) **2**:
enter your required stroke length here.
- + Optional data (line only) **3**:
if nothing is entered here, the basic variant will be supplied
(in this example this means a standard piston rod).

When making your selection, note the conditions associated with the variants **4**, which are shown as footnotes.

Example of an order code:

1 AEN		2		P		A		3	
Type	Single-acting compact cylinder, pushing								
Piston Ø [mm]	Stroke [mm]								
12	1 ... 10								
16, 20, 25, 32, 40, 50, 63, 80, 100	1 ... 25								
Piston rod thread									
A	Male thread								
I	Female thread								
Cushioning									
P	Elastic cushioning rings/plates at both ends								
Position sensing									
A	Via proximity sensor								
Protection against rotation									
Q	Square piston rod 4								
Temperature resistance									
S6	Heat-resistant seals up to max. 120 °C								
1 Not with piston Ø 12 4									

Contact

On pages 1759 to 1760 you will find the service network with details of our contacts.

Prefer online?

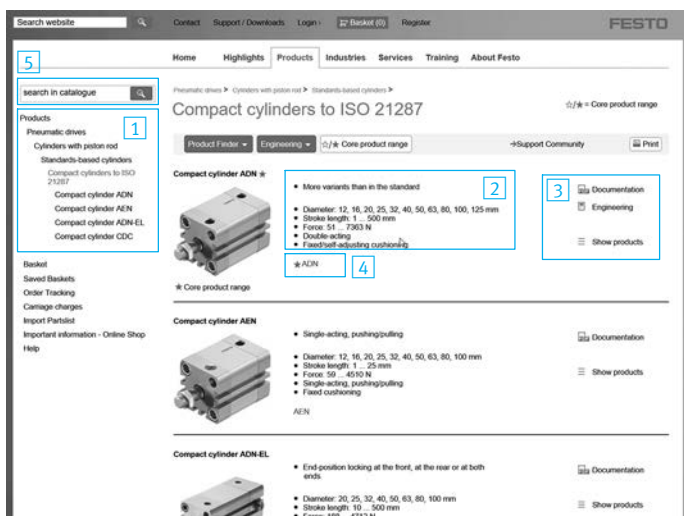
→ www.festo.com

We look forward to hearing from you.

Online or offline – get the ideal solution fast

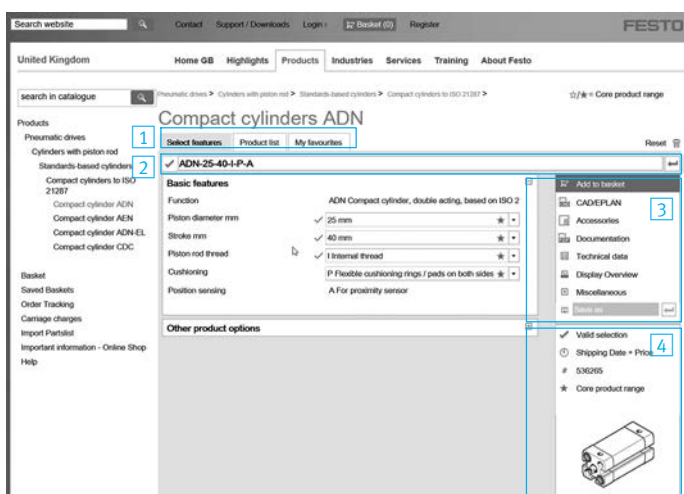
Online: Enter → www.festo.com in your web browser, then choose your country.
Click on Go.
On the homepage, select the "Products" menu.

Offline: Insert the DVD and install the product catalogue.
On the start page, click on the "Products" link.

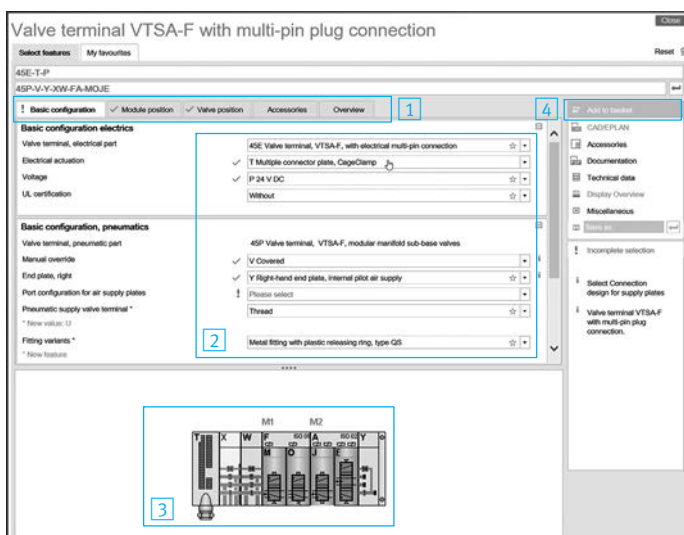
**From the product group to the product**

There are three options available:

1. Click on a product group [1] or product photo. A selection of products will then be displayed along with a list of the technical features [2] and selectable links [3]:
 - "Engineering" starts the selection and calculation software
 - "Documentation" provides detailed information in PDF format
 - "Feature search" lets you further narrow down the product selection
2. Full text search: Enter your search term in the search field [5]. This can be made up of complete or partial keywords, part numbers, type codes or names of favourites. Depending on your input, a selection of products as described in step 1 will be displayed or you will be taken directly to the product you searched for.
3. Quick link: Use the quick link [4] to take you directly to the required product by clicking on an order code.

**Functions in the product configurator**

1. Tab navigation [1]
 - "Select features": Select the appropriate features here
 - "Product list": Lists all products in the product group
2. Input field for order code [2]:
Enter the exact order code here.
3. Other actions [3] which are available following a correct configuration:
 - "Add to basket": Adds your product to the basket, see also the sections "Exporting your basket" and "Managing your basket" → 19.
 - "2D/3D view": Creates a CAD model, see the section "Viewing CAD models"
 - "Accessories": Lists suitable accessories
 - "Data Sheet": Contains all the relevant technical data
 - "Display Overview": Displays an overview of all selected models
4. Details [4]:
Here you will find information such as part number, price, product graphic, product illustration and circuit symbol.

**Selecting product features in the product configurator**

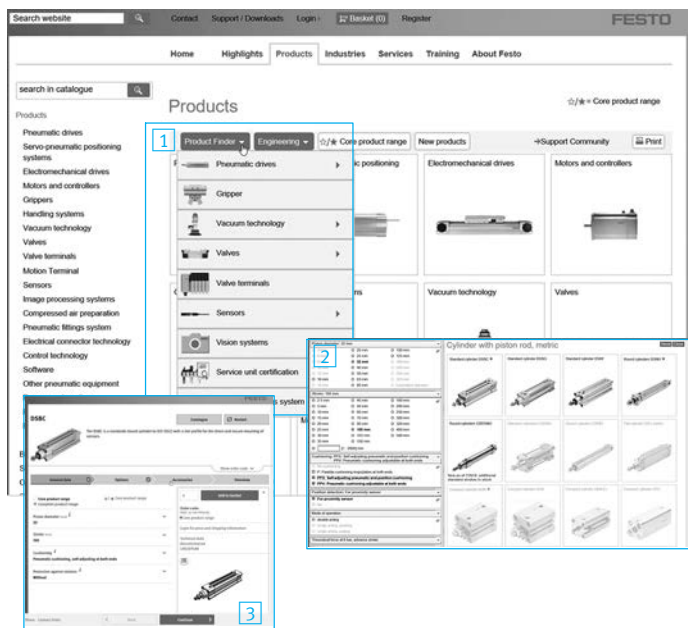
1. Select the product features:
 - Navigate using the tabs [1].
 - Configure your product by selecting the required features [2] on the tabs [1] running from left to right.
 - The tabs [1] give you a quick overview of all the selected features. Missing features are marked with a blue exclamation mark and incorrect features are marked in red. Clicking on the feature takes you directly to it, so that you can then change it.
2. Graphic representation [3]: A dynamic graphic¹⁾ is created based on your current configuration.
3. Add the product to the basket: Once the configuration is complete, you can add products to the basket by clicking on "Add to basket" [4]. A message is displayed to confirm that the product has been added successfully.
To find out how to place an order, see the section "Managing your basket" → 19.

1) Available for the valve terminal and service unit product groups.

Online or offline – get the ideal solution fast

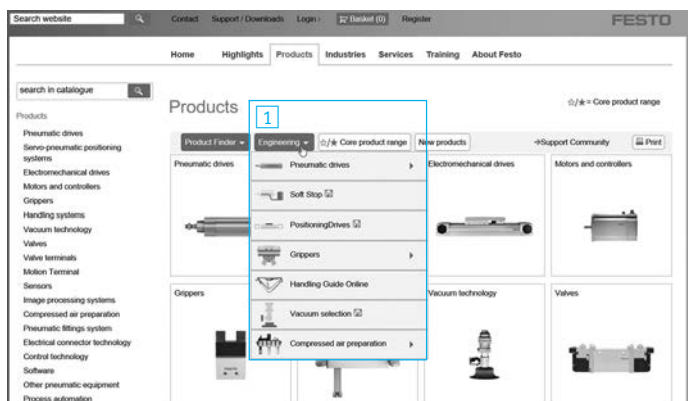
Online: Enter www.festo.com in your web browser, then choose your country. Click on Go. On the homepage, select the "Products" menu.

Offline: Insert the DVD and install the product catalogue. On the start page, click on the "Products" link.



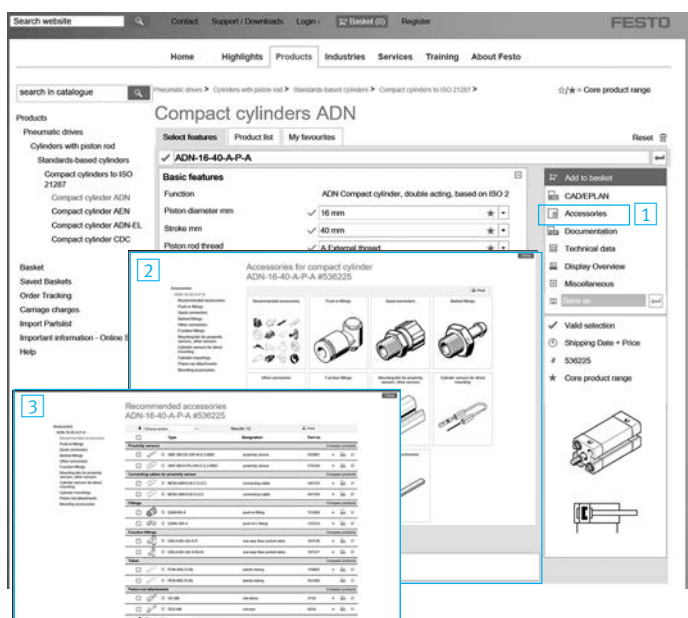
Selecting product features in the product finder

1. Click on the blue icon "Product finder" **1** and select the required product group.
2. Select the required technical features in the selection field **2** on the left-hand side.
3. Then click on a product photo. The configurator **3** opens with the features you selected.



Engineering tools for appropriate products for your applications

1. Click on the blue icon "Engineering" **1** and select the required engineering tool. This tool guides you step-by-step to the application simulation based on the technical features you selected and suggests the appropriate products for your application.



Finding the appropriate accessories quickly

1. Select the required features in the configurator.
2. Click on the "Accessories" icon **1** on the right-hand side.
3. Select the required accessory from the accessories on offer **2**.

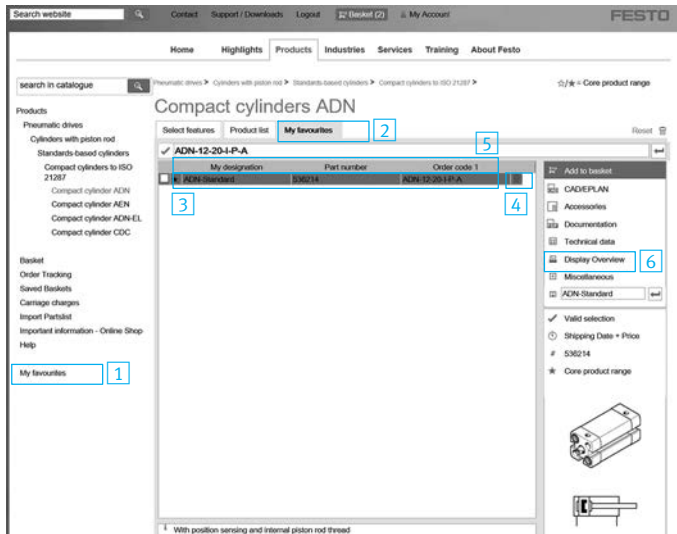
The tool will take you to the appropriate accessory selection list.

TIP: For some cylinder series you can find the appropriate accessories faster by selecting "Recommended accessories" in the accessories on offer **2**. For some cylinder series you will also find "Recommended accessories" **3** after you have added your selection to the basket.

Online or offline – get the ideal solution fast

Online: Please register as a user to use the functions described on this page.

Offline: Registration is not required to use the functions on this page.

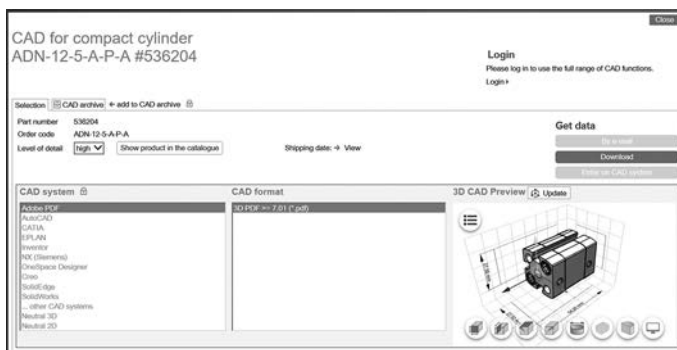


My favourites

You can save as many product configurations as favourites as you want.

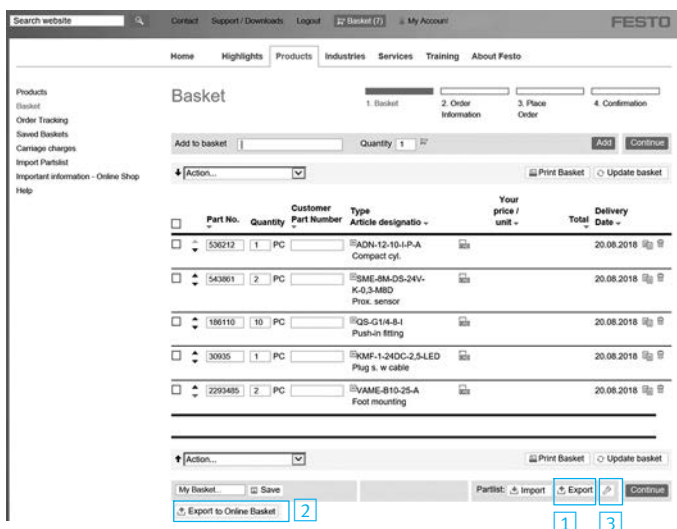
To display the list of all stored favourites (1):

- Click on the "My favourites" tab (2). A table containing your saved favourites is displayed.
- The name of the favourite, part number, type code and a button (4) for deleting the favourite are displayed.
- Double-clicking on a row in the configuration (3) opens the corresponding configuration window.
- You can sort your favourites by clicking on the column headings (5).
- You can select multiple favourites and compare them by clicking on "Product compare" in the field on the right (6).



Viewing CAD models

Clicking on the "2D/3D view" icon opens a window containing a CAD preview of the product. The "Export" function lets you export the files to your CAD system in the right format.



Exporting your basket ...

1. ... as a csv file:
To do this, click on "Export" (1), choose "Save as" in the new window and specify where you want to save it to. This file can then be opened in Excel, for example, and edited.
2. ... in your choice of format: To do this, click on "Settings" (3) and specify which information is to be exported.

Managing your basket

1. Upload the basket directly to the Online Shop and place your order: to upload a basket directly to the Online Shop, simply click on "Export to online basket" (2). An Internet connection is established and the products are transferred to the online basket. After logging in via "Login", your net prices and delivery times are displayed. Now just place your order and you're done!
2. Place an order: To place an order, simply print out your basket and send it to Festo by fax or export it as an e-mail.



The Support Portal

All product information can be accessed centrally → www.festo.com/sp



Festo Online Shop

Round-the-clock benefits

24h online

+ **Continuous availability** – product information, documentation, prices, availability, ordering, etc.



+ **Request quotations** – you can request quotations directly from the basket at the push of a button.



+ **Complete overview of all orders** – order tracking with search function, status display in lists and easy reordering.



+ **Download all documents for a complete basket** – complete documentation for the selected products.



+ **No minimum quantity surcharge** – there will be no additional costs for small orders.



+ **Express delivery** – orders placed before 8:30 p.m. with express delivery selected will be with you by noon the following working day, provided they are in stock.

You will find our Online Shop at ...

→ www.festo.com

> click on the "Basket" link

Search website

Contact Support / Downloads Logout **Basket (3)** My Account

Home Highlights **Products** Industries Services Training About Festo

Basket

1. Basket 2. Order Information 3. Place Order 4. Confirmation

Add to basket [] Quantity 1 [] [Add] [Continue]

↓ Action... [] [Print Basket] [Update basket]

☐	Part No.	Quantity	Customer Part Number	Type Article designation	Your price / unit	Total	Delivery Date
☐	536212	1	PC	ADN-12-10-I-P-A Compact cyl.	€ 208		20.08.2018
☐	543861	2	PC	SME-8M-DS-24V-K-0,3-M8D Prox. sensor	€ 208		20.08.2018
☐	193138	1	PC	GRLA-M5-QS-4-D 1-way contr.val	€ 208		20.08.2018

↑ Action... [] [Print Basket] [Update basket]

My Basket... [] Save [] Partlist: Import Export [] [Continue]

Requested Delivery Date 19.08.2018 Shipping method UPS Saver Service [] Ship complete orders only [] [Check]

Please Note: For items that exceed 30kg or are over 2 metres in length, delivery can take up to 5 working days from despatch date.

Festo Design Tool 3D

Already registered?

Then you can log in directly via → www.festo.com/login or by clicking on "Login".

If you have not yet registered ...

... open the registration form via → www.festo.com and by clicking on "Register".

Further information on the Festo Online Shop can be found here:

→ www.festo.com/ols

In dialogue

Partnership for a better automation solution

Festo – partner for automation

Integrated information ...

... is a prerequisite for successful pneumatic and electric automation.

That's why Festo sees itself as a partner to its customers and maintains a continuous dialogue with them to provide and exchange expert and comprehensive information.

Direct communication

- Worldwide consultation provided by more than 1000 sales engineers and project engineers with up-to-date product and industry knowledge
- Hotlines to answer all your questions
- Experts on components, modules, systems and industries

At events

- Over 120 trade fairs around the world each year
- Expotainer – the exhibition that comes to you
- Technology days – specialised presentations and exhibits about current topics in the field of automation
- Automation lectures – a series of specialised presentations based on actual, real-life applications

In printed form

- trends in automation – the customer magazine with application examples, news and innovations from the world of automation technology

Documentation

- The printed Festo catalogue. Automation in a compact volume and with a clear structure
- Industry catalogues
- Manuals and operating instructions
- System descriptions and product overview posters
- Specialist literature

Everything can be found on our Support Portal at → www.festo.com/sp

Are you familiar with our basic and further training courses? Festo Didactic brings together and promotes the transfer of knowledge:

Festo Didactic → 22.

After all, productivity begins with training.

**Digital dialogue**

- Overview of all tools and services: → www.festo.com/support
- Easy search, fast design: Product Finders and free engineering tools
- Wide range of tools for CAD and creating circuit diagrams
- Efficiency with complete transparency: the Online Shop
- Application notes on commissioning on the Support Portal
- Additional product videos on YouTube: service2see
- Product Key for automatic product identification
- Spare parts catalogue, including for configured products like valve terminals
- Database-supported catalogue in 26 languages



Festo Didactic

Festo Didactic is the world's leading supplier to technical educational institutions and provider of consulting and training services to industry. The product and service portfolio offers customers an integrated approach, covering all technological areas of factory and process automation. We integrate technical training content with knowledge and training courses from other specialist areas like process optimisation, management and communication.

As an integral part of the Festo Group, Festo Didactic has its roots in the world of automation and industry is just part of its DNA. We work in close cooperation with Festo Automation and are familiar with the challenges faced by our customers. This enables us to offer tailored and practical training courses for industry. As well as covering our core competency in automation technology, these also include innovation topics like Industry 4.0. This content is delivered by experienced trainers and is tailored to each individual group of participants.



Selection of current training courses

Industry 4.0 Assessment –

We prepare your company for digitalisation and Industry 4.0

Like many other companies, you are probably asking yourself the following questions: how well prepared are your production and processes for the digital transformation? Where do you stand at the moment as an organisation? And how well do you prepare your employees for the digital future? Our Industry 4.0 Assessment is the ideal solution for assessing how prepared your company is for Industry 4.0 and providing a starting point for your digitalisation strategy. Together we define which Industry 4.0 technologies will add value to your company and help you to achieve your goals in the long term. Our detailed analysis offers you a reliable basis for initiating further processes and projects on the path of digital transformation.

Introduction to Industry 4.0 – Fundamentals and opportunities

Industry 4.0 is a hot topic, and one that is often understood in different ways. People working in management positions in particular are increasingly being confronted with Industry 4.0, and need to be aware of the effects. It offers companies numerous ways of enhancing productivity, quality and processes. Before it can be implemented, however, managers need a thorough understanding of all the elements and technologies, and how they are intertwined. This knowledge can then be used to develop new business models and specific strategies for implementing Industry 4.0 in the participants' own companies.

Active participation 4.0 – Interactive introduction to Industry 4.0

"Industry 4.0" is a hot topic in industry at the moment. Despite the transformation that this brings, many employees do not know what the changes will involve or why they are necessary. Changes are hard for them to understand and also cause anxiety, resulting in a lack of motivation. The "Active participation 4.0" training course is a 1-day interactive awareness building training course for employees from industrial companies working in both production-related and non-production-related areas. Its purpose is to raise awareness of the topic of digitalisation and the changes associated with the technological transformation. The training course addresses the current challenges and motivates participants to embrace them.

Lean management and Industry 4.0 – Two solutions that complement each other

Lean management and Industry 4.0 are two concepts that pursue similar goals. With an increasing number of customised products and ever declining batch sizes, the lean concept is reaching its limits. Industry 4.0 supports the existing lean methods with new technologies. However, digitalisation produces new types of waste (particularly when it comes to data), therefore new forms of value stream analysis are becoming more important. By adapting the typical value stream analysis, these new types of waste can be identified and avoided.

Industry 4.0: Enabling the production of tomorrow

The goal of Industry 4.0 is the smart factory.

The trend in industrial production is towards the individualisation of products and batch sizes of one. Conventional processes are increasingly merging with modern information and communication technologies. The real and virtual worlds are continuing to converge, and the Internet of Things is becoming a reality.

However, the transformation and the new technical opportunities are not only affecting companies, but in particular their employees. The challenge of being able to apply the principles of self-organisation in open and unpredictable, complex and dynamic situations also calls for new knowledge on the part of your employees. New competencies – both technical, organisational or social – that were less relevant up to now are becoming increasingly important and help your employees to be productive in a new, more complex working environment. These include the ability to reflect, analytical thinking, complex communication and coming up with new ideas.

All our services are focused on developing these necessary competencies. We always combine the transfer of knowledge with the development of skills and the practical transfer to the participants' working environment, whether in public courses, company-specific training courses or during process-oriented consultation.

The aim is to ensure that your employees not only understand the technologies around Industry 4.0, but can also apply and develop them in a targeted way in your company to help increase efficiency and performance.

You will find a small selection of our training courses on this page.

CP Factory Training – Production planning and control in the smart factory

Production planning and control (PPC) has always been one of the core tasks of a manufacturing company and is gaining in significance with smart factories and Industry 4.0 (e.g. greater product diversity, customised solutions and the demand for batch sizes of one). The purpose of production planning and control is to design the production processes so that smooth and economical operation is guaranteed. Inadequate or poor PPC frequently results in delivery, cost and quality problems. Designing an efficient PPC system is therefore essential for every manufacturing company.

Smart Maintenance – Predictive and usage-based maintenance

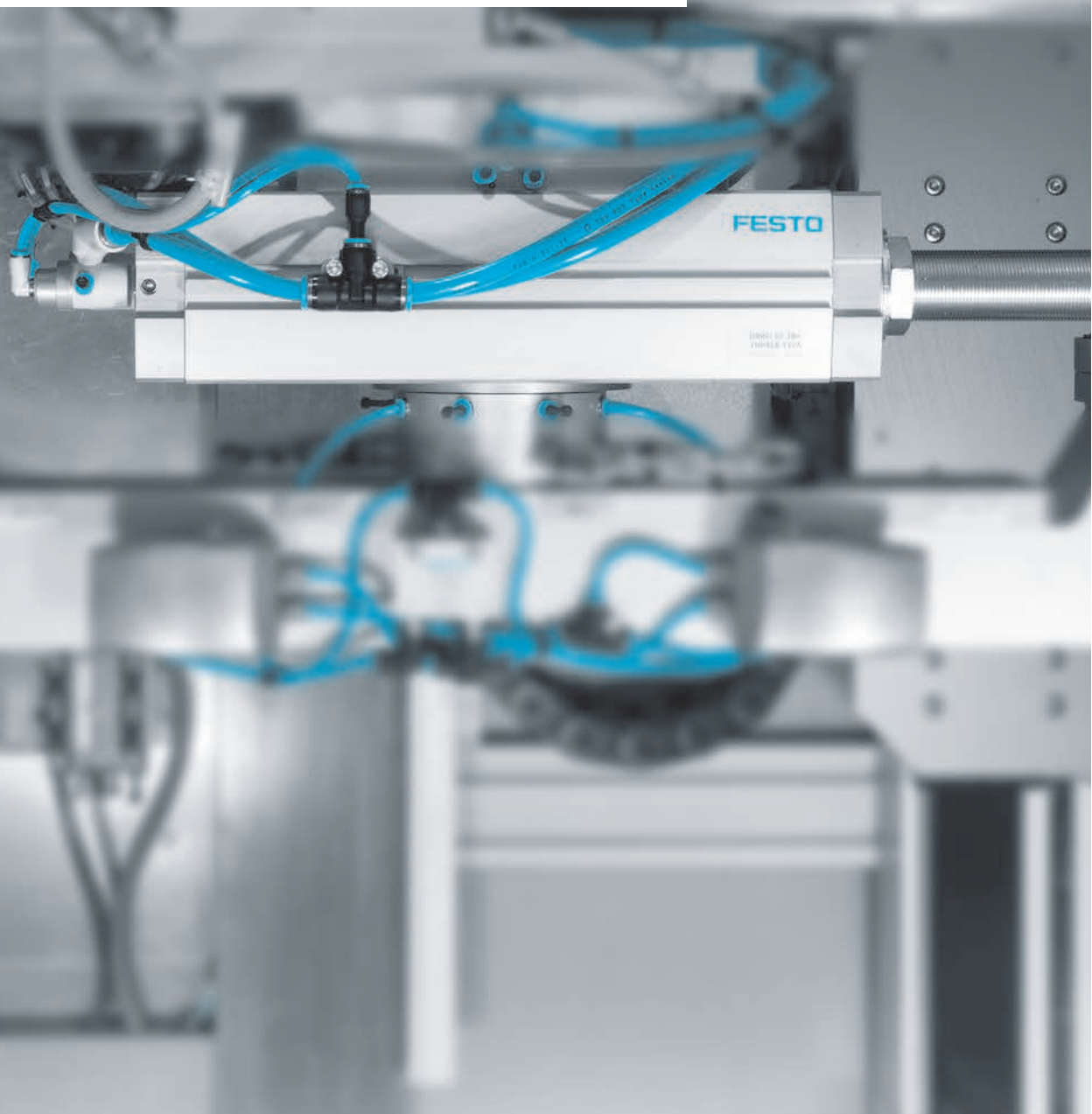
Cyber-physical systems enable new approaches in maintenance and yet also place higher demands on maintenance. Because all the promises of Industry 4.0, such as one-piece flow or make-to-order, can only be fulfilled with extremely high machine and system availability and reliability. Those responsible for maintenance are therefore required to use maintenance strategies that show anomalies and wear in good time before malfunctions and failures occur, and that turn maintenance into a predictable process.

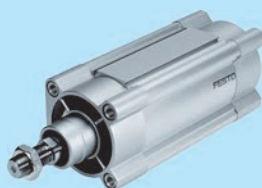
Detailed information as well as course dates, locations and costs: → tac.global@festo.com



1 Pneumatic drives

- + Cylinders with piston rod
- + Rodless cylinders
- + Semi-rotary drives
- + Tandem, high-force and multi-position cylinders
- + Drives with guides
- + Stopper cylinders
- + Clamping cylinders
- + Bellows and diaphragm drives
- + Rotary indexing tables
- + Valve actuators for process automation
- + Cylinder/valve combinations
- + Shock absorbers
- + Cylinder mounting parts and accessories





DSBC ★

Standards-based cylinders to ISO 15552

- + Self-adjusting pneumatic end-position cushioning PPS
- + Comprehensive range of mounting accessories for just about every type of installation

→ page 61

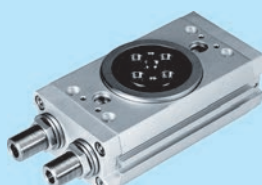


CRDSNU

Standards-based and round cylinders, stainless steel

- + Corrosion-resistant stainless steel, therefore extremely easy to clean
- + Position sensing

→ page 125



DRRD ★

Semi-rotary drives

- + Twin-piston rotary drive, power transmission via rack and pinion principle
- + Very high bearing load capacity

→ page 313



DGRF-C

Guided drive

- + Easy to clean
- + Position sensing
- + Elastic cushioning rings at both ends
- + Plain-bearing guide

→ page 417

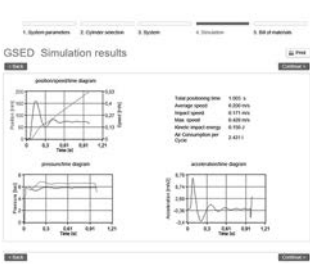
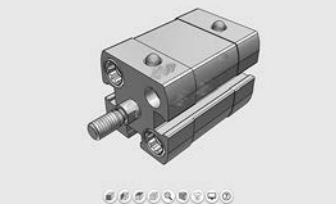
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Product overview

01

Software tool

Pneumatic simulation		Perfect simulations replace expensive real-life tests. The tool is an expert system that supports you in the selection and configuration of the entire pneumatic control chain. If one parameter is changed, the program automatically adapts all the others.	This tool can be found - on the Internet at www.festo.com/catalogue by clicking on the blue "Engineering" button - or on the DVD under "Engineering Tools"
Festo Design Tool 3D		The Festo Design Tool 3D is a 3D product configurator for generating specific CAD product combinations from Festo. The configurator makes your search for the right accessory easier, more reliable and faster. You can then order the module that has been created with a single order item – either completely pre-assembled or as individual parts in a single box. As a result, your bill of materials is considerably shortened and downstream processes such as product ordering, order picking and assembly are significantly simplified.	All ordering options are available in the following countries: AT, BE, CH, CZ, DE, DK, ES, EST, FI, FR, GB, GR, HU, IE, IT, NL, NO, PL, PT, RU, SE, SI, SK, TR, ZA. This tool can be found either via the address: www.festo.com/fdt-3d-online in the above listed countries,

Standards-based cylinders

Type	 Compact cylinders ADN	 Compact cylinders AEN	 Compact cylinders ADN-EL	 Compact cylinders, Clean Design CDC
Mode of operation	Double-acting	Single-acting, pushing, pulling	Double-acting	Double-acting
Piston diameter	12 mm, 16 mm, 20 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm, 125 mm	12 mm, 16 mm, 20 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm	20 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm	20 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm, 80 mm
Theoretical force at 6 bar, advancing	51 ... 7363 N	54 ... 4416 N	188 ... 4712 N	141 ... 3016 N
Stroke	1 ... 500 mm	1 ... 25 mm	10 ... 500 mm	1 ... 500 mm
Cushioning	Elastic cushioning rings/plates at both ends, self-adjusting pneumatic end-position cushioning	Elastic cushioning rings/plates at both ends	Elastic cushioning rings/plates at both ends	Elastic cushioning rings/plates at both ends
Description	- ISO 21287 - Up to 50% less installation space than comparable standards-based cylinders to ISO 15552 - Piston rod with female or male thread - Wide range of variants for customised applications - For position sensing	- ISO 21287 - Up to 50% less installation space than comparable standards-based cylinders to ISO 15552 - Piston rod with female or male thread - Wide range of variants for customised applications - For position sensing	- Mounting hole pattern to ISO 21287 - With end-position locking at both ends, front or rear - Piston rod with female or male thread - For position sensing	- ISO 21287 - Up to 50% less installation space than comparable standards-based cylinders to ISO 15552 - Easy-to-clean design - Increased corrosion protection - Wide range of variants for customised applications - Piston rod with female or male thread - For position sensing
→ Page/online	43	43	adn-el	cdc

Standards-based cylinders

			
Type	Standards-based cylinders DSBC	Standards-based cylinders DSBG	Standards-based cylinders DSBG
Mode of operation	Double-acting	Double-acting	Double-acting
Piston diameter	32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm, 125 mm	32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm, 125 mm	160 mm, 200 mm, 250 mm, 320 mm
Theoretical force at 6 bar, advancing	415 ... 7363 N	415 ... 7363 N	12064 ... 48255 N
Stroke	1 ... 2800 mm	1 ... 2800 mm	1 ... 2700 mm
Cushioning	Elastic cushioning rings/plates at both ends, self-adjusting pneumatic end-position cushioning, pneumatic cushioning, adjustable at both ends	Elastic cushioning rings/plates at both ends, self-adjusting pneumatic end-position cushioning, pneumatic cushioning, adjustable at both ends	Elastic cushioning rings/plates at both ends, pneumatic cushioning, adjustable at both ends
Description	• ISO 15552 (ISO 6431, VDMA 24562) • Self-adjusting pneumatic end-position cushioning which adapts optimally to changes in load and speed • Wide range of variants for customised applications • Comprehensive range of mounting accessories for just about every type of installation • For position sensing	• ISO 15552 (ISO 6431, VDMA 24562) • Sturdy tie rod design • Self-adjusting pneumatic end-position cushioning which adapts optimally to changes in load and speed • Comprehensive range of mounting accessories for just about every type of installation • For position sensing	• ISO 15552 (ISO 6431, VDMA 24562) • Sturdy tie rod design • Pneumatic end-position cushioning adjustable at both ends • Optionally without end-position cushioning and position sensing, resulting in a price advantage • Optionally with spacer bolt attachment • For position sensing
→ Page/online	61	75	87

Standards-based cylinders

			
Type	Standards-based cylinders, Clean Design DSBF-C	Round cylinders DSNU	Round cylinders ESNU
Mode of operation	Double-acting	Double-acting	Single-acting, pushing
Piston diameter	32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm, 125 mm	8 mm, 10 mm, 12 mm, 16 mm, 20 mm, 25 mm	8 mm, 10 mm, 12 mm, 16 mm, 20 mm, 25 mm
Theoretical force at 6 bar, advancing	415 ... 7363 N	23 ... 295 N	19 ... 271 N
Stroke	1 ... 2800 mm	1 ... 500 mm	1 ... 50 mm
Cushioning	Elastic cushioning rings/plates at both ends, self-adjusting pneumatic end-position cushioning, pneumatic cushioning, adjustable at both ends	Elastic cushioning rings/plates at both ends, self-adjusting pneumatic end-position cushioning, pneumatic cushioning, adjustable at both ends	Elastic cushioning rings/plates at both ends
Description	• ISO 15552 • Increased corrosion protection • Easy-to-clean design • FDA-approved lubrication and sealing on the basic design • Long service life thanks to optional dry-running seal • Self-adjusting pneumatic end-position cushioning which adapts optimally to changes in load and speed • For position sensing	• ISO 6432 • Wide range of variants for customised applications • Good running performance and long service life • Self-adjusting pneumatic end-position cushioning which adapts optimally to changes in load and speed • Piston rod with female or male thread • For position sensing	• ISO 6432 • Wide range of variants for customised applications • Good running performance and long service life • Piston rod with female or male thread • For position sensing
→ Page/online	97	107	107

Product overview

01

Round cylinders

Pneumatic drives

			
Type	Round cylinders DSNU	★ Round cylinders DSNU	Round cylinders ESNU
Mode of operation	Double-acting	Double-acting	Single-acting, pushing
Piston diameter	8 mm, 10 mm, 12 mm, 16 mm, 20 mm, 25 mm	32 mm, 40 mm, 50 mm, 63 mm	32 mm, 40 mm, 50 mm, 63 mm
Theoretical force at 6 bar, advancing	23 ... 295 N	482.5 ... 1870.3 N	406 ... 1765 N
Stroke	1 ... 500 mm	1 ... 500 mm	1 ... 50 mm
Cushioning	Elastic cushioning rings/plates at both ends, self-adjusting pneumatic end-position cushioning, pneumatic cushioning, adjustable at both ends	Elastic cushioning rings/plates at both ends, self-adjusting pneumatic end-position cushioning, pneumatic cushioning, adjustable at both ends	Elastic cushioning rings/plates at both ends
Description	• ISO 6432 • Wide range of variants for customised applications • Good running performance and long service life • Self-adjusting pneumatic end-position cushioning which adapts optimally to changes in load and speed • Piston rod with female or male thread • For position sensing	• Wide range of variants for customised applications • Good running performance and long service life • Self-adjusting pneumatic end-position cushioning which adapts optimally to changes in load and speed • Piston rod with female or male thread • For position sensing	• Wide range of variants for customised applications • Good running performance and long service life • Piston rod with female or male thread • For position sensing
→ Page/online	107	107	107

Round cylinders

		
Type	Round cylinders ESNU	Round cylinders EG-PK
Mode of operation	Single-acting, pushing	Single-acting, pushing
Piston diameter	32 mm, 40 mm, 50 mm, 63 mm	2.5 mm, 4 mm, 6 mm
Theoretical force at 6 bar, advancing	406 ... 1765 N	1.9 ... 11.8 N
Stroke	1 ... 50 mm	5... 25 mm
Cushioning	Elastic cushioning rings/plates at both ends	At one end, non-adjustable, no cushioning
Description	• Wide range of variants for customised applications • Good running performance and long service life • Piston rod with female or male thread • For position sensing	• Micro cylinder • Barbed fitting for plastic tubing with standard I.D. • Without position sensing
→ Page/online	107	eg-pk

Product overview

Stainless-steel cylinders

01

Type	 Round cylinders CRDSNU, CRDSNU-B	 Round cylinders CRDSNU, CRDSNU-B	 Standards-based cylinders CRDNG, CRDNGS	 Round cylinders CRHD
Mode of operation	Double-acting	Double-acting	Double-acting	Double-acting
Piston diameter	12 mm, 16 mm, 20 mm, 25 mm	32 mm, 40 mm, 50 mm, 63 mm	32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm, 125 mm	32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm
Theoretical force at 6 bar, advancing	68 ... 295 N	483 ... 1870 N	483 ... 7363 N	483 ... 4712 N
Stroke	1 ... 500 mm	1 ... 500 mm	10 ... 2000 mm	10 ... 500 mm
Cushioning	Elastic cushioning rings/plates at both ends, self-adjusting pneumatic end-position cushioning, pneumatic cushioning, adjustable at both ends	Elastic cushioning rings/plates at both ends, self-adjusting pneumatic end-position cushioning, pneumatic cushioning, adjustable at both ends	Pneumatic cushioning, adjustable at both ends	Pneumatic cushioning, adjustable at both ends
Description	• ISO 6432 • Corrosion resistant against aggressive ambient conditions • Easy-to-clean design • Long service life thanks to optional dry-running seal • Wide range of variants for customised applications • Self-adjusting pneumatic end-position cushioning which adapts optimally to changes in load and speed • For position sensing	• Corrosion resistant against aggressive ambient conditions • Easy-to-clean design • Long service life thanks to optional dry-running seal • Wide range of variants for customised applications • Self-adjusting pneumatic end-position cushioning which adapts optimally to changes in load and speed • For position sensing	• ISO 15552 (ISO 6431, VDMA 24562) • Corrosion resistant against aggressive ambient conditions • Easy-to-clean design • Variants: through piston rod, heat-resistant design • Threaded mounting, mounting via accessories • For position sensing	• Corrosion resistant against aggressive ambient conditions • Easy-to-clean design, optimised for the most exacting demands • Great flexibility thanks to different end caps • Piston rod with male thread • For position sensing
→ Page/online	125	125	125	125

Pneumatic drives

Compact, short-stroke and flat cylinders

Type	 Compact cylinders ADN	 Compact cylinders AEN	 Compact cylinders ADN-S, AEN-S	 Compact cylinders, multimount DPDM
Mode of operation	Double-acting	Single-acting, pushing, pulling	Double-acting, single-acting	Double-acting, single-acting
Piston diameter	12 mm, 16 mm, 20 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm, 125 mm	12 mm, 16 mm, 20 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm	6 mm, 10 mm	6 mm, 10 mm, 16 mm, 20 mm, 25 mm, 32 mm
Theoretical force at 6 bar, advancing	51 ... 7363 N	56 ... 4416 N	13 ... 47 N	17 ... 483 N
Stroke	1 ... 500 mm	1 ... 25 mm	5 ... 10 mm	5 ... 50 mm
Cushioning	Elastic cushioning rings/plates at both ends, self-adjusting pneumatic end-position cushioning	Elastic cushioning rings/plates at both ends	No cushioning	Elastic cushioning rings/plates at both ends
NEW			• New series	• New series
Description	• Up to 50% less installation space than comparable standards-based cylinders to ISO 15552 • Piston rod with female or male thread • Wide range of variants for customised applications • For position sensing • ISO 21287	• Up to 50% less installation space than comparable standards-based cylinders to ISO 15552 • Piston rod with female or male thread • Wide range of variants for customised applications • For position sensing • ISO 21287	• Minimal fitting space • High forces in a compact size • Piston rod with female or male thread • For position sensing	• Mounting via through-hole and via female thread • Compact design • Piston rod variants • For position sensing
→ Page/online	43	43	145	157

Product overview

01 Compact, short-stroke and flat cylinders

Pneumatic drives

Type	 Short-stroke cylinders ADVC, AEVC	 Compact cylinders ADNGF	 Compact cylinders ADN-EL	 Compact cylinders CDC
Mode of operation	Double-acting, pushing, single-acting	Double-acting	Double-acting	Double-acting
Piston diameter	4 mm, 6 mm, 10 mm, 12 mm, 16 mm, 20 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm	12 mm, 16 mm, 20 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm, guide rod with yoke	20 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm	20 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm, 80 mm
Theoretical force at 6 bar, advancing	4.9 ... 4712 N	68 ... 4712 N	188 ... 4712 N	141 ... 3016 N
Stroke	2.5 ... 25 mm	1 ... 400 mm	10 ... 500 mm	1 ... 500 mm
Cushioning	Elastic cushioning rings/plates at both ends	Elastic cushioning rings/plates at both ends, self-adjusting pneumatic end-position cushioning	Elastic cushioning rings/plates at both ends	Elastic cushioning rings/plates at both ends
Description	- Very short overall length - High forces in a compact size - Piston rod with female or male thread - For position sensing via proximity sensor for T-slot and for C-slot - Mounting hole pattern according to VDMA 24562 as of Ø 32 mm	- Mounting hole pattern to ISO 21287 - Piston rod secured against rotation by a guide rod and yoke plate - Plain-bearing guide - Optionally with through piston rod - For position sensing	- With end-position locking at both ends, front or rear - For position sensing - Piston rod with female or male thread - Mounting hole pattern to ISO 21287	- Up to 50% less installation space than comparable standards-based cylinders to ISO 15552 - Easy-to-clean design - Increased corrosion protection - Wide range of variants for customised applications - Piston rod with female or male thread - For position sensing - ISO 21287
→ Page/online	165	187	adn-el	cdc

Compact, short-stroke and flat cylinders

Type	 Flat cylinders DZF	 Flat cylinders DZH	 Flat cylinders EZH
Mode of operation	Double-acting	Double-acting	Pushing, single-acting
Piston diameter	Oval piston, equivalent diameter, 12 mm, 18 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm	Oval piston, equivalent diameter, 16 mm, 20 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm	Square piston rod, equivalent diameter, 3 mm, 6 mm, 12 mm, 22 mm
Theoretical force at 6 bar, advancing	51 ... 1870 N	104 ... 1870 N	3.8 ... 205 N
Stroke	1 ... 320 mm	1 ... 1000 mm	10 ... 50 mm
Cushioning	Elastic cushioning rings/plates at both ends	Pneumatic cushioning, adjustable at both ends	No cushioning
Description	- Extremely flat design - Protected against rotation thanks to special piston shape - Ideal for manifold assembly - Wide range of mounting options - Piston rod with female or male thread - For position sensing	- Flat design - Protected against rotation thanks to special piston shape - Ideal for manifold assembly - Wide range of mounting options - Piston rod with male thread - For position sensing	- Extremely flat design - Protected against rotation thanks to special piston shape - Wide range of mounting options - For position sensing
→ Page/online	dzf	dzh	ezh

Cartridge cylinders and multimount cylinders

01

			
Type	Compact cylinders, multimount DPDM	Multimount cylinders DMM, EMM, DMML, EMLL	Cartridge cylinders EGZ
Mode of operation	Double-acting	Double-acting, pushing, single-acting	Pushing, single-acting
Piston diameter	6 mm, 10 mm, 16 mm, 20 mm, 25 mm, 32 mm	10 mm, 16 mm, 20 mm, 25 mm, 32 mm	6 mm, 10 mm, 16 mm
Theoretical force at 6 bar, advancing	17 ... 483 N	37 ... 483 N	13.9 ... 109 N
Stroke	5 ... 50 mm	1 ... 50 mm	5 ... 15 mm
Cushioning	Elastic cushioning rings/plates at both ends	Elastic cushioning rings/plates at both ends	No cushioning
NEW	• New series		
Description	- Mounting via through-hole and via female thread - Compact design - Piston rod variants - For position sensing	- Wide range of mounting options - Wide selection of piston rod variants - Piston rod with male thread - For position sensing	- Minimal fitting space - Installation with or without mounting components - Piston rod with male thread
→ Page/online	157	dmm	egz

Pneumatic drives

Cylinders with clamping unit

			
Type	Standards-based cylinders with clamping cartridge DSBC-C	Compact cylinders with clamping cartridge ADN-KP	Round cylinders with clamping cartridge DSNU-KP
Mode of operation	Double-acting	Double-acting	Double-acting
Piston diameter	32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm, 125 mm	20 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm	8 mm, 10 mm, 12 mm, 16 mm, 20 mm, 25 mm
Theoretical force at 6 bar, advancing	483 ... 7363 N	188 ... 4712 N	30 ... 295 N
Stroke	10 ... 2000 mm	10 ... 500 mm	1 ... 500 mm
Cushioning	Elastic cushioning rings/plates at both ends, pneumatic cushioning, self-adjusting at both ends, pneumatic cushioning, adjustable at both ends	Elastic cushioning rings/plates at both ends	Elastic cushioning rings/plates at both ends, self-adjusting pneumatic end-position cushioning, pneumatic cushioning, adjustable at both ends
Description	- Piston rod can be clamped in any position - Piston rod can be held in position for long periods even with alternating loads, fluctuating operating pressure or leaks in the system - Mounting hole pattern to ISO 15552 - Piston rod with female or male thread - For position sensing	- Piston rod can be held in any position - Piston rod can be held in position for long periods even with alternating loads, fluctuating operating pressure in the system or loss of pressure - Mounting hole pattern to ISO 21287 - Piston rod with female or male thread - For position sensing	- Piston rod can be held in any position - Piston rod can be held in position for long periods even with alternating loads, fluctuating operating pressure in the system or loss of pressure - Mounting hole pattern to ISO 6432 - For position sensing
→ Page/online	dsbc-c	43	107

Product overview

01

Cylinders with clamping unit

Pneumatic drives

		
Type	Round cylinders with clamping cartridge DSNU-KP	Cylinders with clamping unit DNCKE, DNCKE-S
Mode of operation	Double-acting	Double-acting
Piston diameter	32 mm, 40 mm, 50 mm, 63 mm	40 mm, 63 mm, 100 mm
Theoretical force at 6 bar, advancing	483 ... 1870 N	754 ... 4712 N
Stroke	1 ... 500 mm	10 ... 2000 mm
Cushioning	Elastic cushioning rings/plates at both ends, self-adjusting pneumatic end-position cushioning, pneumatic cushioning, adjustable at both ends	Pneumatic cushioning, adjustable at both ends
Description	- Piston rod can be clamped in any position - Piston rod can be held in position for long periods even with alternating loads, fluctuating operating pressure in the system or loss of pressure - For position sensing	- Piston rod can be held and braked in any position - Variant DNCKE-...-S approved for use in safety-oriented parts of control systems - Mounting hole pattern to ISO 15552 - Piston rod with male thread - For position sensing
→ Page/online	107	dncke

Rodless cylinders

				
Type	Linear drives DLGF	Linear drives DGC-K	Linear drives DGC-G, DGC-GF, DGC-KF	Linear drives with heavy-duty guide DGC-HD
Piston diameter	20 mm, 25 mm, 32 mm, 40 mm	18 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm, 80 mm	8 mm, 12 mm, 18 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm	18 mm, 25 mm, 40 mm
Theoretical force at 6 bar, advancing	188 ... 754 N	153 ... 3016 N	30 ... 1870 N	153 ... 754 N
Stroke	50 ... 1000 mm	1 ... 8500 mm	1 ... 8500 mm	1 ... 5000 mm
Cushioning	Pneumatic cushioning, self-adjusting at both ends	Pneumatic cushioning, adjustable at both ends	Elastic cushioning rings/plates at both ends, pneumatic cushioning, adjustable at both ends, shock absorber, hard characteristic curve, shock absorber, soft characteristic curve	Shock absorber, hard characteristic curve, shock absorber, soft characteristic curve
Position sensing	Via proximity sensor	Via proximity sensor	Via proximity sensor	Via proximity sensor
NEW	New series			
Description	- Extremely flat design - Basic design or recirculating ball bearing guide	- Compact design: 30% narrower than the basic variant DGC-G - Basic drive without guide, for simple drive functions - Low moving dead weight - Symmetrical design	- Basic design, plain or recirculating ball bearing guide - All settings accessible from one side - Optionally with variable end stops and intermediate position module - Software tool available for bearing calculation - Optional: NSF-H1 lubricant for the food zone (see www.festo.com/sp/dgc > "Certificates" tab) - Optional: clamping unit for holding loads	- For maximum loads and torques thanks to duo rail guide - Very good operating performance under torque load - Long service life - Ideal as a basic axis for linear gantries and cantilever axes - Wide range of options for mounting on drives
→ Page/online	197	213	227	257

Product overview

Rodless cylinders

01

			
Type	Linear drives SLG	Linear drives DGO	Linear drives SLM
Piston diameter	8 mm, 12 mm, 18 mm	12 mm, 16 mm, 20 mm, 25 mm, 32 mm, 40 mm	12 mm, 16 mm, 20 mm, 25 mm, 32 mm, 40 mm
Theoretical force at 6 bar, advancing	30 ... 153 N	68 ... 754 N	68 ... 754 N
Stroke	100 ... 900 mm	10 ... 4000 mm	10 ... 1500 mm
Cushioning	Elastic cushioning rings/plates at both ends, shock absorber, hard characteristic curve	Elastic cushioning rings/plates at both ends, pneumatic cushioning, adjustable at both ends	Elastic cushioning rings/plates at both ends, shock absorber, hard characteristic curve
Position sensing	Via proximity sensor	Via proximity sensor	Via proximity sensor, via inductive sensors
Description	- Extremely flat design - Highest precision thanks to integrated recirculating ball bearing guide - Adjustable end stops - Choice of supply ports - Available with intermediate position module	- Magnetic power transmission - Pressure-tight and zero leakage - Dirt-proof and dust-proof	- Magnetic power transmission - Recirculating ball bearing guide: combination of slide unit and rodless linear drive - Individual choice of end-position cushioning and sensing
→ Page/online	slg	dgo	slm

Pneumatic drives

Software tool

Mass moment of inertia		Juggling pencils and pocket calculators is now a thing of the past. No matter whether you have discs, blocks, push-on flanges, grippers, etc., this tool does the job of calculating all the mass moments of inertia. Just save, send or print and you're finished.	This tool can be found - on the Internet at www.festo.com/catalogue by clicking on the blue "Engineering" button - or on the DVD under "Engineering Tools"
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Semi-rotary drives

			
Type	Swivel modules DRVS	★ Swivel modules DSM	Swivel modules DSM-B, DSM-HD-B
Size	6, 8, 12, 16, 25, 32, 40	6, 8, 10	12, 16, 25, 32, 40, 63
Theoretical torque at 6 bar	0.15 ... 20 Nm	0.15 ... 1.7 Nm	1.25 ... 80 Nm
Permissible mass moment of inertia	6.5 ... 350 kgcm ²	0.00065 ... 0.0026 kgm ²	0.005 ... 0.50 kgm ²
Position sensing	Via proximity sensor	Via proximity sensor, none	Via proximity sensor
Swivel angle	0 ... 270°	0 ... 240°	0 ... 270°
Description	- Double-acting semi-rotary drive with rotary vane - Lighter than other semi-rotary drives - Fixed swivel angle, adjustable swivel angle possible with the help of accessories - Housing protected against splash water and dust	- Double-acting semi-rotary drive with rotary vane or with tandem rotary vanes - Fixed swivel angle or infinitely adjustable swivel angle - With spigot or hollow flanged shaft - With elastic cushioning rings/plates at both ends	- Double-acting semi-rotary drive with rotary vane, with tandem rotary vanes or with heavy-duty bearing - Swivel angle is infinitely adjustable over the entire swivel range - With elastic cushioning rings/plates at both ends, adjustable or with shock absorbers at both ends, self-adjusting
→ Page/online	269	281	293

Product overview

01

Semi-rotary drives



**Swivel modules
DRRD**



**Swivel/linear drive units
DSL-B**



Type	Swivel modules DRRD	Swivel/linear drive units DSL-B
Size	8, 10, 12, 16, 20, 25, 32, 35, 40, 50, 63	16, 20, 25, 32, 40
Theoretical torque at 6 bar	0.2 ... 112 Nm	1.25 ... 20 Nm
Permissible mass moment of inertia	15 ... 420,000 kgcm ²	0.35 ... 40 kgcm ²
Position sensing	Via proximity sensor	Via proximity sensor
Swivel angle	180°	0 ... 272°
Description	- Twin-piston rotary drive, power transmission via rack and pinion principle - Very high accuracy in the end positions - Very high bearing load capacity - Very good axial run-out at the flanged shaft	- Rotary and linear motion can be controlled individually or simultaneously - High repetition accuracy - With plain or recirculating ball bearing guide - Through piston rod
→ Page/online	313	dsl

Pneumatic drives

Tandem and high-force cylinders



**High-force cylinders
ADN H**



**Tandem cylinders
DNCT**

Type	High-force cylinders ADN H	Tandem cylinders DNCT
Piston diameter	25 mm, 40 mm, 63 mm, 100 mm	32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm, 125 mm
Theoretical force at 6 bar, advancing	1036 ... 18281 N	898 ... 14244 N
Stroke	1 ... 150 mm	2 ... 500 mm
Description	- Max. 4 cylinders can be combined - Thrust increase - Only 2 connections are required to pressurise all cylinders - Piston rod with female or male thread - For position sensing - Mounting hole pattern to ISO 21287	- Max. 2 cylinders can be combined - Thrust and return force increase - Piston rod with male thread - For position sensing - Mounting hole pattern to ISO 15552
→ Page/online	adnh	dncf

Multi-position cylinders



**Multi-position cylinders
ADN M**

Type	Multi-position cylinders ADN M
Piston diameter	25 mm, 40 mm, 63 mm, 100 mm
Theoretical force at 6 bar, advancing	295 ... 4712 N
Max. total of all individual strokes	1000 mm, 2000 mm
Description	- Mounting hole pattern to ISO 21287 - Piston rod with female or male thread 2 ... 5 cylinders can be combined - Max. 5 positions can be approached - For position sensing
→ Page/online	adnm

Product overview

Drives with slides

01

		 NEW	
Type	Mini slides DGSL	Mini slides DGST	Mini slides DGSC
Piston diameter	6 mm, 8 mm, 10 mm, 12 mm, 16 mm, 20 mm, 25 mm, 32 mm	6 mm, 8 mm, 10 mm, 12 mm, 16 mm, 20 mm, 25 mm	6 mm
Theoretical force at 6 bar, advancing	17 ... 483 N	34 ... 589 N	17 N
Stroke	10 ... 200 mm	10 ... 200 mm	10 mm
Cushioning	Short elastic cushioning rings/plates at both ends, no cushioning, elastic cushioning rings/plates at both ends with fixed stop, elastic cushioning rings/plates at both ends, shock absorber, self-adjusting, progressive, at both ends, with reducing sleeve, shock absorber, progressive, at both ends	Elastic cushioning at both ends, without end-position cushioning, elastic cushioning at both ends, non-adjustable, with end-position cushioning	Elastic cushioning rings/plates at both ends
Position sensing	Via proximity sensor	Via proximity sensor	None
NEW		• New series	
Description	• High load capacity and positioning accuracy • Maximum movement precision thanks to ground-in ball bearing cage guide • Maximum flexibility thanks to 8 sizes • Reliable in the event of pressure drop thanks to clamping cartridge or end-position locking • Wide variety of mounting and attachment options • Compact design	• Powerful twin-piston drive • Shortest mini slide on the market • Precision recirculating ball bearing guide • Versatile mounting options	• Smallest guided slide unit on the market • Precision ball bearing cage guide: reliable and high-quality process • Long service life thanks to housing made from high-alloy steel • Low break-away pressure and uniform movement thanks to minimal friction of guide and seal
→ Page/online	337	359	dgsc

Pneumatic drives

Drives with slides

			
Type	Mini slides SLF	Mini slides SLS	Mini slides SLT
Piston diameter	6 mm, 10 mm, 16 mm	6 mm, 10 mm, 16 mm	6 mm, 10 mm, 16 mm, 20 mm, 25 mm
Theoretical force at 6 bar, advancing	17 ... 121 N	17 ... 121 N	34 ... 590 N
Stroke	10 ... 80 mm	5 ... 30 mm	10 ... 200 mm
Cushioning	Elastic cushioning rings/plates at both ends	Elastic cushioning rings/plates at both ends	CC: shock absorber at both ends, elastic cushioning rings/plates at both ends
Position sensing	Via proximity sensor	Via proximity sensor	Via proximity sensor
Description	• Flat design • Ball bearing cage guide • Versatile mounting options • Easy adjustment of end positions	• Flat design • Ball bearing cage guide • Versatile mounting options	• Powerful twin-piston drive • Ball bearing cage guide • Versatile mounting options • Easy adjustment of end positions
→ Page/online	slf	sls	385

Product overview

01

Drives with guide rods

Pneumatic drives

			
Type	Guided drives DFM, DFM-B	★ Guided drives, Clean Design DGRF	Compact cylinders ADNGF
Piston diameter	12 mm, 16 mm, 20 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm	20 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm	12 mm, 16 mm, 20 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm, 80 mm, 100 mm
Theoretical force at 6 bar, advancing	68 ... 4712 N	189 ... 1870 N	68 ... 4712 N
Stroke	10 ... 400 mm	10 ... 400 mm	1 ... 400 mm
Cushioning	Elastic cushioning rings/plates at both ends, pneumatic cushioning, adjustable at both ends; shock absorber, soft characteristic curve	Self-adjusting pneumatic end-position cushioning, elastic cushioning rings/plates at both ends, pneumatic cushioning, adjustable at both ends	Elastic cushioning rings/plates at both ends, self-adjusting pneumatic end-position cushioning
Position sensing	Via proximity sensor	Via proximity sensor	Via proximity sensor
Description	• Drive and guide unit in a single housing • Plain or recirculating ball bearing guide • High resistance to torques and lateral forces • Wide range of mounting options • Wide range of variants for customised applications	• Easy-to-clean design • Increased corrosion protection • FDA-approved lubrication and sealing on the basic design • Hygienic mounting of the sensors possible • Compact design with high guide precision and load capacity • Long service life thanks to optional dry-running seal • Self-adjusting pneumatic end-position cushioning which adapts optimally to changes in load and speed	• Mounting hole pattern to ISO 21287 • Piston rod secured against rotation by a guide rod and yoke plate • Plain-bearing guide • Optionally with through piston rod • For position sensing
→ Page/online	399	417	187

Drives with guide rods

			
Type	Mini-guided drives DFC	Twin-piston cylinders DPZ	Twin-piston cylinders DPZJ
Piston diameter	4 mm, 6 mm, 10 mm	10 mm, 16 mm, 20 mm, 25 mm, 32 mm	10 mm, 16 mm, 20 mm, 25 mm, 32 mm
Theoretical force at 6 bar, advancing	7.5 ... 47 N	60 ... 966 N	60 ... 724 N
Stroke	5 ... 30 mm	10 ... 100 mm	10 ... 100 mm
Cushioning	Elastic cushioning rings/plates at both ends	Elastic cushioning rings/plates at both ends	Elastic cushioning rings/plates at both ends
Position sensing	Via proximity sensor, none	Via proximity sensor	Via proximity sensor
Description	• Smallest guided drive • High precision and load capacity • Minimal space requirement • Drive and guide unit in a single housing • Plain or recirculating ball bearing guide	• Twin pistons provide twice the force in half the space • Plain or recirculating ball bearing guide • Precision stroke adjustment in the end position	• With yoke plate on rear of cylinder for higher lateral forces and precision • Twin pistons provide twice the force in half the space • Plain or recirculating ball bearing guide • Precision stroke adjustment in the end position
→ Page/online	dfc	dpz	dpzj

Product overview

Stopper cylinders

01

			
Type	Stopper cylinders DFSP	Stopper cylinders DFST	Stopper cylinders STAF
Piston diameter	16 mm, 20 mm, 32 mm, 40 mm, 50 mm	50 mm, 63 mm, 80 mm	32 mm, 80 mm
Permissible impact force on the advanced piston rod	710 ... 6280 N	3000 ... 6000 N	480 ... 14600 N
Stroke	5 ... 30 mm	30 ... 40 mm	20 ... 40 mm
Position sensing	Via proximity sensor	Via proximity sensor	Via proximity sensor
Toggle lever position sensing		Via inductive sensors	
Description	• Trunnion version with/without female thread, with/without protection against rotation • Roller version with protection against rotation • Compact design • Sensor slots on 3 sides • Long service life thanks to very good cushioning characteristics and sturdy piston rod guide • Workpiece carriers, pallets and packages weighing up to 90 kg can be safely stopped	• Toggle lever design • Integrated, adjustable shock absorber for smooth and adapted stopping • Up to 800 kg impact load • For position sensing on the piston • Lever locking mechanism • Toggle lever deactivator	• Roller version, toggle lever design • Absorption of high lateral forces • Direct mounting of solenoid valves on flange plate
→ Page/online	425	437	sta

Pneumatic drives

Clamping cylinders

	
Type	Clamping modules EV
Clamping area	10x30, 15x40, 15x63, 20x120, 20x180, 20x75, Ø 12, Ø 16, Ø 20, Ø 25, Ø 32, Ø 40, Ø 50, Ø 63
Stroke	3 ... 5 mm
Description	• Compact cylinder without piston rod, with diaphragm • Single-acting, with reset function • Flat design • Hermetically sealed • Pressure plates and foot mounting as accessories
→ Page/online	ev

Linear/swivel clamps

	
Type	Linear/swivel clamps CLR
Piston diameter	12 mm, 16 mm, 20 mm, 25 mm, 32 mm, 40 mm, 50 mm, 63 mm
Theoretical clamping force at 6 bar	51 ... 1682 N
Clamping stroke	10 ... 50 mm
Swivel angle	90°+/- 2°, 90°+/- 3°, 90°+/- 4°
Description	• Swivelling and clamping in one step • Adjustable swivel direction • Clamping fingers as accessories • Optionally with dust and welding spatter protection • Double-acting • For position sensing
→ Page/online	clr

Product overview

01

Hinge cylinders



Hinge cylinder
DFAW

Type	
Piston diameter	50 mm, 63 mm, 80 mm
Stroke	10 ... 200 mm
Theoretical force at 6 bar, advancing	1178 ... 3016 N
Position sensing	Via proximity sensor
Cushioning	Self-adjusting pneumatic end-position cushioning
Description	- Clamping of components during the welding process - Double-acting - Easy to mount thanks to swivel bearing on the bearing cap - Integrated flow control - Integrated, self-adjusting end-position cushioning - Variants with clamping unit
→ Page/online	dfaw

Bellows actuators



Bellows actuator
EB

Type	
Size	80, 145, 165, 215, 250, 325, 385
Stroke	20 ... 230 mm
Description	- Use as a spring element or for reducing oscillations - Single-bellows or double-bellows cylinder - High forces with a short stroke - Uniform movement: no stick-slip effect - Use in dusty environments or in water - Maintenance-free
→ Page/online	eb

Fluidic muscle



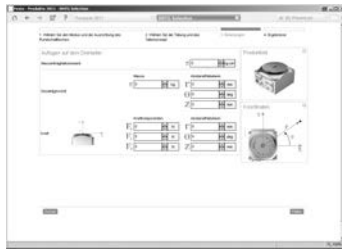
Fluidic muscle
DMSP

Type	
Size	5, 10, 20, 40
Theoretical force at 6 bar	140 ... 6000 N
Nominal length	30 ... 9000 mm
Max. contraction	20% of nominal length, 25% of nominal length
Description	- With press-fitted connection - Up to 30% less weight: a superb force/weight ratio - Single-acting, pulling - Three integrated adapter variants 10 times the initial force of a comparable pneumatic cylinder - Uniform movement: no stick-slip effect - Hermetically sealed design offers protection against dust, dirt and fluids
→ Page/online	dmsp

Software tool

01

Rotary indexing table



This tool helps you to select the right rotary indexing table of the type DHTG from Festo for your application. Let yourself be guided by the program – enter the general parameters and you will receive at least one suggestion for the product best suited to your application.

This tool can be found

- on the Internet at www.festo.com/catalogue by clicking on the blue "Engineering" button
- or on the DVD under "Engineering Tools"

Rotary indexing tables



Rotary indexing tables
DHTG

Type	Rotary indexing tables DHTG
Size	65, 90, 140, 220
Theoretical torque at 6 bar	2.1 ... 58.9 Nm
Indexing stations	2 ... 24
Description	• For swivelling or separating tasks • Sturdy mechanical system • Easy planning and commissioning • Rotary table diameters: 65, 90, 140, 220 mm • Free control of rotational direction
→ Page/online	dhtg

Pneumatic drives

Linear actuators for process automation



Linear actuators with displacement encoder
DFPI



Linear actuators with displacement encoder
DFPI-NB3P



Linear actuators Copac
DLP

Type	Linear actuators with displacement encoder DFPI	Linear actuators with displacement encoder DFPI-NB3P	Linear actuators Copac DLP
Design	Piston rod, cylinder barrel	Piston rod, cylinder barrel	Piston rod
Mode of operation	Double-acting	Double-acting	Double-acting
Size of valve actuator	100, 125, 160, 200, 250, 320	100, 125, 160, 200, 250, 320	80, 100, 125, 160, 200, 250, 320
Flange hole pattern	F07, F10, F14		
Operating pressure	3 ... 8 bar	3 ... 8 bar	2 ... 8 bar
Ambient temperature	–20 ... 80 °C	–20 ... 80 °C	–20 ... 80 °C
Description	• Mounting interfaces for process valves to DIN 3358 • Integrated air supply • Optionally with integrated displacement encoder or fully integrated positioner • IP65, IP67, IP69K, NEMA4 • ATEX certification	• Mounting interfaces to ISO 15552 • Sturdy tie rod design • Optionally with integrated displacement encoder or fully integrated positioner • IP65, IP67, IP69K, NEMA4 • ATEX certification	• Mounting interfaces for process valves to DIN 3358 • Port pattern as per NAMUR to VDI/VDE 3845 • Integrated air supply • ATEX certification
→ Page/online	dfpi	dfpi	dtp

Product overview

01 Quarter turn actuators for process automation

Pneumatic drives

		
Type	Quarter turn actuators DFPD	Quarter turn actuators DAPS
Design	Rack and pinion	Scotch yoke system
Mode of operation	Double-acting, single-acting	Double-acting, single-acting
Size of valve actuator	10, 20, 40, 80, 120, 160, 240, 300, 480, 700, 900, 1200, 2300	0008, 0015, 0030, 0053, 0060, 0090, 0106, 0120, 0180, 0240, 0360, 0480, 0720, 0960, 1440, 1920, 2880, 3840, 4000, 5760, 8000
Flange hole pattern	F03, F04, F05, F14, F0507, F0710, F1012, F1216	F03, F04, F05, F07, F10, F12, F14, F16, F25
Operating pressure	2 ... 8 bar	1 ... 8.4 bar
Ambient temperature	-20 ... 80 °C	-50 ... 150 °C
NEW	• Additional versions	
Description	- Uniform torque characteristic across the entire rotation angle range of 90° in the double-acting version - Process valve connection to ISO 5211 - Mounting hole pattern to VDI/VDE 3845 - Sturdy, non-slip and easy-to-clean aluminium housing - Long service life, low wear - Increased corrosion protection	- High breakaway torques - Approved in accordance with Directive 2014/34/EU (ATEX) - Flange hole pattern to ISO 5211 - Mounting hole pattern to VDI/VDE 3845 - Optionally with handwheel as manual emergency override - Corrosion-resistant variant made from stainless steel
→ Page/online	dfpd	daps

Software tool

Shock absorbers		Whether diagonal or vertical, curved or straight, lever or disc, all types of cushioned movements are taken into account. The software tool always recommends the best shock absorber. This tool can be found - on the Internet at www.festo.com/catalogue by clicking on the blue "Engineering" button - or on the DVD under "Engineering Tools"
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Shock absorbers

				
Type	Shock absorbers DYSR	Shock absorbers YSR-C	Shock absorbers YSRW	Shock absorbers YSRW-DGC
Stroke	8 ... 60 mm	4 ... 60 mm	8 ... 34 mm	For Ø 8 ... 63 mm
Max. energy absorption per stroke	4 ... 384 J	0.6 ... 380 J	1.3 ... 70 J	
Cushioning	Adjustable	Self-adjusting	Self-adjusting, soft characteristic curve	Self-adjusting, soft characteristic curve
Description	- Hydraulic shock absorber with spring return - Adjustable cushioning hardness	- Hydraulic shock absorber with path-controlled flow control function - Rapidly increasing cushioning force curve - Short cushioning stroke - Suitable for rotary drives	- Hydraulic shock absorber with path-controlled flow control function - Gently increasing cushioning force curve - Long cushioning stroke - Suitable for low-vibration operation - Short cycle times possible	- For linear drives DGC - Gently increasing cushioning force curve - Sizes 12, 18, 25, 32, 40, 50, 63
→ Page/online	dysr	ysr-c	ysrw	ysrw-dgc

Product overview

Shock absorbers

01

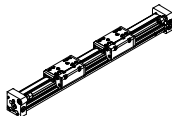
			
Type	Shock absorbers YSRWJ	Shock absorbers DYEF-Y1, DYEF-Y1F	Shock absorbers DYSC
Stroke	8 ... 14 mm	0.9 ... 7 mm	4 ... 25 mm
Max. energy absorption per stroke	1 ... 3 J	0.005 ... 1.2 J	0.6 ... 100 J
Cushioning	Self-adjusting, soft characteristic curve	P cushioning with metal fixed stop, P cushioning without metal fixed stop	Self-adjusting
Description	- Cushioning with self-adjusting, progressive hydraulic shock absorber - Gently increasing cushioning force curve - Adjustable cushioning stroke - End-position sensing with proximity sensor SME/SMT-8 - Precision end-position adjustment	- Mechanical shock absorber with flexible rubber buffer - Elastic rubber buffer allows a defined metal end position - Adjustable cushioning hardness - Ideal for cushioning low energy - With precise metal end position	- Hydraulic shock absorber with path-controlled flow control function - Rapidly increasing cushioning force curve - Short cushioning stroke - Suitable for rotary drives - With metal fixed stop
→ Page/online	ysrwj	dyef	dysc

Pneumatic drives

Shock absorbers

		
Type	Shock absorbers DYSW	Hydraulic cushioning cylinders DYHR
Stroke	6 ... 20 mm	20 ... 60 mm
Max. energy absorption per stroke	0.8 ... 12 J	32 ... 384 J
Cushioning	Self-adjusting, soft characteristic curve	Adjustable
Description	- Hydraulic shock absorber with path-controlled flow control function - Gently increasing cushioning force curve - Long cushioning stroke - Suitable for low-vibration operation - Short cycle times possible - With metal fixed stop	- Hydraulic cushioning cylinder for constant, slow braking speeds across the entire stroke - Braking speed can be precisely adjusted - Built-in compression spring returns the piston rod to the initial position - Suitable for slow feed speeds in the range up to 0.1 m/s
→ Page/online	dysw	dyhr

Cylinder mounting parts and accessories for pneumatic drives

				
Type	Mounting components ★	Piston rod attachments ★	Guide axes DGC-FA	Guide units FEN, FENG
Size			8, 12, 18, 25, 32, 40, 50, 63	8/10, 12/16, 20, 25, 32, 40, 50, 63, 80, 100
Stroke			1 ... 8500 mm	1 ... 500 mm
Round material to be clamped				
Static holding force				
Description	- Mounting kits DARQ - Direct mountings - Foot mountings - Flange mountings - Swivel mountings - Clevis feet LNG, trunnion supports LN2 - Slot nuts NST/NSTL - Centring pins/sleeves NSTH	- Rod clevises SG, CRSG - Rod eyes SGS - Coupling pieces KSG - Self-aligning rod couplers FK - Adapters AD	- Without drive - With recirculating ball bearing guide - With guide and freely movable slide - Higher torsional resistance - Reduced vibrations with dynamic loads - For supporting force and torque capacity in multi-axis applications	- For protecting standards-based cylinders against rotation at high torque loads - Plain or recirculating ball bearing guide - High guide precision for workpiece handling
→ Page/online	n_015001	n_03150	dgc-fa	fen

Product overview

Cylinder mounting parts and accessories for pneumatic drives

			
Type	Clamping cartridges KP	Clamping units KPE, KEC, KEC-S	Clamping units, clamping components DADL
Size			16, 20, 25, 32, 35, 40, 50, 63
Stroke			
Round material to be clamped	4 ... 32 mm	4 ... 32 mm	
Static holding force	80 ... 7500 N	80 ... 8000 N	
Description	• For in-house assembly of clamping units • Not certified for use in safety-oriented control systems	• KPE: ready-to-install combination of clamping cartridge KP and housing • KEC: for use as a holding device (static application) • KEC-S: for safety-related applications	• Clamping unit DADL-EL: for semi-rotary drive DRRD, for mechanical locking in the end positions to prevent unwanted movement in unpressurised condition • Clamping component DADL-EC: for semi-rotary drive DRRD, for securing an intermediate position in combination with the clamping unit DADL-EL • Without drive
→ Page/online	kp	kpe	dadl

Customised components – for your specific requirements



Drives with customised designs
Can't find the pneumatic drive you need in our catalogue?
We can offer you customised components that are tailored to your specific requirements.

- Common product modifications:
- Materials for special ambient conditions
 - Customised dimensions
 - Special strokes
 - Customised mounting options
 - Implementation of special cylinder functions (cylinder/valve combinations, single-acting principle, etc.)

Many additional variants are possible. Ask your Festo sales engineer, who will be happy to help.
→ www.festo.com/contact



Festo can also supply special variants like telescopic cylinders on request – please contact us.



ADN
Double-acting



AEN
Single-acting

Gain space and save money during engineering

- + With compact dimensions
- + With the right variant
- + Thanks to standardised interfaces to ISO 21287

Cylinders with piston rod > Standards-based cylinders >
Compact cylinders, to ISO 21287

ADN ★

Double-acting

AEN

Single-acting

Cylinders with piston rod > Standards-based cylinders >

Compact cylinders, to ISO 21287

ADN ★ / AEN



Overview, configuration and ordering

→ www.festo.com/catalogue/adn



Additional information, support and user documentation

→ www.festo.com/sp/adn



Quick ordering of basic designs

→ page 48

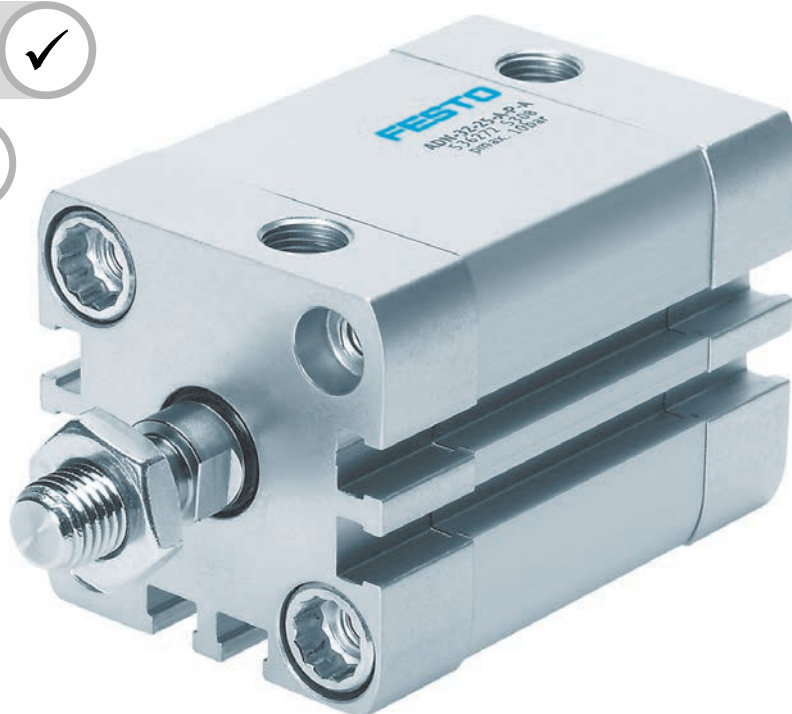


Selected types in accordance with the ATEX Directive
for explosive atmospheres

→ www.festo.com/catalogue/ex



Spare parts service



- + Piston diameter 12 ... 125 mm
- + Conforms to ISO 21287
- + With self-adjusting pneumatic end-position cushioning PPS
- + Up to 50% less installation space than comparable standards-based cylinders to ISO 15552
- + For position sensing
- + High flexibility thanks to the wide range of variants
- + Piston rod with female or male thread
- + Wide range of variants

Compact cylinders ADN ★ /AEN, to ISO 21287

Product range overview

Type/function	Piston Ø [mm]	Stroke [mm]	Force [N]	Product options										→ Page/ online
				A	I	P	PPS	A	Q	S2	S6	TT		
Double-acting	ADN – Basic design													
	12, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125	1 ... 500	68 ... 7363	■	■	■	■	■	■	■	■	■	■	46
	ADN- ... -EL – With end-position locking													
	20, 25, 32, 40, 50, 63, 80, 100	–	–	–	–	–	–	–	–	–	–	–	–	adn
Single-acting	AEN – Pushing													
	12, 16, 20, 25, 32, 40, 50, 63, 80, 100	1 ... 25	59 ... 4510	■	■	■	–	■	–	–	■	–	–	50
	AEN-...-Z – Pulling													
	12, 16, 20, 25, 32, 40, 50, 63, 80, 100	1 ... 25	59 ... 4510	■	■	■	–	■	–	–	■	–	–	aen
	AEN-...-Q – Protected against rotation with square piston rod													
	16, 20, 25, 32, 40, 50, 63, 80, 100	1 ... 25	59 ... 4510	■	■	■	–	■	–	–	■	–	–	50
Double-acting	ADNH – High-force cylinder													
	25, 40, 63, 100	1 ... 150	542 ... 18,281	■	■	■	–	■	–	–	■	–	–	adnh
	ADNM – Multi-position cylinder													
	25, 40, 63, 100	1 ... 150	295 ... 4712	■	■	■	–	■	–	–	■	–	–	adnm
	ADNGF – Non-rotating with yoke													
	12, 16, 20, 25, 32, 40, 50, 63, 80, 100	–	–	–	–	–	■	–	–	■	■	–	–	189

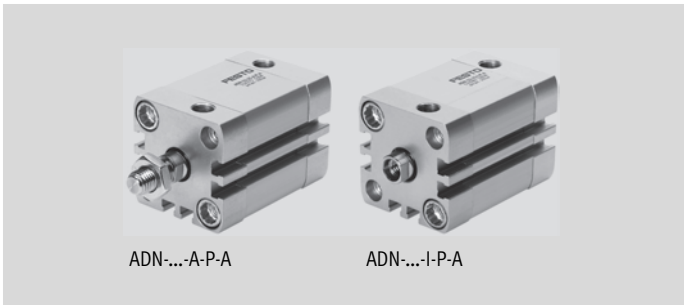
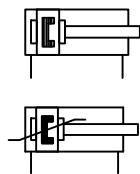
Product options

A	Male thread	Q	Square piston rod	K5	Special piston rod thread	S10	Slow speed
I	Female thread	S1	Reinforced piston rod	K8	Extended piston rod	S11	Low friction
P	Elastic cushioning rings/plates at both ends	S2	Through piston rod	K10	Smooth anodised aluminium piston rod	R3	High corrosion protection
PPS	Pneumatic cushioning, self-adjusting at both ends	S20	Through, hollow piston rod	S6	Heat-resistant seals up to max. 120°C	R8	Dust protection
A	Position sensing	K2	Extended male piston rod thread			TL	Laser etched rating plate
						TT	Low temperature

Cylinders with piston rod > Standards-based cylinders >

Compact cylinders ADN ★ to ISO 21287

Data sheet – Double-acting



Technical data			Dimensions ➔ Page 56				
Piston Ø		12	16	20	25	32	40
Pneumatic connection		M5	M5	M5	M5	G1/8	G1/8
Piston rod thread	Female	M3	M4	M6	M6	M8	M8
	Male	M5	M6	M8	M8	M10x1.25	M10x1.25
Stroke [mm]		1 ... 300				1 ... 400	
Cushioning	ADN---P	Elastic cushioning rings/plates at both ends					
	ADN---PPS	–			Pneumatic cushioning, self-adjusting at both ends		
Cushioning length	ADN---PPS [mm]	–		3	3.5	4	5
Theoretical force	ADN--- [N]	68	121	188	295	483	754
at 6 bar, advancing	ADN---S2 [N]	51	90	141	247	415	686
Theoretical force	ADN--- [N]	51	90	141	247	415	686
at 6 bar, retracting	ADN---S2 [N]	51	90	141	247	415	686

Piston Ø		50	63	80	100	125
Pneumatic connection		G1/8	G1/8	G1/8	G1/8	G1/4
Piston rod thread	Female	M10	M10	M12	M12	M16
	Male	M12x1.25	M12x1.25	M16x1.5	M16x1.5	M20x1.5
Stroke	[mm]	1 ... 400		1 ... 500		
Cushioning	ADN-...-P	Elastic cushioning rings/plates at both ends				
	ADN-...-PPS	Pneumatic cushioning, self-adjusting at both ends				–
Cushioning length	ADN-...-PPS [mm]	6	7	7.5	10	–
Theoretical force	ADN-... [N]	1178	1870	3016	4712	7363
at 6 bar, advancing	ADN-...-S2 [N]	1057	1750	2827	4524	7069
Theoretical force	ADN-... [N]	1057	1750	2827	4524	7069
at 6 bar, retracting	ADN-...-S2 [N]	1057	1750	2827	4524	7069

Operating conditions			12	16	20	25	32	40	50	63	80	100	125
Operating pressure	ADN-...	[bar]	1 ... 10		0,6 ... 10								
	ADN-...-PPS	[bar]	–		1,5 ... 10			1 ... 10			–		
	ADN-...-Q	[bar]	1,3 ... 10		1 ... 10		0,8 ... 10			0,6 ... 10			
	ADN-...-S2	[bar]	1,5 ... 10	1,3 ... 10	1,2 ... 10		1 ... 10			0,8 ... 10			
	ADN-...-TT	[bar]	–		1,5 ... 10			1 ... 10			–		
Ambient temperature ¹⁾	ADN-...	[°C]	–20 ... +80										
	ADN-...-S6	[°C]	0 ... +120										
	ADN-...-TT	[°C]	–		–40 ... +80								

1) Note operating range of proximity sensors.

Materials		12	16	20	25	32	40	50	63	80	100	125
Piston Ø		12	16	20	25	32	40	50	63	80	100	125
Piston rod		High-alloy steel										
Bearing cap		Anodised aluminium									Coated die-cast aluminium	Anodised aluminium
Cylinder barrel		Smooth anodised wrought aluminium alloy										
End cap		Anodised aluminium									Coated die-cast aluminium	Anodised aluminium
Seals	ADN-...	TPE-U (PUR)										
	ADN-...-S6	FPM										

Order code – Double-acting

01

Pneumatic drives

Type		ADN		Double-acting compact cylinder	
Piston Ø [mm]		Stroke [mm]			
12	5, 10, 15, 20, 25, 30, 40	1 ... 300			
16	5, 10, 15, 20, 25, 30, 40, 50	1 ... 300			
20, 25	5, 10, 15, 20, 25, 30, 40, 50, 60	1 ... 300			
32, 40, 50	5, 10, 15, 20, 25, 30, 40, 50, 60, 80	1 ... 400			
63	10, 15, 20, 25, 30, 40, 50, 60, 80	1 ... 400			
80, 100	10, 15, 20, 25, 30, 40, 50, 60, 80	1 ... 500			
125	–	1 ... 500			
Piston rod thread		I		Female thread	
		A		Male thread	
Cushioning		P		Elastic cushioning rings/plates at both ends	
		PPS		Pneumatic cushioning, self-adjusting at both ends	
Position sensing		A		Via proximity sensor	
Protection against rotation		Q		Square piston rod	
Piston rod		–		Piston rod at one end	
		S2		Through piston rod	
Temperature resistance		S6		Heat-resistant seals up to max. 120°C	
Low temperature		TT		Temperature resistance down to max. –40°C	

- 1

Only with piston Ø 20 ... 100
Not with temperature resistance S6 and low temperature TT.
Minimum stroke 5 mm.
- 2

Only with piston Ø 20 ... 100
Not with temperature resistance S6.

Order example:
ADN-50-50-A-P-A
Double-acting compact cylinder ADN - piston diameter 50 mm - stroke 50 mm - male thread - elastic cushioning rings/plates at both ends - position sensing via proximity sensor - piston rod at one end

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
→ www.festo.com/catalogue/...

Enter the type code in the search field.

Cylinders with piston rod > Standards-based cylinders >

Compact cylinders ADN ★ to ISO 21287

01

★ Quick ordering¹⁾

P – Elastic cushioning rings/plates at both ends

Pneumatic drives

Part no.	Type
Piston Ø 12 mm	
536204	ADN-12-5-A-P-A
536205	ADN-12-10-A-P-A
536206	ADN-12-15-A-P-A
536207	ADN-12-20-A-P-A
536208	ADN-12-25-A-P-A
536209	ADN-12-30-A-P-A
536210	ADN-12-40-A-P-A
536211	ADN-12-5-I-P-A
536212	ADN-12-10-I-P-A
536213	ADN-12-15-I-P-A
536214	ADN-12-20-I-P-A
536215	ADN-12-25-I-P-A
536216	ADN-12-30-I-P-A
536217	ADN-12-40-I-P-A
Piston Ø 16 mm	
536219	ADN-16-5-A-P-A
536220	ADN-16-10-A-P-A
536221	ADN-16-15-A-P-A
536222	ADN-16-20-A-P-A
536223	ADN-16-25-A-P-A
536224	ADN-16-30-A-P-A
536225	ADN-16-40-A-P-A
536331	ADN-16-50-A-P-A
536226	ADN-16-5-I-P-A
536227	ADN-16-10-I-P-A
536228	ADN-16-15-I-P-A
536229	ADN-16-20-I-P-A
536230	ADN-16-25-I-P-A
536231	ADN-16-30-I-P-A
536232	ADN-16-40-I-P-A
536341	ADN-16-50-I-P-A
Piston Ø 20 mm	
536234	ADN-20-5-A-P-A
536235	ADN-20-10-A-P-A
536236	ADN-20-15-A-P-A
536237	ADN-20-20-A-P-A
536238	ADN-20-25-A-P-A
536239	ADN-20-30-A-P-A
536240	ADN-20-40-A-P-A
536241	ADN-20-50-A-P-A
536352	ADN-20-60-A-P-A
536242	ADN-20-5-I-P-A
536243	ADN-20-10-I-P-A
536244	ADN-20-15-I-P-A
536245	ADN-20-20-I-P-A
536246	ADN-20-25-I-P-A
536247	ADN-20-30-I-P-A
536248	ADN-20-40-I-P-A
536249	ADN-20-50-I-P-A
536362	ADN-20-60-I-P-A

Part no.	Type
Piston Ø 25 mm	
536251	ADN-25-5-A-P-A
536252	ADN-25-10-A-P-A
536253	ADN-25-15-A-P-A
536254	ADN-25-20-A-P-A
536255	ADN-25-25-A-P-A
536256	ADN-25-30-A-P-A
536257	ADN-25-40-A-P-A
536258	ADN-25-50-A-P-A
536373	ADN-25-60-A-P-A
536259	ADN-25-5-I-P-A
536260	ADN-25-10-I-P-A
536261	ADN-25-15-I-P-A
536262	ADN-25-20-I-P-A
536263	ADN-25-25-I-P-A
536264	ADN-25-30-I-P-A
536265	ADN-25-40-I-P-A
536366	ADN-25-50-I-P-A
536383	ADN-25-60-I-P-A
Piston Ø 32 mm	
536268	ADN-32-5-A-P-A
536269	ADN-32-10-A-P-A
536270	ADN-32-15-A-P-A
536271	ADN-32-20-A-P-A
536272	ADN-32-25-A-P-A
536273	ADN-32-30-A-P-A
536274	ADN-32-40-A-P-A
536275	ADN-32-50-A-P-A
536276	ADN-32-60-A-P-A
536277	ADN-32-80-A-P-A
536278	ADN-32-5-I-P-A
536279	ADN-32-10-I-P-A
536280	ADN-32-15-I-P-A
536281	ADN-32-20-I-P-A
536282	ADN-32-25-I-P-A
536283	ADN-32-30-I-P-A
536284	ADN-32-40-I-P-A
536285	ADN-32-50-I-P-A
536286	ADN-32-60-I-P-A
536287	ADN-32-80-I-P-A
Piston Ø 40 mm	
536289	ADN-40-5-A-P-A
536290	ADN-40-10-A-P-A
536291	ADN-40-15-A-P-A
536292	ADN-40-20-A-P-A
536293	ADN-40-25-A-P-A
536294	ADN-40-30-A-P-A
536295	ADN-40-40-A-P-A
536296	ADN-40-50-A-P-A
536297	ADN-40-60-A-P-A
536298	ADN-40-80-A-P-A

Part no.	Type
Piston Ø 40 mm	
536299	ADN-40-5-I-P-A
536300	ADN-40-10-I-P-A
536301	ADN-40-15-I-P-A
536302	ADN-40-20-I-P-A
536303	ADN-40-25-I-P-A
536304	ADN-40-30-I-P-A
536305	ADN-40-40-I-P-A
536306	ADN-40-50-I-P-A
536307	ADN-40-60-I-P-A
536308	ADN-40-80-I-P-A
Piston Ø 50 mm	
536310	ADN-50-5-A-P-A
536311	ADN-50-10-A-P-A
536312	ADN-50-15-A-P-A
536313	ADN-50-20-A-P-A
536314	ADN-50-25-A-P-A
536315	ADN-50-30-A-P-A
536316	ADN-50-40-A-P-A
536317	ADN-50-50-A-P-A
536318	ADN-50-60-A-P-A
536319	ADN-50-80-A-P-A
536320	ADN-50-5-I-P-A
536321	ADN-50-10-I-P-A
536322	ADN-50-15-I-P-A
536323	ADN-50-20-I-P-A
536324	ADN-50-25-I-P-A
536325	ADN-50-30-I-P-A
536326	ADN-50-40-I-P-A
536327	ADN-50-50-I-P-A
536328	ADN-50-60-I-P-A
536329	ADN-50-80-I-P-A
Piston Ø 63 mm	
536332	ADN-63-10-A-P-A
536333	ADN-63-15-A-P-A
536334	ADN-63-20-A-P-A
536335	ADN-63-25-A-P-A
536336	ADN-63-30-A-P-A
536337	ADN-63-40-A-P-A
536338	ADN-63-50-A-P-A
536339	ADN-63-60-A-P-A
536340	ADN-63-80-A-P-A
536342	ADN-63-10-I-P-A
536343	ADN-63-15-I-P-A
536344	ADN-63-20-I-P-A
536345	ADN-63-25-I-P-A
536346	ADN-63-30-I-P-A
536347	ADN-63-40-I-P-A
536348	ADN-63-50-I-P-A
536349	ADN-63-60-I-P-A
536350	ADN-63-80-I-P-A

1) All products in this table are easy to select and quick to order.

Compact cylinders ADN ★ to ISO 21287

★ Quick ordering¹⁾

P – Elastic cushioning rings/plates at both ends

Part no.	Type
Piston Ø 80 mm	
536353	ADN-80-10-A-P-A
536354	ADN-80-15-A-P-A
536355	ADN-80-20-A-P-A
536356	ADN-80-25-A-P-A
536357	ADN-80-30-A-P-A
536358	ADN-80-40-A-P-A
536359	ADN-80-50-A-P-A
536360	ADN-80-60-A-P-A
536361	ADN-80-80-A-P-A

Part no.	Type
Piston Ø 80 mm	
536363	ADN-80-10-I-P-A
536364	ADN-80-15-I-P-A
536365	ADN-80-20-I-P-A
536366	ADN-80-25-I-P-A
536367	ADN-80-30-I-P-A
536368	ADN-80-40-I-P-A
536369	ADN-80-50-I-P-A
536370	ADN-80-60-I-P-A
536371	ADN-80-80-I-P-A

PPS – Pneumatic cushioning, self-adjusting at both ends

Part no.	Type
Piston Ø 32 mm	
572655	ADN-32-10-A-PPS-A
572656	ADN-32-15-A-PPS-A
572657	ADN-32-20-A-PPS-A
572658	ADN-32-25-A-PPS-A
572659	ADN-32-30-A-PPS-A
572660	ADN-32-40-A-PPS-A
572661	ADN-32-50-A-PPS-A
572662	ADN-32-60-A-PPS-A
572663	ADN-32-80-A-PPS-A
572646	ADN-32-10-I-PPS-A
572647	ADN-32-15-I-PPS-A
572648	ADN-32-20-I-PPS-A
572649	ADN-32-25-I-PPS-A
572650	ADN-32-30-I-PPS-A
572651	ADN-32-40-I-PPS-A
572652	ADN-32-50-I-PPS-A
572653	ADN-32-60-I-PPS-A
572654	ADN-32-80-I-PPS-A
Piston Ø 40 mm	
572673	ADN-40-10-A-PPS-A
572674	ADN-40-15-A-PPS-A
572675	ADN-40-20-A-PPS-A
572676	ADN-40-25-A-PPS-A
572677	ADN-40-30-A-PPS-A
572678	ADN-40-40-A-PPS-A
572679	ADN-40-50-A-PPS-A
572680	ADN-40-60-A-PPS-A
572681	ADN-40-80-A-PPS-A
572664	ADN-40-10-I-PPS-A
572665	ADN-40-15-I-PPS-A
572666	ADN-40-20-I-PPS-A
572667	ADN-40-25-I-PPS-A
572668	ADN-40-30-I-PPS-A
572669	ADN-40-40-I-PPS-A
572670	ADN-40-50-I-PPS-A
572671	ADN-40-60-I-PPS-A
572672	ADN-40-80-I-PPS-A

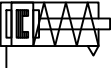
Part no.	Type
Piston Ø 50 mm	
572691	ADN-50-10-A-PPS-A
572692	ADN-50-15-A-PPS-A
572693	ADN-50-20-A-PPS-A
572694	ADN-50-25-A-PPS-A
572695	ADN-50-30-A-PPS-A
572696	ADN-50-40-A-PPS-A
572697	ADN-50-50-A-PPS-A
572698	ADN-50-60-A-PPS-A
572699	ADN-50-80-A-PPS-A
572682	ADN-50-10-I-PPS-A
572683	ADN-50-15-I-PPS-A
572684	ADN-50-20-I-PPS-A
572685	ADN-50-25-I-PPS-A
572686	ADN-50-30-I-PPS-A
572687	ADN-50-40-I-PPS-A
572688	ADN-50-50-I-PPS-A
572689	ADN-50-60-I-PPS-A
572690	ADN-50-80-I-PPS-A
Piston Ø 63 mm	
572709	ADN-63-10-A-PPS-A
572710	ADN-63-15-A-PPS-A
572711	ADN-63-20-A-PPS-A
572712	ADN-63-25-A-PPS-A
572713	ADN-63-30-A-PPS-A
572714	ADN-63-40-A-PPS-A
572715	ADN-63-50-A-PPS-A
572716	ADN-63-60-A-PPS-A
572717	ADN-63-80-A-PPS-A
572700	ADN-63-10-I-PPS-A
572701	ADN-63-15-I-PPS-A
572702	ADN-63-20-I-PPS-A
572703	ADN-63-25-I-PPS-A
572704	ADN-63-30-I-PPS-A
572705	ADN-63-40-I-PPS-A
572706	ADN-63-50-I-PPS-A
572707	ADN-63-60-I-PPS-A
572708	ADN-63-80-I-PPS-A

Part no.	Type
Piston Ø 80 mm	
572727	ADN-80-10-A-PPS-A
572728	ADN-80-15-A-PPS-A
572729	ADN-80-20-A-PPS-A
572730	ADN-80-25-A-PPS-A
572731	ADN-80-30-A-PPS-A
572732	ADN-80-40-A-PPS-A
572733	ADN-80-50-A-PPS-A
572734	ADN-80-60-A-PPS-A
572735	ADN-80-80-A-PPS-A
572718	ADN-80-10-I-PPS-A
572719	ADN-80-15-I-PPS-A
572720	ADN-80-20-I-PPS-A
572721	ADN-80-25-I-PPS-A
572722	ADN-80-30-I-PPS-A
572723	ADN-80-40-I-PPS-A
572724	ADN-80-50-I-PPS-A
572725	ADN-80-60-I-PPS-A
572726	ADN-80-80-I-PPS-A

1) All products in this table are easy to select and quick to order.

01

Data sheet – Single-acting, pushing



Technical data						Dimensions → Page 56
Piston Ø		12	16	20	25	32
Pneumatic connection		M5	M5	M5	M5	G1/8
Piston rod thread	Female	M3	M4	M6	M6	M8
	Male	M5	M6	M8	M8	M10x1.25
Stroke	[mm]	1 ... 10				
Cushioning		Elastic cushioning rings/plates at both ends				
Theoretical force at 6 bar, advancing	[N]	56	95	162	259	441

Piston Ø		40	50	63	80	100
Pneumatic connection		G1/8	G1/8	G1/8	G1/8	G1/8
Piston rod thread	Female	M8	M10	M10	M12	M12
	Male	M10x1.25	M12x1.25	M12x1.25	M16x1.5	M16x1.5
Stroke	[mm]	1 ... 25				
Cushioning		Elastic cushioning rings/plates at both ends				
Theoretical force at 6 bar, advancing	[N]	702	1098	1783	2899	4511

Operating conditions											
Piston Ø		12	16	20	25	32	40	50	63	80	100
Operating pressure		[bar]	1.5 ... 10		1 ... 10						
Ambient temperature ¹⁾	AEN-...	[°C]	-20 ... +80								
	AEN-...-S6	[°C]	0 ... +120								

1) Note operating range of proximity sensors.

Materials		
Piston Ø	12 ... 80	100
Piston rod	High-alloy steel	
Bearing cap	Anodised aluminium	Coated die-cast aluminium
Cylinder barrel	Smooth anodised wrought aluminium alloy	
End cap	Anodised aluminium	Coated die-cast aluminium
Seals	TPE-U (PUR)	

Order code – Single-acting, pushing

01

Pneumatic drives

Type		AEN	Single-acting compact cylinder, pushing
Piston Ø [mm]			
	Stroke [mm]		
12	1 ... 10		
16, 20, 25, 32, 40, 50, 63, 80, 100	1 ... 25		
Piston rod thread			
A	Male thread		
I	Female thread		
Cushioning			
P	Elastic cushioning rings/plates at both ends		
Position sensing			
A	Via proximity sensor		
Protection against rotation			
Q	Square piston rod	1	
Temperature resistance			
S6	Heat-resistant seals up to max. 120°C		

1 Not with piston Ø 12

Order example:

AEN-50-25-I-P-A-Q-S6

Single-acting compact cylinder AEN - piston diameter 50 mm - stroke 25 mm - female thread - elastic cushioning rings/plates at both ends - position sensing via proximity sensor - square piston rod - heat-resistant seals up to max. 120°C

Ordering – Product options

Configurable product

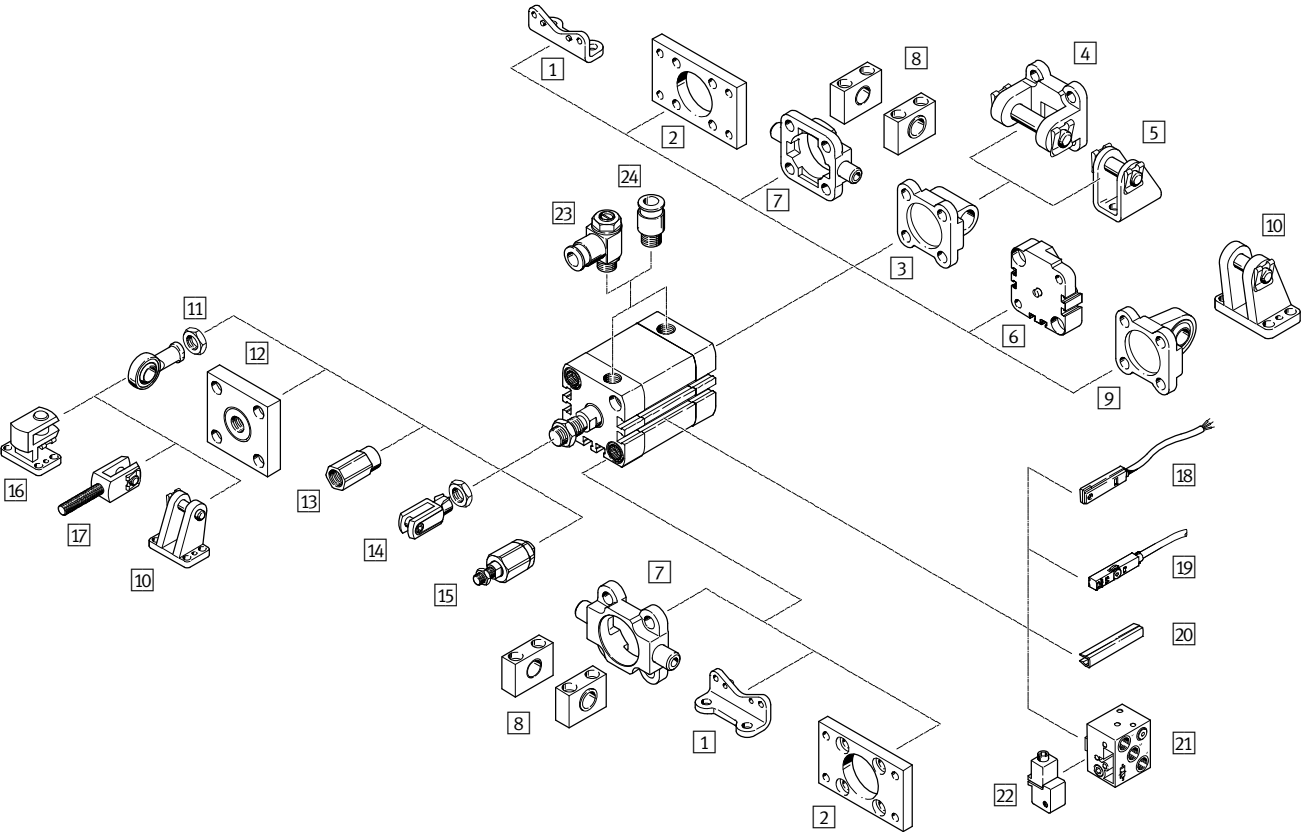
This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
➔ www.festo.com/catalogue/...

Enter the type code in the search field.

01 Accessories

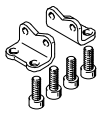
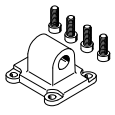
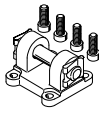
Pneumatic drives

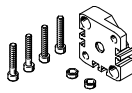
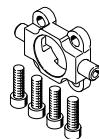
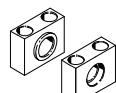
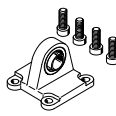
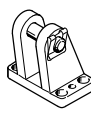
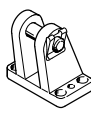


	Basic design	Q	S2	→ Page/online
1	Foot mounting HNA	■	■	53
2	Flange mounting FNC	■	■	53
3	Swivel flange SNCL	■	–	53
4	Swivel flange SNCB	■	–	53
5	Clevis foot LBN	■	–	53
	Clevis foot CRLBN	■	–	adn
6	Multi-position kit DPNA	■	–	53
7	Trunnion flange ZNCF	■	■	53
	Trunnion flange CRZNG	■	■	adn
8	Trunnion support LNZG	■	■	53
9	Swivel flange SNCS	■	–	53
10	Clevis foot LBG	■	–	53
11	Rod eye SGS	■	■	54
	Rod eye CRSGS	■	■	adn
12	Coupling piece KSG/KSZ	■	■	54
13	Adapter AD	■	–	54
14	Rod clevis SG	■	■	54
	Rod clevis CRSG	■	■	adn
15	Self-aligning rod coupler FK	■	–	54
	Self-aligning rod coupler CRFK	■	■	adn
16	Right-angle clevis foot LQG	■	–	54
17	Rod clevis SGA	■	–	54
18	Proximity sensor SME-/SMT-8 and connecting cable NEBU	■	■	55
19	Proximity sensor SME-/SMT-8M and connecting cable NEBU	■	■	55
20	Slot cover ABP-5-S	■	■	55
21	Proximity sensor SMP0-8E	■	■	adn
22	Mounting kit SMB-8E	■	■	adn
23	One-way flow control valve GRLA/GRLZ	■	■	55
24	Push-in fitting QS	■	■	1443

Compact cylinders ADN ★ /AEN, to ISO 21287

Accessories – Ordering data

	For Ø	Part no.	Type
1 Foot mounting Dimensions online: → adn			
	12	537237	HNA-12
	16	537238	HNA-16
	20	537239	HNA-20
	25	537240	HNA-25
	32	537241	HNA-32
	40	537242	HNA-40
	50	537243	HNA-50
	63	537244	HNA-63
	80	537249	HNA-80
	100	537250	HNA-100
2 Flange mounting Dimensions online: → adn			
	12	537245	FNC-12
	16	537246	FNC-16
	20	537247	FNC-20
	25	537248	FNC-25
	32	★ 174376	FNC-32
	40	★ 174377	FNC-40
	50	★ 174378	FNC-50
	63	★ 174379	FNC-63
	80	★ 174380	FNC-80
	100	174381	FNC-100
	125	174382	FNC-125
3 Swivel flange Dimensions online: → adn			
	12	537790	SNCL-12
	16	537791	SNCL-16
	20	537792	SNCL-20
	25	537793	SNCL-25
	32	★ 174404	SNCL-32
	40	★ 174405	SNCL-40
	50	★ 174406	SNCL-50
	63	★ 174407	SNCL-63
	80	★ 174408	SNCL-80
	100	174409	SNCL-100
	125	174410	SNCL-125
4 Swivel flange Dimensions online: → adn			
	32	★ 174390	SNCB-32
	40	★ 174391	SNCB-40
	50	★ 174392	SNCB-50
	63	★ 174393	SNCB-63
	80	★ 174394	SNCB-80
	100	174395	SNCB-100
	125	174396	SNCB-125
5 Clevis foot Data sheets online: → lbn			
	12, 16	★ 6058	LBN-12/16
	20, 25	★ 6059	LBN-20/25

	For Ø	Part no.	Type
6 Multi-position kit Dimensions online: → adn			
	12	537263	DPNA-12
	16	537264	DPNA-16
	20	537265	DPNA-20
	25	537266	DPNA-25
	32	537267	DPNA-32
	40	537268	DPNA-40
	50	537269	DPNA-50
	63	532270	DPNA-63
	80	537271	DPNA-80
	100	537272	DPNA-100
7 Trunnion flange Dimensions online: → adn			
	32	174411	ZNCF-32
	40	174412	ZNCF-40
	50	174413	ZNCF-50
	63	174414	ZNCF-63
	80	174415	ZNCF-80
	100	174416	ZNCF-100
	125	174417	ZNCF-125
8 Trunnion support Dimensions online: → adn			
	32	32959	LNZG-32
	40, 50	32960	LNZG-40/50
	63, 80	32961	LNZG-63/80
	100, 125	32962	LNZG-100/125
9 Swivel flange Dimensions online: → adn			
	32	★ 174397	SNCS-32
	40	★ 174398	SNCS-40
	50	★ 174399	SNCS-50
	63	★ 174400	SNCS-63
	80	★ 174401	SNCS-80
	100	174402	SNCS-100
	125	174403	SNCS-125
10 Clevis foot Data sheets online: → lbg			
	32	31761	LBG-32
	40	31762	LBG-40
	50	31763	LBG-50
	63	31764	LBG-63
	80	31765	LBG-80
	100	31766	LBG-100
	125	31767	LBG-125
Clevis foot used with rod eye SGS Data sheets online: → lbg			
	32, 40	31761	LBG-32
	50, 63	31762	LBG-40
	80, 100	31763	LBG-50
		31764	LBG-63
	125	31765	LBG-80
		31766	LBG-100

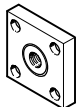
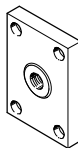
Cylinders with piston rod > Standards-based cylinders >

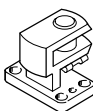
Compact cylinders ADN ★ /AEN, to ISO 21287

Pneumatic drives

01

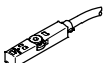
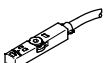
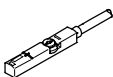
Accessories – Ordering data

	For Ø	Part no.	Type
11 Rod eye Data sheets online: → sgs			
	16	★ 9254	SGS-M6
	20, 25	★ 9255	SGS-M8
	32, 40	★ 9261	SGS-M10x1,25
	50, 63	★ 9262	SGS-M12x1,25
	80, 100	★ 9263	SGS-M16x1,5
	125	★ 9264	SGS-M20x1,5
12 Coupling piece Data sheets online: → ksg			
	32, 40	32963	KSG-M10x1,25
	50, 63	32964	KSG-M12x1,25
	80, 100	32965	KSG-M16x1,5
	125	32966	KSG-M20x1,5
12 Coupling piece Data sheets online: → ksz			
	16	36123	KSZ-M6
	20, 25	36124	KSZ-M8
	32, 40	36125	KSZ-M10x1,25
	50, 63	36126	KSZ-M12x1,25
	80, 100	36127	KSZ-M16x1,5
	125	36128	KSZ-M20x1,5
13 Adapter Data sheets online: → ad			
	16	157328	AD-M6-M5
		157329	AD-M6-G1/8
		157330	AD-M6-G1/4
		157331	AD-M8-G1/8
	20, 25	157332	AD-M8-G1/4
		157333	AD-M10x1,25-G1/8
	32, 40	157334	AD-M10x1,25-G1/4
	50, 63	160256	AD-M12x1,25-G1/4
		160257	AD-M12x1,25-G3/8

	For Ø		Part no.	Type
14 Rod clevis Data sheets online: → sg				
	16	★	3110	SG-M6
	20, 25	★	3111	SG-M8
	32, 40	★	6144	SG-M10x1,25
	50, 63	★	6145	SG-M12x1,25
	80, 100	★	6146	SG-M16x1,5
	125	★	6147	SG-M20x1,5
15 Self-aligning rod coupler Data sheets online: → fk				
	12		30184	FK-M5
	16	★	2061	FK-M6
	20, 25	★	2062	FK-M8
	32, 40	★	6140	FK-M10x1,25
	50, 63	★	6141	FK-M12x1,25
	80, 100	★	6142	FK-M16x1,5
	125	★	6143	FK-M20x1,5
16 Right-angle clevis foot for rod eye SGS Data sheets online: → lqg				
	32, 40		31768	LQG-32
	50, 63		31769	LQG-40
	80, 100		31770	LQG-50
			31771	LQG-63
	125		31772	LQG-80
			31773	LQG-100
17 Rod clevis Data sheets online: → sga				
	32, 40		32954	SGA-M10x1,25
	50, 63		10767	SGA-M12x1,25
	80, 100		10768	SGA-M16x1,25
	125		10769	SGA-M20x1,5

Accessories – Ordering data

01

	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
18/19 Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets → Page 1206					
	12 ... 125	PNP, cable	2.5	★ 574335	SMT-8M-A-PS-24V-E-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-A-PS-24V-E-0,3-M8D
		PNP, plug	0.3	★ 574337	SMT-8M-A-PS-24V-E-0,3-M12
		NPN, cable	2.5	★ 574338	SMT-8M-A-NS-24V-E-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-A-NS-24V-E-0,3-M8D
Magneto-resistive – N/C contact Data sheets → Page 1206					
	12 ... 125	PNP, cable	7.5	★ 574340	SMT-8M-A-PO-24V-E-7,5-OE
Magnetic reed – N/O contact Data sheets → Page 1201					
	12 ... 125	Contacting, cable	2.5	★ 543862	SME-8M-DS-24V-K-2,5-OE
		Contacting, cable	5.0	★ 543863	SME-8M-DS-24V-K-5,0-OE
		Contacting, cable	2.5	★ 543872	SME-8M-ZS-24V-K-2,5-OE
		Contacting, plug	0.3	★ 543861	SME-8M-DS-24V-K-0,3-M8D
Data sheets → Page 1203					
	12 ... 125	Contacting, cable	2.5	150855	SME-8-K-LED-24
		Contacting, plug	0.3	150857	SME-8-S-LED-24
Magnetic reed – N/C contact Data sheets → Page 1203					
	12 ... 125	Contacting, cable	7.5	160251	SME-8-O-K-LED-24
18/19 Connecting cable, straight socket Data sheets → Page 1543					
	12 ... 125	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
		M12x1, 5-pin	2.5	★ 541363	NEBU-M12G5-K-2.5-LE3
			5.0	★ 541364	NEBU-M12G5-K-5-LE3
Angled socket Data sheets → Page 1543					
	12 ... 125	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3
		M12x1, 5-pin	2.5	541367	NEBU-M12W5-K-2.5-LE3
			5.0	541370	NEBU-M12W5-K-5-LE3
20 Slot cover ¹⁾					
	12 ... 125	–	–	151680	ABP-5-S

1) Packaging unit 2x 0.5 m.

	For Ø	Connection		Part no.	Type
		Thread	O.D.		
23 One-way flow control valve with slotted head screw, metal²⁾ for exhaust air flow control Data sheets → Page 1033					
	12, 16, 20, 25	M5	3	★ 193137	GRLA-M5-QS-3-D
	32	G1/8	4	★ 193143	GRLA-G1/8-QS-4-D
	40, 50, 63, 80, 100		6	★ 193144	GRLA-G1/8-QS-6-D
	125	G1/4	8	★ 193147	GRLA-G1/4-QS-8-D
For supply air flow control Data sheets → Page 1033					
	12, 16, 20, 25	M5	3	★ 193153	GRLZ-M5-QS-3-D
	32	G1/8	4	★ 193157	GRLZ-G1/8-QS-4-D
	40, 50, 63, 80, 100		6	★ 193158	GRLZ-G1/8-QS-6-D

2) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

Cylinders with piston rod > Standards-based cylinders >

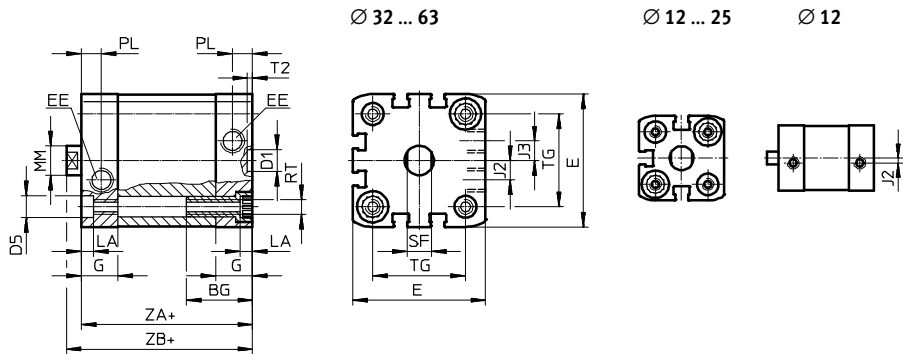
Compact cylinders ADN ★ /AEN, to ISO 21287

01

Dimensions

Download CAD data → www.festo.com

Basic design – Ø 12 ... 63



+ = plus stroke length

Ø	BG	D1 Ø	D5 Ø	E	EE	G	J2	J3	LA
[mm]	min.	H9	F9						+0.2
12	17	9	6	27.5 ^{+0.3}	M5	10.5	2	–	3.5
16				29 ^{+0.3}		11	2.6		
20	19.5		9	35.5 ^{+0.3}		12			
25				39.5 ^{+0.3}					
32	26			47 ^{+0.3}	G1/8	15	6		5
40				54.5 ^{+0.3}			8		
50	27	12	65.5 ^{+0.3}	11.5					
63			75.5 ^{+0.3}						

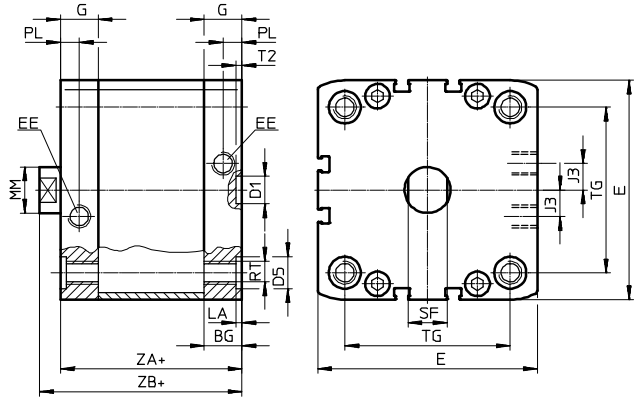
Ø	MM Ø	PL	RT	SF	T2	TG	ZA	ZB	PPS
[mm]		+0.2		h13	+0.1	±0.2	±0.3	+1.2	+1.3
12	6	6	M4	5	2.1	16	35	39.2	–
16	8			7		18		39.7	
20	10		M5	9		22	37	42.5	42.5
25						26	39	44.5	45.3
32	12	8.2	M6	10		32.5	44	50	50.6
40						38	45	51.1	51.7
50	16		M8	13	2.6	46.5		53.2	53.2
63						56.5	57.1	57	

Compact cylinders ADN ★/AEN, to ISO 21287

Dimensions

Download CAD data → www.festo.com

Basic design – Ø 80 ... 125



+ = plus stroke length

Ø	BG	D1 Ø	D5 Ø	E	EE	G	J3	LA
[mm]	min.	H9						+0.2
80	17	12	15	95.5 ^{+0.6}	G1/8	16.5	11.5	2.6
100	21.5			113.5 ^{+0.6}		21.5	20	
125	20		–	134.6 ^{+0.3}	G1/4	20	21.15	–

Ø	MM Ø	PL	RT	SF	T2	TG	ZA	ZB	PPS
[mm]		+0.2		h13	+0.1	±0.2	±0.3	+1.2	+1.3
80	20	8.2	M10	17	2.6	72	54	62.9	63.4
100		10.5				89	67	76	76.8
125	25			M12	21		110	81	92

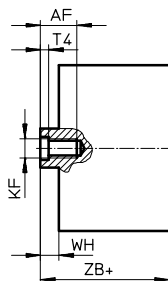
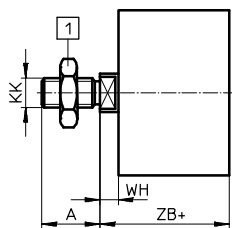
Compact cylinders ADN ★ /AEN, to ISO 21287

01

Dimensions

Basic design

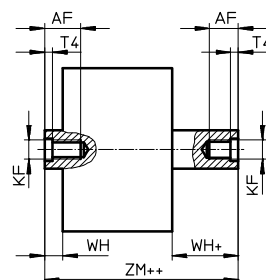
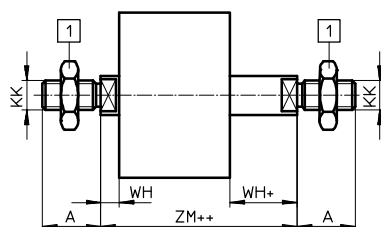
Download CAD data → www.festo.com



1 Hex nut DIN 439-B
only with Ø 32 ... 125

+ = plus stroke length

S2 – Through piston rod

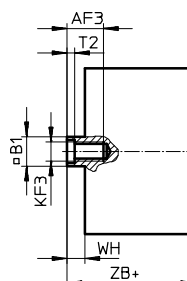
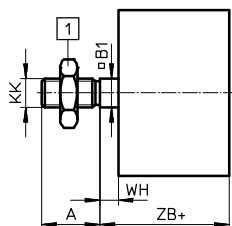


1 Hex nut DIN 439-B
only with Ø 32 ... 125

+ = plus stroke length

++ = plus 2x stroke length

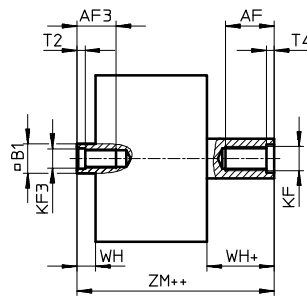
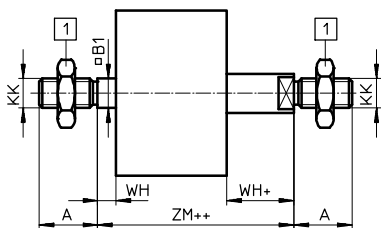
Q – Square piston rod



1 Hex nut DIN 439-B
only with Ø 32 ... 125

+ = plus stroke length

Q-S2 – Square, through piston rod



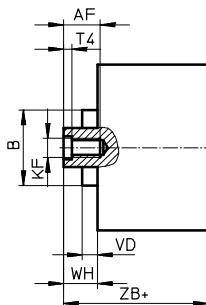
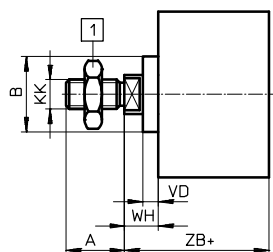
Note

The left-hand piston rod is square, the right-hand piston rod round.

+ = plus stroke length

++ = plus 2x stroke length

TT – Low temperature



1 Hex nut DIN 439-B
only with Ø 32 ... 125

+ = plus stroke length

Compact cylinders ADN ★ /AEN, to ISO 21287

Dimensions

Download CAD data → www.festo.com

01

Ø	A	A1	A2	AF	AF3	B Ø	B1 □	D7 Ø	D8	D9 Ø	L5	KF	KF3	KK
[mm]	-0.5			min.	min.									
12	10	1 ... 10	1 ... 300	8	8	-	5.5	-	-	-	-	M3	M3	M5
16	12			10	10		7	4.5		3.2	3	M4	M4	M6
20	16			1 ... 20	1 ... 400	14	12	18		9	6	3.8	2	M6
25		19	22			16	14	27	10	8	4.5	3	M8	M6
32	40			50	63									
80		28	1 ... 30			1 ... 500	20	20	35	16	-	G1/8	8	-
100	40			1 ... 40	25									
125														

Ø [mm]	T2	T3	T4	VD	WH			ZB			ZM	
					+1.3	PPS +1.4	TT +1.3	+1.2	PPS +1.3	TT +1.2		PPS
12	1.5	–	1.5	–	4.2	–	–	39.2	–	–	44.5 +0.5	–
16					4.7			39.7			45.7 +0.5	
20	2	2	2.6	5.2	5.5	5.5	10.5	42.5	42.5	47.5	49.5 +0.5	49.5 +0.5
25								44.5	45.3	49.5	51.5 +0.5	51.5 +0.5
32	2.6	2.6	3.3	6.4	6	6.5	12.5	50	50.6	56.5	57.5 +0.5	58.6 +0.6
40					6.1	6.6		51.1	51.7	57.5	58.6 +0.6	59.7 +0.7
50	3.3	3.3	4.7		8.2	8.2	14.7	53.2	53.2	59.7	62.8 +0.6	63.1 +0.7
63					8.1	8	14.6	57.1	57	63.6	66.6 +0.6	66.5 +0.7
80	4.7	4.7	6.1		8.9	9.4	15.4	62.9	63.4	69.4	73.2 +0.6	74.3 +0.7
100					9	9.8	15.5	76	76.8	82.5	86.4 +0.6	88 +0.7
125	6.1	–	7	–	11	–	–	92	–	–	104.4 +0.6	–



Save time and money during commissioning

- + Thanks to standardised interfaces to ISO 15552
- + With standardised mounting accessories
- + With self-adjusting end-position cushioning PPS

Cylinders with piston rod › Standards-based cylinders ›
Standards-based cylinders
to ISO 15552

DSBC ★

Cylinders with piston rod > Standards-based cylinders >

Standards-based cylinders to ISO 15552

DSBC★



Overview, configuration and ordering

→ www.festo.com/catalogue/dsbc



Additional information, support and user documentation

→ www.festo.com/sp/dsbc



Quick ordering of basic designs

→ page 66



Selected types in accordance with the ATEX Directive
for explosive atmospheres

→ www.festo.com/catalogue/ex



Spare parts service



- + ISO 15552 (ISO 6431, VDMA 24562)
- + Strokes of up to 2800 mm
- + With self-adjusting pneumatic end-position cushioning PPS
- + For position sensing
- + Excellent flexibility thanks to the wide range of variants
- + Comprehensive range of accessories for just about every type of installation
- + Optionally with metal scraper

Standards-based cylinders DSBC ★ to ISO 15552

Product range overview

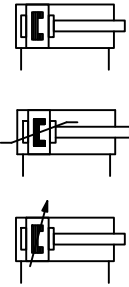
Type/function	Piston Ø [mm]	Stroke [mm]	Force [N]	Product options													
				Q	T	F	P	PPS	PPV	A	N3	T1	T3	T4	A3	...E	
DSBC																	
Double-acting	32, 40, 50, 63, 80, 100, 125	1 ... 2800	483 ... 7363	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Product options

Q	With protection against rotation	T	Through piston rod	A	Position sensing	A1	Increased chemical resistance
L	Low friction	F	Female piston rod thread	N3	Standard conforms to ISO 15552	A2	Hard scraper
U	Uniform, slow movement	D3	Sensor slot on 3 sides	R3	High corrosion protection	A3	Suitable for unlubricated operation
L1	Low friction for balancer applications	P	Elastic cushioning rings/plates at both ends	T1	Heat-resistant seals up to max. 120°C	A6	Metal scraper
C	Clamping unit attached	PPS	Pneumatic cushioning, self-adjusting at both ends	T3	Low temperature	EX4	EU certification (II 2GD)
E1	End-position locking at both ends	PPV	Pneumatic cushioning, adjustable at both ends	T4	Heat-resistant seals up to max. 150°C	...E	Piston rod extension
E2	End-position locking with advanced piston rod			P2	Bellows on bearing cap	...L	Piston rod thread extension
E3	End-position locking with retracted piston rod						

Standards-based cylinders DSBC ★ to ISO 15552

Data sheet



Technical data		Dimensions → Page 73						
Piston Ø		32	40	50	63	80	100	125
Pneumatic connection		G1/8	G1/4	G1/4	G3/8	G3/8	G1/2	G1/2
Piston rod thread		M10x1.25	M12x1.25	M16x1.5	M16x1.5	M20x1.5	M20x1.5	M27x2
Stroke								
DSBC-...	[mm]	1 ... 2800						
DSBC-...-Q	[mm]	1 ... 1500						
DSBC-...-E	[mm]	1 ... 2000						
Cushioning								
DSBC-...-P		Elastic cushioning rings/plates at both ends						
DSBC-...-PPS		Pneumatic cushioning, self-adjusting at both ends						
DSBC-...-PPV		Pneumatic cushioning, adjustable at both ends						
Cushioning length	[mm]	17	19	22	22	31	31	45
Theoretical force at 6 bar, advancing	[N]	483	754	1178	1870	3016	4712	7363
Theoretical force at 6 bar, retracting	[N]	415	633	990	1682	2721	4418	6881
Max. impact energy in the end positions								
DSBC-...	[J]	0.4 ¹⁾	0.7	1.0	1.3	1.8	2.5	3.3
DSBC-...-T1/T3/T4	[J]	0.2 ¹⁾	0.35	0.5	0.65	0.9	1.25	1.65

1) The max. impact energy in combination with the trunnion mounting kit DAMT is 0.1 J.

Operating conditions								
Piston Ø		32	40	50	63	80	100	125
Operating pressure								
DSBC-...	[bar]	0.6 ... 12		0.4 ... 12			0.2 ... 10	
DSBC-...-T3	[bar]	1 ... 12					1 ... 10	
DSBC-...-A3	[bar]	1.5 ... 12		1 ... 12		0.6 ... 12		0.6 ... 10
Ambient temperature ²⁾								
DSBC-...	[°C]	-20 ... +80						
DSBC-...-T1	[°C]	0 ... +120						
DSBC-...-T3	[°C]	-40 ... +80						
DSBC-...-T4	[°C]	0 ... +150						

2) Note operating range of proximity sensors.

Materials	
Piston rod	High-alloy steel
Bearing cap	Coated die-cast aluminium
Cylinder barrel	Smooth anodised wrought aluminium alloy
End cap	Coated die-cast aluminium
Seals	TPE-U (PU)

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
→ www.festo.com/catalogue/...

Enter the type code in the search field.

Order code

01

Pneumatic drives

		DSBC	-	-	-	-	-	-	-	-	A	-	-	-	-
Type															
DSBC	Double-acting standards-based cylinder														
Protection against rotation															
-	None														
Q	With protection against rotation 1														
Stroke Ø [mm]															
	Stroke [mm]														
32, 40, 50, 63, 80, 100, 125	20, 25, 30, 40, 50, 60, 70, 80, 100, 125, 150, 160, 200, 250, 300, 320, 400, 500 1 ... 2800														
Piston rod															
-	Piston rod at one end														
T	Through piston rod														
Piston rod thread type															
-	Male thread														
F	Female thread														
Cushioning															
P	Elastic cushioning rings/plates at both ends														
PPS	Pneumatic cushioning, self-adjusting at both ends 2														
PPV	Pneumatic cushioning, adjustable at both ends														
Position sensing															
A	Via proximity sensor														
Standard															
-	Based on ISO 15552														
N3	Conforms to ISO 15552														
Temperature range															
-	Standard														
T1	Heat resistant up to max. 120°C														
T3	Low temperature														
T4	Heat resistant up to max. 150°C														
Wiper seal variant															
-	None														
A3	Suitable for unlubricated operation 2														
Piston rod extension															
-	None														
...E	1 ... 500 mm 3														

1 Not with piston Ø 125,
not with standard N3
or temperature range T3, T4

or wiper seal variant A3,
only up to strokes of 1500 mm

2 Not with temperature range T1, T3,
T4

3 Only up to strokes of 2000 mm

Order example:

DSBC-32-500-PPVA-N3T1

Double-acting standards-based cylinder - without protection against rotation - piston diameter 32 mm - stroke 500 mm - piston rod at one end - male thread - pneumatic cushioning, adjustable at both ends - position sensing via proximity sensor - standard conforms to ISO 15552 - heat resistant up to max. 120°C - no wiper seal - without piston rod extension

Cylinders with piston rod > Standards-based cylinders >

Standards-based cylinders DSBC ★ to ISO 15552

★ Quick ordering¹⁾

PPS – Pneumatic cushioning, self-adjusting at both ends

Part no.	Type
Piston Ø 32 mm	
2123085	DSBC-32-20-PPSA-N3
1376467	DSBC-32-25-PPSA-N3
2123086	DSBC-32-30-PPSA-N3
1376468	DSBC-32-40-PPSA-N3
1376469	DSBC-32-50-PPSA-N3
2123087	DSBC-32-60-PPSA-N3
2123088	DSBC-32-70-PPSA-N3
1376470	DSBC-32-80-PPSA-N3
1376471	DSBC-32-100-PPSA-N3
1376472	DSBC-32-125-PPSA-N3
2123089	DSBC-32-150-PPSA-N3
1376473	DSBC-32-160-PPSA-N3
1376474	DSBC-32-200-PPSA-N3
1376475	DSBC-32-250-PPSA-N3
2123090	DSBC-32-300-PPSA-N3
1376476	DSBC-32-320-PPSA-N3
1376477	DSBC-32-400-PPSA-N3
1376478	DSBC-32-500-PPSA-N3
Piston Ø 40 mm	
2123780	DSBC-40-20-PPSA-N3
1376903	DSBC-40-25-PPSA-N3
2123781	DSBC-40-30-PPSA-N3
1376904	DSBC-40-40-PPSA-N3
1376905	DSBC-40-50-PPSA-N3
2123782	DSBC-40-60-PPSA-N3
2123783	DSBC-40-70-PPSA-N3
1376906	DSBC-40-80-PPSA-N3
1376907	DSBC-40-100-PPSA-N3
1376908	DSBC-40-125-PPSA-N3
2123784	DSBC-40-150-PPSA-N3
1376909	DSBC-40-160-PPSA-N3
1376910	DSBC-40-200-PPSA-N3
1376911	DSBC-40-250-PPSA-N3
2123785	DSBC-40-300-PPSA-N3
1376912	DSBC-40-320-PPSA-N3
1376913	DSBC-40-400-PPSA-N3
1376914	DSBC-40-500-PPSA-N3

Part no.	Type
Piston Ø 50 mm	
2102628	DSBC-50-20-PPSA-N3
1376301	DSBC-50-25-PPSA-N3
2102629	DSBC-50-30-PPSA-N3
1376304	DSBC-50-40-PPSA-N3
1376305	DSBC-50-50-PPSA-N3
2102630	DSBC-50-60-PPSA-N3
2102631	DSBC-50-70-PPSA-N3
1376306	DSBC-50-80-PPSA-N3
1376307	DSBC-50-100-PPSA-N3
1376308	DSBC-50-125-PPSA-N3
2102632	DSBC-50-150-PPSA-N3
1376309	DSBC-50-160-PPSA-N3
1376310	DSBC-50-200-PPSA-N3
1376311	DSBC-50-250-PPSA-N3
2102633	DSBC-50-300-PPSA-N3
1376312	DSBC-50-320-PPSA-N3
1376313	DSBC-50-400-PPSA-N3
1376314	DSBC-50-500-PPSA-N3
Piston Ø 63 mm	
2126684	DSBC-63-20-PPSA-N3
1383632	DSBC-63-25-PPSA-N3
2126685	DSBC-63-30-PPSA-N3
1383633	DSBC-63-40-PPSA-N3
1383634	DSBC-63-50-PPSA-N3
2126686	DSBC-63-60-PPSA-N3
2126687	DSBC-63-70-PPSA-N3
1383635	DSBC-63-80-PPSA-N3
1383636	DSBC-63-100-PPSA-N3
1383637	DSBC-63-125-PPSA-N3
2126688	DSBC-63-150-PPSA-N3
1383638	DSBC-63-160-PPSA-N3
1383639	DSBC-63-200-PPSA-N3
1383640	DSBC-63-250-PPSA-N3
2126689	DSBC-63-300-PPSA-N3
1383641	DSBC-63-320-PPSA-N3
1383642	DSBC-63-400-PPSA-N3
1383643	DSBC-63-500-PPSA-N3

Part no.	Type
Piston Ø 80 mm	
2126636	DSBC-80-20-PPSA-N3
1383366	DSBC-80-25-PPSA-N3
2126637	DSBC-80-30-PPSA-N3
1383367	DSBC-80-40-PPSA-N3
1383368	DSBC-80-50-PPSA-N3
2126638	DSBC-80-60-PPSA-N3
2126639	DSBC-80-70-PPSA-N3
1383369	DSBC-80-80-PPSA-N3
1383370	DSBC-80-100-PPSA-N3
1383371	DSBC-80-125-PPSA-N3
2126640	DSBC-80-150-PPSA-N3
1383372	DSBC-80-160-PPSA-N3
1383373	DSBC-80-200-PPSA-N3
1383374	DSBC-80-250-PPSA-N3
2126641	DSBC-80-300-PPSA-N3
1383375	DSBC-80-320-PPSA-N3
1383376	DSBC-80-400-PPSA-N3
1383377	DSBC-80-500-PPSA-N3

1) All products in this table are easy to select and quick to order.

Standards-based cylinders DSBC ★ to ISO 15552

★ Quick ordering¹⁾

PPV – Pneumatic cushioning, adjustable at both ends

Part no.	Type
Piston Ø 32 mm	
2123069	DSBC-32-20-PPVA-N3
1376422	DSBC-32-25-PPVA-N3
2123070	DSBC-32-30-PPVA-N3
1376423	DSBC-32-40-PPVA-N3
1376424	DSBC-32-50-PPVA-N3
2123071	DSBC-32-60-PPVA-N3
2123072	DSBC-32-70-PPVA-N3
1376425	DSBC-32-80-PPVA-N3
1376426	DSBC-32-100-PPVA-N3
1376427	DSBC-32-125-PPVA-N3
2123073	DSBC-32-150-PPVA-N3
1376428	DSBC-32-160-PPVA-N3
1376429	DSBC-32-200-PPVA-N3
1376430	DSBC-32-250-PPVA-N3
2123074	DSBC-32-300-PPVA-N3
1376431	DSBC-32-320-PPVA-N3
1376432	DSBC-32-400-PPVA-N3
1376433	DSBC-32-500-PPVA-N3
Piston Ø 40 mm	
2123166	DSBC-40-20-PPVA-N3
1376656	DSBC-40-25-PPVA-N3
2123167	DSBC-40-30-PPVA-N3
1376657	DSBC-40-40-PPVA-N3
1376658	DSBC-40-50-PPVA-N3
2123224	DSBC-40-60-PPVA-N3
2123225	DSBC-40-70-PPVA-N3
1376659	DSBC-40-80-PPVA-N3
1376660	DSBC-40-100-PPVA-N3
1376661	DSBC-40-125-PPVA-N3
2123226	DSBC-40-150-PPVA-N3
1376662	DSBC-40-160-PPVA-N3
1376663	DSBC-40-200-PPVA-N3
1376664	DSBC-40-250-PPVA-N3
2123227	DSBC-40-300-PPVA-N3
1376665	DSBC-40-320-PPVA-N3
1376666	DSBC-40-400-PPVA-N3
1376667	DSBC-40-500-PPVA-N3

Part no.	Type
Piston Ø 50 mm	
2098969	DSBC-50-20-PPVA-N3
1366948	DSBC-50-25-PPVA-N3
2098970	DSBC-50-30-PPVA-N3
1366949	DSBC-50-40-PPVA-N3
1366950	DSBC-50-50-PPVA-N3
2098972	DSBC-50-60-PPVA-N3
2098973	DSBC-50-70-PPVA-N3
1366951	DSBC-50-80-PPVA-N3
1366952	DSBC-50-100-PPVA-N3
1366953	DSBC-50-125-PPVA-N3
2098974	DSBC-50-150-PPVA-N3
1366954	DSBC-50-160-PPVA-N3
1366955	DSBC-50-200-PPVA-N3
1366956	DSBC-50-250-PPVA-N3
2098975	DSBC-50-300-PPVA-N3
1366957	DSBC-50-320-PPVA-N3
1366958	DSBC-50-400-PPVA-N3
1366959	DSBC-50-500-PPVA-N3
Piston Ø 63 mm	
2125490	DSBC-63-20-PPVA-N3
1383578	DSBC-63-25-PPVA-N3
2125491	DSBC-63-30-PPVA-N3
1383579	DSBC-63-40-PPVA-N3
1383580	DSBC-63-50-PPVA-N3
2125492	DSBC-63-60-PPVA-N3
2125493	DSBC-63-70-PPVA-N3
1383581	DSBC-63-80-PPVA-N3
1383582	DSBC-63-100-PPVA-N3
1383583	DSBC-63-125-PPVA-N3
2125494	DSBC-63-150-PPVA-N3
1383584	DSBC-63-160-PPVA-N3
1383585	DSBC-63-200-PPVA-N3
1383586	DSBC-63-250-PPVA-N3
2125495	DSBC-63-300-PPVA-N3
1383587	DSBC-63-320-PPVA-N3
1383588	DSBC-63-400-PPVA-N3
1383589	DSBC-63-500-PPVA-N3

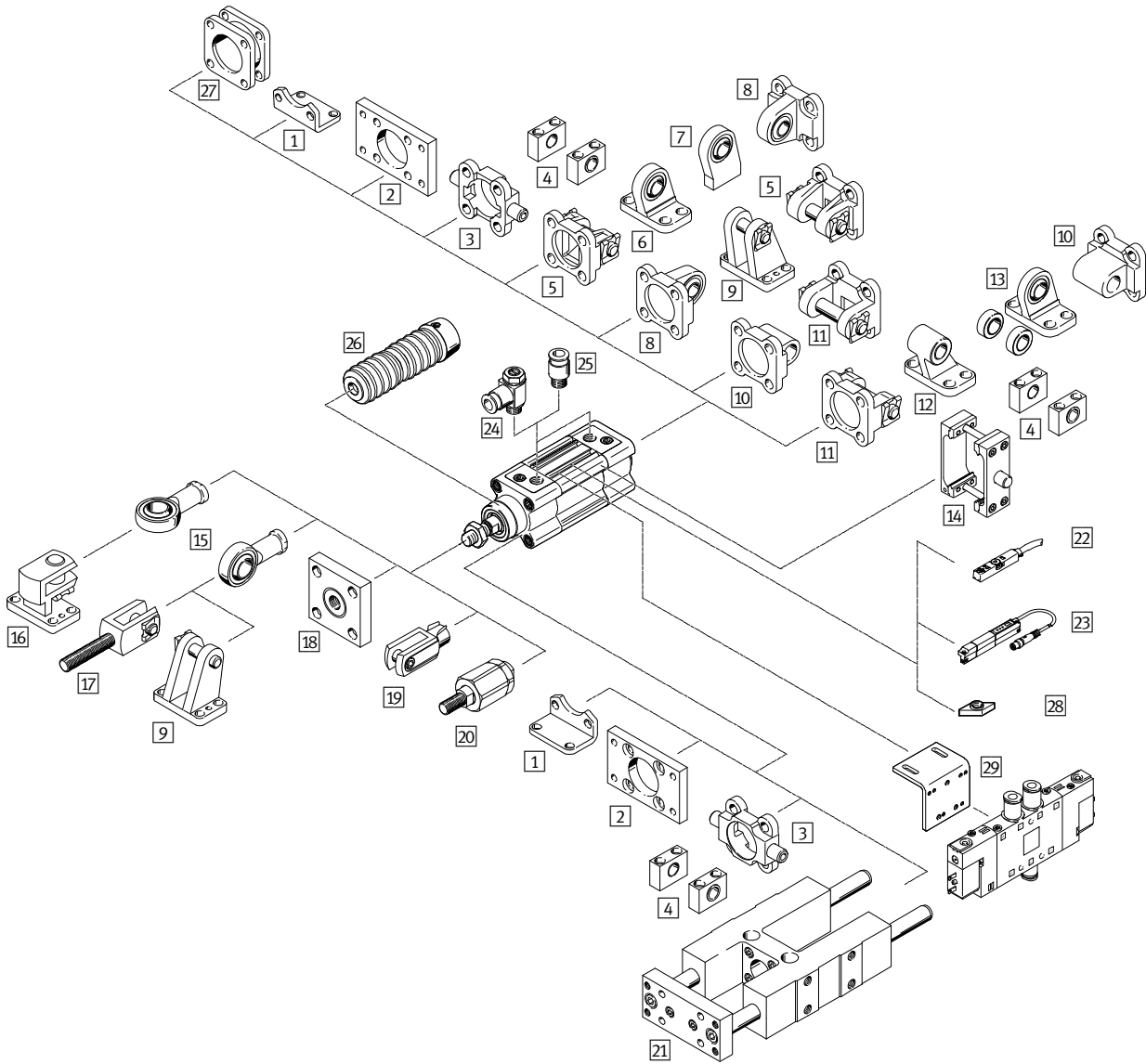
Part no.	Type
Piston Ø 80 mm	
2126594	DSBC-80-20-PPVA-N3
1383333	DSBC-80-25-PPVA-N3
2126595	DSBC-80-30-PPVA-N3
1383334	DSBC-80-40-PPVA-N3
1383335	DSBC-80-50-PPVA-N3
2126597	DSBC-80-60-PPVA-N3
2126598	DSBC-80-70-PPVA-N3
1383336	DSBC-80-80-PPVA-N3
1383337	DSBC-80-100-PPVA-N3
1383338	DSBC-80-125-PPVA-N3
2126599	DSBC-80-150-PPVA-N3
1383339	DSBC-80-160-PPVA-N3
1383340	DSBC-80-200-PPVA-N3
1383341	DSBC-80-250-PPVA-N3
2126600	DSBC-80-300-PPVA-N3
1383342	DSBC-80-320-PPVA-N3
1383343	DSBC-80-400-PPVA-N3
1383344	DSBC-80-500-PPVA-N3

1) All products in this table are easy to select and quick to order.

01

Accessories

Pneumatic drives



		→ Page/online
1	Foot mounting HNC Foot mounting CRHNC	69 dsbc
2	Flange mounting FNC Flange mounting CRFNG	69 dsbc
3	Trunnion flange ZNCF Trunnion flange CRZNG	69 dsbc
4	Trunnion support LNZG Trunnion support CRLNZG	69 dsbc
5	Swivel flange SNC	69
6	Clevis foot LSNG	69
7	Clevis foot LSNSG	69
8	Swivel flange SNCS	69
9	Clevis foot LBG	69
10	Swivel flange SNCL	69
11	Swivel flange SNCB	69
12	Clevis foot LNG	69
13	Clevis foot LSN	69
14	Trunnion mounting kit DAMT	70
15	Rod eye SGS Rod eye CRS GS	70 dsbc

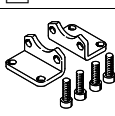
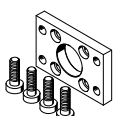
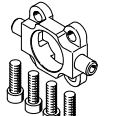
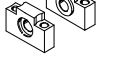
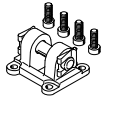
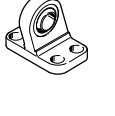
		→ Page/online
16	Right-angle clevis foot LQG	70
17	Rod clevis SGA	70
18	Coupling piece KSG Coupling piece KSZ	70 70
19	Rod clevis SG Rod clevis CRSG	70 dsbc
20	Self-aligning rod coupler FK Self-aligning rod coupler CRFK	70 dsbc
21	Guide unit FENG	70
22	Proximity sensor SME/SMT-8M	71
23	Position sensor SMAT/SDAT	72
24	One-way flow control valve GRLA	72
25	Push-in fitting QS	1443
26	Bellows kit DADB	dsbc
27	Multi-position kit DPNC	71
28	Slot nut ABAN	72
29	Mounting kit DAVM	dsbc
-	Slot cover ABP-5-S	70

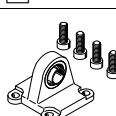
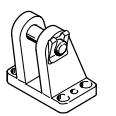
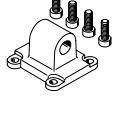
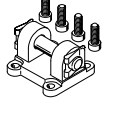
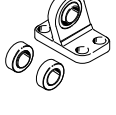
Standards-based cylinders DSBC ★ to ISO 15552

01

Pneumatic drives

Accessories – Ordering data

	For Ø		Part no.	Type
1 Foot mounting Dimensions online: → dsbc				
	32	★	174369	HNC-32
	40	★	174370	HNC-40
	50	★	174371	HNC-50
	63	★	174372	HNC-63
	80	★	174373	HNC-80
	100		174374	HNC-100
	125		174375	HNC-125
2 Flange mounting Dimensions online: → dsbc				
	32	★	174376	FNC-32
	40	★	174377	FNC-40
	50	★	174378	FNC-50
	63	★	174379	FNC-63
	80	★	174380	FNC-80
	100		174381	FNC-100
	125		174382	FNC-125
3 Trunnion flange Dimensions online: → dsbc				
	32		174411	ZNCF-32
	40		174412	ZNCF-40
	50		174413	ZNCF-50
	63		174414	ZNCF-63
	80		174415	ZNCF-80
	100		174416	ZNCF-100
	125		174417	ZNCF-125
4 Trunnion support Dimensions online: → lnzg				
	32		32959	LNZG-32
	40, 50		32960	LNZG-40/50
	63, 80		32961	LNZG-63/80
	100, 125		32962	LNZG-100/125
5 Swivel flange Dimensions online: → dsbc				
	32	★	174383	SNC-32
	40	★	174384	SNC-40
	50	★	174385	SNC-50
	63	★	174386	SNC-63
	80	★	174387	SNC-80
	100		174388	SNC-100
	125		174389	SNC-125
6 Clevis foot Data sheets online: → lsng				
	32		31740	LSNG-32
	40		31741	LSNG-40
	50		31742	LSNG-50
	63		31743	LSNG-63
	80		31744	LSNG-80
	100		31745	LSNG-100
	125		31746	LSNG-125
7 Clevis foot Data sheets online: → lsnsg				
	32		31747	LSNSG-32
	40		31748	LSNSG-40
	50		31749	LSNSG-50
	63		31750	LSNSG-63
	80		31751	LSNSG-80
	100		31752	LSNSG-100
	125		31753	LSNSG-125

	For Ø		Part no.	Type
8 Swivel flange Dimensions online: → dsbc				
	32	★	174397	SNCS-32
	40	★	174398	SNCS-40
	50	★	174399	SNCS-50
	63	★	174400	SNCS-63
	80	★	174401	SNCS-80
	100		174402	SNCS-100
	125		174403	SNCS-125
9 Clevis foot Data sheets online: → lbg				
	32		31761	LBG-32
	40		31762	LBG-40
	50		31763	LBG-50
	63		31764	LBG-63
	80		31765	LBG-80
	100		31766	LBG-100
	125		31767	LBG-125
10 Swivel flange Dimensions online: → dsbc				
	32	★	174404	SNCL-32
	40	★	174405	SNCL-40
	50	★	174406	SNCL-50
	63	★	174407	SNCL-63
	80	★	174408	SNCL-80
	100		174409	SNCL-100
	125		174410	SNCL-125
11 Swivel flange Dimensions online: → dsbc				
	32	★	174390	SNCB-32
	40	★	174391	SNCB-40
	50	★	174392	SNCB-50
	63	★	174393	SNCB-63
	80	★	174394	SNCB-80
	100		174395	SNCB-100
	125		174396	SNCB-125
12 Clevis foot Data sheets online: → lng				
	32	★	33890	LNG-32
	40	★	33891	LNG-40
	50	★	33892	LNG-50
	63	★	33893	LNG-63
	80	★	33894	LNG-80
	100		33895	LNG-100
	125		33896	LNG-125
13 Clevis foot Data sheets online: → lsn				
	32		5561	LSN-32
	40		5562	LSN-40
	50		5563	LSN-50
	63		5564	LSN-63
	80		5565	LSN-80
	100		5566	LSN-100
	125		6987	LSN-125

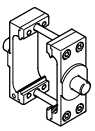
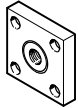
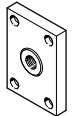
Cylinders with piston rod > Standards-based cylinders >

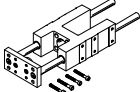
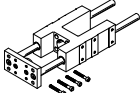
Standards-based cylinders DSBC ★ to ISO 15552

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Accessories – Ordering data

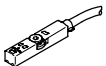
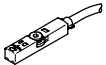
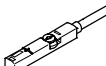
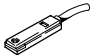
Pneumatic drives

	For Ø	Part no.	Type
14 Trunnion mounting kit Dimensions online: → dsbc			
	32	★ 2213233	DAMT-V1-32-A
	40	★ 2214899	DAMT-V1-40-A
	50	★ 2214909	DAMT-V1-50-A
	63	★ 2214971	DAMT-V1-63-A
	80	★ 163529	DAMT-V1-80-A
	100	163530	DAMT-V1-100-A
	125	1812524	DAMT-V8-125-A
15 Rod eye Data sheets online: → sgs			
	32	★ 9261	SGS-M10x1,25
	40	★ 9262	SGS-M12x1,25
	50, 63	★ 9263	SGS-M16x1,5
	80, 100	★ 9264	SGS-M20x1,5
	125	10774	SGS-M27x2
16 Right-angle clevis foot Data sheets online: → lqg			
	32	31768	LQG-32
	40	31769	LQG-40
	50	31770	LQG-50
	63	31771	LQG-63
	80	31772	LQG-80
	100	31773	LQG-100
	125	31774	LQG-125
17 Rod clevis Data sheets online: → sga			
	32	32954	SGA-M10x1,25
	40	10767	SGA-M12x1,25
	50, 63	10768	SGA-M16x1,5
	80, 100	10769	SGA-M20x1,5
	125	10770	SGA-M27x2
18 Coupling piece Data sheets online: → ksg			
	32	32963	KSG-M10x1,25
	40	32964	KSG-M12x1,25
	50, 63	32965	KSG-M16x1,5
	80, 100	32966	KSG-M20x1,5
	125	32967	KSG-M20x1,5
18 Coupling piece Data sheets online: → ksz			
	32	36125	KSZ-M10x1,25
	40	36126	KSZ-M12x1,25
	50, 63	36127	KSZ-M16x1,5
	80, 100	36128	KSZ-M20x1,5

	For Ø	Part no.	Type
19 Rod clevis Data sheets online: → sg			
	32	★ 6144	SG-M10x1,25
	40	★ 6145	SG-M12x1,25
	50, 63	★ 6146	SG-M16x1,5
	80, 100	★ 6147	SG-M20x1,5
	125	14987	SG-M27x2-B
20 Self-aligning rod coupler Data sheets online: → fk			
	32	★ 6140	FK-M10x1,25
	40	★ 6141	FK-M12x1,25
	50, 63	★ 6142	FK-M16x1,5
	80, 100	★ 6143	FK-M20x1,5
	125	10485	FK-M27x2
21 Guide unit for variable strokes from 10 ... 500 mm, with recirculating ball bearing guide Data sheets online: → feng			
	32	34487	FENG-32-...-KF ¹⁾
	40	34488	FENG-40-...-KF ¹⁾
	50	34489	FENG-50-...-KF ¹⁾
	63	34490	FENG-63-...-KF ¹⁾
	80	34491	FENG-80-...-KF ¹⁾
	100	34492	FENG-100-...-KF ¹⁾
21 Guide unit for variable strokes from 10 ... 500 mm, with plain-bearing guide Data sheets online: → feng			
	32	34481	FENG-32-...-GF ¹⁾
	40	34482	FENG-40-...-GF ¹⁾
	50	34483	FENG-50-...-GF ¹⁾
	63	34484	FENG-63-...-GF ¹⁾
	80	34485	FENG-80-...-GF ¹⁾
	100	34486	FENG-100-...-GF ¹⁾
Slot cover²⁾			
	32 ... 125	151680	ABP-5-S

- 1) Enter required stroke. Order example: the order code for an appropriate guide unit for the standards-based cylinder DSBC-40-250 is FENG-40-250-KF (guide unit FENG - piston diameter 40 mm - stroke 250 mm - with recirculating ball bearing guide).
- 2) Packaging unit 2x 0.5 m.

Accessories – Ordering data

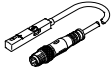
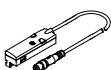
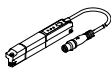
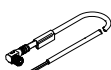
	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
22 Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets → Page 1206					
	32 ... 125	PNP, cable	2.5	★ 574335	SMT-8M-A-PS-24V-E-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-A-PS-24V-E-0,3-M8D
		PNP, plug	0.3	★ 574337	SMT-8M-A-PS-24V-E-0,3-M12
		NPN, cable	2.5	★ 574338	SMT-8M-A-NS-24V-E-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-A-NS-24V-E-0,3-M8D
Magneto-resistive – N/C contact Data sheets → Page 1206					
	32 ... 125	PNP, cable	7.5	★ 574340	SMT-8M-A-PO-24V-E-7,5-OE
Magnetic reed – N/O contact Data sheets → Page 1201					
	32 ... 125	Contacting, cable	2.5	★ 543862	SME-8M-DS-24V-K-2,5-OE
		Contacting, cable	5.0	★ 543863	SME-8M-DS-24V-K-5,0-OE
		Contacting, cable	2.5	★ 543872	SME-8M-ZS-24V-K-2,5-OE
		Contacting, plug	0.3	★ 543861	SME-8M-DS-24V-K-0,3-M8D
Magnetic reed – N/C contact Data sheets → Page 1203					
	32 ... 125	Contacting, cable	7.5	★ 546799	SME-8M-DO-24V-K-7,5-OE

	For Ø	Connection	Cable length [m]	Part no.	Type
Connecting cable, straight socket					Data sheets → Page 1543
	32 ... 125	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
		M12x1, 5-pin	2.5	★ 541363	NEBU-M12G5-K-2.5-LE3
			5.0	★ 541364	NEBU-M12G5-K-5-LE3
Angled socket					Data sheets → Page 1543
	32 ... 125	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3
		M12x1, 5-pin	2.5	541367	NEBU-M12W5-K-2.5-LE3
			5.0	541370	NEBU-M12W5-K-5-LE3

	For Ø	Part no.	Type
27 Multi-position kit Data sheets online: → dsbc			
	32	174418	DPNC-32
	40	174419	DPNC-40
	50	174420	DPNC-50
	63	174421	DPNC-63
	80	174422	DPNC-80
	100	174423	DPNC-100
	125	174424	DPNC-125

Standards-based cylinders DSBC to ISO 15552

Accessories – Ordering data

	For Ø	Switching output Connection	Cable length [m]	Part no.	Type
23 Position sensor for T-slot Data sheets online: → Position sensor					
	32 ... 125	0 ... 10 V, 4-pin	0.3	553744	SMAT-8M-U-E-0,3-M8D
	32 ... 125	0 ... 10 V, 4 ... 20 mA, 4-pin	–	540191	SMAT-8E-S50-IU-M8
	32 ... 125	0 ... 10 V, 4 ... 20 mA, 4-pin	0.3	570134	SMAT-8E-S50-IU-E-0,3-M8D
	32 ... 125	4 ... 20 mA, 4-pin	0.3	1531265	SDAT-MHS-M50-1L-SA-E-Q3-M8
				1531266	SDAT-MHS-M80-1L-SA-E-Q3-M8
				1531267	SDAT-MHS-M100-1L-SA-E-Q3-M8
				1531268	SDAT-MHS-M125-1L-SA-E-Q3-M8
				1531269	SDAT-MHS-M160-1L-SA-E-Q3-M8
Connecting cable, straight socket Data sheets → Page 1543					
	32 ... 125	M8x1, 4-pin	2.5	541342	NEBU-M8G4-K-2.5-LE4
			5	541343	NEBU-M8G4-K-5-LE4
Angled socket Data sheets → Page 1543					
	32 ... 125	M8x1, 4-pin	2.5	541344	NEBU-M8W4-K-2.5-LE4
			5	551345	NEBU-M8W4-K-5-LE4

Function	For Ø	Connection Thread	O.D.	Part no.	Type
24 One-way flow control valve for exhaust air flow control¹⁾ with slotted head screw, metal Data sheets → Page 1033					
	32	G1/8	4	 193143	GRLA-1/8-QS-4-D
	40, 50	G1/4	6	 193146	GRLA-1/4-QS-6-D
	63, 80	G3/8	8	 193150	GRLA-3/8-QS-8-D
	100, 125	G1/2	12	 193152	GRLA-1/2-QS-12-D

1) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

	For Ø	Part no.	Type
28 Slot nut			
	32 ... 125	8028500	ABAN-8-1M4-5-P2 ²⁾
		8028501	ABAN-8-1M4-5-P100 ³⁾

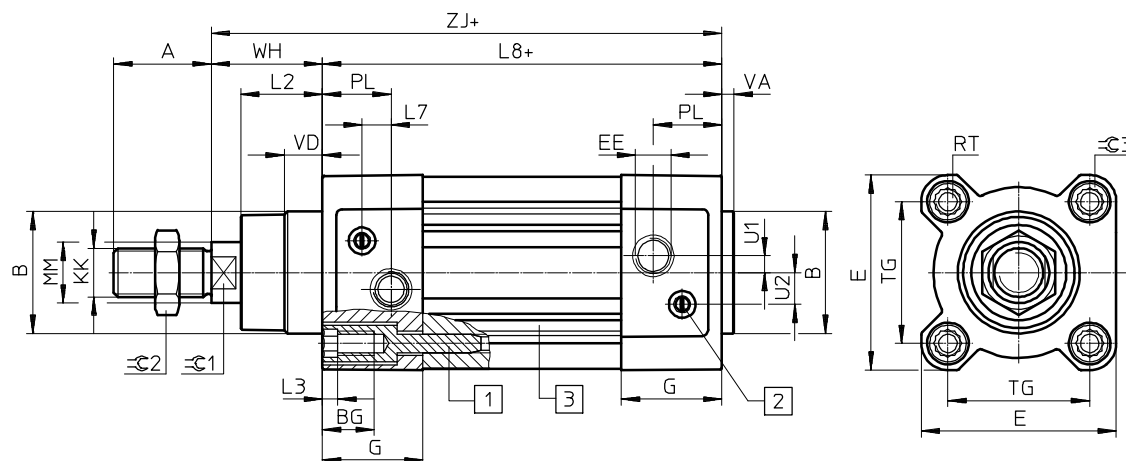
2) Packaging unit 2 pieces.
3) Packaging unit 100 pieces.

Dimensions

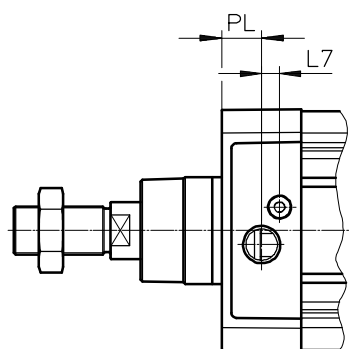
Download CAD data → www.festo.com

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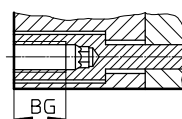
Basic design and A3 – Unlubricated operation



Ø 125



Ø 80 ... 125



+ = plus stroke length

- 1 Socket head screw with female thread for mounting components
- 2 Regulating screw for adjustable end-position cushioning
- 3 Slot for proximity sensor

Ø	A	B	BG	E	EE	G	U2	U1	KK	L2	L3	L7	L8
[mm]	-0.5	Ø d11	min.	+0.5		-0.2	±0.1	±0.1			max.		±0.4
32	22	30	16	45	G1/8	28	5.7	5.25	M10x1.25	18 _{-0.2}	5	6.5	94
40	24	35	16	54	G1/4	33	8	4	M12x1.25	21.3 _{-0.2}	5	7.5	105
50	32	40	16	64	G1/4	33	10.4	5.5	M16x1.5	26.8 _{-0.2}	5	9.5	106
63	32	45	16	75	G3/8	40.5	12.75	6.25	M16x1.5	27 _{-0.2}	5	9	121
80	40	45	17	93	G3/8	43	12.5	8	M20x1.5	34.2 _{-0.2}	–	11	128
100	40	55	17	110	G1/2	48	13.5	10	M20x1.5	38 _{-0.2}	–	7.5	138
125	54	60	20	136	G1/2	44.7	13	8	M27x2	45.5 _{-0.3}	–	10	160

Ø	MM	PL	RT	TG	VA	VD	WH	ZJ	≡C1	≡C2	≡C3
[mm]	Ø	±0.1		±0.3		+0.5	+2.2	+1.8			
32	12	19.5	M6	32.5	4 _{-0.2}	10	25	119.1	10	16	6
40	16	22.5	M6	38	4 _{-0.2}	10.5	28.7	133.9	13	18	6
50	20	22.5	M8	46.5	4 _{-0.2}	11.5	35.6	141.8	17	24	8
63	20	27.5	M8	56.5	4 _{-0.2}	15	35.9	157.1	17	24	8
80	25	30	M10	72	4 _{-0.2}	15.7	45.4	173.6	22	30	6
100	25	31.5	M10	89	4 _{-0.2}	19.2	49.3	187.5	22	30	6
125	32	22.5	M12	110	6 _{-0.3}	20.5	64.1	225	27	41	8

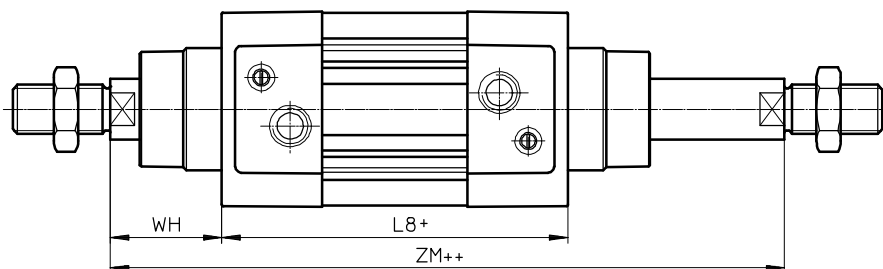
Standards-based cylinders DSBC ★ to ISO 15552

01

Dimensions

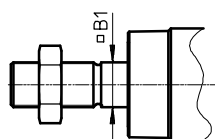
Download CAD data → www.festo.com

T – Through piston rod



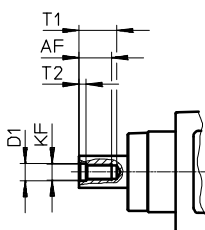
+ = plus stroke length
 ++ = plus 2x stroke length

Q – With protection against rotation



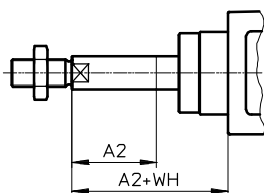
Note
Protection against rotation at one end in combination with the variant T.

F – Female thread



Note
Female thread at both ends in combination with the variant T.

...E – Piston rod extension



Note
Piston rod extension at one end in combination with the variant T.
Piston rod extension only at the square piston rod in combination with the variant T and Q.

Ø	A2		AF	B1	D1	KF
[mm]	min.	max.	min.			
32	1	500	12	10	6.4	M6
40	1	500	12	12	8.4	M8
50	1	500	16	16	10.5	M10
63	1	500	16	16	10.5	M10
80	1	500	20	20	13	M12
100	1	500	20	20	13	M12
125	1	500	32	–	17	M16

Ø	L8	T1	T2	WH	ZM
[mm]	±0.4	max.		+2.2	+1
32	94	16	2.6	25	146.1
40	105	16	3.3	28.7	164.8
50	106	21	4.7	35.6	179.8
63	121	21	4.7	35.9	195.4
80	128	26.5	6.1	45.4	221
100	138	26.5	6.1	49.3	238.8
125	160	40	8	64.1	290



Save time and money during commissioning

- + Thanks to standardised interfaces to ISO 15552
- + With standardised mounting accessories
- + With self-adjusting end-position cushioning PPS

Cylinders with piston rod › Standards-based cylinders ›
Standards-based cylinders
to ISO 15552

DSBG

Ø 32 ... 125 mm

Cylinders with piston rod > Standards-based cylinders >
Standards-based cylinders to ISO 15552

DSBG



Overview, configuration and ordering

→ www.festo.com/catalogue/dsbg



Additional information, support and user documentation

→ www.festo.com/sp/dsbg

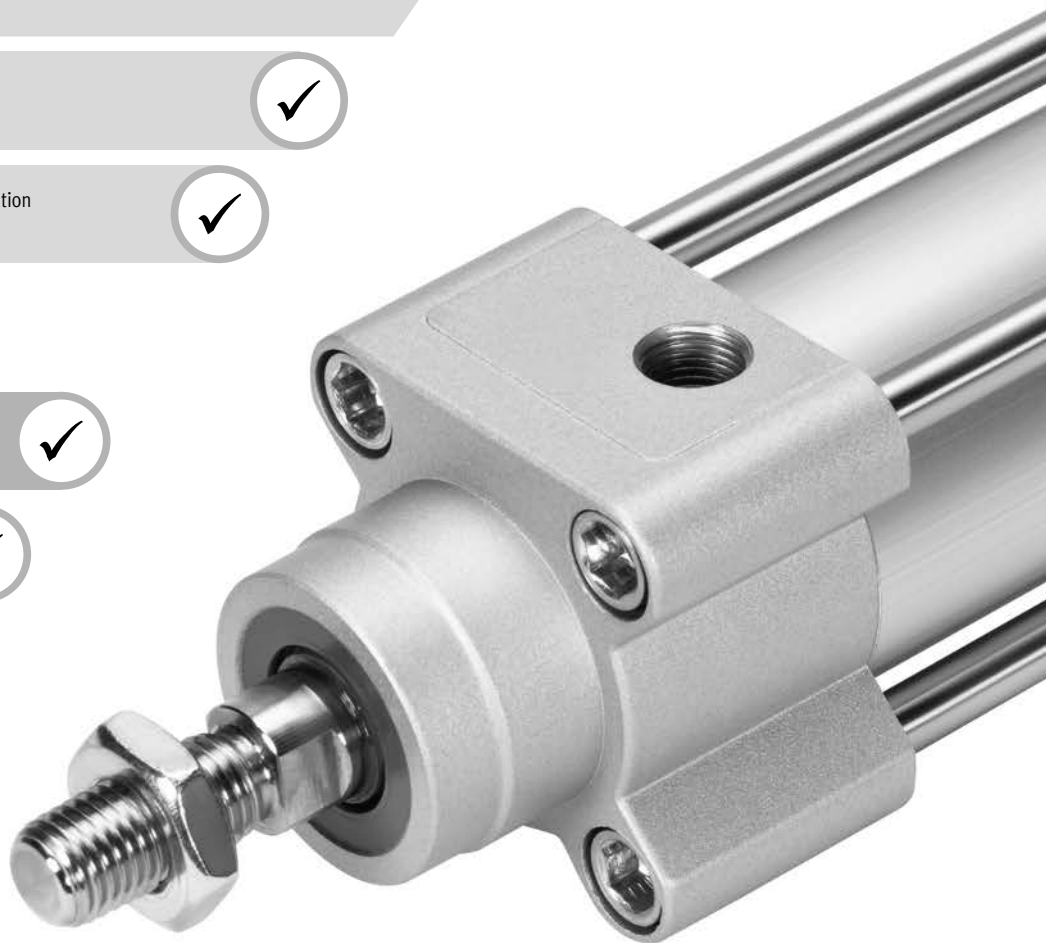


Selected types in accordance with the ATEX Directive
for explosive atmospheres

→ www.festo.com/catalogue/ex



Spare parts service



- + ISO 15552 (ISO 6431, VDMA 24562)
- + Strokes of up to 2800 mm
- + With self-adjusting pneumatic end-position cushioning PPS
- + Sturdy tie rod design
- + For contactless position sensing
- + Comprehensive range of accessories for just about every type of installation
- + Optionally with protection against rotation
- + Optionally with metal scraper

Standards-based cylinders DSBG, to ISO 15552

Product range overview – Piston Ø 32 ... 125

Type/function	Piston Ø [mm]	Stroke [mm]	Force [N]	Product options													
				Q	T	F	P	PPS	PPV	A	N3	T1	T3	T4	A3	...V	...E
DSBG																	
Double-acting	32, 40, 50, 63, 80, 100, 125	1 ... 2800	483 ... 7363	■	■	■	■	■	■	■	■	■	■	■	■	■	■

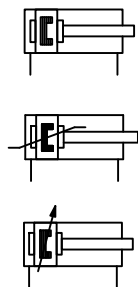
Product options

Q	With protection against rotation	P	Elastic cushioning rings/plates at both ends	T1	Heat-resistant seals up to max. 120 °C	...E	Piston rod extension
L	Low friction					...L	Piston rod thread extension
U	Uniformly slow movement	PPS	Pneumatic cushioning, self-adjusting at both ends	T3	Low temperature	...S	Shortened piston rod thread
L1	Low friction for balancer applications	PPV	Pneumatic cushioning, adjustable at both ends	T4	Heat-resistant seals up to max. 150 °C	M...	Piston rod thread type
T	Through piston rod			P2	Protective bellows on bearing cap	...LB2	Thread length of stud bolts on bearing cap
F	Female piston rod thread	A	Position sensing	A2	Hard scraper	...LB3	Thread length of stud bolts on end cap
		N3	Standard conforms to ISO 15552	A3	Suitable for unlubricated operation		
		R3	High corrosion protection	A6	Metal scraper		
				EX4	EU certification (II 2GD)		
				...V	Swivel mounting position		

Standards-based cylinders DSBG, to ISO 15552

01

Data sheet – Piston Ø 32 ... 125



Technical data		Dimensions → Page 85						
Piston Ø		32	40	50	63	80	100	125
Pneumatic connection		G1/8	G1/4	G1/4	G3/8	G3/8	G1/2	G1/2
Piston rod thread		M10x1.25	M12x1.25	M16x1.5	M16x1.5	M20x1.5	M20x1.5	M27x2
Stroke								
DSBG-...	[mm]	1 ... 2800						
DSBG-...-Q	[mm]	1 ... 1500						
DSBG-...-E	[mm]	1 ... 2000						
Cushioning								
DSBG-...-P		Elastic cushioning rings/plates at both ends						
DSBG-...-PPS		Pneumatic cushioning, self-adjusting at both ends						
DSBG-...-PPV		Pneumatic cushioning, adjustable at both ends						
Cushioning length	[mm]	17	19	22	22	31	31	45
Theoretical force at 6 bar, advancing	[N]	483	754	1178	1870	3016	4712	7363
Theoretical force at 6 bar, retracting	[N]	415	633	990	1682	2721	4418	6881
Max. impact energy in the end positions								
DSBG-...	[J]	0.4	0.7	1.0	1.3	1.8	2.5	3.3
DSBG-...-T1, T3, T4	[J]	0.2	0.35	0.5	0.65	0.9	1.25	1.65

Operating conditions								
Piston Ø		32	40	50	63	80	100	125
Operating pressure								
DSBG-...	[bar]	0.6 ... 12			0.4 ... 12			0.2 ... 10
DSBG-...-T3	[bar]	1 ... 12						1 ... 10
DSBG-...-A3	[bar]	1.5 ... 12		1 ... 12	0.6 ... 12		0.6 ... 10	
Ambient temperature ¹⁾								
DSBG-...	[°C]	-20 ... +80						
DSBG-...-T1	[°C]	0 ... +120						
DSBG-...-T3	[°C]	-40 ... +80						
DSBG-...-T4	[°C]	0 ... +150						

1) Note operating range of proximity sensors.

Materials	
Piston rod	High-alloy steel
Bearing cap	Coated die-cast aluminium
Cylinder barrel	Anodised wrought aluminium alloy
End cap	Coated die-cast aluminium
Seals	TPE-U (PU), NBR

Ordering – Product options



Configurable product

This product and all its options can be ordered using the configurator.

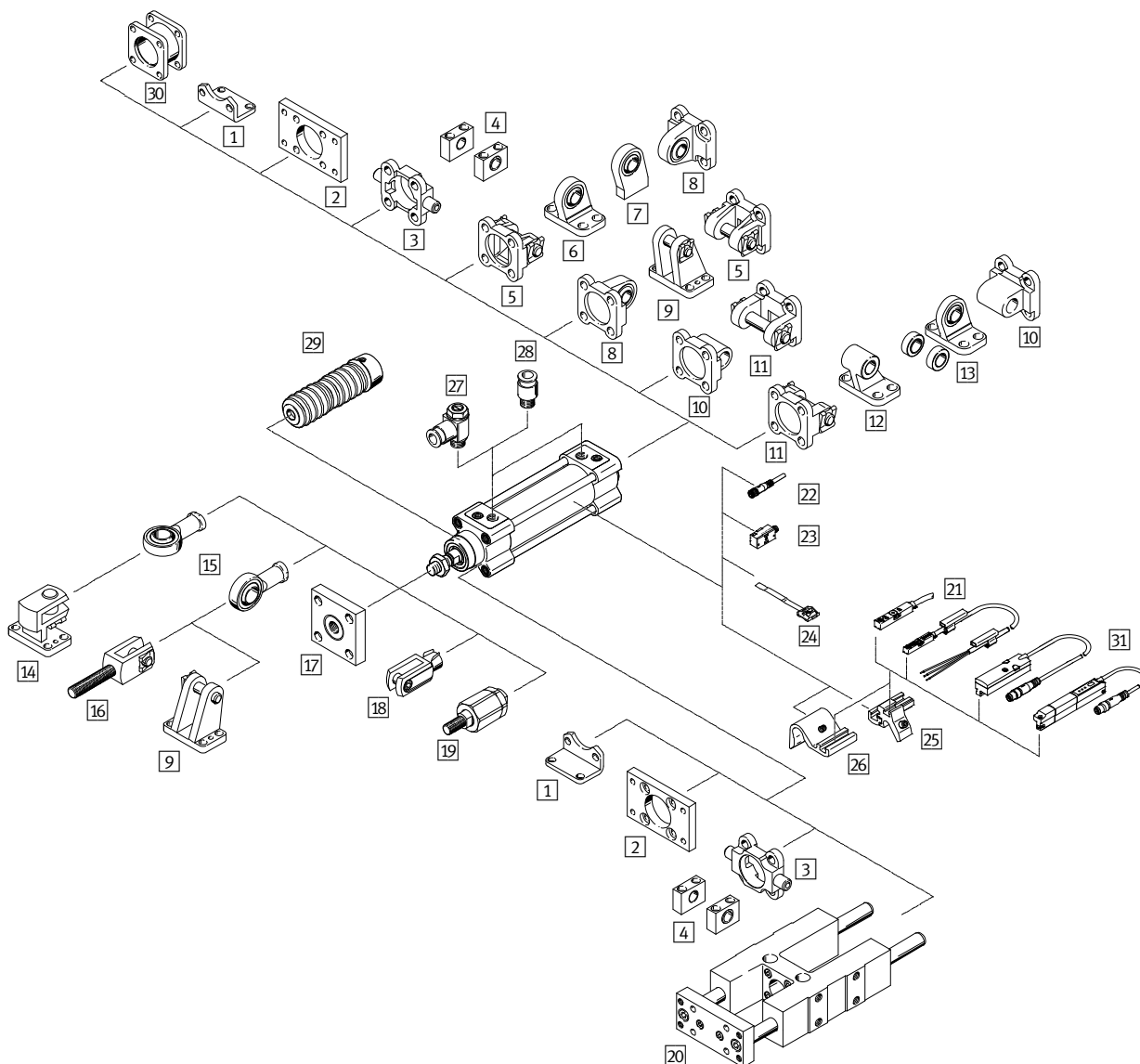
The configurator can be found under Products on the DVD or
→ www.festo.com/catalogue/...

Enter the type code in the search field.

Cylinders with piston rod > Standards-based cylinders >

Standards-based cylinders DSBG, to ISO 15552

Accessories – Piston Ø 32 ... 125

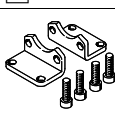
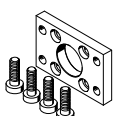
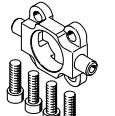
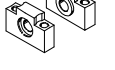
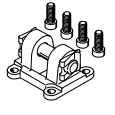
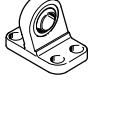


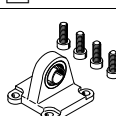
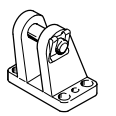
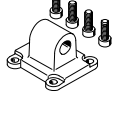
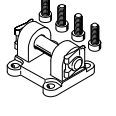
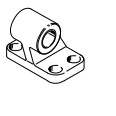
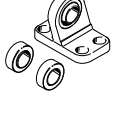
		→ Page/online
1	Foot mounting HNC	81
	Foot mounting CRHNC	dsbg
2	Flange mounting FNC	81
	Flange mounting CRFNG	dsbg
3	Trunnion flange ZNCF	81
	Trunnion flange CRZNG	dsbg
4	Trunnion support LNZG	81
	Trunnion support CRLNZG	dsbg
5	Swivel flange SNC	81
6	Clevis foot LSNG	81
7	Clevis foot LSNSG	81
8	Swivel flange SNCS	81
	Swivel flange CRSNCS/SNCS-R3	dsbg
9	Clevis foot LBG	81
	Clevis foot LBG-R3	dsbg
10	Swivel flange SNCL	81
11	Swivel flange SNCB	81
	Swivel flange SNCB-R3	dsbg
12	Clevis foot LNG	81
	Clevis foot CRLNG	dsbg
13	Clevis foot LSN	81
14	Right-angle clevis foot LQG	82

		→ Page/online
15	Rod eye SGS	82
	Rod eye CRSGS	dsbg
16	Rod clevis SGA	82
17	Coupling piece KSG	82
	Coupling piece KSZ	82
18	Rod clevis SG	82
	Rod clevis CRSG	dsbg
19	Self-aligning rod coupler FK	82
	Self-aligning rod coupler CRFK	dsbg
20	Guide unit FENG	82
21	Proximity sensor SME/SMT-8M	83
22	Connecting cable NEBU	83
23	Proximity sensor SMPO-1	83
24	Mounting kit SMBS	83
25	Mounting kit SMBZ	83
26	Mounting kit DASP	84
27	One-way flow control valve GRLA	84
28	Push-in fitting QS	1443
29	Bellows kit DADB	dsbg
30	Multi-position kit DPNC	84
31	Position transmitter SMAT-8M/SDAT	84

Standards-based cylinders DSBG, to ISO 15552

Accessories – Ordering data – Piston Ø 32 ... 125

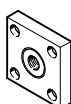
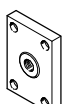
	For Ø		Part no.	Type
1 Foot mounting Dimensions online: → dsbg				
	32	★	174369	HNC-32
	40	★	174370	HNC-40
	50	★	174371	HNC-50
	63	★	174372	HNC-63
	80	★	174373	HNC-80
	100		174374	HNC-100
	125		174375	HNC-125
2 Flange mounting Dimensions online: → dsbg				
	32	★	174376	FNC-32
	40	★	174377	FNC-40
	50	★	174378	FNC-50
	63	★	174379	FNC-63
	80	★	174380	FNC-80
	100		174381	FNC-100
	125		174382	FNC-125
3 Trunnion flange Dimensions online: → dsbg				
	32		174411	ZNCF-32
	40		174412	ZNCF-40
	50		174413	ZNCF-50
	63		174414	ZNCF-63
	80		174415	ZNCF-80
	100		174416	ZNCF-100
	125		174417	ZNCF-125
4 Trunnion support Dimensions online: → lnzg				
	32		32959	LNZG-32
	40, 50		32960	LNZG-40/50
	63, 80		32961	LNZG-63/80
	100, 125		32962	LNZG-100/125
5 Swivel flange Dimensions online: → dsbg				
	32	★	174383	SNC-32
	40	★	174384	SNC-40
	50	★	174385	SNC-50
	63	★	174386	SNC-63
	80	★	174387	SNC-80
	100		174388	SNC-100
	125		174389	SNC-125
6 Clevis foot Data sheets online: → lsng				
	32		31740	LSNG-32
	40		31741	LSNG-40
	50		31742	LSNG-50
	63		31743	LSNG-63
	80		31744	LSNG-80
	100		31745	LSNG-100
	125		31746	LSNG-125
7 Clevis foot Data sheets online: → lsnsg				
	32		31747	LSNSG-32
	40		31748	LSNSG-40
	50		31749	LSNSG-50
	63		31750	LSNSG-63
	80		31751	LSNSG-80
	100		31752	LSNSG-100
	125		31753	LSNSG-125

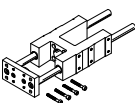
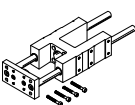
	For Ø		Part no.	Type
8 Swivel flange Dimensions online: → dsbg				
	32	★	174397	SNCS-32
	40	★	174398	SNCS-40
	50	★	174399	SNCS-50
	63	★	174400	SNCS-63
	80	★	174401	SNCS-80
	100		174402	SNCS-100
	125		174403	SNCS-125
9 Clevis foot Data sheets online: → lbg				
	32		31761	LBG-32
	40		31762	LBG-40
	50		31763	LBG-50
	63		31764	LBG-63
	80		31765	LBG-80
	100		31766	LBG-100
	125		31767	LBG-125
10 Swivel flange Dimensions online: → dsbg				
	32	★	174404	SNCL-32
	40	★	174405	SNCL-40
	50	★	174406	SNCL-50
	63	★	174407	SNCL-63
	80	★	174408	SNCL-80
	100		174409	SNCL-100
	125		174410	SNCL-125
11 Swivel flange Dimensions online: → dsbg				
	32	★	174390	SNCB-32
	40	★	174391	SNCB-40
	50	★	174392	SNCB-50
	63	★	174393	SNCB-63
	80	★	174394	SNCB-80
	100		174395	SNCB-100
	125		174396	SNCB-125
12 Clevis foot Data sheets online: → lng				
	32	★	33890	LNG-32
	40	★	33891	LNG-40
	50	★	33892	LNG-50
	63	★	33893	LNG-63
	80	★	33894	LNG-80
	100		33895	LNG-100
	125		33896	LNG-125
13 Clevis foot Data sheets online: → lsn				
	32		5561	LSN-32
	40		5562	LSN-40
	50		5563	LSN-50
	63		5564	LSN-63
	80		5565	LSN-80
	100		5566	LSN-100
	125		6987	LSN-125

Cylinders with piston rod > Standards-based cylinders >

Standards-based cylinders DSBG, to ISO 15552

Accessories – Ordering data – Piston Ø 32 ... 125

	For Ø	Part no.	Type
14 Right-angle clevis foot Data sheets online: → lqg			
	32	31768	LQG-32
	40	31769	LQG-40
	50	31770	LQG-50
	63	31771	LQG-63
	80	31772	LQG-80
	100	31773	LQG-100
	125	31774	LQG-125
15 Rod eye Data sheets online: → sgs			
	32	★ 9261	SGS-M10x1,25
	40	★ 9262	SGS-M12x1,25
	50, 63	★ 9263	SGS-M16x1,5
	80, 100	★ 9264	SGS-M20x1,5
	125	10774	SGS-M27x2
16 Rod clevis Data sheets online: → sga			
	32	32954	SGA-M10x1,25
	40	10767	SGA-M12x1,25
	50, 63	10768	SGA-M16x1,5
	80, 100	10769	SGA-M20x1,5
	125	10770	SGA-M27x2
17 Coupling piece Data sheets online: → ksg			
	32	32963	KSG-M10x1,25
	40	32964	KSG-M12x1,25
	50, 63	32965	KSG-M16x1,5
	80, 100	32966	KSG-M20x1,5
	125	32967	KSG-M27x2
17 Coupling piece Data sheets online: → ksz			
	32	36125	KSZ-M10x1,25
	40	36126	KSZ-M12x1,25
	50, 63	36127	KSZ-M16x1,5
	80, 100	36128	KSZ-M20x1,5

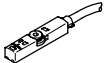
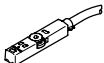
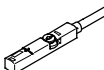
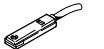
	For Ø	Part no.	Type
18 Rod clevis Data sheets online: → sg			
	32	★ 6144	SG-M10x1,25
	40	★ 6145	SG-M12x1,25
	50, 63	★ 6146	SG-M16x1,5
	80, 100	★ 6147	SG-M20x1,5
	125	14987	SG-M27x2-B
19 Self-aligning rod coupler Data sheets online: → fk			
	32	★ 6140	FK-M10x1,25
	40	★ 6141	FK-M12x1,25
	50, 63	★ 6142	FK-M16x1,5
	80, 100	★ 6143	FK-M20x1,5
	125	10485	FK-M27x2
20 Guide unit for variable strokes from 10 ... 500 mm, with recirculating ball bearing guide Data sheets online: → feng			
	32	34487	FENG-32-...-KF ¹⁾
	40	34488	FENG-40-...-KF ¹⁾
	50	34489	FENG-50-...-KF ¹⁾
	63	34490	FENG-63-...-KF ¹⁾
	80	34491	FENG-80-...-KF ¹⁾
	100	34492	FENG-100-...-KF ¹⁾
20 Guide unit for variable strokes from 10 ... 500 mm, with plain-bearing guide Data sheets online: → feng			
	32	34481	FENG-32-...-GF ¹⁾
	40	34482	FENG-40-...-GF ¹⁾
	50	34483	FENG-50-...-GF ¹⁾
	63	34484	FENG-63-...-GF ¹⁾
	80	34485	FENG-80-...-GF ¹⁾
	100	34486	FENG-100-...-GF ¹⁾

- 1) Enter required stroke. Order example: the order code for an appropriate guide unit for the standards-based cylinder DSBG-40-250 is FENG-40-250-KF (guide unit FENG - piston diameter 40 mm - stroke 250 mm - with recirculating ball bearing guide).

Standards-based cylinders DSBG, to ISO 15552

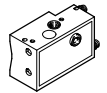
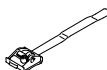
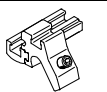
Accessories – Ordering data – Piston Ø 32 ... 125

01

	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
21 Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets → Page 1206					
	32 ... 125	PNP, cable	2.5	★ 574335	SMT-8M-A-PS-24V-E-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-A-PS-24V-E-0,3-M8D
		PNP, plug	0.3	★ 574337	SMT-8M-A-PS-24V-E-0,3-M12
		NPN, cable	2.5	★ 574338	SMT-8M-A-NS-24V-E-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-A-NS-24V-E-0,3-M8D
Magneto-resistive – N/C contact Data sheets → Page 1206					
	32 ... 125	PNP, cable	7.5	★ 574340	SMT-8M-A-PO-24V-E-7,5-OE
Magnetic reed – N/O contact Data sheets → Page 1201					
	32 ... 125	Contacting, cable	2.5	★ 543862	SME-8M-DS-24V-K-2,5-OE
		Contacting, cable	5.0	★ 543863	SME-8M-DS-24V-K-5,0-OE
		Contacting, cable	2.5	★ 543872	SME-8M-ZS-24V-K-2,5-OE
		Contacting, plug	0.3	★ 543861	SME-8M-DS-24V-K-0,3-M8D
Magnetic reed – N/C contact Data sheets → Page 1203					
	32 ... 125	Contacting, cable	7.5	★ 546799	SME-8M-DO-24V-K-7,5-OE

Pneumatic drives

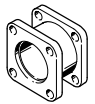
	For Ø	Connection	Cable length [m]	Part no.	Type
22 Connecting cable, straight socket Data sheets → Page 1543					
	32 ... 125	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
		M12x1, 5-pin	2.5	★ 541363	NEBU-M12G5-K-2.5-LE3
			5.0	★ 541364	NEBU-M12G5-K-5-LE3
Angled socket Data sheets → Page 1543					
	32 ... 125	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3
		M12x1, 5-pin	2.5	541367	NEBU-M12W5-K-2.5-LE3
			5.0	541370	NEBU-M12W5-K-5-LE3

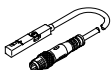
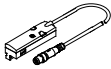
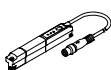
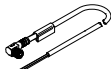
	For Ø	Part no.	Type
23 Proximity sensor in block design, magnetic reed – N/O contact, pneumatic Data sheets online: → smeo			
	32 ... 100	31008	SMPO-1-H-B
24 Mounting kit for proximity sensor SMPO-1			
	32 ... 100	151226	SMBS-2
25 Mounting kit for proximity sensor SME/SMT-8			
	32 ... 100	537806	SMBZ-8-32/100
	32 ... 100	★ 538937	SMBR-8-8/100-S6
26 Mounting kit for proximity sensor SME/SMT-8			
	125	1451483	DASP-M4-125-A

Cylinders with piston rod > Standards-based cylinders >

Standards-based cylinders DSBG, to ISO 15552

01 Accessories – Ordering data – Piston Ø 32 ... 125

	For Ø	Part no.	Type
30 Multi-position kit Data sheets online: → dsbg			
	32	174418	DPNC-32
	40	174419	DPNC-40
	50	174420	DPNC-50
	63	174421	DPNC-63
	80	174422	DPNC-80
	100	174423	DPNC-100

	For Ø	Switching output connection	Cable length [m]	Part no.	Type
31 Position sensor for T-slot Data sheets online: → Position sensor					
	32 ... 125	0 ... 10 V, 4-pin	0.3	553744	SMAT-8M-U-E-0,3-M8D
	125	0 ... 10 V, 4 ... 20 mA, 4-pin	–	540191	SMAT-8E-S50-IU-M8
	125	0 ... 10 V, 4 ... 20 mA, 4-pin	0.3	570134	SMAT-8E-S50-IU-E-0,3-M8D
	32 ... 125	4 ... 20 mA, 4-pin	0.3	1531265	SDAT-MHS-M50-1L-SA-E-Q3-M8
				1531266	SDAT-MHS-M80-1L-SA-E-Q3-M8
				1531267	SDAT-MHS-M100-1L-SA-E-Q3-M8
				1531268	SDAT-MHS-M125-1L-SA-E-Q3-M8
				1531269	SDAT-MHS-M160-1L-SA-E-Q3-M8
Connecting cable, straight socket Data sheets → Page 1543					
	32 ... 125	M8x1, 4-pin	2.5	541342	NEBU-M8G4-K-2.5-LE4
			5	541343	NEBU-M8W4-K-5-LE4
Angled socket Data sheets → Page 1543					
	32 ... 125	M8x1, 4-pin	2.5	541344	NEBU-M8W4-K-2.5-LE4
			5	551345	NEBU-M8W4-K-5-LE4

Function	For Ø	Connection		Part no.	Type
		Thread	O.D.		
27 One-way flow control valve for exhaust air flow control¹⁾ with slotted head screw, metal Data sheets → Page 1033					
	32	G1/8	4	★ 193143	GRLA-1/8-QS-4-D
	40, 50	G1/4	6	★ 193146	GRLA-1/4-QS-6-D
	63, 80	G3/8	8	★ 193150	GRLA-3/8-QS-8-D
	100, 125	G1/2	12	★ 193152	GRLA-1/2-QS-12-D

1) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

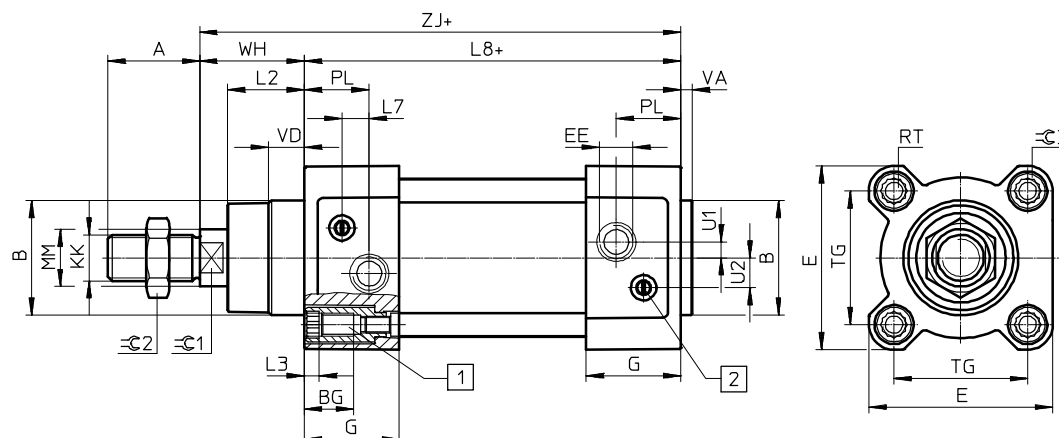
Standards-based cylinders DSBG, to ISO 15552

Dimensions – Piston Ø 32 ... 125

Download CAD data → www.festo.com

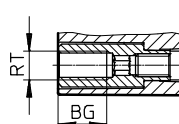
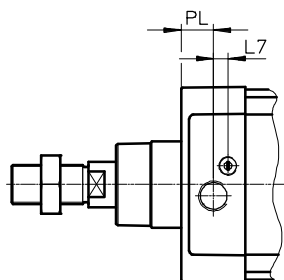
01

Basic design and A3 – Unlubricated operation



Ø 125

Ø 80 ... 125

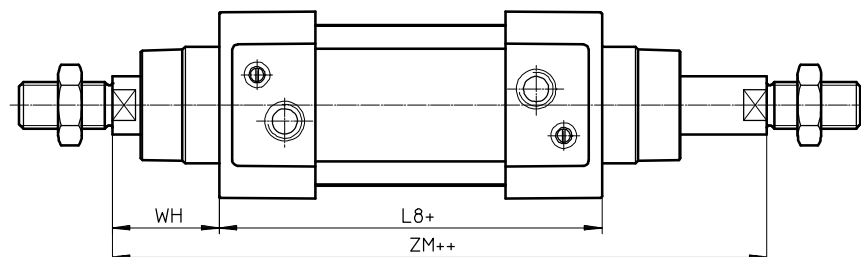


+ = plus stroke length

1 Socket head screw with female thread for mounting components

2 Regulating screw for adjustable end-position cushioning

T – Through piston rod



+ = plus stroke length

++ = plus 2x stroke length

Ø	A	B	BG	I	EE	G	U2	U1	KK	L2	L3	L7	L8
[mm]	-0.5	Ø d11	min.	+0.5		-0.2	±0.1	±0.1			max.		±0.4
32	22	30	16	45	G1/8	28	5.7	5.25	M10x1.25	18 _{-0.2}	5	6.5	94
40	24	35	16	54	G1/4	33	8	4	M12x1.25	21.3 _{-0.2}	5	7.5	105
50	32	40	16	64	G1/4	33	10.4	5.5	M16x1.5	26.8 _{-0.2}	5	9.5	106
63	32	45	16	75	G3/8	40.5	12.75	6.25	M16x1.5	27 _{-0.2}	5	9	121
80	40	45	17	93	G3/8	43	12.5	8	M20x1.5	34.2 _{-0.2}	–	11	128
100	40	55	17	110	G1/2	48	13.5	10	M20x1.5	38 _{-0.2}	–	7.5	138
125	54	60	20	136	G1/2	44.7	13	8	M27x2	45 _{-0.3}	–	10	160

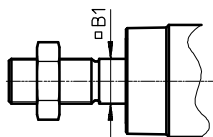
Ø	MM	PL	RT	TG	VA	VD	WH	ZJ	ZM	⌀1	⌀2	⌀3
[mm]	Ø	±0.1		±0.3		+0.5	+2.2	+1.8	+1			
32	12	19.5	M6	32.5	4 _{-0.2}	10	25	119.1	146.1	10	16	6
40	16	22.5	M6	38	4 _{-0.2}	10.5	28.7	133.9	164.8	13	18	6
50	20	22.5	M8	46.5	4 _{-0.2}	11.5	35.6	141.8	179.8	17	24	8
63	20	27.5	M8	56.5	4 _{-0.2}	15	35.9	157.1	195.4	17	24	8
80	25	30	M10	72	4 _{-0.2}	15.7	45.4	173.6	221	22	30	6
100	25	31.5	M10	89	4 _{-0.2}	19.2	49.3	187.5	238.8	22	30	6
125	32	22.5	M12	110	6 _{-0.3}	20.5	64.1	225	290	27	41	8

Standards-based cylinders DSBG, to ISO 15552

01

Dimensions – Piston Ø 32 ... 125

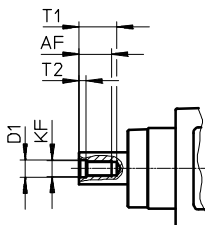
Q – With protection against rotation



Note

In combination with variant T, the piston rod is protected against rotation at one end.

F – Female thread

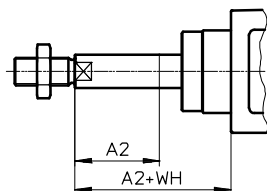


Download CAD data → www.festo.com

Note

In combination with variant T, the piston rod has female threads at both ends.

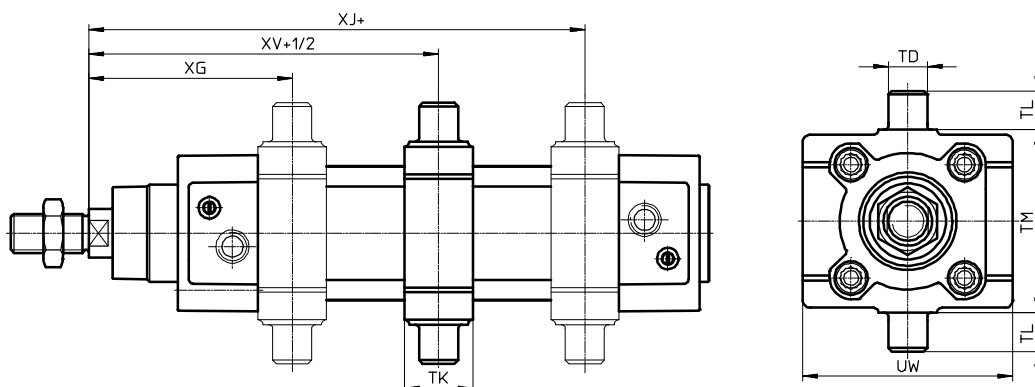
...E – Piston rod extension



Note

Piston rod extension at one end in combination with the variant T. Piston rod extension only at the square piston rod in combination with the variant T and Q.

...V – Swivel mounting position



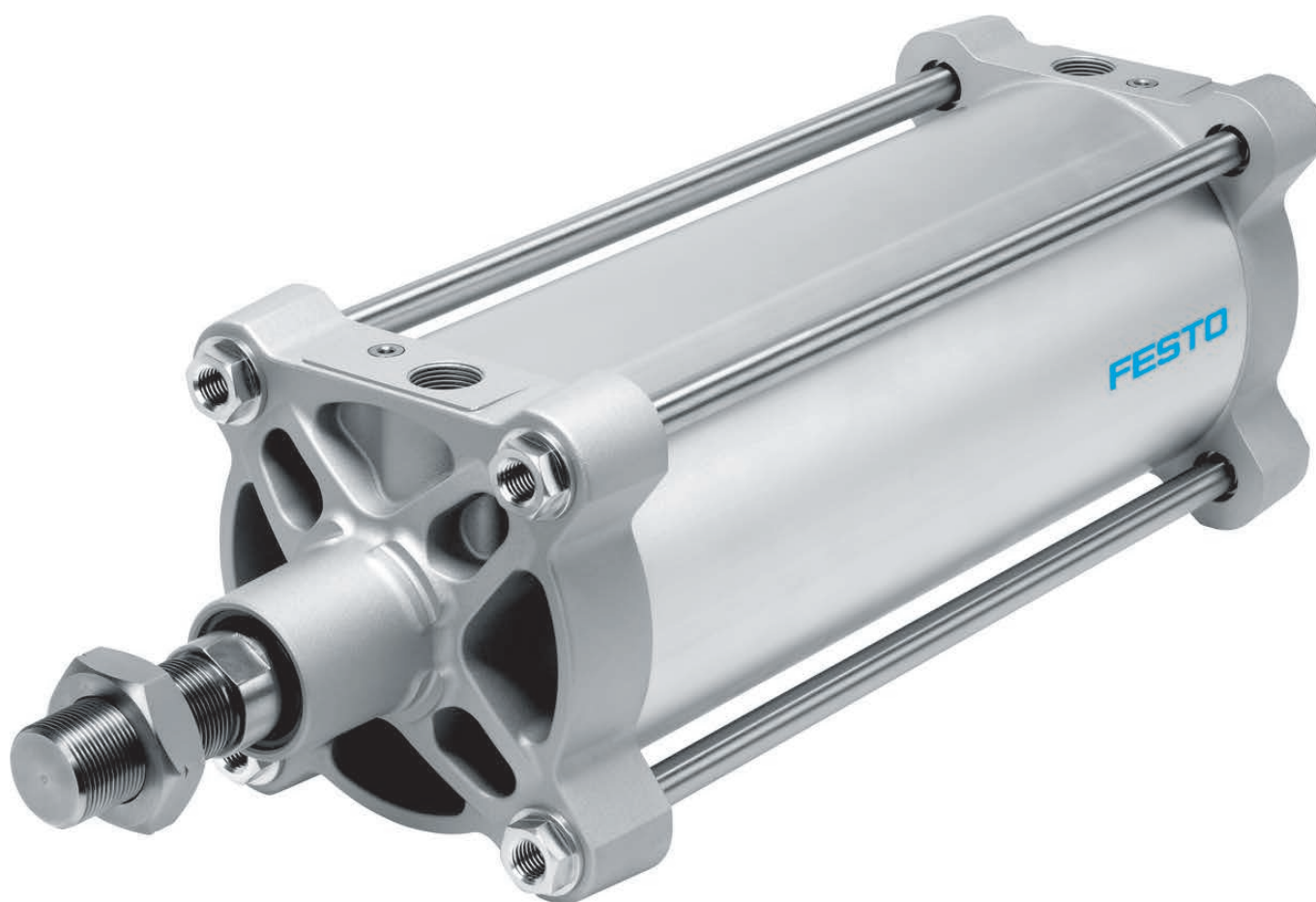
Note

The dimensions for the swivel mounting position (...V) refer to the basic design without piston rod extension. The swivel mounting can be moved at any time.

+ = plus stroke length
+1/2 = plus half stroke length

Ø	A2		AF	B1	D1	KF	T1	T2	WH
[mm]	min.	max.	min.				max.		+2.2
32	1	500	12	10	6.4	M6	16	2.6	25
40	1	500	12	12	8.4	M8	16	3.3	28.7
50	1	500	16	16	10.5	M10	21	4.7	35.6
63	1	500	16	16	10.5	M10	21	4.7	35.9
80	1	500	20	20	13	M12	26.5	6.1	45.4
100	1	500	20	20	13	M12	26.5	6.1	49.3
125	1	500	32	–	17	M16	40	8	64.1

Ø	TD	TK	TL	TM	UW	XG	XJ	XV
[mm]	Ø e9		h14	h14		min.	max.	
32	12	20	12	50	65	64±1.4	81±1.4	73±1.4
40	16	25	16	63	72	74.2±1.4	88.4±1.4	81.2±1.4
50	16	28	16	75	86	82.6±1.4	94.8±1.4	88.6±1.4
63	20	30	20	90	98	91.4±1.8	101.6±1.8	96.4±1.8
80	20	32	20	110	110	104.4±1.8	114.6±1.8	109.4±1.8
100	25	38	25	132	136	116.3±1.8	120.5±1.8	118.3±1.8
125	25	44	25	160	160	131.7±1.8	158.3±1.8	145±1.8



Save costs

- + When position sensing and adjustable cushioning are not required
- + Thanks to standardised interfaces to ISO 15552
- + With standardised mounting accessories

Cylinders with piston rod › Standards-based cylinders ›
Standards-based cylinders
to ISO 15552

DSBG

Ø 160 ... 320 mm

Cylinders with piston rod > Standards-based cylinders >

Standards-based cylinders to ISO 15552

DSBG



Overview, configuration and ordering

→ www.festo.com/catalogue/dsbg



Additional information, support and user documentation

→ www.festo.com/sp/dsbg

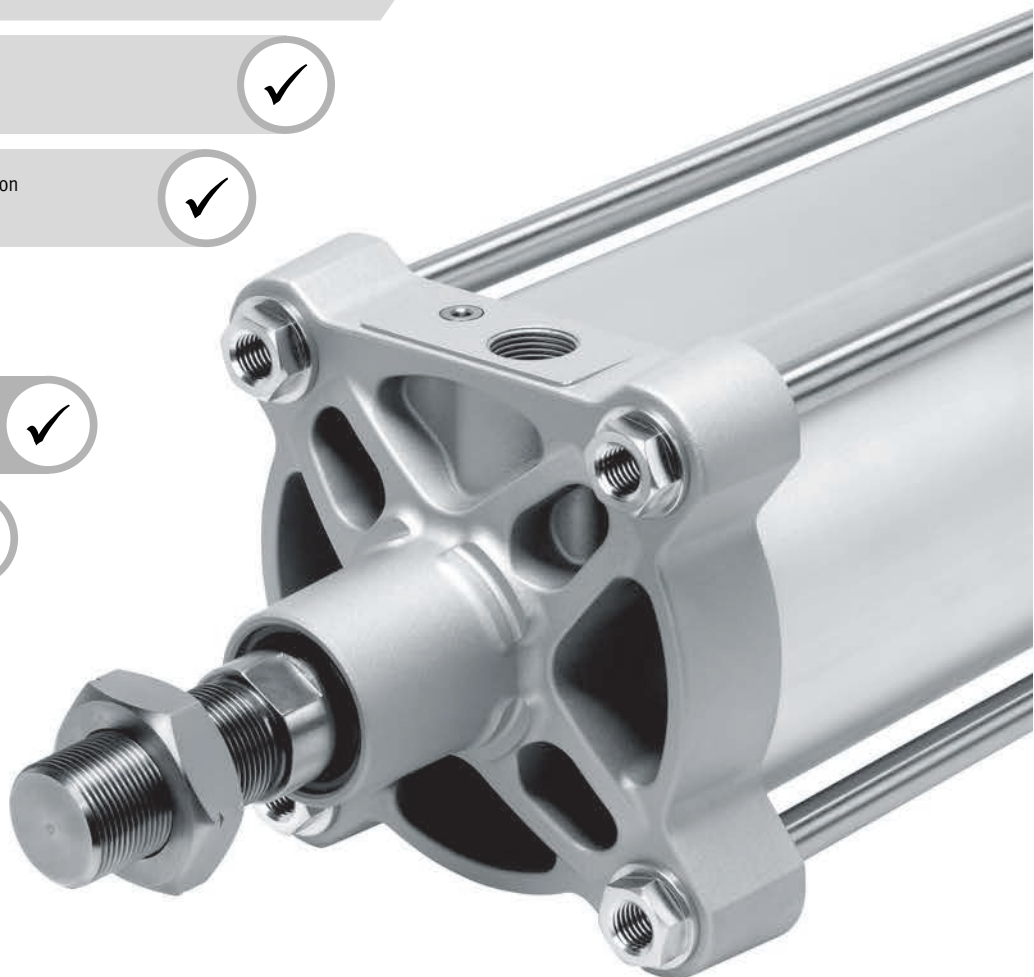


Selected types in accordance with the ATEX Directive
for explosive atmospheres

→ www.festo.com/catalogue/ex



Spare parts service



- + ISO 15552 (ISO 6431, VDMA 24562)
- + Sturdy tie rod design
- + For contactless position sensing
- + Comprehensive range of accessories for just about every type of installation
- + Optionally without sensing and without pneumatic end-position cushioning (price advantage)

Standards-based cylinders DSBG, to ISO 15552

Product range overview – Piston Ø 160 ... 320

Type/function	PistonØ [mm]	Stroke [mm]	Force [N]	Product options					
				V	T	P	PPV	A	N3
DSBG									
Double-acting	160	1 ... 2700	12064	■	■	■	■	■	■
	200	1 ... 2700	18850	■	■	■	■	■	■
	250	1 ... 2250	29452	–	■	■	■	■	■
	320	1 ... 2250	48255	–	■	■	■	■	■

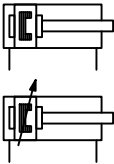
Type/function	PistonØ [mm]	Product options						
		T1	T4	...Y	...I	B1	B2	B3
DSBG								
Double-acting	160	■	■	–	■	■	■	■
	200	■	■	–	■	■	■	■
	250	■	–	■	■	■	■	■
	320	■	–	■	■	■	■	■

Product options

V	With central swivel mounting	A	Position sensing	...Y	Trunnion flange mounting position (positive-locking)	B1	Integrated stud bolts at both ends
T	Through piston rod	N3	Standard conforms to ISO 15552	...E	Piston rod extension	B2	Integrated stud bolts on bearing cap
F	Piston rod thread type	R3	High corrosion protection	...L	Piston rod thread extension	B3	Integrated stud bolts on end cap
P	Elastic cushioning rings/plates at both ends	T1	Heat-resistant seals up to max. 120 °C	...S	Piston rod thread shortening	...LB2	Thread length of spacer bolts on bearing cap
PPV	Pneumatic cushioning, adjustable at both ends	T4	Heat-resistant seals up to max. 150 °C	M...	Piston rod thread version	...LB3	Thread length of spacer bolts on end cap
		A6	Metal scraper				
		EX4	EU certification (II 2GD)				

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Data sheet – Piston Ø 160 ... 320



Technical data				Dimensions → Page 94	
PistonØ		160	200	250	320
Pneumatic connection		G3/4	G3/4	G1	G1
Stroke ¹⁾					
DSBG-...	[mm]	1 ... 2700		1 ... 2250	
DSBG-...-E	[mm]	1 ... 2000			
Cushioning					
DSBG-...-P		Elastic cushioning rings/plates at both ends			
DSBG-...-PPV		Pneumatic cushioning, adjustable at both ends			
Cushioning length	[mm]	48		55	65
Theoretical force at 6 bar, advancing	[N]	12064	18850	29452	48255
Theoretical force at 6 bar, retracting	[N]	11310	18096	28274	46385
Max. impact energy in the end positions					
DSBG-...	[J]	3.3	4.8	7.2	12.6
DSBG-...-T1/-T4	[J]	2.3	4	4.2	6

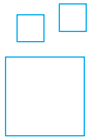
1) In combination with the position sensing option, the minimum stroke is 10 mm.

Operating conditions		
Operating pressure	[bar]	0.6 ... 10
Ambient temperature ²⁾		
DSBG-...	[°C]	−20 ... +80
DSBG-...-T1	[°C]	0 ... +120
DSBG-...-T4	[°C]	0 ... +150

2) Note operating range of proximity sensors

Materials	
Piston rod	High-alloy steel
Bearing cap	Coated die-cast aluminium/cast aluminium
Cylinder barrel	Anodised wrought aluminium alloy
End cap	Coated die-cast aluminium/cast aluminium
Seals	TPE-U (PU), NBR

Ordering – Product options



Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or

→ www.festo.com/catalogue/...

Enter the type code in the search field.

Standards-based cylinders DSBG, to ISO 15552

Order code – Piston Ø 160 ... 320

Type	
DSBG	Standards-based cylinder, double-acting
Central swivel mounting	
–	Without
V	Centrally clamped ☐
Piston Ø [mm]	
	Stroke [mm]
160, 200	25, 40, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500
250, 320	–
Piston rod	
–	Piston rod at one end
T	Through piston rod
Cushioning	
P	Elastic cushioning rings/plates at both ends
PPV	Pneumatic cushioning, adjustable at both ends
Position sensing	
A	Via proximity sensor ☐
Standard	
N3	Conforms to ISO 15552
Temperature range	
–	Standard
T1	0 ... +120°C
T4	0 ... +150°C ☐
Trunnion flange mounting position	
–	Without
...Y	Positive-locking screw connection ☐ ☐ ☐
Piston rod extension	
–	Without
...E	1 ... 500 mm ☐
Integrated stud bolts	
–	Without
B1	At both ends
B2	On bearing cap
B3	On end cap

- 1 Only for piston Ø 160, 200

- 2 Only for piston $\varnothing$ 250

- 3 Only for piston $\varnothing$ 320

- 4 Minimum stroke 10 mm

- 5 Only up to strokes of 2000 mm

- 6 Piston Ø 250: 198 ... 2459 mm

- Piston Ø 320: 226 ... 2483 mm

Order example:

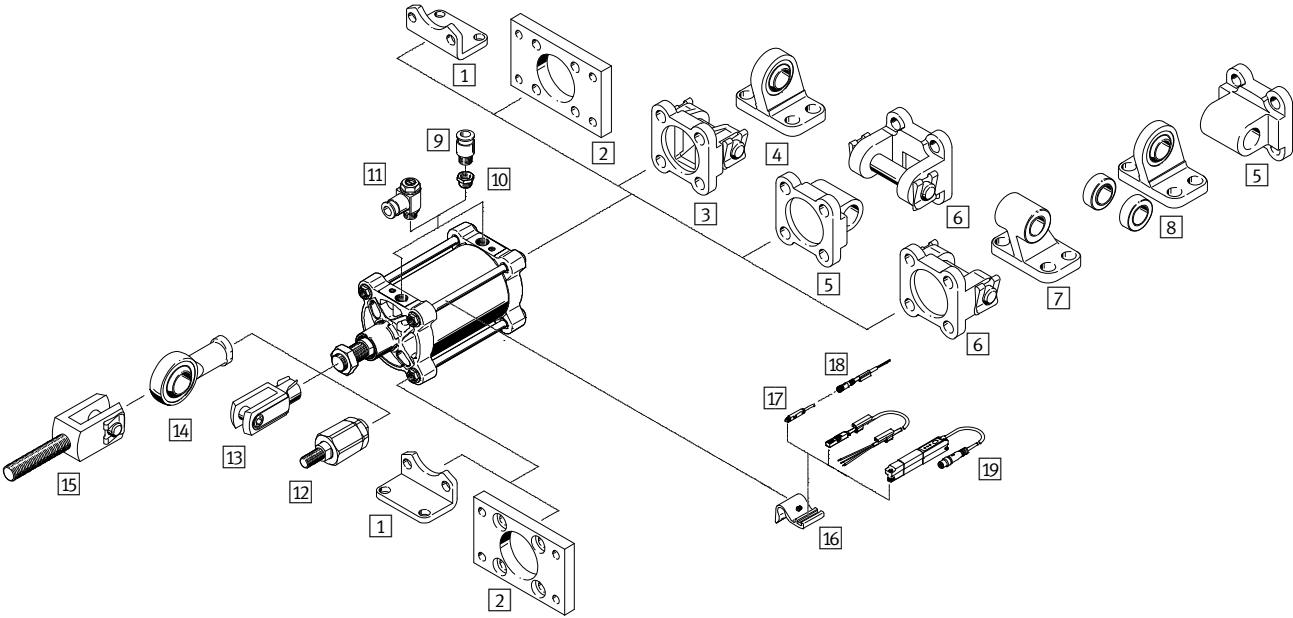
DSBG-160-500-PPVA-N3T1-M36-B2

Double-acting standards-based cylinder - without central swivel mounting - piston diameter 160 mm - stroke 500 mm - piston rod at one end - pneumatic cushioning, adjustable at both ends - position sensing via proximity sensor - conforms to standard ISO 15552 - heat resistant up to max. 120 °C - without trunnion flange mounting position - without piston rod extension - with piston rod thread M36 - with integrated stud bolts on bearing cap

Cylinders with piston rod > Standards-based cylinders >

Standards-based cylinders DSBG, to ISO 15552

Accessories – Piston Ø 160 ... 320



	For Ø	→ Page/online
1	Foot mounting HNG	160 ... 320 92
2	Flange mounting FNG	160 ... 320 92
3	Swivel flange SNG	160, 200 92
4	Clevis foot LSNG	160, 200 92
5	Swivel flange SNGL	160, 200 92
6	Swivel flange SNGB	160 ... 320 92
7	Clevis foot LN/LNG	160 ... 320 93
8	Clevis foot LSN	160 ... 320 93
9	Push-in fitting QS	160, 200 1443
10	Reducing nipple NPFC	160, 200 93
	Reducing nipple D	250, 320 93
11	One-way flow control valve GRLA	160, 200 1031

	For Ø	→ Page/online
12	Self-aligning rod coupler FK	160, 200 93
13	Rod clevis SG	160 ... 320 93
14	Rod eye SGS	160 ... 320 93
15	Rod clevis SGA	160, 200 93
16	Sensor bracket DASP	160 ... 320 93
17	Proximity sensor SME/SMT-8M	160 ... 320 93
18	Connecting cable NEBU	160 ... 320 93
19	Position transmitter SMAT-8M/SDAT	160, 200 dsbg
–	Trunnion support LNZG	160 ... 320 92

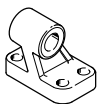
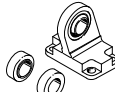
Accessories – Ordering data – Piston Ø 160 ... 320

	For Ø	Part no.	Type
1	Foot mounting	Dimensions online: → dsbg	
	160	34476	HNG-160
	200	34477	HNG-200
	250	157510	HNG-250
	320	157511	HNG-320
2	Flange mounting	Dimensions online: → dsbg	
	160	34478	FNG-160
	200	34479	FNG-200
	250	157508	FNG-250
	320	157509	FNG-320
3	Swivel flange	Dimensions online: → dsbg	
	160	152597	SNG-160
	200	152598	SNG-200

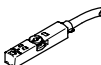
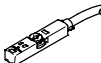
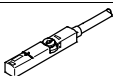
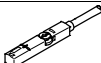
	For Ø	Part no.	Type
4	Clevis foot	Dimensions online: → lsng	
	160	152599	LSNG-160
	200	152600	LSNG-200
5	Swivel flange	Data sheets online: → dsbg	
	160	151534	SNGL-160
	200	151535	SNGL-200
6	Swivel flange	Dimensions online: → dsbg	
	160	34547	SNGB-160
	200	562455	SNGB-200-B
	250	157512	SNGB-250
	320	157513	SNGB-320

Standards-based cylinders DSBG, to ISO 15552

Accessories – Ordering data – Piston Ø 160 ... 320

	For Ø	Part no.	Type
7 Clevis foot Dimensions online: → ln			
	160	9037	LN-160
	200	33898	LNG-200
	250	9039	LN-250
	320	9040	LN-320
8 Clevis foot Data sheets online: → lsn			
	160	6988	LSN-160
	200	6989	LSN-200
	250	6990	LSN-250
	320	6991	LSN-320
10 Reducing nipple Data sheets online: → npfc			
	160, 200	8030313	NPFC-R-G34-G12-MF
	250, 320	197634	D-1/2I-1A
12 Self-aligning rod coupler Data sheets online: → fk			
	160, 200	10746	FK-M36x2

	For Ø	Part no.	Type
13 Rod clevis Data sheets online: → sg			
	160, 200	9581	SG-M36x2
	250	9582	SG-M42x2
	320	9583	SG-M48x2
14 Rod eye Data sheets online: → sgs			
	160, 200	10775	SGS-M36x2
	250	10776	SGS-M42x2
	320	10777	SGS-M48x2
15 Rod clevis Data sheets online: → sga			
	160, 200	10771	SGA-M36x2
16 Sensor bracket for proximity sensor SME/SMT-8 Data sheets online: → dsbg			
	160, 200	155813	DASP-M4-125-A
	250	1456781	DASP-M4-250-A
	320	3015256	DASP-M4-320-A

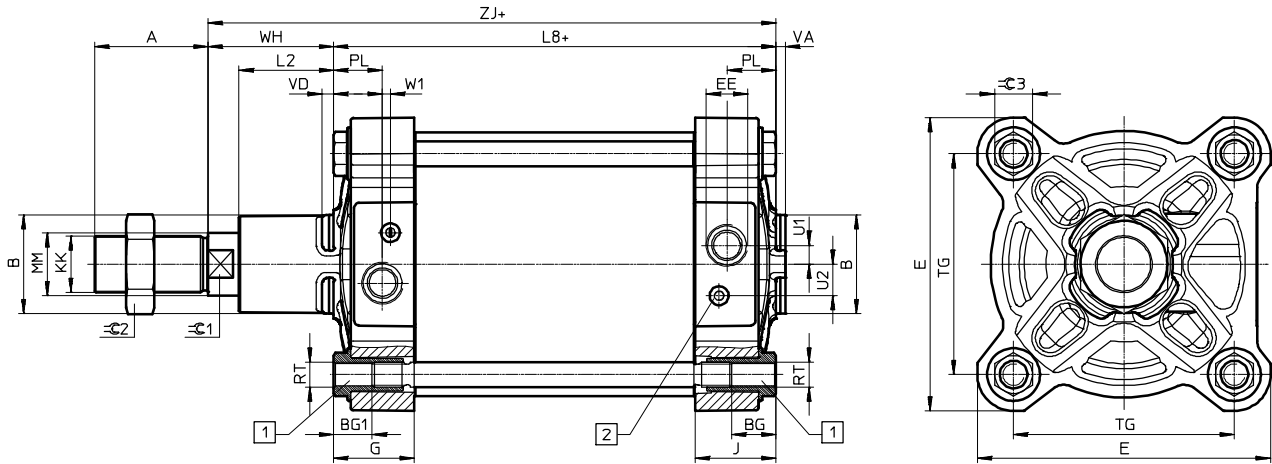
	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
17 Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets → Page 1206					
	160 ... 320	PNP, cable	2.5	★ 574335	SMT-8M-A-PS-24V-E-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-A-PS-24V-E-0,3-M8D
		PNP, plug	0.3	★ 574337	SMT-8M-A-PS-24V-E-0,3-M12
		NPN, cable	2.5	★ 574338	SMT-8M-A-NS-24V-E-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-A-NS-24V-E-0,3-M8D
Magneto-resistive – N/C contact Data sheets → Page 1206					
	160 ... 320	PNP, cable	7.5	★ 574340	SMT-8M-A-PO-24V-E-7,5-OE
Magnetic reed – N/O contact Data sheets → Page 1201					
	160 ... 320	Contacting, cable	2.5	★ 543862	SME-8M-DS-24V-K-2,5-OE
		Contacting, cable	5.0	★ 543863	SME-8M-DS-24V-K-5,0-OE
		Contacting, cable	2.5	★ 543872	SME-8M-ZS-24V-K-2,5-OE
		Contacting, plug	0.3	★ 543861	SME-8M-DS-24V-K-0,3-M8D
Magnetic reed – N/C contact Data sheets → Page 1201					
	160 ... 320	Contacting, cable	7.5	★ 546799	SME-8M-DO-24V-K-7,5-OE

	For Ø	Connection	Cable length [m]	Part no.	Type	
18 Connecting cable, straight socket						Data sheets → Page 1543
	160 ... 320	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3	
			5.0	★ 541334	NEBU-M8G3-K-5-LE3	
		M12x1, 5-pin	2.5	★ 541363	NEBU-M12G5-K-2.5-LE3	
			5.0	★ 541364	NEBU-M12G5-K-5-LE3	
Connecting cable, angled socket						Data sheets → Page 1543
	160 ... 320	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3	
			5.0	★ 541341	NEBU-M8W3-K-5-LE3	
		M12x1, 5-pin	2.5	541367	NEBU-M12W5-K-2.5-LE3	
			5.0	541370	NEBU-M12W5-K-5-LE3	

01

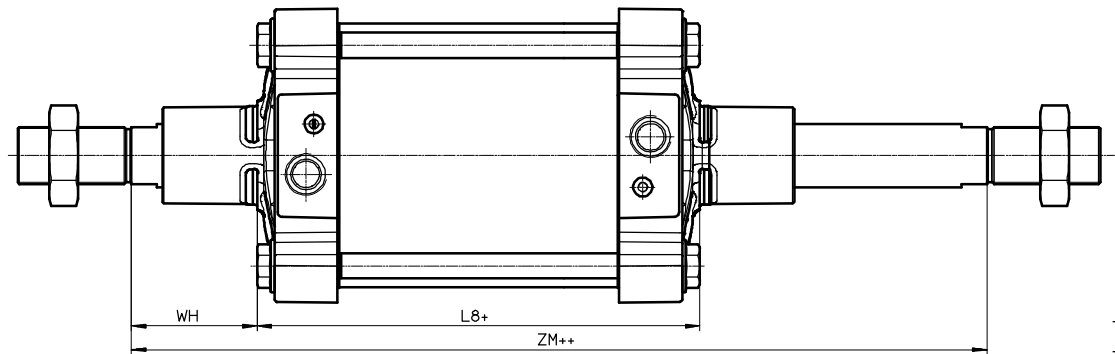
Dimensions – Piston Ø 160 ... 320

Basic design



- + = plus stroke length
- 1 Socket head screw with female thread for mounting components
- 2 Regulating screw for adjustable end-position cushioning (PPV)

T – Through piston rod



- + = plus stroke length
- ++ = plus 2x stroke length

Ø	A	B	BG	BG1	I	EE	G	J
[mm]	-0.5	Ø d11	min.	±0.5	±0.5			
160	72	65	24	25	186	G3/4	50.7	50.7
200	72	75	24	25	230	G3/4	46.9	46.7
250	84	90	25	26	284	G1	51.2	51.2
320	96	110	28	29	347	G1	58.2	58.2

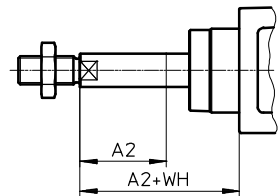
Ø	KK	L2	L8	MM	PL	RT	TG	U1	U2
[mm]							±1.1		
160	M36x2	60	180±1	40	31	M16	140	12	20
200	M36x2	70	180±1.2	40	30	M16	175	12	20
250	M42x2	80	200±1.6	50	32	M20	220	25	25
320	M48x2	90	220±2.2	63	37.5	M24	270	25	25

Ø	VA	VD	W1	WH	ZJ	ZM	∅1	∅2	∅3
[mm]	-1				±1				
160	6	7	5	80±1.3	260	342±1	36	55	24 _{h13}
200	6	6.5	5	95±1.4	275	372±1.2	36	55	24 _{h13}
250	10	13.7	3	105±1.5	305	410±1.6	46	65	41 _{h14}
320	10	10.7	1.5	120±1.5	340	462±1	55	75	50 _{h14}

Standards-based cylinders DSBG, to ISO 15552

Dimensions – Piston Ø 160 ... 320

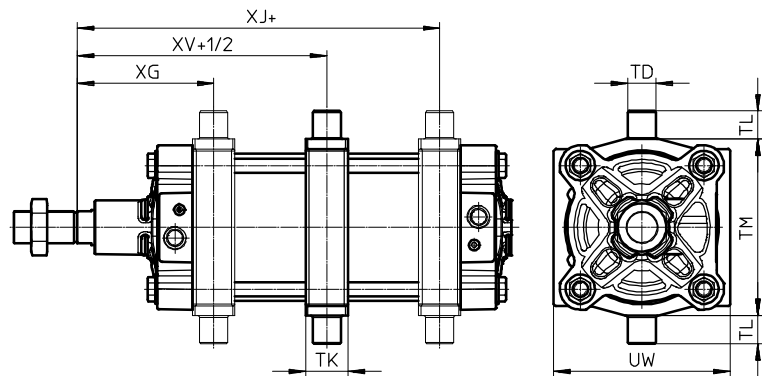
...E – Piston rod extension



Note
Piston rod extension at one end in combination with variant T.

Ø [mm]	A2		WH
	min.	max.	
160	1	500	80±1.3
200	1	500	95±1.4
250	1	500	105±1.5
320	1	500	120±1.5

V – Central swivel mounting



Note
The swivel mounting is mounted centrally on delivery but can be moved at any time.

+ = plus stroke length
+1/2 = plus half stroke length

Ø [mm]	TD Ø e8	TK	TL h14	TM h14	UW	XG ±0.5	XJ ±0.5	XV
160	32	48	32	200	200	157.5	182.5	170
200	32	48	32	250	240	169	200.5	185

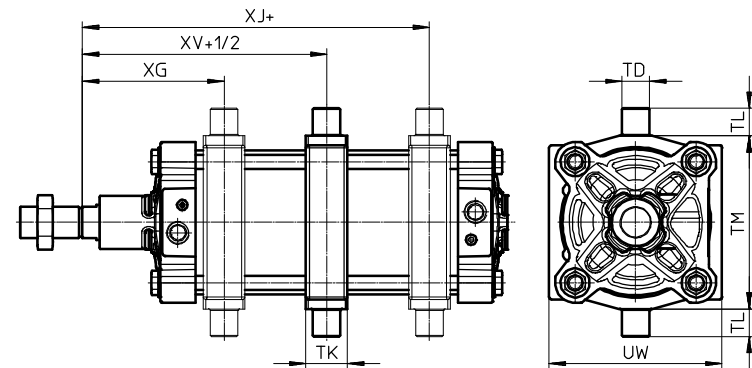
Cylinders with piston rod > Standards-based cylinders >

Standards-based cylinders DSBG, to ISO 15552

01

Dimensions – Piston Ø 160 ... 320

...Y – Trunnion flange mounting position



Note

The dimensions for the trunnion flange mounting position (...Y) refer to the basic design without piston rod extension.

The swivel mounting has a positive-locking screw connection.

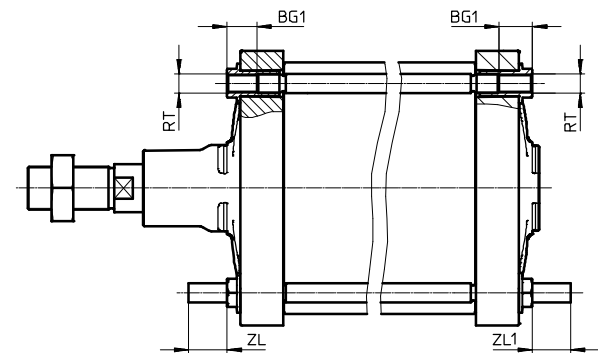
This means that the position cannot be changed at a later date.

+ = plus stroke length

+1/2 = plus half stroke length

Ø	TD	TK	TL	TM	UW	XG	XJ	XV
[mm]	Ø e8		h14	h14		±2.4	±2.4	±2.4
250	40	60	40	320	319	198	209	205
320	50	70	50	400	385	226	233	230

B1/B2/B3 – Integrated stud bolt



Ø	BG	BG1	RT	ZL	ZL1 ¹⁾
[mm]		±0.5		±0.5	
160	24	25	M16	32	32
200	24	25	M16	32	32
250	25	26	M20	40	40
320	28	29	M24	50	50

1) Tolerances depending on variant:

B1: ZL1 = +1/–2; B3: ZL1 = ±0.5



Save time and money during maintenance and commissioning

- + Thanks to easy-to-clean clean design
- + Thanks to increased corrosion protection
- + With self-adjusting end-position cushioning PPS

Cylinders with piston rod › Standards-based cylinders ›
Standards-based cylinders,
to ISO 15552, clean design

DSBF-C

Cylinders with piston rod > Standards-based cylinders >

Standards-based cylinders, to ISO 15552, clean design

DSBF-C



Overview, configuration and ordering

→ www.festo.com/catalogue/dsbf



Additional information, support and user documentation

→ www.festo.com/sp/dsbf

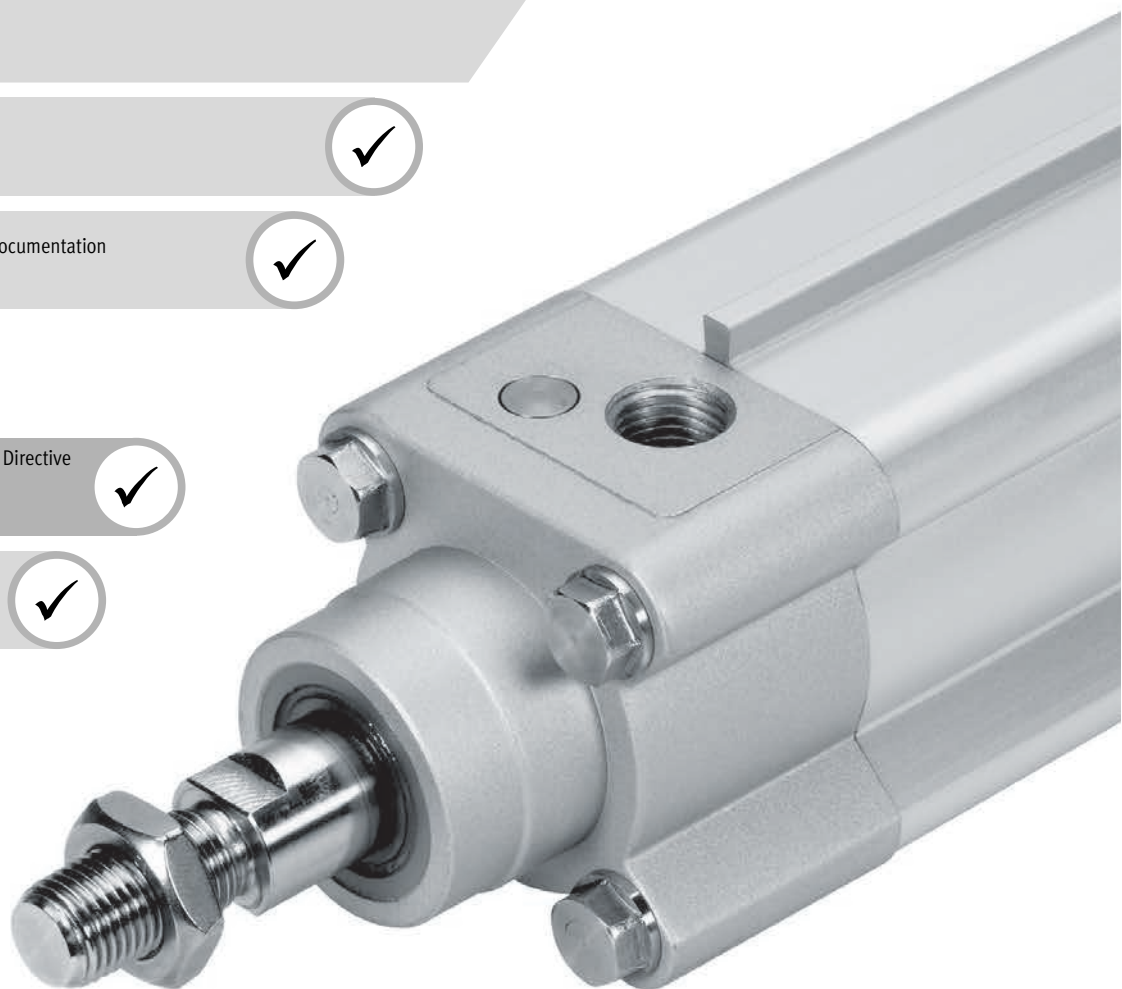


Selected types in accordance with the ATEX Directive
for explosive atmospheres

→ www.festo.com/catalogue/ex



Spare parts service



- + ISO 15552 with increased corrosion protection
- + Resistant to conventional cleaning agents
- + FDA-approved lubrication and sealing on the basic variant
- + Hygienic mounting of the sensors possible
- + With self-adjusting pneumatic end-position cushioning PPS
- + Optional dry-running seal for long service life, even with frequent cleaning

Standards-based cylinders DSBF-C, to ISO 15552, Clean Design

Product range overview

Type/function	Piston Ø [mm]	Stroke [mm]	Force [N]	Product options											
				T	F	P	PPV	PPS	N3	T1	T3	T4	A3	...E	R
DSBF-C															
Double-acting	32, 40, 50, 63, 80, 100, 125	1 ... 2800	483 ... 7363	■	■	■	■	■	■	■	■	■	■	■	■

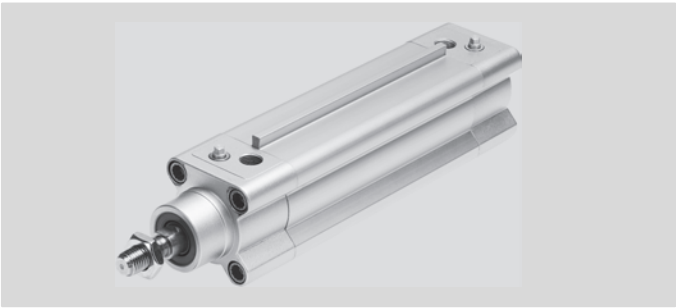
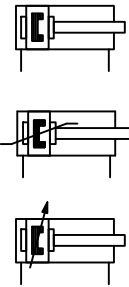
Product options

L	Low friction	P	Elastic cushioning rings/plates at both ends	T1	Heat-resistant seals up to max. 120 °C	A3	Suitable for unlubricated operation
U	Uniform, slow movement	PPS	Pneumatic cushioning, self-adjusting at both ends	T3	Low temperature	EX4	EU certification (II 2GD)
T	Through piston rod	PPV	Pneumatic cushioning, adjustable at both ends	T4	Heat-resistant seals up to max. 150 °C	...E	Piston rod extension
F	Female piston rod thread	A	Position sensing	A1	Increased chemical resistance	...L	Piston rod thread extension
		N3	Standard conforms to ISO 15552	A2	Hard scraper	R	Mounting rail for sensors

Standards-based cylinders DSBF-C, to ISO 15552, Clean Design

01

Data sheet



Technical data			Dimensions ➔ Page 105						
Piston Ø			32	40	50	63	80	100	125
Pneumatic connection			G1/8	G1/4	1/4	G3/8	G3/8	G1/2	G1/2
Piston rod thread			M10x1.25	M12x1.25	M16x1.5	M16x1.5	M20x1.5	M20x1.5	M27x2
Stroke									
DSBF-...	[mm]		1 ... 2800						
DSBF-...-E	[mm]		1 ... 2000						
Cushioning									
DSBF-...-P			Elastic cushioning rings/plates at both ends						
DSBF-...-PPS			Pneumatic cushioning, self-adjusting at both ends						
DSBF-...-PPV			Pneumatic cushioning, adjustable at both ends						
Cushioning length	PPV	[mm]	17	19	22	22	31	31	45
Min. stroke with position sensing ¹⁾		[mm]	18	17	13	10	10	10	10
Theoretical force at 6 bar, advancing		[N]	483	754	1178	1870	3016	4712	7363
Theoretical force at 6 bar, retracting		[N]	415	633	990	1682	2721	4418	6881
Max. impact energy in the end positions									
DSBF-...	[J]		0.4	0.7	1.0	1.3	1.8	2.5	3.3
DSBF-...-T1/T3/T4	[J]		0.2	0.35	0.5	0.65	0.9	1.25	1.65

1) Values apply to proximity sensor SMT-C1, the minimum stroke for proximity sensor CRSMT-8M is 10 mm.

Operating conditions								
Piston Ø		32	40	50	63	80	100	125
Operating pressure								
DSBF-...	[bar]	0.6 ... 12			0.4 ... 12			0.2 ... 10
DSBF-...-T3	[bar]	1 ... 12						1 ... 10
DSBF-...-A3	[bar]	1.5 ... 12			1 ... 12	0.6 ... 12		0.6 ... 10
Ambient temperature ²⁾								
DSBF-...	[°C]	-20 ... +80						
DSBF-...-T1	[°C]	0 ... +120						
DSBF-...-T3	[°C]	-40 ... +80						
DSBF-...-T4	[°C]	0 ... +150						

2) Note operating range of proximity sensors

Materials	
Piston rod	High-alloy stainless steel
Bearing cap	Coated die-cast aluminium
Cylinder barrel	Anodised wrought aluminium alloy
End cap	Coated die-cast aluminium
Seals	NBR, PUR

Product options

Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
→ www.festo.com/catalogue/...

Enter the type code in the search field.

Standards-based cylinders DSBF-C, to ISO 15552, Clean Design

Order code

01

Pneumatic drives

DSBF - C - - - - - A - N3 - - - R	
Type	
DSBF	Standards-based cylinder
Version	
C	Easy-to-clean design
Piston Ø [mm]	
	Stroke [mm]
32, 40, 50, 63, 80, 100, 125	25, 40, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500
1 ... 2800	
Piston rod	
-	Piston rod at one end
T	Through piston rod
Piston rod thread type	
-	Male thread
F	Female thread
Cushioning	
P	Elastic cushioning rings/plates at both ends
PPS	Pneumatic cushioning, self-adjusting at both ends
PPV	Pneumatic cushioning, adjustable at both ends
Position sensing	
A	Via proximity sensor
Standard	
N3	Conforms to ISO 15552
Temperature range	
-	Standard
T1	Heat resistant up to max. 120 °C
T3	Low temperature
T4	Heat resistant up to max. 150 °C
Wiper ring variant	
-	None
A3	Suitable for unlubricated operation
Piston rod extension	
...E	1 ... 500 mm
Sensor mounting	
R	Mounting rail for sensors

1 Not with temperature range T1, T3, T4

2 Not with wiper seal variant A3

3 Only up to strokes of 2000 mm

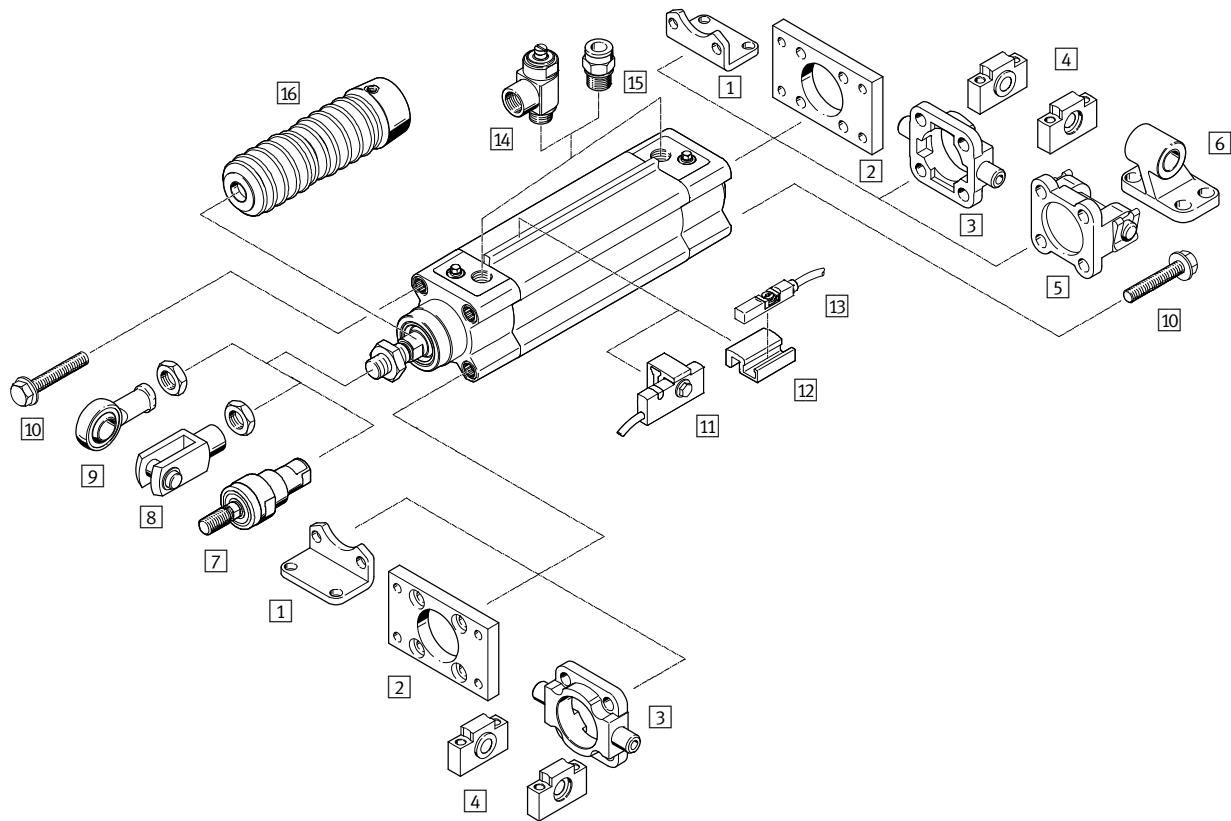
Order example:
DSBF-C-32-500-PPVA-N3T1-200E-R
Standards-based cylinder - easy-to-clean design - piston diameter 32 mm - stroke 500 mm - piston rod at one end - male thread - pneumatic cushioning, self-adjusting at both ends - position sensing via proximity sensor - standard conforms to ISO 15552 - heat resistant up to max. 120 °C - no wiper seal variant - piston rod extension 200 mm - mounting rail for sensors

Cylinders with piston rod > Standards-based cylinders >

Standards-based cylinders DSBF-C, to ISO 15552, Clean Design

01 Accessories

Pneumatic drives

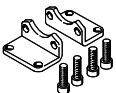
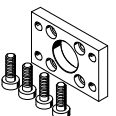
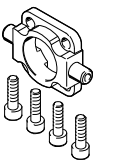
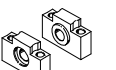
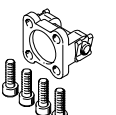


	→ Page/online
1 Foot mounting CRHNC	103
2 Flange mounting CRFNG	103
3 Trunnion flange CRZNG	103
4 Trunnion support CRLNZG	103
5 Swivel flange SNCB- ... -R3	103
6 Clevis foot CRLNG	103
7 Self-aligning rod coupler CRFK	103
8 Rod clevis CRSG	103

	→ Page/online
9 Rod eye CRS GS	103
10 Blanking screw DAMD	103
11 Proximity sensor SMT-C1	104
12 Mounting kit SMB-8-C	104
13 Proximity sensor CRSMT-8M	104
14 One-way flow control valve CRGRLA	104
15 Push-in fitting NPQH/CRQS/CRQSL	dsbf
16 Bellows kit DADB	dsbf

Standards-based cylinders DSBF-C, to ISO 15552, Clean Design

Accessories – Ordering data

	For Ø	Part no.	Type
1 Foot mounting Dimensions online: → dsbf			
	32	176937	CRHNC-32
	40	176938	CRHNC-40
	50	176939	CRHNC-50
	63	176940	CRHNC-63
	80	176941	CRHNC-80
	100	176942	CRHNC-100
	125	176943	CRHNC-125
2 Flange mounting Dimensions online: → dsbf			
	32	161846	CRFNG-32
	40	161847	CRFNG-40
	50	161848	CRFNG-50
	63	161849	CRFNG-63
	80	161850	CRFNG-80
	100	161851	CRFNG-100
	125	185363	CRFNG-125
3 Trunnion flange Dimensions online: → dsbf			
	32	161852	CRZNG-32
	40	161853	CRZNG-40
	50	161854	CRZNG-50
	63	161855	CRZNG-63
	80	161856	CRZNG-80
	100	161857	CRZNG-100
	125	185362	CRZNG-125
4 Trunnion support Dimensions online: → crlnzc			
	32	161874	CRLNZG-32
	40, 50	161875	CRLNZG-40/50
	63, 80	161876	CRLNZG-63/80
	100, 125	161877	CRLNZG-100/125
5 Swivel flange Dimensions online: → dsbf			
	32	176944	SNCB-32-R3
	40	176945	SNCB-40-R3
	50	176946	SNCB-50-R3
	63	176947	SNCB-63-R3
	80	176948	SNCB-80-R3
	100	176949	SNCB-100-R3
	125	176950	SNCB-125-R3

	For Ø	Part no.	Type
6 Clevis foot Data sheets online: → crlng			
	32	161840	CRLNG-32
	40	161841	CRLNG-40
	50	161842	CRLNG-50
	63	161843	CRLNG-63
	80	161844	CRLNG-80
	100	161845	CRLNG-100
	125	176951	CRLNG-125
7 Self-aligning rod coupler Data sheets online: → crrfk			
	32	2305778	CRFK-M10x1,25
	40	2305779	CRFK-M12x1,25
	50, 63	2490673	CRFK-M16x1,5
	80, 100	2545677	CRFK-M20x1,5
8 Rod clevis Data sheets online: → crrsg			
	32	13569	CRSG-M10x1,25
	40	13570	CRSG-M12x1,25
	50, 63	13571	CRSG-M16x1,5
	80, 100	13572	CRSG-M20x1,5
	125	185361	CRSG-M27x2
9 Rod eye Data sheets online: → crrsgs			
	32	195582	CRSGS-M10x1,25
	40	195583	CRSGS-M12x1,25
	50, 63	195584	CRSGS-M16x1,5
	80, 100	195585	CRSGS-M20x1,5
	125	195586	CRSGS-M27x2
10 Blanking screw¹⁾			
	32, 40	1355016	DAMD-PS-M6-12-R1
	50, 63	650121	DAMD-PS-M8-16-R1
	80, 100	1355026	DAMD-PS-M10-16-R1

1) Packaging unit 4 pieces.

Cylinders with piston rod > Standards-based cylinders >

Standards-based cylinders DSBF-C, to ISO 15552, Clean Design

01

Accessories – Ordering data

	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
[11] Proximity sensor, magneto-resistive – N/O contact Data sheets online: → smt					
	32 ... 125	PNP, cable	5.0	571339	SMT-C1-PS-24V-K-5,0-OE
		PNP, plug	0.3	571342	SMT-C1-PS-24V-K-0,3-M8D
		PNP, plug	0.3	571341	SMT-C1-PS-24V-K-0,3-M12
[12] Mounting kit Data sheets online: → dsbf					
	32 ... 125	For CRSMT-8M	–	1806790	SMB-8-C
[13] Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets online: → crsmt-8m					
	32 ... 125	PNP, cable	5.0	574380	CRSMT-8M-PS-24V-K-5,0-OE
		PNP, cable	10.0	574381	CRSMT-8M-PS-24V-K-10,0-OE
		PNP, plug	0.3	574383	CRSMT-8M-PS-24V-K-0,3-M8D
		PNP, plug	0.3	574382	CRSMT-8M-PS-24V-K-0,3-M12
	For Ø	Connection	Cable length [m]	Part no.	Type
[13] Connecting cable, straight socket Data sheets → Page 1543					
	32 ... 125	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
		M12x1, 5-pin	2.5	★ 541363	NEBU-M12G5-K-2.5-LE3
			5.0	★ 541364	NEBU-M12G5-K-5-LE3
Angled socket Data sheets → Page 1543					
	32 ... 125	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3
		M12x1, 5-pin	2.5	541367	NEBU-M12W5-K-2.5-LE3
			5.0	541370	NEBU-M12W5-K-5-LE3
	For Ø	Connection	Part no. Type		
		Thread			
[14] One-way flow control valve with slotted head screw, stainless steel for exhaust air flow control Data sheets online: → grla					
	32	G1/8	161404	CRGRLA-1/8-B	
	40, 50	G1/4	161405	CRGRLA-1/4-B	
	63, 80	G3/8	161406	CRGRLA-3/8-B	
	100	G1/2	161407	CRGRLA-1/2-B	

Pneumatic drives

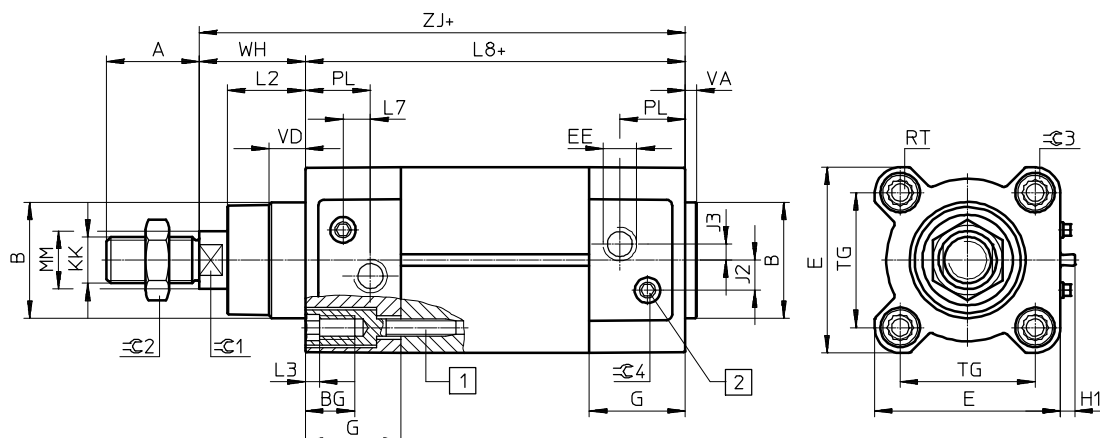
Standards-based cylinders DSBF-C, to ISO 15552, Clean Design

Dimensions

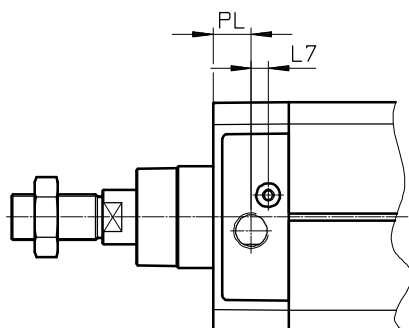
Download CAD data → www.festo.com

01

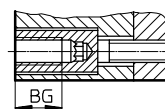
Basic design and A3 – Unlubricated operation



Ø 125



Ø 80 ... 125



+ = plus stroke length

1 Socket head screw with female thread for mounting components

2 Regulating screw for adjustable end-position cushioning

Ø	A	B Ø	BG	E	EE	G	H1	J2	J3
[mm]	-0.5	d11	min.	+0.5		-0.2	±0.2	±0.1	±0.1
32	22	30	16	45	G1/8	28	5	5.7	5.3
40	24	35	16	54	G1/4	33	5	8	4
50	32	40	16	64	G1/4	33	5	10.4	5.5
63	32	45	16	75	G3/8	40.5	5	12.8	6.3
80	40	45	17	93	G3/8	43	5	12.5	8
100	40	55	17	110	G1/2	48	5	13.5	10
125	54	60	20	136	G1/2	44.7	5	13	8

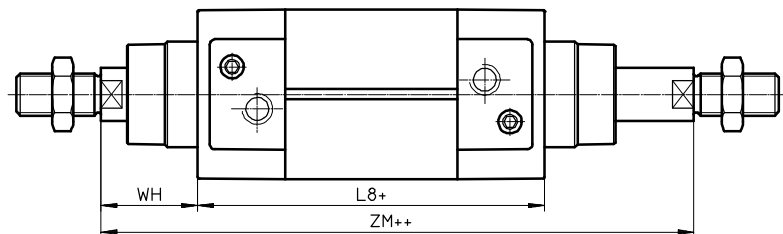
Ø	KK	L2	L3	L7	L8	MM Ø	PL	RT	TG
[mm]			max.		±0.4		±0.1		±0.3
32	M10x1.25	18 _{-0.2}	5	6.5	94	12	19.5	M6	32.5
40	M12x1.25	21.3 _{-0.2}	5	7.5	105	16	22.5	M6	38
50	M16x1.5	26.8 _{-0.2}	5	9.5	106	20	22.5	M8	46.5
63	M16x1.5	27 _{-0.2}	5	9	121	20	27.5	M8	56.5
80	M20x1.5	34.2 _{-0.2}	–	11	128	25	30	M10	72
100	M20x1.5	38 _{-0.2}	–	7.5	138	25	31.5	M10	89
125	M27x2	45.5 _{-0.3}	–	10	160	32	22.5	M12	110

Ø	VA	VD	WH	ZJ	⌀1	⌀2	⌀3	⌀4
[mm]		+0.5	+2.2	+1.8				
32	4 _{-0.2}	10	25	119.1	10	16	6	4
40	4 _{-0.2}	10.5	28.7	133.9	13	18	6	4
50	4 _{-0.2}	11.5	35.6	141.8	17	24	8	4
63	4 _{-0.2}	15	35.9	157.1	17	24	8	4
80	4 _{-0.2}	15.7	45.4	173.6	22	30	6	4
100	4 _{-0.2}	19.2	49.3	187.5	22	30	6	5
125	6 _{-0.3}	20.5	64.1	225	27	41	8	5

Standards-based cylinders DSBF-C, to ISO 15552, Clean Design

Dimensions

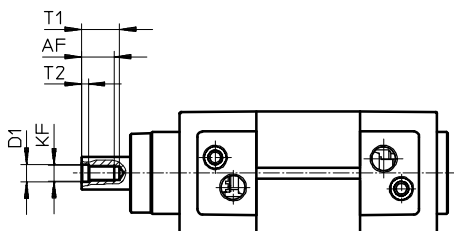
T – Through piston rod



Download CAD data → www.festo.com

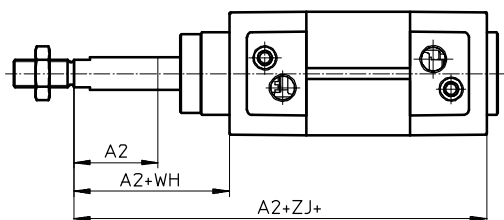
+ = plus stroke length
++ = plus 2x stroke length

F – Piston rod with female thread



Note
In combination with variant T, the piston rod has female threads at both ends.

...E – Piston rod extension



Note
Piston rod extension at one end in combination with variant T.

+ = plus stroke length

∅ [mm]	A2 max.	AF	D1	KF	L8 ±0.4
32	500	12	6.4 ^{+0.2}	M6	94
40		12	8.4 ^{+0.2}	M8	105
50		16	10.5 ^{+0.2}	M10	106
63		16	10.5 ^{+0.2}	M10	121
80		20	13 ^{+0.1}	M12	128
100		20	13 ^{+0.1}	M12	138
125		32	17 ^{+0.1}	M16	160

∅ [mm]	T1	T2 +0.2	WH +2.2	ZJ +1.8	ZM +1
32	16	2.6	26	119.1	146.1
40	16	3.3	28.7	133.9	164.8
50	21	4.7	35.6	141.8	179.8
63	21	4.7	35.9	157.1	195.4
80	26.5	6.1	45.4	173.6	221
100	26.5	6.1	49.3	187.5	238.8
125	40	8	65	225	290



DSNU
Double-acting



ESNU
Single-acting

Save time and money during commissioning

- + Thanks to standardised interfaces to ISO 6432 for piston diameter 8 ... 25 mm
- + With standardised mounting accessories
- + With self-adjusting pneumatic end-position cushioning PPS

Cylinders with piston rod > Standards-based cylinders >
Round cylinders

DSNU ★

Double-acting

ESNU

Single-acting

Cylinders with piston rod > Standards-based cylinders >

Round cylinders

DSNU★/ESNU



Overview, configuration and ordering

→ www.festo.com/catalogue/dsnu



Additional information, support and user documentation

→ www.festo.com/sp/dsnu



Quick ordering of basic designs

→ page 112



Selected types in accordance with the ATEX Directive
for explosive atmospheres

→ www.festo.com/catalogue/ex



- + ISO 6432 (piston diameter 8 ... 25 mm)
- + With self-adjusting pneumatic end-position cushioning PPS
- + For position sensing
- + Wide range of variants
- + Good running performance and long service life
- + Piston rod with female or male thread
- + Comprehensive range of accessories for just about every type of installation

Product range overview

Type/function	Version	Piston Ø [mm]	Stroke [mm]	Force [N]	Product options								→ Page/ online
					P	PPV	PPS	A	Q	S2	K8	S6	
Double-acting	DSNU												
	Basic design to ISO 6432	8, 10, 12, 16, 20, 25	1 ... 500	30 ... 295	■	■	■	■	■	■	■	■	110
	Basic design	32, 40, 50, 63	1 ... 500	483 ... 1870	■	■	■	■	■	■	■	■	110
	MQ – Plain end cap, lateral connection	8, 10, 12, 16, 20, 25, 32, 40, 50, 63	1 ... 500	30 ... 1870	■	■	■	■	■	–	■	■	110
	MA – Plain end cap, axial connection				■	–	–	■	■	–	■	■	dsnu
	MH – Direct mounting				■	■	–	■	■	–	■	■	
Single-acting	ESNU												
	Basic design to ISO 6432	8, 10, 12, 16, 20, 25	1 ... 50	24 ... 270	■	–	–	■	–	–	■	–	116
	Basic design	32, 40, 50, 63	1 ... 50	442 ... 1763	■	–	–	■	–	–	■	–	116
	MA – Plain end cap, axial connection	8, 10, 12, 16, 20, 25	1 ... 50	24 ... 1763	■	–	–	■	–	–	■	–	esnu

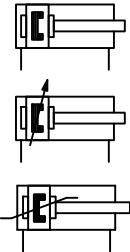
Product options

P	Elastic cushioning rings/plates at both ends	MQ	Alternative plain cylinder end cap, lateral connection	S2	Through piston rod	K5	Special piston rod thread
PPV	Pneumatic cushioning, adjustable at both ends	MA	Alternative plain cylinder end cap, axial connection	KP	With clamping unit	K6	Shortened male piston rod thread
PPS	Pneumatic cushioning, self-adjusting at both ends	MH	Alternative cylinder end cap, direct mounting	K8	Extended piston rod	S10	Slow speed
A	Position sensing	Q	With protection against rotation	S6	Heat-resistant seals up to max. 120 °C	S11	Low friction
				K2	Extended male piston rod thread	R3	High corrosion protection
				K3	Female piston rod thread	R8	Wiper ring
						A6	Metal scraper

Round cylinders DSNU ★

01

Data sheet – Double-acting



Technical data									Dimensions ➔ Page 122		
Piston Ø	8	10	12	16	20	25	32	40	50	63	
Conforms to standard	ISO 6432						–				
Pneumatic connection	M5	M5	M5	M5	G1/8	G1/8	G1/8	G1/4	G1/4	G3/8	
Piston rod end	Male thread										
Piston rod thread	M4	M4	M6	M6	M8	M10x1.25	M10x1.25	M12x1.25	M16x1.5	M16x1.5	
Stroke ¹⁾	[mm]	1 ... 100		1 ... 200		1 ... 320	1 ... 500				
Cushioning											
DSNU-...-P	Elastic cushioning rings/plates at both ends										
DSNU-...-PPV	–		Pneumatic cushioning, adjustable at both ends								
DSNU-...-PPS	–			Pneumatic cushioning, self-adjusting at both ends							
Cushioning length											
DSNU-...-PPV	[mm]	–		9	12	15	17	14	18	20	21
DSNU-...-PPS	[mm]	–			12	15	17	14	18	20	21
Theoretical force at 6 bar, advancing	[N]	30	47	68	121	189	295	483	753	1178	1870
Theoretical force at 6 bar, retracting	[N]	23	40	51	104	158	247	415	633	990	1682

1) Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing.
Longer strokes on request.

Operating conditions										
Piston Ø	8	10	12	16	20	25	32	40	50	63
Operating pressure	[bar]	1.5 ... 10 ²⁾			1 ... 10					
Ambient temperature ³⁾										
DSNU-...	[°C]	-20 ... +80								
DSNU-...-S6	[°C]	0 ... +120								

2) Piston Ø 12 mm, PPV – pneumatic cushioning, adjustable at both ends 2 ... 10 bar.
3) Note operating range of proximity sensors.

Materials	
Piston rod	High-alloy stainless steel
Bearing cap	Colourless anodised wrought aluminium alloy
Cylinder barrel	High-alloy stainless steel
End cap	Colourless anodised wrought aluminium alloy
Seals	
DSNU-...	NBR, TPE-U (PU)
DSNU-...-S6	FPM

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
→ www.festo.com/catalogue/...

Enter the type code in the search field.

Order code – Double-acting

01

Pneumatic drives

Type	
DSNU	Double-acting round cylinder
Piston Ø [mm]	
	Stroke [mm]
8, 10	10, 15, 20, 25, 30, 40, 50, 60, 80, 100
12	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 125, 160, 200
16	10, 15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 100, 125, 150, 160, 200
20	10, 15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 100, 125, 150, 160, 200, 250, 300, 320
25	10, 15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 100, 125, 150, 160, 200, 250, 300, 320, 400, 500
32, 40, 50, 63	25, 40, 50, 80, 100, 125, 160, 200, 250, 320
Cushioning	
P	Elastic cushioning rings/plates at both ends
PPV	Pneumatic cushioning, adjustable at both ends
PPS	Pneumatic cushioning, self-adjusting at both ends
Position sensing	
A	For proximity sensor
Alternative cylinder end cap	
MQ	Plain end cap, lateral connection
Piston rod	
-	Piston rod at one end
S2	Through piston rod
Extended piston rod [mm]	
... K8	
Temperature resistance	
S6	Heat-resistant seals up to max. 120 °C

- 1

Not with piston Ø 8, 10
- 2

Not with piston Ø 8, 10, 12
- 3

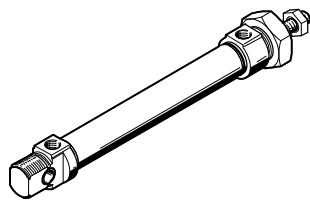
Minimum stroke: 10 mm
- 4

Not with piston rod type S2
- 5

Piston Ø 8, 10: 1 ... 50 mm
Piston Ø 12, 16: 1 ... 100 mm
Piston Ø 20: 1 ... 110 mm
Piston Ø 25: 1 ... 150 mm
- 6

Not for DSNU-12-...-PPV

Basic design

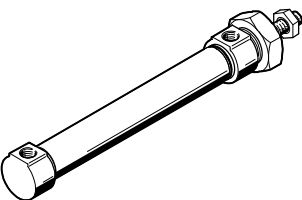


Order example:

DSNU-25-40-PPV-A

Double-acting round cylinder DSNU - piston diameter 25 mm - stroke 40 mm - pneumatic cushioning, adjustable at both ends - position sensing via proximity sensor - piston rod at one end - no extended piston rod - no heat-resistant seal

MQ – Plain cylinder end cap, lateral air connection



Order example:

DSNU-25-40-PPV-A-MQ

Double-acting round cylinder DSNU - piston diameter 25 mm - stroke 40 mm - pneumatic cushioning, adjustable at both ends - position sensing via proximity sensor - cylinder end cap, lateral connection - piston rod at one end - no extended piston rod - no heat-resistant seal

Cylinders with piston rod > Standards-based cylinders >

Round cylinders DSNU ★

01

★ Quick ordering¹⁾

P – Elastic cushioning rings/plates at both ends

Pneumatic drives

Part no.	Type
Piston Ø 12 mm	
19189	DSNU-12-10-P-A
1908255	DSNU-12-15-P-A
1908256	DSNU-12-20-P-A
19190	DSNU-12-25-P-A
1908257	DSNU-12-30-P-A
19191	DSNU-12-40-P-A
19192	DSNU-12-50-P-A
1908258	DSNU-12-60-P-A
19193	DSNU-12-80-P-A
19194	DSNU-12-100-P-A
19195	DSNU-12-125-P-A
19196	DSNU-12-160-P-A
19197	DSNU-12-200-P-A
Piston Ø 16 mm	
19198	DSNU-16-10-P-A
1908259	DSNU-16-15-P-A
1908260	DSNU-16-20-P-A
19199	DSNU-16-25-P-A
1908261	DSNU-16-30-P-A
1908262	DSNU-16-35-P-A
19200	DSNU-16-40-P-A
19201	DSNU-16-50-P-A
1908263	DSNU-16-60-P-A
1908264	DSNU-16-70-P-A
19202	DSNU-16-80-P-A
19203	DSNU-16-100-P-A
19204	DSNU-16-125-P-A
19205	DSNU-16-160-P-A
1908265	DSNU-16-150-P-A
19206	DSNU-16-200-P-A

Part no.	Type
Piston Ø 20 mm	
19207	DSNU-20-10-P-A
1908282	DSNU-20-15-P-A
1908283	DSNU-20-20-P-A
19208	DSNU-20-25-P-A
1908284	DSNU-20-30-P-A
1908285	DSNU-20-35-P-A
19209	DSNU-20-40-P-A
19210	DSNU-20-50-P-A
1908286	DSNU-20-60-P-A
1908287	DSNU-20-70-P-A
19211	DSNU-20-80-P-A
19212	DSNU-20-100-P-A
19213	DSNU-20-125-P-A
1908288	DSNU-20-150-P-A
19214	DSNU-20-160-P-A
19215	DSNU-20-200-P-A
19216	DSNU-20-250-P-A
19217	DSNU-20-300-P-A
34718	DSNU-20-320-P-A

Part no.	Type
Piston Ø 25 mm	
19218	DSNU-25-10-P-A
1908305	DSNU-25-15-P-A
1908306	DSNU-25-20-P-A
19219	DSNU-25-25-P-A
1908307	DSNU-25-30-P-A
1908308	DSNU-25-35-P-A
19220	DSNU-25-40-P-A
19221	DSNU-25-50-P-A
1908309	DSNU-25-60-P-A
1908310	DSNU-25-70-P-A
19222	DSNU-25-80-P-A
19223	DSNU-25-100-P-A
19224	DSNU-25-125-P-A
1908311	DSNU-25-150-P-A
19225	DSNU-25-160-P-A
19226	DSNU-25-200-P-A
19227	DSNU-25-250-P-A
19228	DSNU-25-300-P-A
34719	DSNU-25-320-P-A

1) All products in this table are easy to select and quick to order.

★ Quick ordering¹⁾

PPV – Pneumatic cushioning, adjustable at both ends

Part no.	Type
Piston Ø 16 mm	
1908266	DSNU-16-10-PPV-A
1908267	DSNU-16-15-PPV-A
1908268	DSNU-16-20-PPV-A
33973	DSNU-16-25-PPV-A
1908269	DSNU-16-30-PPV-A
1908270	DSNU-16-35-PPV-A
19229	DSNU-16-40-PPV-A
19230	DSNU-16-50-PPV-A
1908271	DSNU-16-60-PPV-A
1908272	DSNU-16-70-PPV-A
19231	DSNU-16-80-PPV-A
19232	DSNU-16-100-PPV-A
19233	DSNU-16-125-PPV-A
1908273	DSNU-16-150-PPV-A
19234	DSNU-16-160-PPV-A
19235	DSNU-16-200-PPV-A

Part no.	Type
Piston Ø 20 mm	
1908289	DSNU-20-10-PPV-A
1908290	DSNU-20-15-PPV-A
1908291	DSNU-20-20-PPV-A
33974	DSNU-20-25-PPV-A
1908292	DSNU-20-30-PPV-A
1908293	DSNU-20-35-PPV-A
19236	DSNU-20-40-PPV-A
19237	DSNU-20-50-PPV-A
1908294	DSNU-20-60-PPV-A
1908295	DSNU-20-70-PPV-A
19238	DSNU-20-80-PPV-A
19239	DSNU-20-100-PPV-A
19240	DSNU-20-125-PPV-A
1908296	DSNU-20-150-PPV-A
19241	DSNU-20-160-PPV-A
19242	DSNU-20-200-PPV-A
19243	DSNU-20-250-PPV-A
19244	DSNU-20-300-PPV-A
34720	DSNU-20-320-PPV-A

Part no.	Type
Piston Ø 25 mm	
1908312	DSNU-25-10-PPV-A
1908313	DSNU-25-15-PPV-A
1908314	DSNU-25-20-PPV-A
33975	DSNU-25-25-PPV-A
1908315	DSNU-25-30-PPV-A
1908316	DSNU-25-35-PPV-A
19245	DSNU-25-40-PPV-A
19246	DSNU-25-50-PPV-A
1908317	DSNU-25-60-PPV-A
1908318	DSNU-25-70-PPV-A
19247	DSNU-25-80-PPV-A
19248	DSNU-25-100-PPV-A
19249	DSNU-25-125-PPV-A
1908319	DSNU-25-150-PPV-A
19250	DSNU-25-160-PPV-A
19251	DSNU-25-200-PPV-A
19252	DSNU-25-250-PPV-A
19253	DSNU-25-300-PPV-A
34721	DSNU-25-320-PPV-A

PPS – Pneumatic cushioning, self-adjusting at both ends

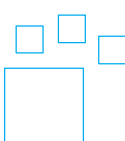
Part no.	Type
Piston Ø 16 mm	
1908274	DSNU-16-10-PPS-A
1908275	DSNU-16-15-PPS-A
1908276	DSNU-16-20-PPS-A
559263	DSNU-16-25-PPS-A
1908277	DSNU-16-30-PPS-A
1908278	DSNU-16-35-PPS-A
559264	DSNU-16-40-PPS-A
559265	DSNU-16-50-PPS-A
1908279	DSNU-16-60-PPS-A
1908280	DSNU-16-70-PPS-A
559266	DSNU-16-80-PPS-A
559267	DSNU-16-100-PPS-A
559268	DSNU-16-125-PPS-A
1908281	DSNU-16-150-PPS-A
559269	DSNU-16-160-PPS-A
559270	DSNU-16-200-PPS-A

Part no.	Type
Piston Ø 20 mm	
1908297	DSNU-20-10-PPS-A
1908298	DSNU-20-15-PPS-A
1908299	DSNU-20-20-PPS-A
559271	DSNU-20-25-PPS-A
1908300	DSNU-20-30-PPS-A
1908301	DSNU-20-35-PPS-A
559272	DSNU-20-40-PPS-A
559273	DSNU-20-50-PPS-A
1908302	DSNU-20-60-PPS-A
1908303	DSNU-20-70-PPS-A
559274	DSNU-20-80-PPS-A
559275	DSNU-20-100-PPS-A
559276	DSNU-20-125-PPS-A
1908304	DSNU-20-150-PPS-A
559277	DSNU-20-160-PPS-A
559278	DSNU-20-200-PPS-A
559279	DSNU-20-250-PPS-A
559280	DSNU-20-300-PPS-A
559281	DSNU-20-320-PPS-A

Part no.	Type
Piston Ø 25 mm	
1908320	DSNU-25-10-PPS-A
1908321	DSNU-25-15-PPS-A
1908322	DSNU-25-20-PPS-A
559282	DSNU-25-25-PPS-A
1908323	DSNU-25-30-PPS-A
1908324	DSNU-25-35-PPS-A
559283	DSNU-25-40-PPS-A
559284	DSNU-25-50-PPS-A
1908325	DSNU-25-60-PPS-A
1908326	DSNU-25-70-PPS-A
559285	DSNU-25-80-PPS-A
559286	DSNU-25-100-PPS-A
559287	DSNU-25-125-PPS-A
1908327	DSNU-25-150-PPS-A
559288	DSNU-25-160-PPS-A
559289	DSNU-25-200-PPS-A
559290	DSNU-25-250-PPS-A
559291	DSNU-25-300-PPS-A
559292	DSNU-25-320-PPS-A

1) All products in this table are easy to select and quick to order.

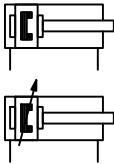
Ordering – Product options

Configurable
productThis product and all its options can
be ordered using the configurator.The configurator can be found under
Products on the DVD or
→ www.festo.com/catalogue/...

Enter the type code in the search field.

Round cylinders DSNU-Q

01 Data sheet – Double-acting with protection against rotation



Technical data					Dimensions ➔ Page 122				
Piston Ø	12	16	20	25	32	40	50	63	
Based on standard	ISO 6432				–				
Pneumatic connection	M5	M5	G1/8	G1/8	G1/8	G1/4	G1/4	G3/8	
Piston rod end	Male thread								
Piston rod thread	M6	M6	M8	M10x1.25	M10x1.25	M12x1.25	M16x1.5	M16x1.5	
Stroke ¹⁾	[mm]	5 ... 160	5 ... 200	5 ... 250	5 ... 300	5 ... 400	5 ... 500		
Cushioning									
DSNU-...-P	Elastic cushioning rings/plates at both ends	–			Elastic cushioning rings/plates at both ends				
DSNU-...-PPV	–	Pneumatic cushioning, adjustable at both ends							
Cushioning length PPV	[mm]	–	12	15	17	14	18	20	21
Theoretical force at 6 bar, advancing	[N]	68	121	189	295	483	753	1178	1870
Theoretical force at 6 bar, retracting	[N]	51	104	158	247	415	633	990	1682
Max. torque at the piston rod	[Nm]	0.10	0.10	0.20	0.45	0.8	1.1	1.5	1.5

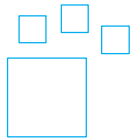
1) Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing. Longer strokes on request.

Operating conditions								
Piston Ø	12	16	20	25	32	40	50	63
Operating pressure	[bar]	1.5 ... 10 ²⁾	1 ... 10					
Ambient temperature ³⁾								
DSNU-...	[°C]	-20 ... +80						
DSNU-Q-...-S6	[°C]	-				0 ... +120		

2) Piston Ø: 12 mm, PPV – pneumatic cushioning, adjustable at both ends 2 ... 10 bar.
3) Note operating range of proximity sensors.

Materials	
Piston rod	High-alloy stainless steel
Bearing cap	Colourless anodised wrought aluminium alloy
Cylinder barrel	High-alloy stainless steel
End cap	Colourless anodised wrought aluminium alloy
Seals	NBR, TPE-U (PU)

Ordering – Product options



Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
→ www.festo.com/catalogue/...

Enter the type code in the search field.

Order code – Double-acting with protection against rotation

01

Pneumatic drives

DSNU

A

Q

Type	
DSNU	Double-acting round cylinder

Piston Ø [mm]	
	Stroke [mm]
12, 16	5 ... 160
20	5 ... 200
25	5 ... 250
32	5 ... 300
40, 50	5 ... 400
63	5 ... 500

Cushioning	
P	Elastic cushioning rings/plates at both ends
PPV	Pneumatic cushioning, adjustable at both ends

Position sensing	
A	For proximity sensor

Alternative cylinder end cap	
MQ	Plain end cap, lateral connection

Protection against rotation	
Q	Square piston rod

Piston rod	
-	Piston rod at one end
S2	Through piston rod

Extended piston rod [mm]	
... K8	1 ... 150

Temperature resistance	
S6	Heat-resistant seals up to max. 120 °C

- 1

Not with piston Ø 16, 20, 25
- 2

Not with piston Ø 12
- 3

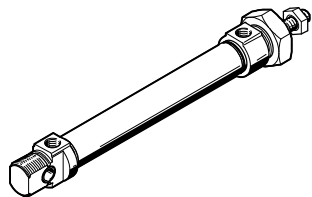
Minimum stroke: 10 mm
- 4

Not with piston rod type S2
- 5

Piston Ø 12, 16: 1 ... 100 mm
Piston Ø 20: 1 ... 110 mm
Piston Ø 25: 1 ... 150 mm
Piston Ø 32 ... 63: 1 ... 500 mm
- 6

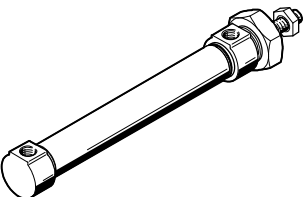
Only with piston Ø 32 ... 63

Basic design



Order example:
DSNU-25-40-PPV-A-Q
Double-acting round cylinder DSNU - piston diameter 25 mm - stroke 40 mm - pneumatic cushioning, adjustable at both ends - position sensing via proximity sensor - square piston rod - piston rod at one end - no extended piston rod - no heat-resistant seal

MQ – Plain cylinder end cap, lateral air connection



Order example:
DSNU-25-40-PPV-A-MQ-Q
Double-acting round cylinder DSNU - piston diameter 25 mm - stroke 40 mm - pneumatic cushioning, adjustable at both ends - position sensing via proximity sensor - cylinder end cap, lateral connection - square piston rod - piston rod at one end - no extended piston rod - no heat-resistant seal

Round cylinders ESNU

01

Data sheet – Single-acting



Technical data		Dimensions → Page 122									
Piston Ø		8	10	12	16	20	25	32	40	50	63
Conforms to standard		ISO 6432						–			
Pneumatic connection		M5	M5	M5	M5	G1/8	G1/8	G1/8	G1/4	G1/4	G3/8
Piston rod end		Male thread									
Piston rod thread		M4	M4	M6	M6	M8	M10x1.25	M10x1.25	M12x1.25	M16x1.5	M16x1.5
Stroke	[mm]	1 ... 50									
Cushioning		Elastic cushioning rings/plates at both ends									
Theoretical force at 6 bar, advancing	[N]	24	41	61	107	169	270	442	688	1071	1763
Theoretical spring return force											
10 mm stroke	[N]	4.9	4.9	6.3	13.2	18.3	22.9	36	60	95	95
25 mm stroke	[N]	4.1	4.1	5.4	11.9	16.5	21.2	30	50	82	82
50 mm stroke	[N]	2.8	4.8	3.9	9.8	13.6	18.5	20	30	60	60

Operating conditions											
Piston Ø		8	10	12	16	20	25	32	40	50	63
Operating pressure	[bar]	1.5 ... 10			1.2 ... 10						
Ambient temperature ¹⁾	[°C]	-20 ... +80									

1) Note operating range of proximity sensors.

Materials	
Piston rod	High-alloy stainless steel
Bearing cap	Colourless anodised wrought aluminium alloy
Cylinder barrel	High-alloy stainless steel
End cap	Colourless anodised wrought aluminium alloy
Seals	NBR, TPE-U (PU)

Order code – Single-acting

01

Pneumatic drives

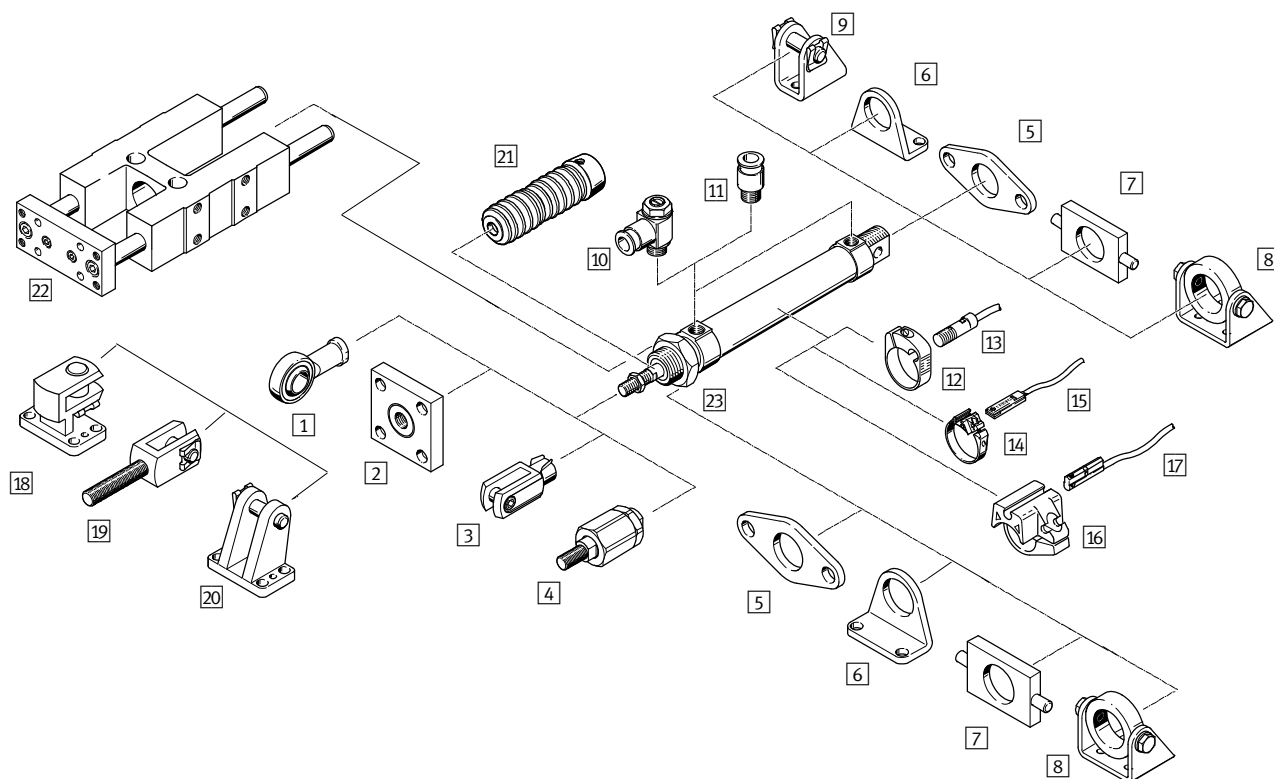
ESNU		–		–		–	P	–	A	–			
Type <table><tr><td>ESNU</td><td>Single-acting round cylinder</td></tr></table>												ESNU	Single-acting round cylinder
ESNU	Single-acting round cylinder												

Cylinders with piston rod > Standards-based cylinders >

Round cylinders DSNU ★ /ESNU

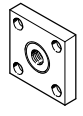
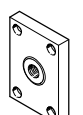
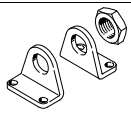
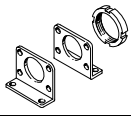
01 Accessories

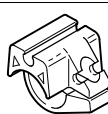
Pneumatic drives



		PistonØ	DSNU/ESNU	DSNU-			→ Page/online
				MQ	Q	S2	
1	Rod eye SGS	8 ... 63	■	■	■	■	119
	Rod eye CRSGS	12 ... 63	■	■	■	■	dsnu
2	Coupling piece KSG/KSZ	12 ... 63	■	■	■	■	119
3	Rod clevis SG	8 ... 63	■	■	■	■	119
	Rod clevis CRSG	12 ... 63	■	■	■	■	dsnu
4	Self-aligning rod coupler FK	8 ... 63	■	■	■	■	119
	Self-aligning rod coupler CRFK	25 ... 63	■	■	■	■	dsnu
5	Flange mounting FBN	8 ... 63	■	■	■	■	119
	Flange mounting CRFBN/CRFV	12 ... 63	■	■	■	■	dsnu
6	Foot mounting HBN	8 ... 63	■	■	■	■	119
	Foot mounting CRHBN/CRH	12 ... 63	■	■	■	■	dsnu
7	Swivel mounting WBN	8 ... 63	■	■	■	■	119
8	Swivel mounting SBN	20 ... 63	■	■	■	■	119
9	Clevis foot LBN	8 ... 63	■	–	■	–	119
	Clevis foot CRLBN	12 ... 63	■	–	■	–	dsnu
10	One-way flow control valve GRLA/GRLZ	8 ... 63	■	■	■	■	120
	One-way flow control valve CRGRLA	8 ... 63	■	■	■	■	dsnu
11	Push-in fitting QS	8 ... 63	■	■	■	■	1443
12	Mounting kit SMBR	8 ... 25	■	■	■	■	119
	Mounting kit CRSMBR	12 ... 63	■	■	■	■	dsnu
13	Proximity sensor SMEO/SMT0	8 ... 25	■	■	■	■	120
	Proximity sensor CRSME0-4	8 ... 63	■	■	■	■	dsnu
14	Mounting kit SMBR-8	8 ... 63	■	■	■	■	119
15	Proximity sensor SME/SMT-8	8 ... 63	■	■	■	■	120
16	Mounting kit SMBR-10	8 ... 63	■	■	■	■	119
17	Proximity sensor SME/SMT-10	8 ... 63	■	■	■	■	120
18	Right-angle clevis foot LQG	32 ... 63	■	■	■	■	121
19	Rod clevis SGA	32 ... 63	■	■	■	■	121
20	Clevis foot LBG	32 ... 63	■	■	■	■	121
21	Bellows kit DADB	12 ... 63	■	■	–	■	dsnu
22	Guide unit FEN	8 ... 25	■	■	–	■	121
23	Hex nut MSK	16 ... 25	■	■	■	■	121

Accessories – Ordering data

	For Ø	Part no.	Type
1 Rod eye Data sheets online: → sgs			
	8, 10	9253	SGS-M4
	12, 16	★ 9254	SGS-M6
	20	★ 9255	SGS-M8
	25, 32	★ 9261	SGS-M10x1,25
	40	★ 9262	SGS-M12x1,25
	50, 63	★ 9263	SGS-M16x1,5
2 Coupling piece Data sheets online: → ksg			
	25, 32	32963	KSG-M10x1,25
	40	32964	KSG-M12x1,25
	50, 63	32965	KSG-M16x1,5
2 Coupling piece Data sheets online: → ksz			
	12, 16	36123	KSZ-M6
	20	36124	KSZ-M8
	25, 32	36125	KSZ-M10x1,25
	40	36126	KSZ-M12x1,25
	50, 63	36127	KSZ-M15x1,5
3 Rod clevis Data sheets online: → sg			
	8, 10	6532	SG-M4
	12, 16	★ 3110	SG-M6
	20	★ 3111	SG-M8
	25, 32	★ 6144	SG-M10x1,25
	40	★ 6145	SG-M12x1,25
	50, 63	★ 6146	SG-M16x1,5
4 Self-aligning rod coupler Data sheets online: → fk			
	8, 10	6528	FK-M4
	12, 16	★ 2061	FK-M6
	20	★ 2062	FK-M8
	25, 32	★ 6140	FK-M10x1,25
	40	★ 6141	FK-M12x1,25
	50, 63	★ 6142	FK-M16x1,5
5 Flange mounting Dimensions online: → dsnu			
	8, 10	5129	FBN-8/10
	12, 16	5130	FBN-12/16
	20, 25	5131	FBN-20/25
	32	195855	FBN-32
	40	195856	FBN-40
	50	195857	FBN-50
	63	195858	FBN-63
6 Foot mounting Dimensions online: → dsnu			
	8, 10	5123	HBN-8/10x1
	12, 16	5124	HBN-8/10x2
		★ 5125	HBN-12/16x1
		★ 5126	HBN-12/16x2
	20, 25	★ 5127	HBN-20/25x1
	20, 25	★ 5128	HBN-20/25x2
		195851	HBN-32x2
		195852	HBN-40x2
		195853	HBN-50x2
	63	195854	HBN-63x2

	For Ø	Part no.	Type
7 Swivel mounting Dimensions online: → dsnu			
	8, 10	8608	WBN-8/10x1
	12, 16	8609	WBN-12/16
	20, 25	8610	WBN-20/25
	32	195863	WBN-32
	40	195864	WBN-40
	50, 63	195865	WBN-50/63
8 Swivel mounting Dimensions online: → dsnu			
	20, 25	539927	SBN-20/25
	32	539924	SBN-32
	40	539925	SBN-40
	50, 63	539926	SBN-50/63
9 Clevis foot Data sheets online: → lbn			
	8, 10	6057	LBN-8/10
	12, 16	★ 6058	LBN-12/16
	20, 25	★ 6059	LBN-20/25
	32	195860	LBN-32
	40	195861	LBN-40
	50, 63	195862	LBN-50/63
12/14/16 Mounting kit for proximity sensor			
	SMT/SME-8		
	8	175091	SMBR-8-8
	10	175092	SMBR-8-10
	12	★ 175093	SMBR-8-12
	16	★ 175094	SMBR-8-16
	20	★ 175095	SMBR-8-20
	25	★ 175096	SMBR-8-25
	32	175097	SMBR-8-32
	40	175098	SMBR-8-40
	50	175099	SMBR-8-50
	63	175100	SMBR-8-63
	SMT/SME-10		
	8	175101	SMBR-10-8
	10	173227	SMBR-10-10
	12	175102	SMBR-10-12
	16	173228	SMBR-10-16
	20	175103	SMBR-10-20
	25	175104	SMBR-10-25
	32	175105	SMBR-10-32
	40	175106	SMBR-10-40
	50	175107	SMBR-10-50
	63	175108	SMBR-10-63
	Round design SMT0/SME0-4		
	8	19272	SMBR-8
	10	19273	SMBR-10
	12	19274	SMBR-12
	16	19275	SMBR-16
	20	19276	SMBR-20
	25	19277	SMBR-25

Cylinders with piston rod > Standards-based cylinders >

Round cylinders DSNU ★ /ESNU

01

Accessories – Ordering data

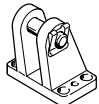
	For Ø	Connection		Part no. Type	
		Thread	O.D.		
10 One-way flow control valve with slotted head screw, metal¹⁾ for exhaust air flow control Data sheets → Page 1033					
	12, 16	M5	3	★	193137 GRLA-M5-QS-3-D
	20, 25	G1/8	4	★	193143 GRLA-1/8-QS-4-D
	32	G1/8	6	★	193144 GRLA-1/8-QS-6-D
	40	G1/4	6	★	193146 GRLA-1/4-QS-6-D
	50	G1/4	8	★	193147 GRLA-1/4-QS-8-D
	63	G3/8	8	★	193150 GRLA-3/8-QS-8-D
For supply air flow control Data sheets → Page 1033					
	12, 16	M5	3	★	193153 GRLZ-M5-QS-3-D
	20, 25	G1/8	4	★	193157 GRLZ-1/8-QS-4-D
	32	G1/8	4	★	193158 GRLZ-1/8-QS-6-D

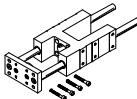
1) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
13 Proximity sensor, round design, magneto-resistive – N/O contact					
Data sheets online: smt0					
	8 ... 25	PNP, cable	2.5	152836	SMT0-4U-PS-K-LED-24
		PNP, plug	–	152742	SMT0-4U-PS-S-LED-24
		NPN, cable	2.5	152837	SMT0-4U-NS-K-LED-24
		NPN, plug	–	152743	SMT0-4U-NS-S-LED-24
Magnetic reed – N/O contact					
Data sheets online: smeo					
	8 ... 25	Contacting, cable	2.5	36198	SME0-4U-K-LED-24
		Contacting, cable	5.0	175401	SME0-4U-K5-LED-24
		Contacting, plug	–	151526	SME0-4U-S-LED-24-B
15 Proximity sensor for T-slot, magneto-resistive – N/O contact					
Data sheets → Page 1206					
	8 ... 63	PNP, cable	2.5	★ 574335	SMT-8M-A-PS-24V-E-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-A-PS-24V-E-0,3-M8D
		PNP, plug	0.3	★ 574337	SMT-8M-A-PS-24V-E-0,3-M12
		NPN, cable	2.5	★ 574338	SMT-8M-A-NS-24V-E-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-A-NS-24V-E-0,3-M8D
Magneto-resistive – N/C contact					
Data sheets → Page 1206					
	8 ... 63	PNP, cable	7.5	★ 574340	SMT-8M-A-PO-24V-E-7,5-OE
Magnetic reed – N/O contact					
Data sheets → Page 1201					
	8 ... 63	Contacting, cable	2.5	★ 543862	SME-8M-DS-24V-K-2,5-OE
		Contacting, cable	5.0	★ 543863	SME-8M-DS-24V-K-5,0-OE
		Contacting, cable	2.5	★ 543872	SME-8M-ZS-24V-K-2,5-OE
		Contacting, plug	0.3	★ 543861	SME-8M-DS-24V-K-0,3-M8D
Data sheets → Page 1203					
	8 ... 63	Contacting, cable	2.5	150855	SME-8-K-LED-24
		Contacting, plug	0.3	150857	SME-8-S-LED-24
Magnetic reed – N/C contact					
Data sheets → Page 1203					
	8 ... 63	Contacting, cable	7.5	160251	SME-8-O-K-LED-24
17 Proximity sensor for C-slot, magneto-resistive – N/O contact					
Data sheets → Page 1222					
	8 ... 63	PNP, cable	2.5	★ 551373	SMT-10M-PS-24V-E-2,5-L-OE
		PNP, plug	0.3	★ 551375	SMT-10M-PS-24V-E-0,3-L-M8D
		PNP, plug	0.3	551376	SMT-10M-PS-24V-E-0,3-Q-M8D
Magnetic reed – N/O contact					
Data sheets → Page 1218					
	8 ... 63	Contacting, cable	2.5	★ 551365	SME-10M-DS-24V-E-2,5-L-OE
		Contacting, plug	0.3	★ 551367	SME-10M-DS-24V-E-0,3-L-M8D
		Contacting, cable	2.5	★ 551369	SME-10M-ZS-24V-E-2,5-L-OE
	8 ... 63	Contacting, cable	2.5	173210	SME-10-KL-LED-24
		Contacting, plug	0.3	173212	SME-10-SL-LED-24

Accessories – Ordering data

	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
13/15/17 Connecting cable, straight socket Data sheets → Page 1543					
	8 ... 63	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
		M12x1, 5-pin	2.5	★ 541363	NEBU-M12G5-K-2.5-LE3
			5.0	★ 541364	NEBU-M12G5-K-5-LE3
Angled socket Data sheets → Page 1543					
	8 ... 63	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3
		M12x1, 5-pin	2.5	541367	NEBU-M12W5-K-2.5-LE3
			5.0	541370	NEBU-M12W5-K-5-LE3

	For Ø	Part no.	Type
18 Right-angle clevis foot Data sheets online: → lqg			
	32	31768	LQG-32
	40	31769	LQG-40
	50	31770	LQG-50
	63	31771	LQG-63
19 Rod clevis Data sheets online: → sga			
	32	32954	SGA-M10x1,25
	40	10767	SGA-M12x1,25
	50, 63	10768	SGA-M16x1,5
20 Clevis foot Data sheets online: → lbg			
	32	31761	LBG-32
	40	31762	LBG-40
	50	31763	LBG-50
	63	31764	LBG-63

	For Ø	Stroke	Part no.	Type
22 Guide unit for variable strokes				
	With recirculating ball bearing guide		Data sheets online: → fen	
	8, 10	1 ... 100	35197	FEN-8/10-...-KF
	12, 16	1 ... 200	33481	FEN-12/16-...-KF
	20	2 ... 250	33482	FEN-20-...-KF
	25	2 ... 250	33483	FEN-25-...-KF
	With plain-bearing guide		Data sheets online: → fen	
	8, 10	1 ... 100	35196	FEN-8/10-...-GF
	12, 16	1 ... 200	19168	FEN-12/16-...-GF
	20	2 ... 250	19169	FEN-20-...-GF
	25	2 ... 250	19170	FEN-25-...-GF
23 Hex nut				
	16	–	189007	MSK-M16X1,5
	20, 25	–	189009	MSK-M22X1,5

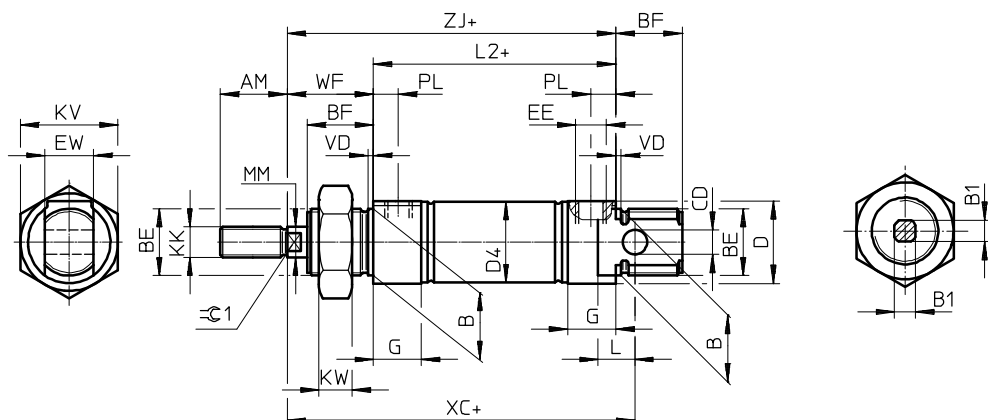
Round cylinders DSNU ★ /ESNU

01

Dimensions

Download CAD data → www.festo.com

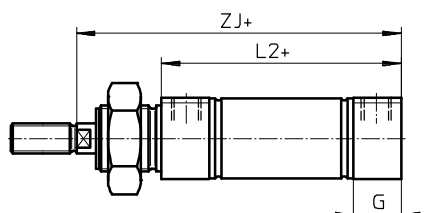
Basic design – Ø 8 ... 25



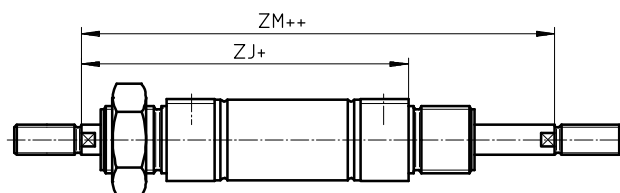
Note

Piston rod nut is not included in the scope of delivery with Ø 8 ... 20.

MQ – Lateral air connection



S2 – Through piston rod

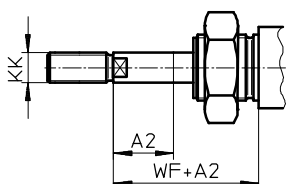


Note

The thread types at both piston rod ends are identical. In combination with variant Q, the left-hand piston

rod end is square, the right-hand piston rod end round.

K8 – Extended piston rod



Note

If variant K8 is required in combination with S2, the piston rod will only be extended on one side.

+ = plus stroke length

++ = plus 2x stroke length

Ø [mm]	A2 max.	AM	B Ø h9	B1 □	BE	BF	CD Ø H9	D Ø	D4 Ø	EE	EW	G	KK
8	50	12	12	–	M12x1.25	12	4	15	9.3	M5	8	10	M4
10				–					11.3				
12	100	16	16	5.5	M16x1.5	17	6	20	13.3		12		M6
16									17.3				
20	110	20	22	7	M22x1.5	20	8	27	21.3	G1/8	16	16	M8
25	150	22		9		22			26.5				M10x1.25

Ø [mm]	KV	KW	L	L2	MM Ø	PL	VD	WF	XC ±1	ZM	ZJ	≤C1
8	19	6	6	46	4	6	2	16	64	78.4	62	–
10												
12	24	8	9	50	6	8.2	2	22	75	94	72	5
16				56								
20	32	11	12	68	8	8.2	2	24	95	116	92	7
25				69.5								

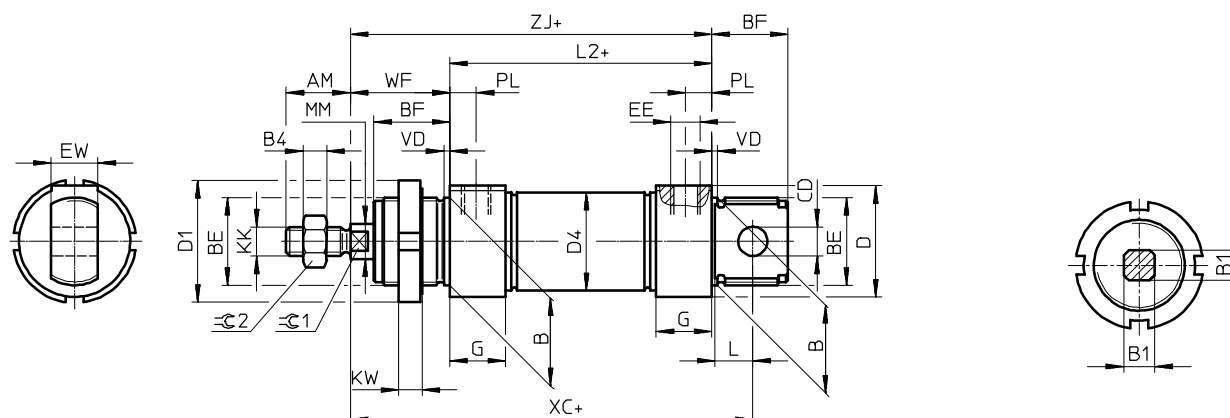
Dimensions

Basic design – Ø 32 ... 63

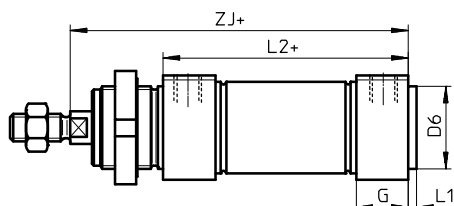
Download CAD data → www.festo.com

01

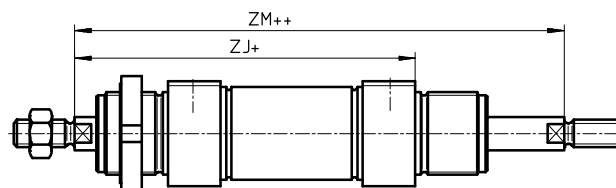
Q – Square piston rod



MQ – Lateral air connection



S2 – Through piston rod



Note

The thread types at both piston rod ends are identical. In combination with variant Q, the left-hand piston rod end is square, the right-hand piston rod end round.

+ = plus stroke length
++ = plus 2x stroke length

Ø [mm]	AM	B Ø h9	B1 □	B4	BE	BF	CD Ø E10	D Ø	D1 Ø	D4 Ø	D6 Ø	EE	EW	G
32	22	30	10	5	M30x1.5	26	10	38	42	33.6	30	G1/8	16	19
40	24	38	12	6	M38x1.5	30	12	46	50	41.6	38	G1/4	18	25
50	32	45	16	8	M45x1.5	33	16	57	60	52.4	45		G3/8	
63								70		65.4				

Ø	KK	KW	L	L1	L2	MM Ø	PL	VD	WF	XC ±1	ZJ	ZM	⌀1	⌀2
[mm]														
32	M10x1.25	8	13	3	69.5	12	9	2	34	117.5	103.5	137.5	10	16
40	M12x1.25	10	15	4	84.6	16	12	3	39	139.6	123.6	162.6	13	18
50	M16x1.5		16		86.2	20			13	44	147.2	130.2	174.2	17
63					94.2		45			156.2	139.2	184.2		



CRDSNU



CRDNG



CRHD

Save time and money during commissioning and maintenance

- + With self-adjusting end-position cushioning PPS
- + Thanks to extremely easy-to-clean clean design
- + Thanks to maximum corrosion protection

Cylinders with piston rod › Stainless-steel cylinders ›
Standards-based and round cylinders,
stainless steel

CRDSNU
CRDNG
CRHD

Cylinders with piston rod > Stainless-steel cylinders >

Standards-based and round cylinders, stainless steel

CRDSNU, CRDNG, CRHD



Overview, configuration and ordering

→ www.festo.com/catalogue/crdsnu



Additional information, support and user documentation

→ www.festo.com/sp/crdsnu



Selected types in accordance with the ATEX Directive
for explosive atmospheres

→ www.festo.com/catalogue/ex



Spare parts service



- + CRDSNU: ISO 6432 (piston diameter 12 ... 25 mm)
- + CRDSNU: with self-adjusting pneumatic end-position cushioning PPS
- + CRDNG: ISO 15552 (piston diameter 32 ... 125 mm)
- + For position sensing
- + Double-acting
- + Adjustable cushioning

Cylinders with piston rod > Stainless-steel cylinders >
Round cylinders CRDSNU/CRHD/CRDNG

Product range overview

Type/function	Version	Piston Ø [mm]	Stroke [mm]	Force [N]	Product options							→ Page/ online
					P	PPV	PPS	A	S2	K8	S6	
Double-acting	CRDSNU – Cylinder barrel, end caps: high-alloy stainless steel											
	Basic design to ISO 6432	12, 16, 20, 25	1 ... 500	68 ... 295	■	■	■	■	■	■	■	128
	Basic design	32, 40, 50, 63	1 ... 500	483 ... 1870	■	■	■	■	■	■	■	128
	MQ – Bearing cap without swivel mounting	12, 16, 20, 25, 32, 40, 50, 63	1 ... 500	68 ... 1870	■	■	■	■	–	■	■	128
	MG – Bearing cap without mounting thread				■	■	■	■	–	■	■	crdrives
	CRHD											
	MQ – Bearing cap with male thread	32, 40, 50, 63, 80, 100	1 ... 500	483 ... 4712	–	■	–	■	–	–	■	131
	MC – End cap with clevis	32, 40, 50, 63, 80, 100	1 ... 500	483 ... 4712	–	■	–	■	–	–	■	131
	MS – End cap with lug	32, 40, 50, 63, 80, 100	1 ... 500	483 ... 4712	–	■	–	■	–	–	■	131
	CRDNG – Cylinder barrel: high-alloy stainless steel; end caps: stainless steel casting											
	Basic design to ISO 15552	32, 40, 50, 63, 80, 100, 125	10 ... 2000	121 ... 295	–	■	–	■	■	–	■	134
	CRDNGS with swivel bearing – Cylinder barrel: high-alloy stainless steel; end caps: stainless steel casting											
	Basic design to ISO 15552	32, 40, 50, 63, 80, 100, 125	10 ... 2000	121 ... 295	–	■	–	■	–	–	■	134

01

Pneumatic drives

Product options – CRDSNU

P	Elastic cushioning rings/plates at both ends	MQ	Alternative cylinder end cap Bearing cap without swivel mounting	A2	Dust protection (hard scraper)	K5	Special piston rod thread
PPV	Pneumatic cushioning, adjustable at both ends	MG	Bearing cap without mounting thread	A3	Unlubricated operation	K8	Extended piston rod
PPS	Pneumatic cushioning, self-adjusting at both ends	A1	Increased chemical resistance	S2	Through piston rod	S6	Heat-resistant seals up to max. 120°C
A	Position sensing			K2	Extended male piston rod thread	TT	Low temperature
				K3	Female piston rod thread	EX4	EU certification (II 2GD)

Product options – CRHD

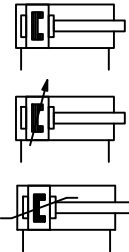
PPV	Pneumatic cushioning, adjustable at both ends	MQ	Alternative cylinder end cap Bearing cap with male thread	MS	Alternative cylinder end cap End cap with lug	S6	Heat-resistant seals up to max. 120°C
A	Position sensing	MC	Alternative cylinder end cap End cap with clevis				

Product options – CRDNG/CRDNGS

PPV	Pneumatic cushioning, adjustable at both ends	A	Position sensing	S6	Heat-resistant seals up to max. 120°C
		S2	Through piston rod		

Round cylinders CRDSNU

01 Data sheet



Technical data		Dimensions ➔ Page 140								
Piston Ø		12	16	20	25	32	40	50	63	
Conforms to standard		ISO 6432				–				
Pneumatic connection		M5	M5	G1/8	G1/8	G1/8	G1/4	G1/4	G3/8	
Piston rod end		Male thread								
Piston rod thread		M6	M6	M8	M10x1.25	M10x1.25	M12x1.25	M16x1.5	M16x1.5	
Stroke ¹⁾	[mm]	1 ... 200		1 ... 320	1 ... 500					
Cushioning										
CRDSNU-...-P		Elastic cushioning rings/plates at both ends								
CRDSNU-...-PPV		–		Pneumatic cushioning, adjustable at both ends						
CRDSNU-...-PPS		–		Pneumatic cushioning, self-adjusting at both ends						
Cushioning length										
CRDSNU-...-PPV		[mm]	–	–	15	17	14	18	20	21
CRDSNU-...-PPS		[mm]	–	12	15	17	14	18	20	21
Theoretical force at 6 bar, advancing		[N]	68	121	188	295	483	754	1178	1870
Theoretical force at 6 bar, retracting		[N]	51	104	158	247	415	633	990	1682

1) Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing.
Longer strokes on request.

Operating conditions		12	16	20	25	32	40	50	63
Piston Ø		12	16	20	25	32	40	50	63
Operating pressure	[bar]	1 ... 10							
Ambient temperature ²⁾									
CRDSNU-...	[°C]	-20 ... +80							
CRDSNU-...-S6	[°C]	0 ... +120							

2) Note operating range of proximity sensors.

Materials	
Piston rod	High-alloy stainless steel
Bearing cap	High-alloy stainless steel
Cylinder barrel	High-alloy stainless steel
End cap	High-alloy stainless steel
Seals	
CRDSNU-...	NBR, TPE-U (PUR) media seal (modified for resistance to hydrolysis and cleaning)
CRDSNU-...-S6	FPM

Round cylinders CRDSNU

Order code

01

Pneumatic drives

CRDSNU - - - A - - - -

Type	
CRDSNU	Double-acting round cylinder
Piston Ø [mm]	
	Stroke [mm]
12, 16	1 ... 200
20	1 ... 320
25, 32, 40, 50, 63	1 ... 500
Cushioning	
P	Elastic cushioning rings/plates at both ends
PPV	Pneumatic cushioning, adjustable at both ends
PPS	Pneumatic cushioning, self-adjusting at both ends
Position sensing	
A	Via proximity sensor
Alternative cylinder end cap	
MQ	Bearing cap without swivel mounting
Piston rod	
-	Piston rod at one end
S2	Through piston rod
Extended piston rod [mm]	
... K8	1 ... 100
Temperature resistance	
S6	Heat-resistant seals up to max. 120°C

- 1 Not with piston Ø 12, 16
- 2 Not with piston Ø 12
- 3 Not with cylinder end cap MQ
- 4 Not with cushioning PPS

Order example:

CRDSNU-25-40-PPV-A
Double-acting round cylinder CRDSNU - piston diameter 25 mm - stroke 40 mm - pneumatic cushioning, adjustable at both ends - position sensing via proximity sensor - bearing cap with mounting thread/end cap with swivel mounting - piston rod at one end - no extended piston rod - no heat-resistant seal

Ordering – Product options

Configurable product

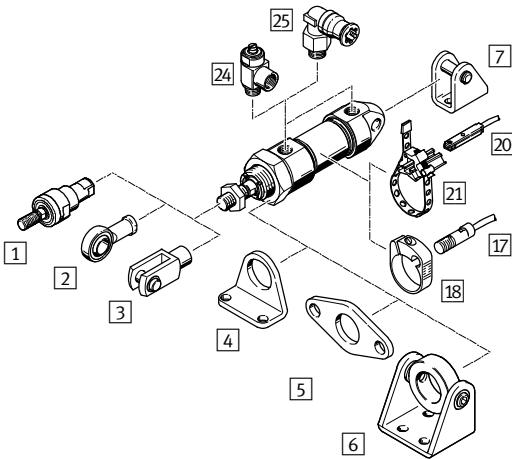
This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
→ www.festo.com/catalogue/...

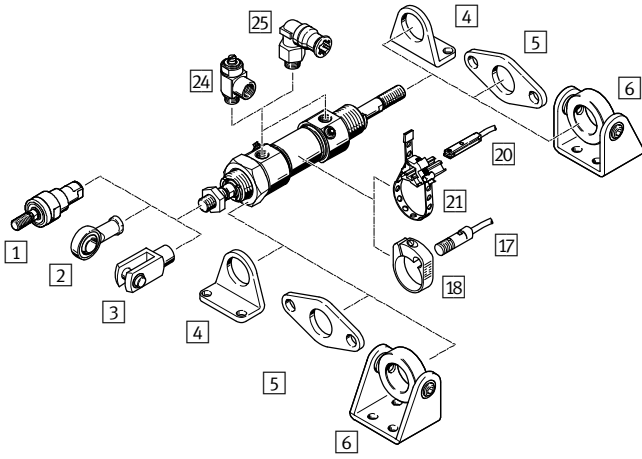
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Accessories

Basic design Ø 12 ... 25

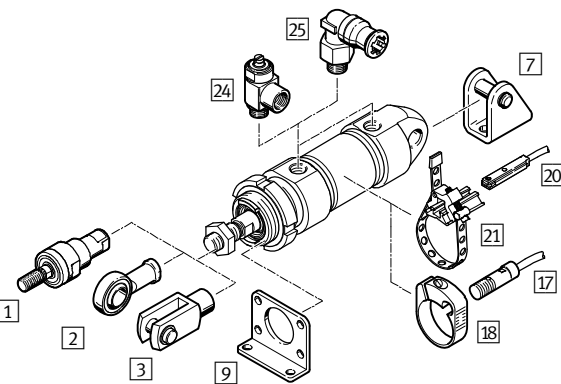


S2 – Through piston rod

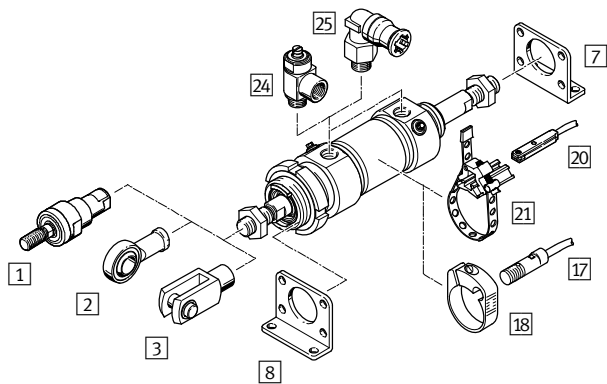


	CRDSNU	CRDSNU- MQ	S2	→ Page/ online
1 Self-aligning rod coupler CRFK	■	■	■	137
2 Rod eye CRSGS	■	■	■	137
3 Rod clevis CRSG	■	■	■	137
4 Foot mounting CRHBN	■	■	■	137
5 Flange mounting CRFBN	■	■	■	137
6 Swivel mounting CRSBN	■	■	■	137
7 Clevis foot CRLBN	■	–	–	137
17 Proximity sensor CRSME0-4	■	■	■	138
18 Mounting kit CRSMBR	■	■	■	138
20 Proximity sensor CRSMT-8	■	■	■	138
21 Mounting kit SMBR	■	■	■	138
24 One-way flow control valve CRGRLA	■	■	■	139
25 Push-in fitting CRQS	■	■	■	crqs

Basic design Ø 32 ... 63



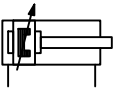
S2 – Through piston rod



	CRDSNU	CRDSNU- MQ	S2	→ Page/ online
1 Self-aligning rod coupler CRFK	■	■	■	137
2 Rod eye CRSGS	■	■	■	137
3 Rod clevis CRSG	■	■	■	137
7 Clevis foot CRLBN	■	–	–	137
8 Foot mounting CRH	–	–	■	137
9 Flange mounting CRFV	■	■	–	137
17 Proximity sensor CRSME0-4	■	■	■	138
18 Mounting kit CRSMBR	■	■	■	138
20 Proximity sensor CRSMT-8	■	■	■	138
21 Mounting kit SMBR	■	■	■	138
24 One-way flow control valve CRGRLA	■	■	■	139
25 Push-in fitting CRQS	■	■	■	crqs

Round cylinders CRHD

Data sheet



Technical data		Dimensions ➔ Page 142					
Piston Ø		32	40	50	63	80	100
Pneumatic connection		G1/8	G1/8	G1/4	G3/8	G3/8	G3/8
Piston rod thread		M10x1.25	M12x1.25	M16x1.5	M16x1.5	M20x1.5	M20x1.5
Stroke	[mm]	1 ... 500					
Cushioning		Pneumatic cushioning, adjustable at both ends					
Cushioning length	[mm]	17	19.5	21	21	31	31
Theoretical force at 6 bar, advancing	[N]	483	754	1178	1870	3016	4712
Theoretical force at 6 bar, retracting	[N]	415	633	990	1682	2721	4418

Operating conditions							
Piston Ø		32	40	50	63	80	100
Operating pressure	[bar]	1 ... 10					
Ambient temperature ¹⁾							
CRHD-...	[°C]	-20 ... +80					
CRHD-...-S6	[°C]	0 ... +120					

1) Note operating range of proximity sensors

Materials	
Piston rod	High-alloy stainless steel
Bearing cap	High-alloy stainless steel
Cylinder barrel	High-alloy stainless steel
End cap	High-alloy stainless steel
Seals	
CRHD-...	NBR, TPE-U (PUR) media seal (modified for resistance to hydrolysis and cleaning)
CRHD-...-S6	FPM

Round cylinders CRHD

Order code

Pneumatic drives

CRHD		-		-		-	PPV	-	A	-		-	
Type													
CRHD	Double-acting round cylinder												
Piston Ø [mm]													
	Stroke [mm]												
32, 40, 50, 63, 80, 100	1 ... 500												
Cushioning													
PPV	Pneumatic cushioning, adjustable at both ends												
Position sensing													
A	Via proximity sensor												
Alternative cylinder end cap													
MQ	Bearing cap with male thread												
MC	End cap with clevis												
MS	End cap with lug												
Temperature resistance													
S6	Heat-resistant seals up to max. 120°C												

Order example:

CRHD-100-80-PPV-A-MQ
Double-acting round cylinder CRHD - piston diameter 100 mm - stroke 80 mm - pneumatic cushioning, adjustable at both ends - position sensing via proximity sensor - bearing cap with male thread - no heat-resistant seal

Ordering – Product options

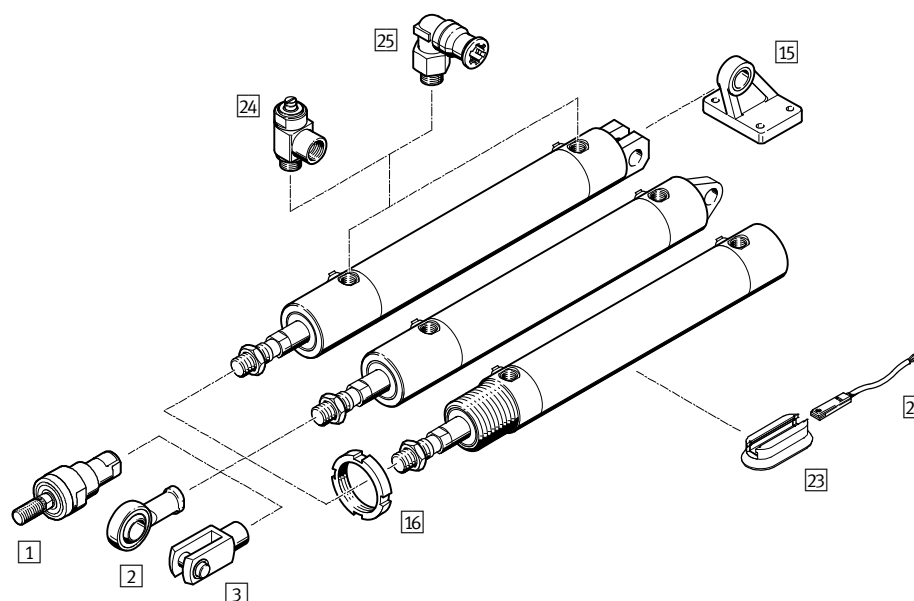
Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
➔ www.festo.com/catalogue/...

Enter the type code in the search field.

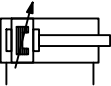
Accessories



	CRHD-			→ Page/online
	MQ	MC	MS	
1 Self-aligning rod coupler CRFK	■	■	■	137
2 Rod eye CRS GS	■	■	■	137
3 Rod clevis CRS G	■	■	■	137
15 Clevis foot CRLMC	–	■	–	137
16 Nut CR	■	–	–	137
22 Proximity sensor CRSMT	■	■	■	138
23 Mounting kit CRSMB-8-32/100	■	■	■	138
24 One-way flow control valve CRGRLA	■	■	■	139
25 Push-in fittings CRQS	■	■	■	crqs

01

Data sheet



Technical data		Dimensions → Page 141					
Piston Ø		32	40	50	63	80	100 125
Conforms to standard		ISO 15552					
Pneumatic connection		G1/8	G1/4	G1/4	G3/8	G3/8	G1/2 G1/2
Piston rod end		Male thread					
Piston rod thread		M10x1.25	M12x1.25	M16x1.5	M16x1.5	M20x1.5	M20x1.5 M27x2
Stroke	[mm]	1 ... 2000					
Cushioning		Pneumatic cushioning, adjustable at both ends					
Cushioning length	[mm]	19	21	23	23	30	30 40
Theoretical force at 6 bar, advancing	[N]	483	754	1178	1870	3016	4712 7363
Theoretical force at 6 bar, retracting	[N]	415	633	990	1682	2721	4418 6881

Operating conditions							
Piston Ø		32	40	50	63	80	100 125
Operating pressure	[bar]	0.6 ... 10					
Ambient temperature ¹⁾							
CRDNG-.../CRDNGS-...	[°C]	-20 ... +80					
CRDNG/CRDNGS-...-S6	[°C]	0 ... +120					

1) Note operating range of proximity sensors

Materials							
Piston rod		High-alloy stainless steel					
Bearing cap		Stainless steel casting					
Cylinder barrel		High-alloy stainless steel					
End cap		Stainless steel casting					
Seals							
CRDNG-.../CRDNGS-...		NBR, TPE-U (PUR) media seal (modified for resistance to hydrolysis and cleaning)					
CRDNG/CRDNGS-...-S6		FPM					

Order code

01

Pneumatic drives

CRDNG		-		-		-	PPV	-	A	-		-	
Type													
CRDNG	Double-acting standards-based cylinder												
CRDNGS	Double-acting standards-based cylinder with swivel flange												
Piston Ø [mm]													
	Stroke [mm]												
32, 40, 50, 63, 80, 100, 125	1 ... 2000												
Cushioning													
PPV	Pneumatic cushioning, adjustable at both ends												
Position sensing													
A	Via proximity sensor												
Piston rod													
-	Piston rod at one end												
S2	Through piston rod 1												
Temperature resistance													
S6	Heat-resistant seals up to max. 120°C												

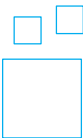
1 Not with temperature resistance S6

Order example:

CRDNG-100-30-PPV-A

Double-acting standards-based cylinder without swivel flange CRDNG - piston diameter 100 mm - stroke 30 mm - pneumatic cushioning, adjustable at both ends - position sensing via proximity sensor - piston rod at one end - no heat-resistant seal

Ordering – Product options



Configurable product

This product and all its options can be ordered using the configurator.

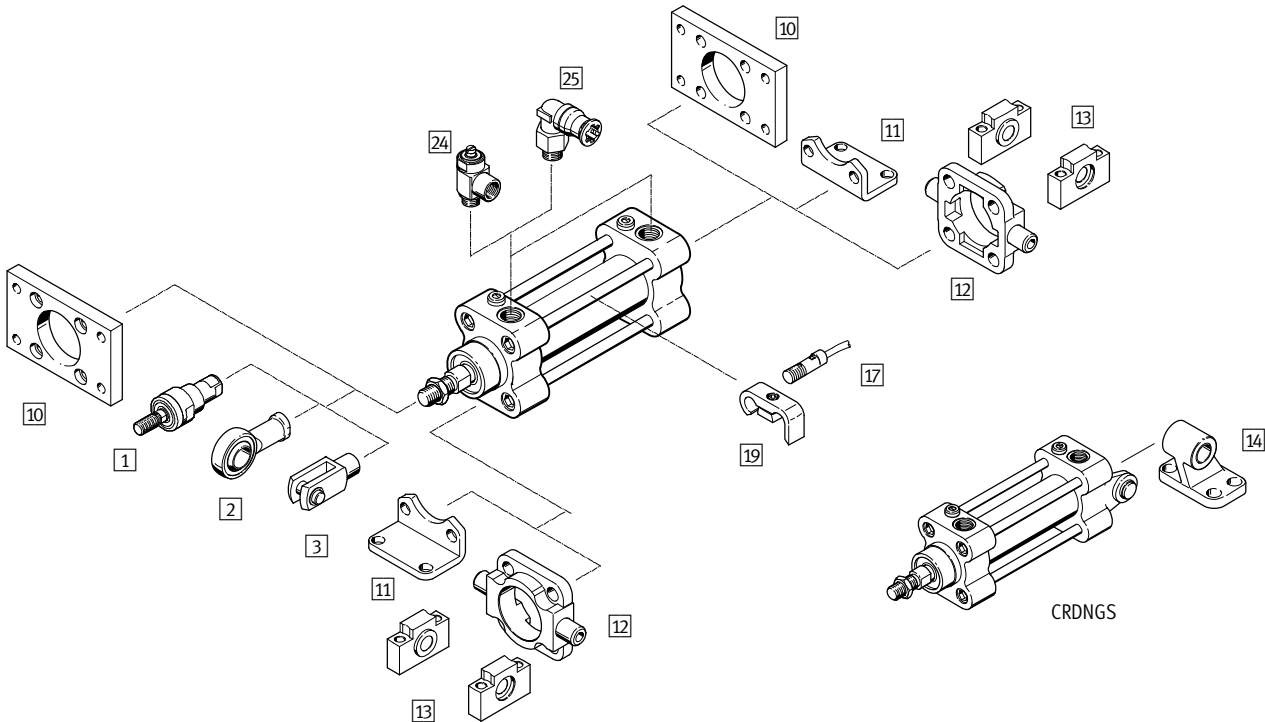
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Enter the type code in the search field.

01 Accessories

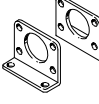
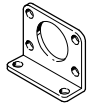
Pneumatic drives

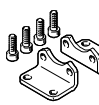
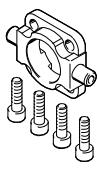
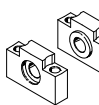
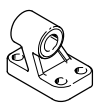
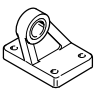


	CRDNG	CRDNGS	→ Page/online
1 Self-aligning rod coupler CRFK	■	■	137
2 Rod eye CRSGS	■	■	137
3 Rod clevis CRSG	■	■	137
10 Flange mounting CRFNG	■	–	137
11 Foot mounting CRHNC	■	–	137
12 Trunnion flange CRZNG	■	–	137
13 Trunnion support CRLNZG	■	–	137
14 Clevis foot CRLNG	–	■	137
17 Proximity sensor CRSME0-4	■	■	138
19 Mounting kit CRSMB	■	■	138
24 One-way flow control valve CRGRLA	■	■	139
25 Push-in fittings CRQS	■	■	qs

Cylinders with piston rod > Stainless-steel cylinders >
Round cylinders CRDSNU/CRHD/CRDNG

Accessories – Ordering data

	For Ø	Part no.	Type
1 Self-aligning rod coupler Data sheets online: → crfk			
	25, 32	2305778	CRFK-M10x1,25
	40	2305779	CRFK-M12x1,25
	50, 63	2490673	CRFK-M16x1,5
	80, 100	2545677	CRFK-M20x1,5
2 Rod eye Data sheets online: → crsgs			
	12, 16	195580	CRSGS-M6
	20	195581	CRSGS-M8
	25, 32	195582	CRSGS-M10x1,25
	40	195583	CRSGS-M12x1,25
	50, 63	195584	CRSGS-M16x1,5
	80, 100	195585	CRSGS-M20x1,5
	125	195586	CRSGS-M27x2
3 Rod clevis Data sheets online: → crsg			
	12, 16	13567	CRSG-M6
	20	13568	CRSG-M8
	25, 32	13569	CRSG-M10x1,25
	40	13570	CRSG-M12x1,25
	50, 63	13571	CRSG-M16x1,5
	80, 100	13572	CRSG-M20x1,5
	125	185361	CRSG-M27x2
4 Foot mounting¹⁾ Dimensions online: → crdsnu			
	12	161866	CRHBN-12/16x1
	16	162999	CRHBN-12/16x2
	20	161867	CRHBN-20/25x1
	25	162998	CRHBN-20/25x2
5 Flange mounting Dimensions online: → crdsnu			
	12, 16	161864	CRFBN-12/16
	20	161865	CRFBN-20/25
	25	161865	CRFBN-20/25
6 Swivel mounting Dimensions online: → crdsnu			
	20	552904	CRSBN-20/25
	25	552904	CRSBN-20/25
7 Clevis foot Dimensions online: → crdsnu			
	12, 16	161862	CRLBN-12/16
	20, 25	161863	CRLBN-20/25
	32	195866	CRLBN-32
	40	195867	CRLBN-40
	50, 63	195868	CRLBN-50/63
8 Foot mounting Dimensions online: → crdsnu			
	32	162951	CRH-32
	40	162952	CRH-40
	50	162953	CRH-50
	63	162954	CRH-63
9 Flange mounting Dimensions online: → crdsnu			
	32	161858	CRFV-32
	40	161859	CRFV-40
	50	161860	CRFV-50
	63	161861	CRFV-63

	For Ø	Part no.	Type
10 Flange mounting Dimensions online: → crdng			
	32	161846	CRFNG-32
	40	161847	CRFNG-40
	50	161848	CRFNG-50
	63	161849	CRFNG-63
	80	161850	CRFNG-80
	100	161851	CRFNG-100
	125	185363	CRFNG-125
11 Foot mounting Dimensions online: → crdsnu			
	32	176937	CRHNC-32
	40	176938	CRHNC-40
	50	176939	CRHNC-50
	63	176940	CRHNC-63
	80	176941	CRHNC-80
	100	176942	CRHNC-100
	125	176943	CRHNC-125
12 Trunnion flange Dimensions online: → crdng			
	32	161852	CRZNG-32
	40	161853	CRZNG-40
	50	161854	CRZNG-50
	63	161855	CRZNG-63
	80	161856	CRZNG-80
	100	161857	CRZNG-100
	125	183362	CRZNG-125
13 Trunnion support Dimensions online: → crdng			
	32	161874	CRLNZG-32
	40, 50	161875	CRLNZG-40/50
	63, 80	161876	CRLNZG-63/80
	100, 125	161877	CRLNZG-100/125
14 Clevis foot Dimensions online: → crdng			
	32	161840	CRLNG-32
	40	161841	CRLNG-40
	50	161842	CRLNG-50
	63	161843	CRLNG-630
	80	161844	CRLNG-80
	100	161845	CRLNG-100
	125	176951	CRLNG-125
15 Clevis foot Dimensions online: → crhd			
	32	197320	CRLMC-32
	40	197321	CRLMC-40
	50	197322	CRLMC-50
	63	197323	CRLMC-63
	80	197324	CRLMC-80
	100	197325	CRLMC-100
16 Nut Dimensions online: → crhd			
	32	197326	CR-M30x1,5
	40	197327	CR-M38x1,5
	50, 63	197328	CR-M45x1,5
	80, 100	197329	CR-M50x2

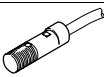
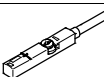
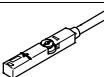
1) CRHBN-...x1: 1 foot
CRHBN-...x2: 2 feet. 1 nut

Cylinders with piston rod > Stainless-steel cylinders >

Round cylinders CRDSNU/CRHD/CRDNG

01

Accessories – Ordering data

	For Ø	Part no.	Type	
18	Mounting kit for proximity sensor CRSME0-4			Dimensions online: → crdsnu
	For round cylinder CRDSNU			
	12	164581	CRSMBR-12	
	16	164582	CRSMBR-16	
	20	164583	CRSMBR-20	
	25	164584	CRSMBR-25	
	32	163888	CRSMBR-32	
	40	163889	CRSMBR-40	
	50	163890	CRSMBR-50	
	63	163891	CRSMBR-63	
19	Mounting kit for proximity sensor CRSME0-4			Dimensions online: → crdng
	For round cylinder CRDNG			
	32	161763	CRSMB-32	
	40	161764	CRSMB-40	
	50	161765	CRSMB-50	
	63	161766	CRSMB-63	
	80	161767	CRSMB-80	
	100	161768	CRSMB-100	
	125	185365	CRSMB-125	
21	Mounting kit for proximity sensor CRSMT-8			Dimensions online: → crdsnu
	For round cylinder CRDSNU		★ 538937	SMBR-8-8/100-S6
23	Mounting kit for proximity sensor CRSMT-8			Dimensions online: → crhd
	For round cylinder CRHD		525565	CRSMB-8-32/100
	For Ø	Switching output, connection	Cable length [m]	Part no. Type
17	Proximity sensor, magnetic reed – N/O contact			Dimensions online: → crsmeo
	12 ... 125	Corrosion-resistant, cable, 3-wire	2.5	161775 CRSME0-4-K-LED-24
20	Proximity sensor for T-slot, magneto-resistive – N/O contact			Data sheets → Page 1206
	12 ... 100	PNP, cable, 3-wire	5.0	574380 CRSMT-8M-PS-24V-K-5,0-OE
		PNP, cable, 3-wire	10.0	574381 CRSMT-8M-PS-24V-K-10,0-OE
		PNP, plug, 3-pin	0.3	574383 CRSMT-8M-PS-24V-K-0,3-M8D
		PNP, plug, 3-pin	0.3	574382 CRSMT-8M-PS-24V-K-0,3-M12
22	Magneto-resistive – N/O contact			Data sheets → Page 1206
	12 ... 100	PNP, cable, 3-wire	2.5	525563 CRSMT-8-PS-K-LED-24
	12 ... 100	PNP, cable, 3-wire	5.0	525564 CRSMT-8-PS-K5-LED-24

Accessories – Ordering data

01

	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
Connecting cable, straight socket					
	12 ... 100	Cable, M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
		Cable, M12x1, 5-pin	2.5	★ 541363	NEBU-M12G5-K-2.5-LE3
			5.0	★ 541364	NEBU-M12G5-K-5-LE3
			Angled socket		
	12 ... 100	Cable, M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3
		Cable, M12x1, 5-pin	2.5	541367	NEBU-M12W5-K-2.5-LE3
			5.0	541370	NEBU-M12W5-K-5-LE3

	Connection Thread	For push-in fitting	Part no.	Type
23 One-way flow control valves CRGRLA – Material: electrolytically polished stainless steel casting Dimensions online: → crgrla				
	M5	CRQS/CRQSL/CRQST	161403	CRGRLA-M5-B
	G1/8		161404	CRGRLA-1/8-B
	G1/4		161405	CRGRLA-1/4-B
	G3/8		161406	CRGRLA-3/8-B
	G1/2		161407	CRGRLA-1/2-B

	Connection Thread	Volume [l]	Part no.	Type
Air reservoir CRVZS – Material: high-alloy stainless steel Dimensions online: → crvzs				
	G1/8	0.1	160233	CRVZS-0,1
	G1/4	0.4	160234	CRVZS-0,4
	G1/4	0.75	160235	CRVZS-0,75
	G1/2	2	160236	CRVZS-2
	G1, G3/8	5	192159	CRVZS-5
	G1, G3/8	10	160237	CRVZS-10

Pneumatic drives

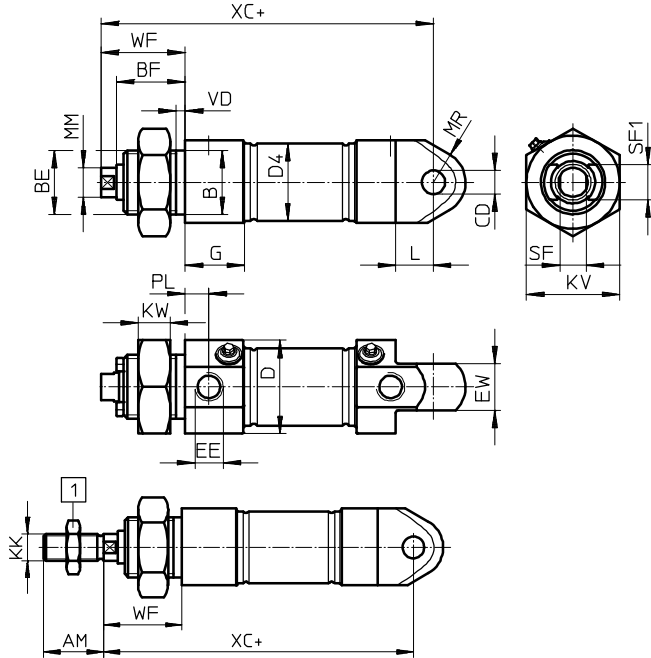
Round cylinders CRDSNU

01

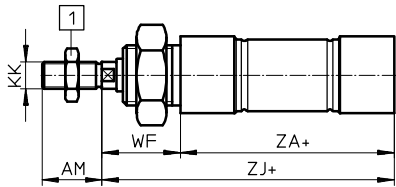
Dimensions

Download CAD data [→ www.festo.com](#)

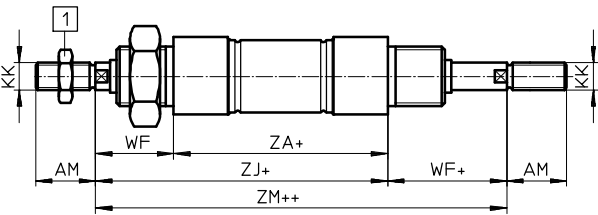
Basic design – Ø 12 ... 25



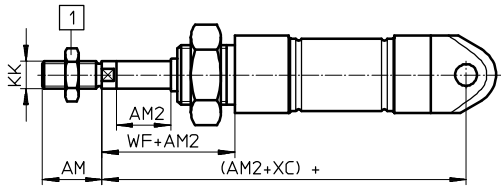
MQ – Lateral air connection



S2 – Through piston rod



K8 – Extended piston rod



1 Piston rod nut is not included in the scope of delivery with Ø 12 ... 20.

+ = plus stroke length
++ = plus 2x stroke length

Ø	AM	AM2	B	BE	BF	CD	D	D4	EE	EW	G	KK	KV
[mm]		max.	Ø h9			Ø H8	Ø	Ø					
12	16	1 ... 100	16	M16x1.5	18	6	20	13.3	M5	12	9.5	M6	24
16	16	1 ... 100	16	M16x1.5	18	6	20	17.3	M5	12	9.7	M6	24
20	20	1 ... 100	22	M22x1.5	20.7	8	30	21.3	G1/8	16	20.5	M8	32
25	22	1 ... 100	22	M22x1.5	23.5	8	32	26.5	G1/8	16	20.5	M10x1.25	32

Ø	KW	L	MM	MR	PL	ST	SF1	VD	WF	XC	ZA	ZJ	ZM
[mm]			Ø							±1			
12	8	10	6	8	6	5	9	3.5	22	75	50	72	95
16	8	10	6	8	6	5	9	3.5	22	82	56	78	101
20	11	13	8	11	8.2	7	12	3.5	24	95	68	92	117
25	11	13	10	11	8.2	9	12	3.5	28	104	69.5	97.5	126

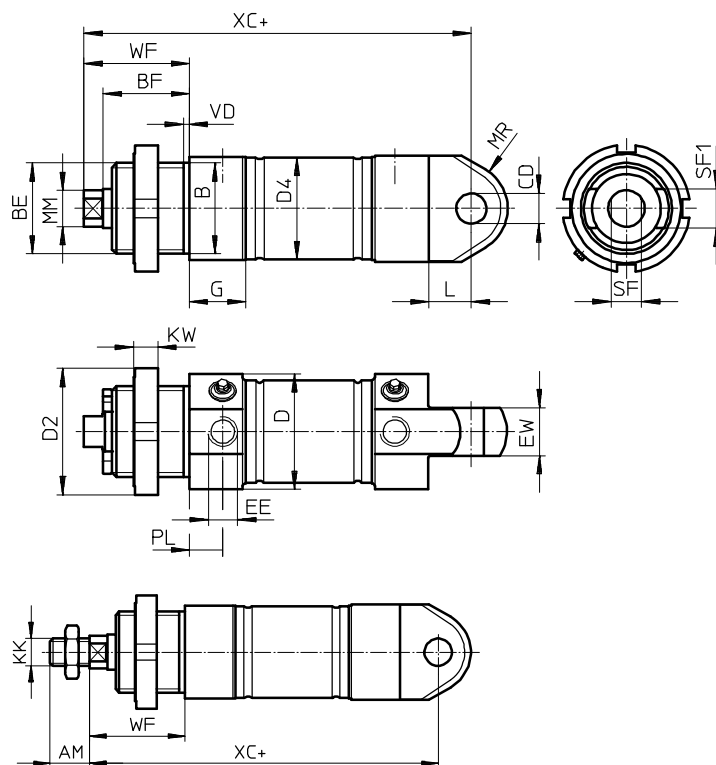
Round cylinders CRDSNU

Dimensions

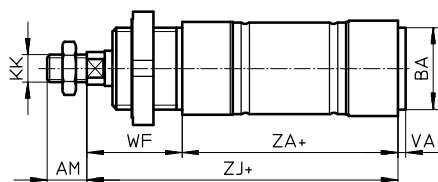
Download CAD data → www.festo.com

01

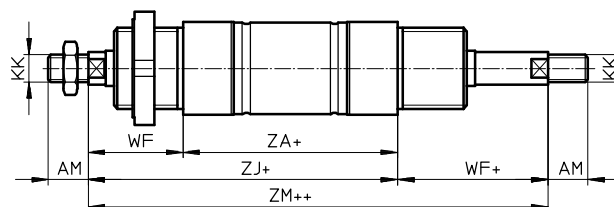
Basic design – Ø 32 ... 63



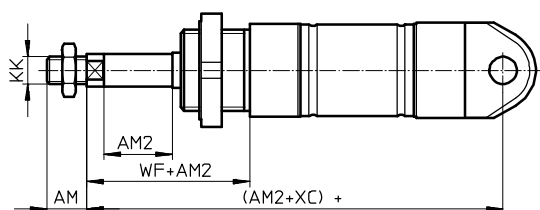
MQ – Lateral air connection



S2 – Through piston rod



K8 – Extended piston rod



+ = plus stroke length
++ = plus 2x stroke length

Ø	AM	AM2	B	BA	BE	BF	CD	D	D2	D4	EE	EW	G	KK
[mm]		max.	Ø h9	h9			Ø H8	Ø	Ø	Ø				
32	22	1 ... 500	30	30	M30x1.5	28.4	10	38	42	33.6	G1/8	16	18.6	M10x1.25
40	24	1 ... 500	38	38	M38x1.5	32	12	49	50	41.6	G1/4	18	24.7	M12x1.25
50	32	1 ... 500	45	45	M45x1.5	36.4	16	57	60	52.4	G1/4	21	24.4	M16x1.5
63	32	1 ... 500	45	45	M45x1.5	36.4	16	70	60	65.4	G3/8	21	27.4	M16x1.5

Ø	KW	L	MM	MR	PL	ST	SF1	VA	VD	WF	XC	ZA	ZJ	ZM
[mm]			Ø								±1			
32	8	14	12	15	9	10	13	3	4.3	34	118	69.5	104	138
40	10	16	16	19	12	13	18	4	4.3	39	140	84.6	124	163
50	10	17	20	22.5	12	17	22	4	4.3	44	147	86.2	130	175
63	10	17	20	22.5	13	17	22	4	4.3	44	156	94.2	139	183

Cylinders with piston rod > Stainless-steel cylinders >

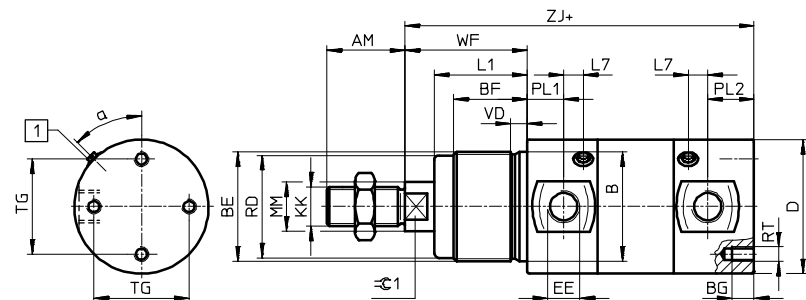
Round cylinders CRHD

01

Dimensions

Download CAD data → www.festo.com

CRHD- ...-MQ – Bearing cap with male thread



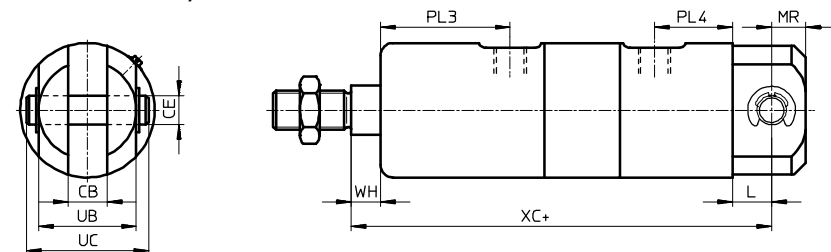
1 Regulating screw for end-position cushioning

+ = plus stroke length

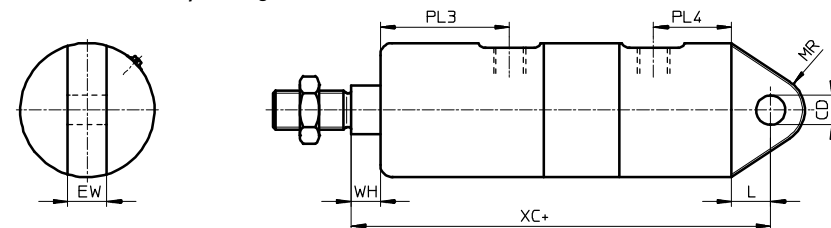
Ø	α	AM	B Ø h9	BE	BF	BG	D Ø	EE	KK	L1
[mm]										
32	50°	22	30	M30x1.5	25	8	36	G1/8	M10x1.25	30
40	45°	24	38	M38x1.5	29	8	45	G1/8	M12x1.25	35
50	45°	32	45	M45x1.5	30	8	55	G1/4	M16x1.5	38
63	45°	32	45	M45x1.5	30	10	68	G3/8	M16x1.5	38
80	45°	40	50	M50x2	30	15	86	G3/8	M20x1.5	38
100	45°	40	50	M50x2	30	15	106	G3/8	M20x1.5	38

Ø	L7	MM Ø	RD Ø	RT	PL1	PL2	TG	VD	WF	ZJ	≈1
[mm]											
32	5	12	27	M5	13	21	22	7	38	120	10
40	8	16	35	M6	15	18	30	7	45	135	13
50	5	20	42	M6	15	19	39	6.25	50	143	17
63	8	20	42	M8	17	24	49	6.25	50	158	17
80	9	25	47	M10	18	31	65	7.5	50	174	22
100	13	25	47	M10	22	30	82	7.5	50	189	22

CRHD- ...-MC – End cap with clevis



CRHD- ...-MS – End cap with lug



+ = plus stroke length

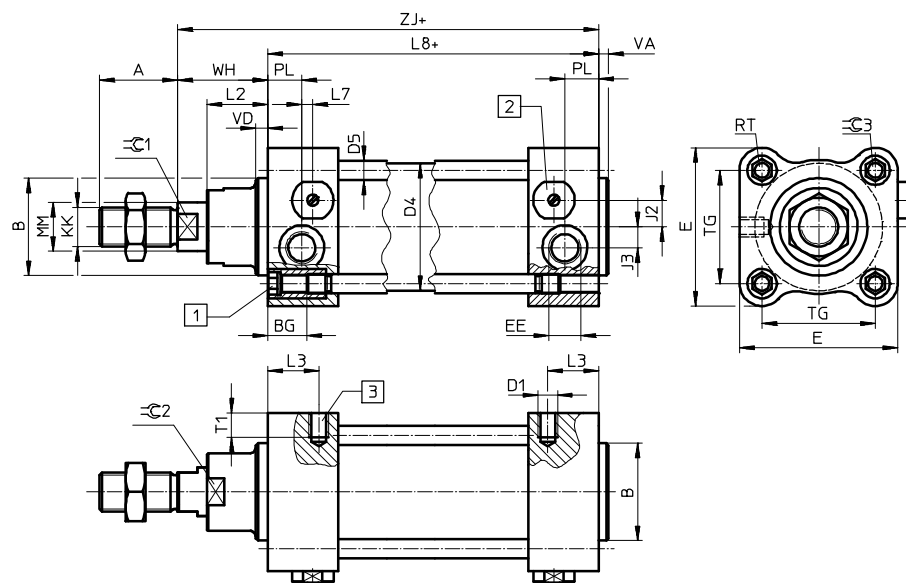
Ø	CB	CD Ø H9	CE Ø e8	EW	L	MR	PL3	PL4	UB	UC	WH	XC
[mm]	+0.2/+0.1			-0.1/-0.2					-0.1/-0.2			
32	10	10	10	10	15	12	43	28	26	35	8	142
40	12	12	12	12	16	14	50	27	32	43	10	160
50	16	12	12	16	16	14	53	30	40	51	12	170
63	16	16	16	16	22	18	55	34	40	53	12	190
80	20	16	16	20	22	20	56	45	60	73	12	210
100	20	20	20	20	27	25	60	43.5	60	73	12	230

Dimensions

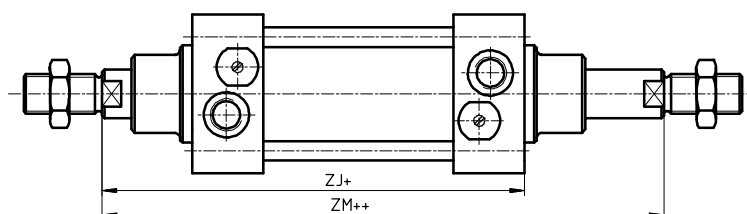
Download CAD data → www.festo.com

01

Basic design – Ø 32 ... 125



S2 – Through piston rod



- 1 Socket head screw with female thread
- 2 Cover for adjustable end-position cushioning
- 3 Threaded hole for direct mounting

+ = plus stroke length

++ = plus 2x stroke length

Ø [mm]	A	B Ø e11	BG	D1	D4 Ø	D5 Ø	E	EE	J2	J3	KK	L2	L3
32	22	30	16	M6	33.6	6	50	G1/8	7	5.7	M10x1.25	16	13
40	24	35	16	M6	41.6	6	55	G1/4	10	6.5	M12x1.25	18	16.5
50	32	40	16	M8	52.4	8	65	G1/4	11.5	8.6	M16x1.5	25	21
63	32	45	16	M10	65.4	8	75	G3/8	14.5	12	M16x1.5	25	22
80	40	45	23	M10	82.8	10	100	G3/8	15	13	M20x1.5	31	22.5
100	40	55	23	M12	102.8	10	120	G1/2	23	14	M20x1.5	36	22.5
125	54	60	23	M12	128.6	12	145	G1/2	28.5	8	M27x2	46	23.5

Ø [mm]	L7	L8	MM Ø	PL	RT	T1	TG	VA	VD	WH	ZJ	ZM	≈C1	≈C2	≈C3
32	5.3	94 +0.4	12	13	M6	9	32.5	4	6	26	120	148	10	26	6
40	2.5	105 +0.4/-0.6	16	14	M6	9	38	4	6	30	135	167	13	30	6
50	4.5	106 +0.4/-0.6	20	14	M8	10	46.5	4	6	37	143	183	17	34	8
63	5	121 +0.4/-0.6	20	18	M8	12	56.5	4	6	37	158	199	17	36	8
80	6	128 +0.4/-0.6	25	17	M10	15	72	4	7	46	174	222	22	41	10
100	9	138 +0.4/-0.6	25	18	M10	18	89	4	7	51	189	240	22	41	10
125	4.5	160 +0.4/-0.6	32	27	M12	18	110	6	6	66	226	292	27	50	12

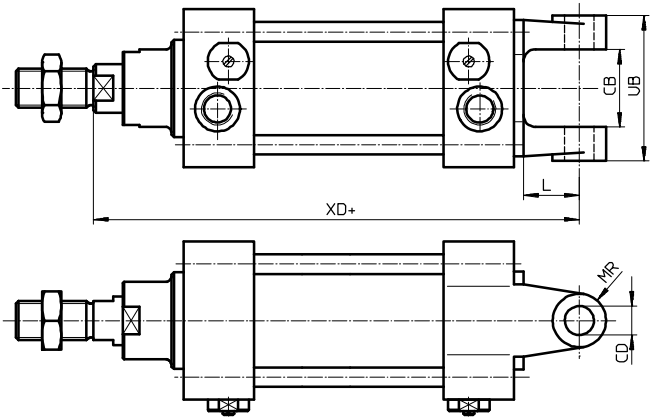
Round cylinders CRDNGS

01

Dimensions

Download CAD data → www.festo.com

Basic design – Ø 32 ... 125

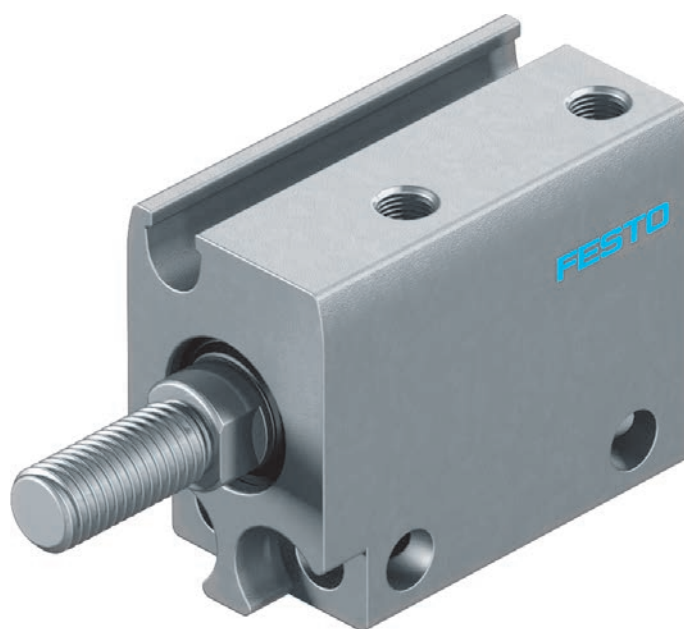


+ = plus stroke length

Ø	CB	CD	L	MR	UB	XD
[mm]	H14	Ø H9				
32	26	10	18	9	45	142
40	28	12	21	10	52	160
50	32	12	23	11	60	170
63	40	16	28	13	70	190
80	50	16	32	13	90	210
100	60	20	37	17	110	230
125	70	25	44	23	130	276

Pneumatic drives

New New series



Gain space and save money during engineering

- + With compact dimensions
- + With extra-short length
- + With increased mounting flexibility

Cylinders with piston rod › Compact, short-stroke and flat cylinders ›
Short-stroke cylinders

ADN-S

Double-acting

AEN-S

Single-acting

Cylinders with piston rod > Compact, short-stroke and flat cylinders >

Short-stroke cylinders

ADN-S / AEN-S



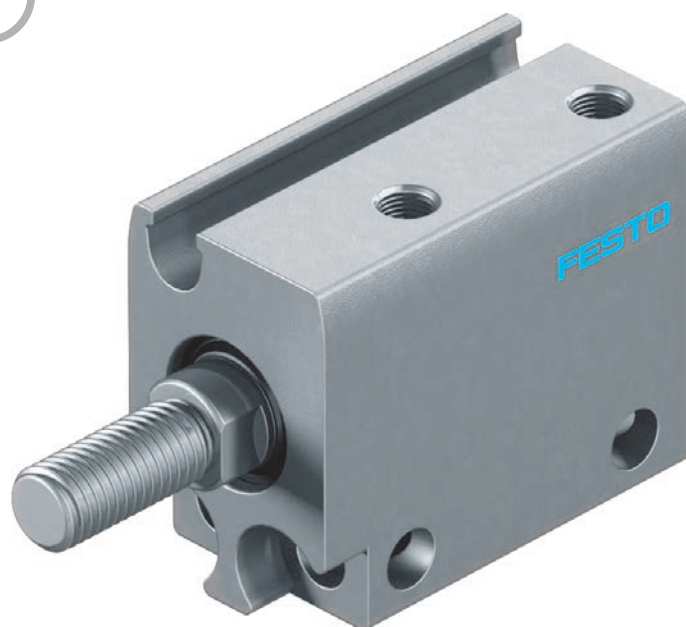
Overview, configuration and ordering

→ www.festo.com/catalogue/adn-s



Additional information, support and user documentation

→ www.festo.com/sp/adn-s

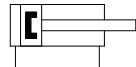


- + Piston diameters 6 and 10 mm
- + Requires minimal installation space
- + Additional mounting holes
- + For position sensing

Compact cylinders ADN-S

NEW

Data sheet – Double-acting



Technical data			Dimensions → Page 153	
Piston Ø		6		10
Pneumatic connection		M3		
Piston rod end		Female thread		
		Male thread		
Stroke	[mm]	5, 10		
Theoretical force at 6 bar, advancing	[N]	17		47
Theoretical force at 6 bar, retracting	[N]	9.4		30.2

Operating conditions				
Piston Ø	6	10		
Operating pressure ¹⁾	[bar]	1.5 ... 8	1 ... 8	
Ambient temperature ²⁾	[°C]	-10 ... +60		

1) The minimum pressure values in retracting direction may be slightly higher after an extended idle time.
2) Note operating range of proximity sensors.

Materials	
Housing	Smooth anodised wrought aluminium alloy
Piston rod	High-alloy stainless steel
Seals	NBR
	TPE-U (PU)

NEW

Cylinders with piston rod > Compact, short-stroke and flat cylinders >

Compact cylinders ADN-S

Order code – Double-acting

01

Pneumatic drives

ADN

S

Type	
ADN	Double-acting compact cylinder

Type	
S	Short

Piston Ø [mm]	
	Stroke [mm]
6	5, 10
10	5, 10

Piston rod thread	
I	Female thread
A	Male thread

Position sensing	
A	Via proximity sensor

Order example:
ADN-S-6-10-I-A
Double-acting compact cylinder ADN - short type - piston diameter 6 mm - stroke 10 mm - female thread - position sensing via proximity sensor

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or

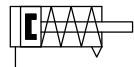
➔ www.festo.com/catalogue/...

Enter the type code in the search field.

Compact cylinders AEN-S

NEW

Data sheet – Single-acting

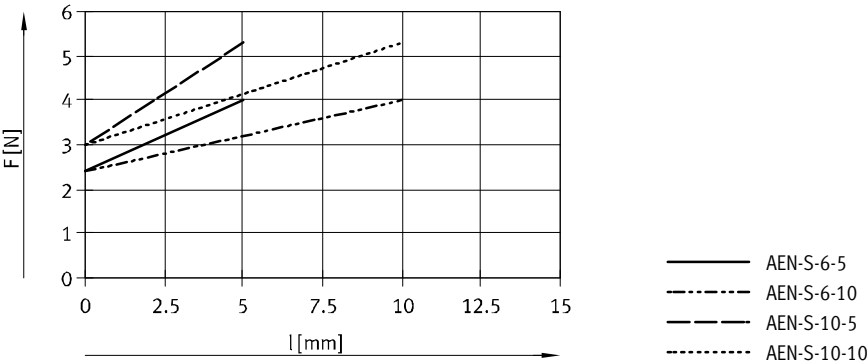


Technical data

Dimensions → Page 155

Piston Ø	6	10	
Pneumatic connection	M3		
Piston rod end	Female thread		
	Male thread		
Stroke	[mm]	5, 10	
Theoretical force at 6 bar, advancing	[N]	13	41.7

Theoretical spring force for retraction



Operating conditions		
Piston Ø	6	10
Operating pressure	[bar]	2.5 ... 8
Ambient temperature ¹⁾	[°C]	−10 ... +60

1) Note operating range of proximity sensors.

Materials	
Housing	Anodised wrought aluminium alloy
Piston rod	High-alloy stainless steel
Seals	NBR
	TPE-U (PU)

NEW

Cylinders with piston rod > Compact, short-stroke and flat cylinders >

Compact cylinders AEN-S

Order code – Double-acting

01

Pneumatic drives

AEN

S

Type	
AEN	Single-acting compact cylinder

Type	
S	Short

Piston Ø [mm]	
	Stroke [mm]
6	5, 10
10	5, 10

Piston rod thread	
I	Female thread
A	Male thread

Position sensing	
A	Via proximity sensor

Order example:
AEN-S-6-10-I-A
Single-acting compact cylinder AEN - short type - piston diameter 6 mm - stroke 10 mm - female thread - position sensing via proximity sensor

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or

www.festo.com/catalogue/...

Enter the type code in the search field.

Compact cylinders ADN-S/AEN-S

NEW

01

Accessories – Ordering data

	Switching output, connection	Cable length [m]	Part no.	Type
Proximity sensor for C-slot, magneto-resistive – N/O contact			Data sheets → Page 1217	
	PNP, plug	0.3	★ 551375	SMT-10M-PS-24V-E-0,3-L-M8D
	PNP, cable	2.5	★ 551373	SMT-10M-PS-24V-E-2,5-L-OE
Proximity sensor for C-slot, magnetic reed – N/O contact			Data sheets → Page 1217	
	Contacting, plug	0.3	★ 551367	SME-10M-DS-24V-E-0,3-L-M8D
	Contacting, cable	2.5	★ 551365	SME-10M-DS-24V-E-2,5-L-OE
	Contacting, cable	2.5	★ 551369	SME-10M-ZS-24V-E-2,5-L-OE
Proximity sensor for C-slot, magneto-resistive – N/O contact			Data sheets → Page 1217	
	PNP, plug	0.3	547863	SMT-10G-PS-24V-E-0,3Q-M8D
	PNP, cable	2.5	547862	SMT-10G-PS-24V-E-2,5Q-OE
	NPN, plug	0.3	8065029	SMT-10G-NS-24V-E-0,3Q-M8D
	NPN, cable	2.5	8065030	SMT-10G-NS-24V-E-2,5Q-OE
Connecting cable, straight socket			Data sheets → Page 1543	
	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
		5.0	★ 541334	NEBU-M8G3-K-5-LE3
Angled socket			Data sheets → Page 1543	
	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
		5.0	★ 541341	NEBU-M8W3-K-5-LE3

Pneumatic drives

NEW

Cylinders with piston rod > Compact, short-stroke and flat cylinders >

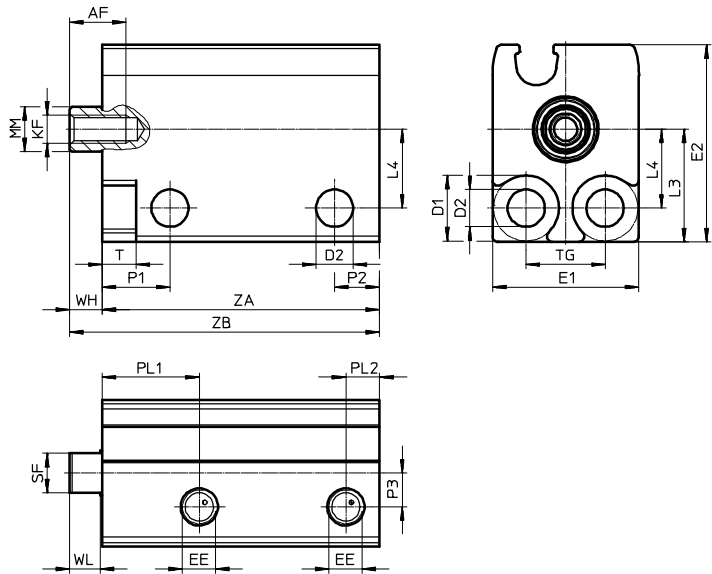
Compact cylinders ADN-S

Dimensions

With female thread

Download CAD data www.festo.com

01



Ø	AF	D1	D2	EE	E1	E2	KF	L3	L4	MM
[mm]	min.	Ø H13	Ø		max.	max.				
6	5	5.8	3.3	M3	13	17.5	M2.5	10	7	4
10	6				13.5	20.5	M3	11	8	6

Ø	P1	P2	P3	PL2	SF	T	TG	WH	WL
[mm]							±0.1		
6	6	4	3	3	3.5	3	7	3	2.7
10			3.2		5				

Ø	Stroke	Position sensing	PL1	ZA	ZB
[mm]	[mm]			+0.3	+0.35
6	5	—	8.6	20.5	23.5
		■	8.6	24.5	27.5
	10	—	8.6	25.5	28.5
		■	8.6	29.5	32.5
10	5	—	9.2	20.5	23.5
		■	9.9	24.5	27.5
	10	—	9.2	25.5	28.5
		■	9.9	29.5	32.5

Pneumatic drives

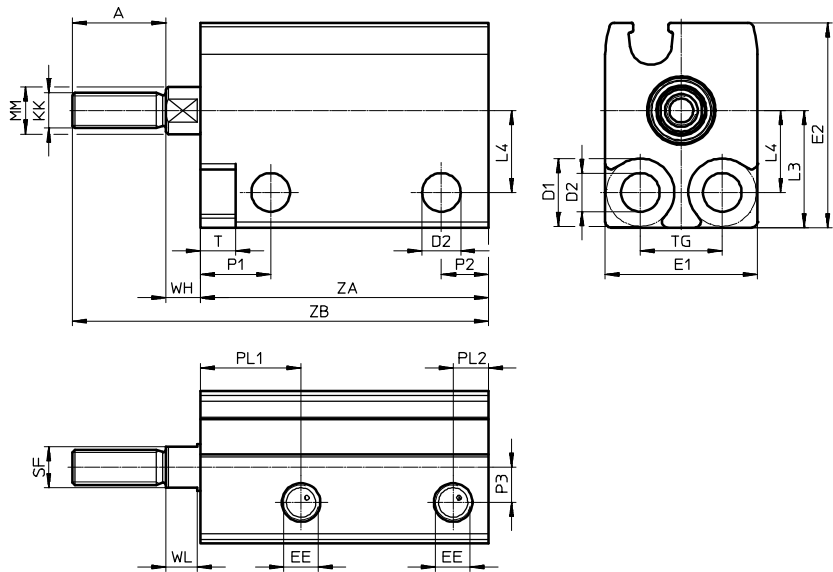
Compact cylinders ADN-S

NEW

Download CAD data → www.festo.com

Dimensions

With male thread



Ø	A	D1	D2	EE	E1	E2	KK	L3	L4	MM
[mm]		Ø H13	Ø		max.	max.				
6	8	5.8	3.3	M3	13	17.5	M3	10	7	4
10	10				13.5	20.5	M4	11	8	6

Ø	P1	P2	P3	PL2	SF	T	TG	WH	WL
[mm]							±0.1		
6	6	4	3	3	3.5	3	7	3	2.7
10			3.2		5				

Ø	Stroke	Position sensing	PL1	ZA	ZB
[mm]	[mm]			+0.3	+0.35
6	5	–	8.6	20.5	23.5
		■	8.6	24.5	27.5
	10	–	8.6	25.5	28.5
		■	8.6	29.5	32.5
10	5	–	9.2	20.5	23.5
		■	9.9	24.5	27.5
	10	–	9.2	25.5	28.5
		■	9.9	29.5	32.5

NEW

Cylinders with piston rod > Compact, short-stroke and flat cylinders >

Compact cylinders AEN-S

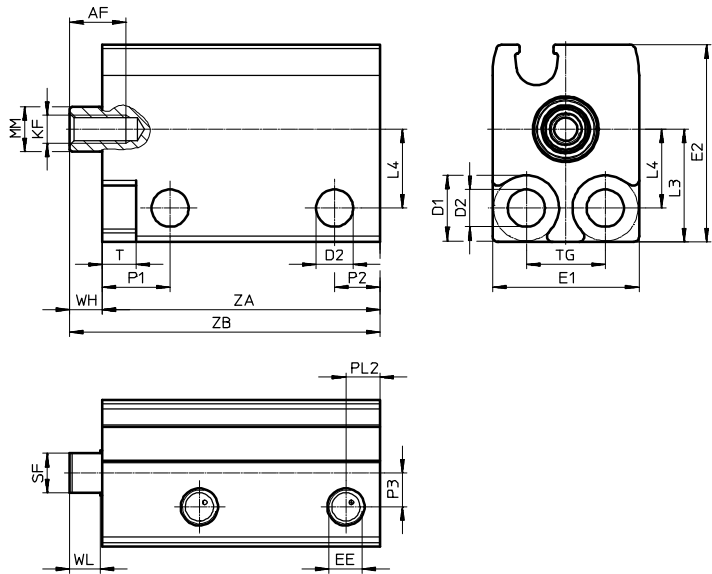
Dimensions

With female thread

Download CAD data www.festo.com

01

Pneumatic drives



Ø	AF	D1	D2	EE	E1	E2	KF	L3	L4	MM
[mm]	min.	Ø H13	Ø		max.	max.				
6	5	5.8	3.3	M3	13	17.5	M2.5	10	7	4
10	6				13.5	20.5	M3	11	8	6

Ø	P1	P2	P3	PL2	SF	T	TG	WH	WL
[mm]							±0.1		
6	6	4	3	3	3.5	3	7	3	2.7
10			3.2		5				

Ø	Stroke	Position sensing	ZA	ZB
[mm]	[mm]		+0.3	+0.35
6	5	—	20.5	23.5
		■	24.5	27.5
	10	—	25.5	28.5
		■	29.5	32.5
10	5	—	20.5	23.5
		■	24.5	27.5
	10	—	25.5	28.5
		■	29.5	32.5

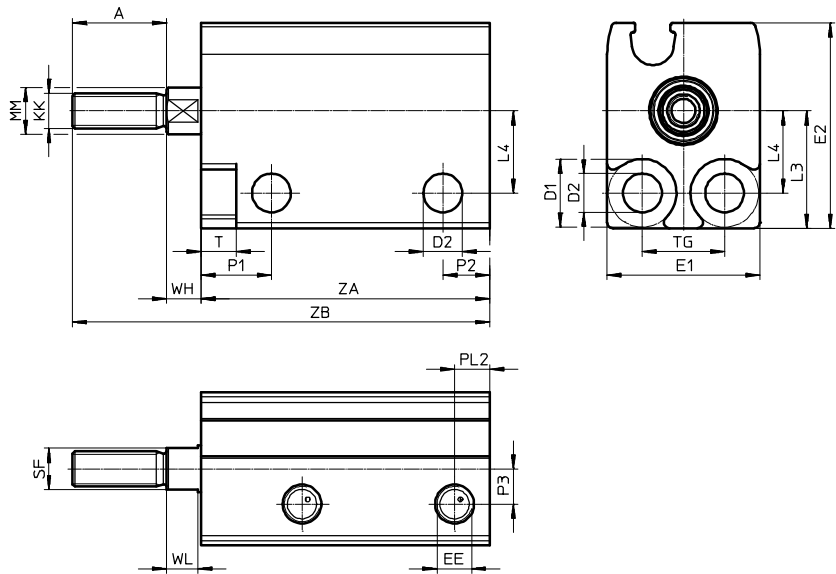
Compact cylinders AEN-S

NEW

Download CAD data → www.festo.com

Dimensions

With male thread

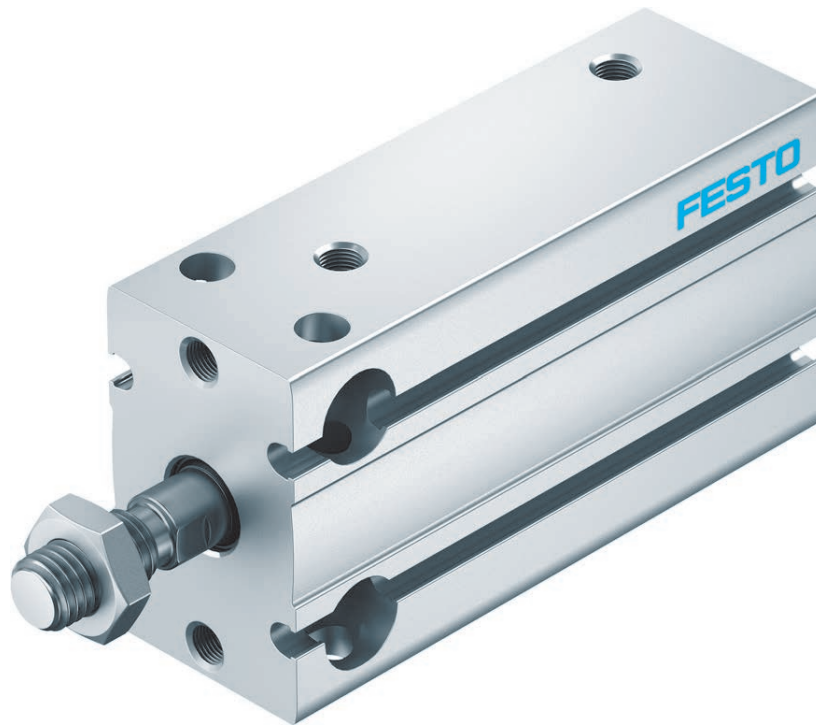


∅	A	D1 ∅ H13	D2 ∅	EE	E1 max.	E2 max.	KK	L3	L4	MM
[mm]										
6	8	5.8	3.3	M3	13	17.5	M3	10	7	4
10	10				13.5	20.5	M4	11	8	6

∅	P1	P2	P3	PL2	SF	T	TG ±0.1	WH	WL
[mm]									
6	6	4	3	3	3.5	3	7	3	2.7
10			3.2		5				

∅	Stroke [mm]	Position sensing	ZA +0.3	ZB +0.35
[mm]				
6	5	—	20.5	23.5
		■	24.5	27.5
	10	—	25.5	28.5
		■	29.5	32.5
10	5	—	20.5	23.5
		■	24.5	27.5
	10	—	25.5	28.5
		■	29.5	32.5

New New series



Multi-talented in all situations

- + Wide range of mounting options
- + Perfect for all applications with linear movements and short stroke
- + Sturdy and reliable

Cylinders with piston rod › Compact, short-stroke and flat cylinders ›
Compact cylinders, multimount

DPDM

Cylinders with piston rod > Compact, short-stroke and flat cylinders >

Compact cylinders, multimount

DPDM



Overview, configuration and ordering

→ www.festo.com/catalogue/dpdm



Additional information, support and user documentation

→ www.festo.com/sp/dpdm



- + With and without protection against rotation
- + Easy mounting thanks to wide range of mounting interfaces
- + With piston rod at one end, through piston rod or through and hollow piston rod

NEW

Cylinders with piston rod > Short-stroke cylinders and compact cylinders >

Compact cylinders DPDM, multimount

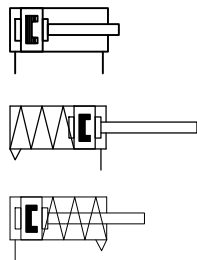
Product range overview

Type/function	Piston Ø [mm]	Stroke [mm]	Force [N]	Product options					
				Q	T	H	P	A	T1
DPDM									
Double-acting	6, 10, 16, 20, 25, 32	5 ... 50	17 ... 483	■	■	■	■	■	–
Single-acting, pushing	6, 10, 16, 20, 25, 32	5 ... 15	13 ... 415	■	–	–	■	■	–
Single-acting, pulling	6, 10, 16, 20, 25, 32	5 ... 15	13 ... 415	■	–	–	■	■	–

Product options

Q	Protection against rotation, double-acting	T	Through piston rod at one end	P	Elastic cushioning rings/plates at both ends	A	Position sensing
S	Single-acting, pushing	H	Through, hollow piston rod			T1	Heat-resistant seals up to max. 120°C
P	Single-acting, pulling						

Data sheet



Technical data				Dimensions → Page 163		
Piston Ø	6	10	16	20	25	32
Pneumatic connection	M5	M5	M5	M5	M5	G1/8
Piston rod thread	M3	M4	M6	M8	M10x1.25	M10x1.25
Stroke						
DPDM-...-P	[mm]	5, 10, 15, 20, 25, 30		5, 10, 15, 20, 25, 30, 40, 50		
DPDM-...-S/P	[mm]	5, 10, 15				
Theoretical force at 6 bar, advancing						
DPDM-...	17	47	121	188	295	483
DPDM-...-S	13	38	100	160	269	445
DPDM-...-T/-H	13	40	104	158	247	415
Theoretical force at 6 bar, retracting						
DPDM-...	13	40	104	158	247	415
DPDM-...-P	9	31	93	130	221	377
Cushioning ¹⁾	Elastic cushioning rings/plates at both ends					

1) With piston Ø 6 in combination with the function "Single-acting, pushing", the cushioning is only at the bearing cap.

Operating conditions							
Piston Ø		6	10	16	20	25	32
Operating pressure							
DPDM-...	[bar]	1.8 ... 8		1.5 ... 8		1 ... 8	
DPDM-Q-...	[bar]	1.5 ... 10		1.5 ... 10		1 ... 8	
DPDM-...-S/-P	[bar]	2.5 ... 8		2 ... 8		1.5 ... 8	
Ambient temperature ¹⁾							
DPDM-...	[°C]	-10 ... +80					
DPDM-...-T1	[°C]	-		0 ... +120			

1) Note operating range of proximity sensors.

Housing	Wrought aluminium alloy
Piston rod	High-alloy stainless steel
Seals	
DPDM-...	NBR/TPE-U(PU)
DPDM-...-T1	HNBR/FPM

Order code

[illegible]

3 Not with T/H

Compact cylinder DPDM - piston diameter 16 mm - stroke 30 mm - double-acting - through piston rod - elastic cushioning rings/plates at both ends - position sensing via proximity sensor - standard temperature range

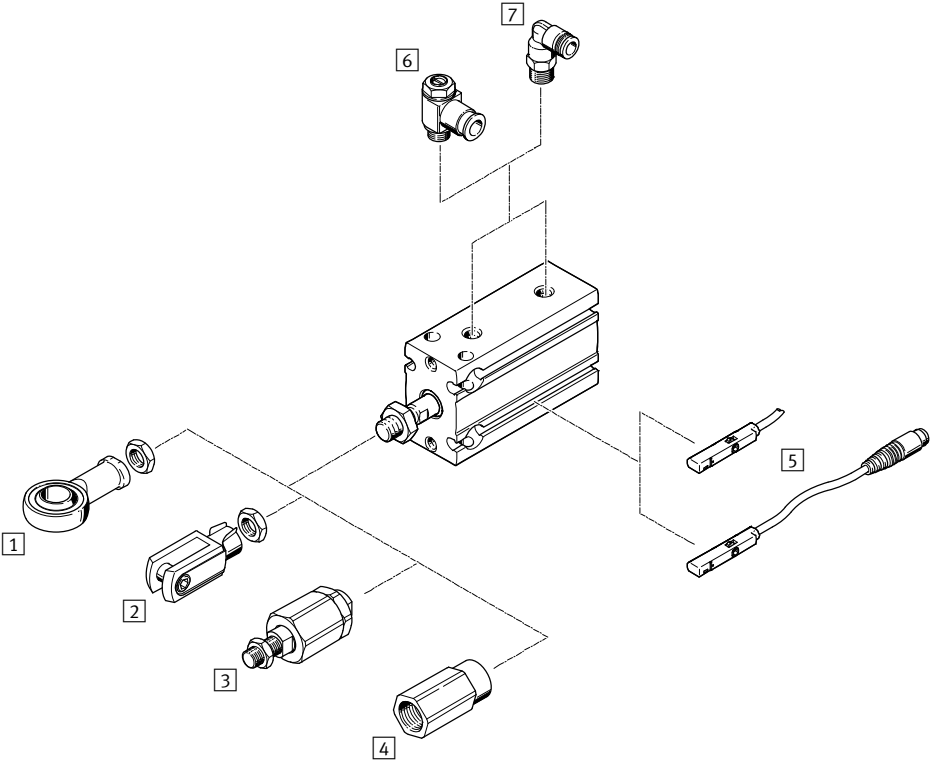
NEW

Cylinders with piston rod > Short-stroke cylinders and compact cylinders >
Compact cylinders DPDM, multimount

Accessories

01

Pneumatic drives



		→ Page/online
1	Rod eye SGS	162
2	Rod clevis SG	162
3	Self-aligning rod coupler FK	162
4	Adapter AD	162

		→ Page/online
5	Proximity sensor SME-/SMT-8, SMT10	162
6	One-way flow control valve GRLA/VFOH	162
7	Push-in fitting QS	1443
-	Connecting cable NEBU	162

Compact cylinders DPDM, multimount

NEW

01

Accessories – Ordering data

	For Ø	Part no.	Type
1 Rod eye SGS Data sheets online: → sgs			
	10	9253	SGS-M4
	16	★ 9254	SGS-M6
	20	★ 9255	SGS-M8
	25	★ 9261	SGS-M10x1,25
	32	★ 9261	SGS-M10x1,25
2 Rod clevis SG Data sheets online: → sg			
	10	6532	SG-M4
	16	★ 3110	SG-M6
	20	★ 3111	SG-M8
	25	★ 6144	SG-M10x1,25
	32	★ 6144	SG-M10x1,25

	For Ø	Part no.	Type
3 Self-aligning rod coupler FK Data sheets online: → fk			
	10	6528	FK-M4
	16	★ 2061	FK-M4
	20	★ 2062	FK-M4
	25	★ 6140	FK-M10x1,25
	32	★ 6140	FK-M10x1,25
4 Adapter AD Data sheets online: → ad			
	10	–	–
	16	157328	AD-M6-M5
	20	157329	AD-M8-1/8
		157331	AD-M8-1/8
	25	157332	AD-M8-1/4
		157333	AD-M10x1,25-1/8
	32	157334	AD-M10x1,25-1/4
		157334	AD-M10x1,25-1/4

	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
5 Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets → Page 1222					
	6 ... 20	PNP, cable	2.5	★ 551373	SMT-10M-PS-24V-E-2,5-L-OE
		PNP, plug	0.3	★ 551375	SMT-10M-PS-24V-E-0,3-L-M8D
		NPN, cable	2.5	★ 551377	SMT-10M-NS-24V-E-2,5-L-OE
		NPN, plug	0.3	★ 551379	SMT-10M-NS-24V-E-0,3-L-M8D
Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets → Page 1206					
	25, 32	PNP, cable	2.5	★ 574335	SMT-8M-A-PS-24V-K-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-A-PS-24V-K-0,3-M8D
		NPN, cable	2.5	★ 574338	SMT-8M-A-NS-24V-K-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-A-NS-24V-K-0,3-M8D
Magneto-resistive – N/C contact Data sheets → Page 1206					
	25, 32	PNP, cable	7.5	★ 574340	SMT-8M-A-PO-24V-K7,5-OE

	For size	Switching output, connection	Cable length [m]	Part no.	Type
Connecting cable, straight socket					
	16 ... 20	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
Angled socket					
	16 ... 20	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3

	For Ø	Connection		Part no.	Type
		Thread	O.D.		
6 One-way flow control valve Data sheets → Page 1031					
	6, 10, 16, 20, 25	M5	4	★ 193138	GRLA-M5-QS-4-D
			6	★ 193139	GRLA-M5-QS-6-D
			4	★ 197577	GRLA-M5-QS-4-RS-D
			6	★ 197578	GRLA-M5-QS-6-RS-D
	32	G1/8	3	★ 193144	GRLA-1/8-QS-6-D
			4	★ 193145	GRLA-1/8-QS-8-D
			6	★ 197581	GRLA-1/8-QS-6-RS-D
			8	★ 534337	GRLA-1/8-QS-8-RS-D

NEW

Cylinders with piston rod > Short-stroke cylinders and compact cylinders >

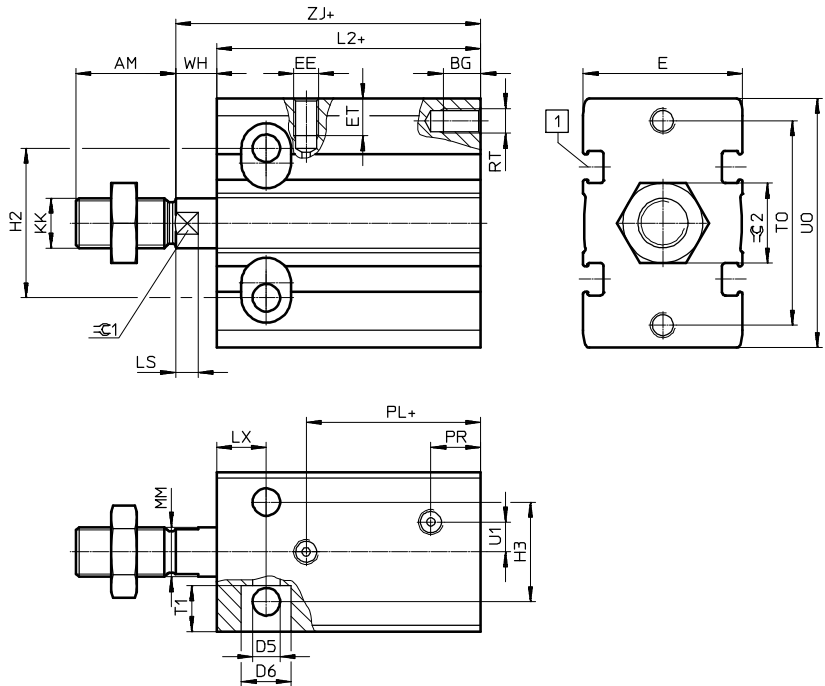
Compact cylinders DPDM, multimount

Dimensions

Basic design

Download CAD data www.festo.com

01



- 1 Slot for proximity sensor:
Ø 6 ... 20: SMT-10
Ø 25, 32: SMT/SME-8

+ = plus stroke length

Ø	AM	BG	D5 Ø	D6	E +0.3	EE	ET	H2
[mm]								
6	7	5	3.2	6	13	M5	4	10
10	10	5	3.2	6	15	M5	4.5	13
16	12	6	4.3	7.5	20	M5	4.5	19
20	16	7.5	5.5	10	26	M5	6	24
25	20	7.5	5.5	10	32	M5	7.5	30
32	20	9	6.6	11	40	G1/8	8.5	40

Ø	H3	KK	L2	LS -0.1	LX	MM Ø	PL	PR
[mm]								
6	7	M3	33	-	7	3	17.5	9.5
10	9	M4	35	-	7	4	19.5	9.5
16	13	M6	40	3	7	6	24.1	11
20	16	M8	46	4	9	8	26.5	11
25	20	M10x1.25	48	4.5	10	10	30	10
32	24	M10x1.25	48	4.5	11	12	27	11

Ø	RT	T1	T0	U1	U0	WH ¹⁾	ZJ	≈C1 h13	≈C2
[mm]									
6	M3	5	17	-	22	2	35	-	5.5
10	M3	5	19	-	24	2	37	-	7
16	M4	6	27	-	32	5	45	5	10
20	M5	8.2	33	6	40	6	52	7	13
25	M5	9.2	41	6	50	7	55	9	17
32	M6	12	52	9	62	8	56	10	17

1) WH is measured when the piston rod is in the end position

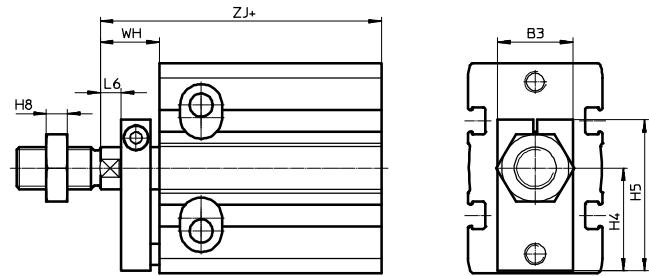
Compact cylinders DPDM, multimount

NEW

Download CAD data → www.festo.com

Dimensions

Q – With protection against rotation

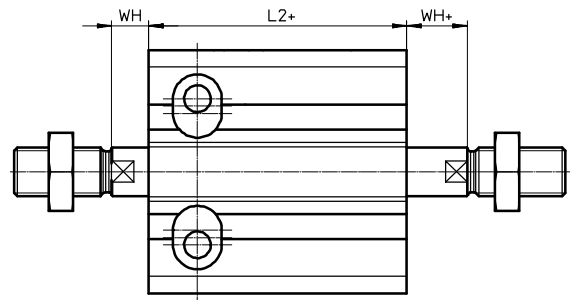


+ = plus stroke length

Ø [mm]	B3	H4	H5	H8	L6	WH	ZJ
6	11	10.5	17.5	1.8	–	9	42
10	14	11.5	19.5	2.2	–	9	44
16	15	15.5	24	3.2	3	12	52
20	15	19.5	29	4	4	13	59
25	18	24.5	36	5	5	14	62
32	20	30.5	45	5	6	15	63

T – Through piston rod

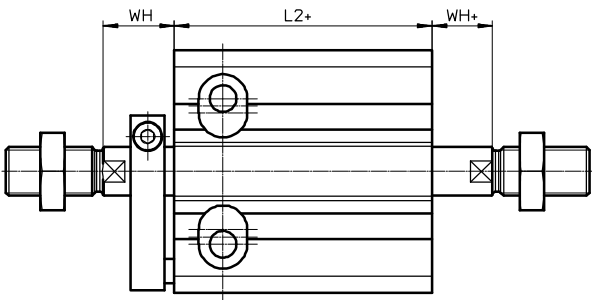
DPDM- ... -T



+ = plus stroke length

Ø [mm]	L2	WH	WH+
6	33	2	2
10	35	2	2
16	40	5	5
20	46	6	6
25	48	7	7
32	48	8	8

DPDM-Q- ... -T

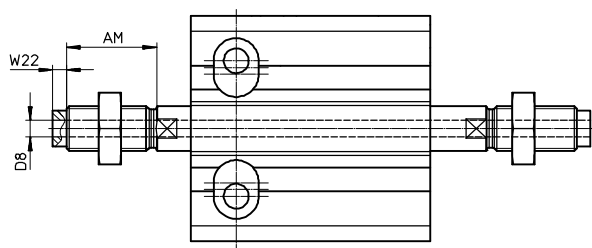


+ = plus stroke length

Ø [mm]	L2	WH	WH+
6	33	9	2
10	35	9	2
16	40	12	5
20	46	13	6
25	48	14	7
32	48	15	8

H – Through, hollow piston rod

DPDM- ... -H



+ = plus stroke length

Ø [mm]	AM	D8 Ø	W22
16	12	2.3	3
20	16	3.2	2
25	20	3.8	3
32	20	4.5	3



ADVC
Double-acting



AEVC
Single-acting

Gain space and save money during engineering

- + With extremely compact dimensions
- + With maximum clamping forces
- + Thanks to standard hole pattern to VDMA 24562

Cylinders with piston rod > Compact, short-stroke and flat cylinders >
Short-stroke cylinders

ADVC ★
Double-acting

AEVC ★
Single-acting

Cylinders with piston rod > Compact, short-stroke and flat cylinders >

Short-stroke cylinders

ADVC★ /AEVC★



Overview, configuration and ordering

→ www.festo.com/catalogue/advc



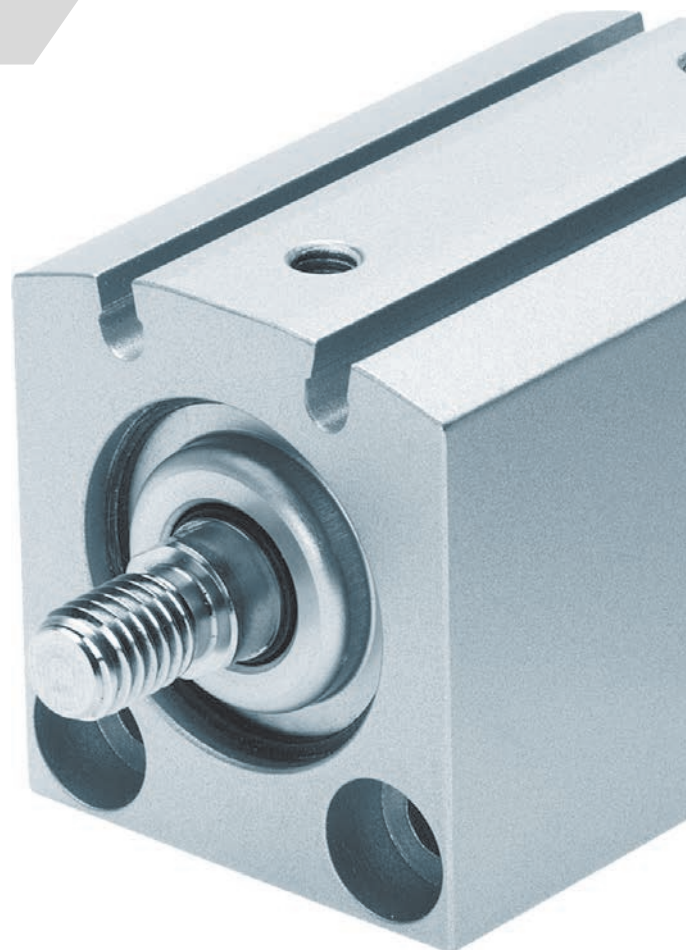
Additional information, support and user documentation

→ www.festo.com/sp/advc



Quick ordering of basic designs

→ page 169



- + Short-stroke cylinder with standard hole pattern to VDMA 24562 from diameter 32 mm
- + Minimal space required
- + High clamping forces in a compact size
- + For position sensing via proximity sensors for T-slot and for C-slot
- + Piston rod with female or male thread

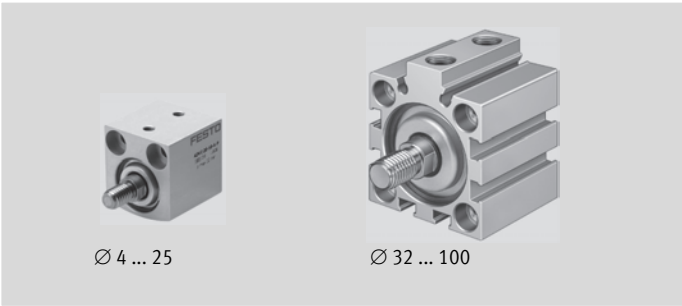
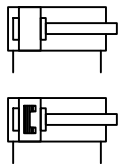
Product range overview

Type/function	Piston Ø	Stroke	Force	Product options					➔ Page/ online
	[mm]	[mm]	[N]	Piston rod thread			P	A	
				A	I	–			
Double-acting	ADVC								
	4	2.5, 5	7.5	■	–	■	■	–	167
	6, 10	5, 10	17 ... 47	■	–	■	■	■	
	12	5, 10	68	■	■	■	■	■	
	16, 20, 25	5, 10, 15, 20, 25	121 ... 295	■	■	–	■	■	
	32, 40	5, 10, 15, 20, 25	483, 754	■	■	–	■	■	
	50, 63, 80, 100	10, 15, 20, 25	1178 ... 4712	■	■	–	■	■	
Single-acting	AEVC								
	4	2.5, 5	5	■	–	■	■	–	171
	6, 10	5, 10	11 ... 41	■	–	■	■	■	
	12	5, 10	59	■	■	■	■	■	
	16, 20, 25	5, 10, 25	105 ... 270	■	■	–	■	■	
	32	5, 10, 25	450	■	■	–	■	■	
	40, 50, 63, 80, 100	10, 25	700 ... 4500	■	■	–	■	■	

Product options

A	Male thread	P	Elastic cushioning rings/plates
I	Female thread		at both ends
–	Without thread	A	Position sensing

Data sheet – Double-acting



Technical data

Dimensions → Page 178

Piston Ø	4	6	10	12	16	20	25	
Pneumatic connection	M3	M3	M5	M5	M5	M5	M5	
Female piston rod thread	–	–	–	M3	M4	M5	M5	
Male piston rod thread	M2	M3	M4	M5	M6	M8	M8	
Stroke	2.5, 5	5, 10			5, 10, 15, 20, 25			
Cushioning	Elastic cushioning rings/plates at both ends							
Theoretical force at 6 bar, advancing	[N]	7.5	17	47	68	121	189	295
Theoretical force at 6 bar, retracting	[N]	5.7	13	40	51	91	141	247
Piston Ø	32	40	50	63	80	100		
Pneumatic connection	G1/8	G1/8	G1/8	G1/8	G1/8	G1/4		
Female piston rod thread	M6	M6	M8	M8	M10	M12		
Male piston rod thread	M10x1.25	M10x1.25	M12x1.25	M12x1.25	M16x1.5	M20x1.5		
Stroke	5, 10, 15, 20, 25		10, 15, 20, 25					
Cushioning	Elastic cushioning rings/plates at both ends							
Theoretical force at 6 bar, advancing	[N]	483	754	1178	1870	3016	4712	
Theoretical force at 6 bar, retracting	[N]	415	686	1056	1750	2847	4418	

Short-stroke cylinders ADVC ★

01

Data sheet – Double-acting

Operating conditions														
Piston Ø		4	6	10	12	16	20	25	32	40	50	63	80	100
Operating pressure	[bar]	2 ... 8	1.5 ... 8	1 ... 8	1 ... 10				0.6 ... 10					
Ambient temperature ¹⁾	[°C]	-20 ... +80												

1) Note operating range of proximity sensors.

Materials		
Piston Ø	4	6 ... 100
Piston rod	Anodised wrought aluminium alloy	High-alloy steel
Bearing cap	Anodised wrought aluminium alloy	
Cylinder barrel	Anodised wrought aluminium alloy	
End cap	Anodised wrought aluminium alloy	
Seals	HNBR, NBR	HNBR, TPE-U (PU)

Order code – Double-acting

ADVC – – – – P –

Type

ADVC

Double-acting short-stroke cylinder

Piston Ø [mm]

Stroke [mm]

4

2.5, 5

6, 10, 12

5, 10

16, 20, 25

5, 10, 15, 20, 25

32, 40

5, 10, 15, 20, 25

50, 63, 80, 100

10, 15, 20, 25

Piston rod thread

A

Male thread

I

Female thread

1

–

Without thread

2

Cushioning

P

Elastic cushioning rings/plates at both ends

Position sensing

–

None

A

Via proximity sensor

3

- 1 Not with piston Ø 4, 6 and 10
- 2 Only with piston Ø 4, 6, 10 and 12
- 3 From piston Ø 6

Order example:

ADVC-12-10-A-P-A

Double-acting short-stroke cylinder ADVC - piston diameter 12 mm - stroke 10 mm - male thread - elastic cushioning rings/plates at both ends - position sensing via proximity sensor

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or [www.festo.com/catalogue/...](#)

Enter the type code in the search field.

Short-stroke cylinders ADVC

★ Quick ordering¹⁾

Male thread

Part no.	Type
Piston Ø 12 mm	
188094	ADVC-12-5-A-P
188095	ADVC-12-10-A-P
188092	ADVC-12-5-A-P-A
188093	ADVC-12-10-A-P-A
Piston Ø 16 mm	
188123	ADVC-16-5-A-P
188124	ADVC-16-10-A-P
188125	ADVC-16-15-A-P
188126	ADVC-16-20-A-P
188127	ADVC-16-25-A-P
188118	ADVC-16-5-A-P-A
188119	ADVC-16-10-A-P-A
188120	ADVC-16-15-A-P-A
188121	ADVC-16-20-A-P-A
188122	ADVC-16-25-A-P-A
Piston Ø 20 mm	
188155	ADVC-20-5-A-P
188156	ADVC-20-10-A-P
188157	ADVC-20-15-A-P
188158	ADVC-20-20-A-P
188159	ADVC-20-25-A-P
188150	ADVC-20-5-A-P-A
188151	ADVC-20-10-A-P-A
188152	ADVC-20-15-A-P-A
188153	ADVC-20-20-A-P-A
188154	ADVC-20-25-A-P-A

Part no.	Type
Piston Ø 25 mm	
188187	ADVC-25-5-A-P
188188	ADVC-25-10-A-P
188189	ADVC-25-15-A-P
188190	ADVC-25-20-A-P
188191	ADVC-25-25-A-P
188182	ADVC-25-5-A-P-A
188183	ADVC-25-10-A-P-A
188184	ADVC-25-15-A-P-A
188185	ADVC-25-20-A-P-A
188186	ADVC-25-25-A-P-A
Piston Ø 32 mm	
188219	ADVC-32-5-A-P
188220	ADVC-32-10-A-P
188221	ADVC-32-15-A-P
188222	ADVC-32-20-A-P
188223	ADVC-32-25-A-P
188214	ADVC-32-5-A-P-A
188215	ADVC-32-10-A-P-A
188216	ADVC-32-15-A-P-A
188217	ADVC-32-20-A-P-A
188218	ADVC-32-25-A-P-A

Part no.	Type
Piston Ø 40 mm	
188247	ADVC-40-5-A-P
188248	ADVC-40-10-A-P
188249	ADVC-40-15-A-P
188250	ADVC-40-20-A-P
188251	ADVC-40-25-A-P
188242	ADVC-40-5-A-P-A
188243	ADVC-40-10-A-P-A
188244	ADVC-40-15-A-P-A
188245	ADVC-40-20-A-P-A
188246	ADVC-40-25-A-P-A
Piston Ø 50 mm	
188272	ADVC-50-10-A-P
188273	ADVC-50-15-A-P
188274	ADVC-50-20-A-P
188275	ADVC-50-25-A-P
188268	ADVC-50-10-A-P-A
188269	ADVC-50-15-A-P-A
188270	ADVC-50-20-A-P-A
188271	ADVC-50-25-A-P-A
Piston Ø 63 mm	
188296	ADVC-63-10-A-P
188297	ADVC-63-15-A-P
188298	ADVC-63-20-A-P
188299	ADVC-63-25-A-P
188292	ADVC-63-10-A-P-A
188293	ADVC-63-15-A-P-A
188294	ADVC-63-20-A-P-A
188295	ADVC-63-25-A-P-A

1) All products in this table are easy to select and quick to order.

Cylinders with piston rod > Short-stroke cylinders and compact cylinders >

Short-stroke cylinders ADVC ★

01

★ Quick ordering¹⁾

Female thread

Pneumatic drives

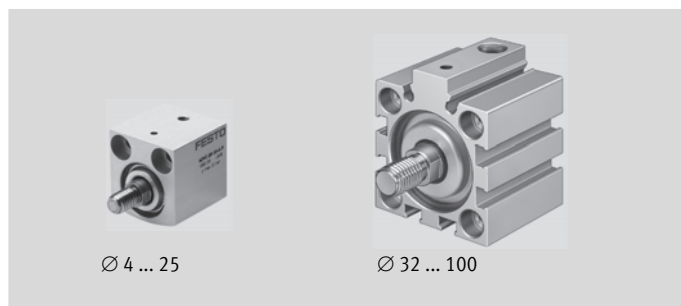
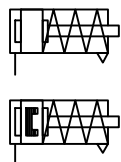
Part no.	Type
Piston Ø 12 mm	
188090	ADVC-12-5-I-P
188091	ADVC-12-10-I-P
188088	ADVC-12-5-I-P-A
188089	ADVC-12-10-I-P-A
Piston Ø 16 mm	
188113	ADVC-16-5-I-P
188114	ADVC-16-10-I-P
188115	ADVC-16-15-I-P
188116	ADVC-16-20-I-P
188117	ADVC-16-25-I-P
188108	ADVC-16-5-I-P-A
188109	ADVC-16-10-I-P-A
188110	ADVC-16-15-I-P-A
188111	ADVC-16-20-I-P-A
188112	ADVC-16-25-I-P-A
Piston Ø 20 mm	
188145	ADVC-20-5-I-P
188146	ADVC-20-10-I-P
188147	ADVC-20-15-I-P
188148	ADVC-20-20-I-P
188149	ADVC-20-25-I-P
188140	ADVC-20-5-I-P-A
188141	ADVC-20-10-I-P-A
188142	ADVC-20-15-I-P-A
188143	ADVC-20-20-I-P-A
188144	ADVC-20-25-I-P-A

Part no.	Type
Piston Ø 25 mm	
188177	ADVC-25-5-I-P
188178	ADVC-25-10-I-P
188179	ADVC-25-15-I-P
188180	ADVC-25-20-I-P
188181	ADVC-25-25-I-P
188172	ADVC-25-5-I-P-A
188173	ADVC-25-10-I-P-A
188174	ADVC-25-15-I-P-A
188175	ADVC-25-20-I-P-A
188176	ADVC-25-25-I-P-A
Piston Ø 32 mm	
188209	ADVC-32-5-I-P
188210	ADVC-32-10-I-P
188211	ADVC-32-15-I-P
188212	ADVC-32-20-I-P
188213	ADVC-32-25-I-P
188204	ADVC-32-5-I-P-A
188205	ADVC-32-10-I-P-A
188206	ADVC-32-15-I-P-A
188207	ADVC-32-20-I-P-A
188208	ADVC-32-25-I-P-A

Part no.	Type
Piston Ø 40 mm	
188237	ADVC-40-5-I-P
188238	ADVC-40-10-I-P
188239	ADVC-40-15-I-P
188240	ADVC-40-20-I-P
188241	ADVC-40-25-I-P
188232	ADVC-40-5-I-P-A
188233	ADVC-40-10-I-P-A
188234	ADVC-40-15-I-P-A
188235	ADVC-40-20-I-P-A
188236	ADVC-40-25-I-P-A
Piston Ø 50 mm	
188264	ADVC-50-10-I-P
188265	ADVC-50-15-I-P
188266	ADVC-50-20-I-P
188267	ADVC-50-25-I-P
188260	ADVC-50-10-I-P-A
188261	ADVC-50-15-I-P-A
188262	ADVC-50-20-I-P-A
188263	ADVC-50-25-I-P-A
Piston Ø 63 mm	
188288	ADVC-63-10-I-P
188289	ADVC-63-15-I-P
188290	ADVC-63-20-I-P
188291	ADVC-63-25-I-P
188284	ADVC-63-10-I-P-A
188285	ADVC-63-15-I-P-A
188286	ADVC-63-20-I-P-A
188287	ADVC-63-25-I-P-A

1) All products in this table are easy to select and quick to order.

Data sheet – Single-acting



Technical data							Dimensions → Page 185	
Piston Ø	4	6	10	12	16	20	25	
Pneumatic connection	M3	M3	M5	M5	M5	M5	M5	
Female piston rod thread	–	–	–	M3	M4	M5	M5	
Male piston rod thread	M2	M3	M4	M5	M6	M8	M8	
Stroke [mm]	2.5, 5	5, 10			5, 10, 25			
Cushioning	Elastic cushioning rings/plates at both ends							
Theoretical force at 6 bar, advancing [N]	5	11	41	59	105	170	270	
Theoretical force at 6 bar, retracting [N]	1	3	3	4	5	10 ¹⁾	15	
Piston Ø	32	40	50	63	80	100		
Pneumatic connection	G1/8	G1/8	G1/8	G1/8	G1/8	G1/4		
Female piston rod thread	M6	M6	M8	M8	M10	M12		
Male piston rod thread	M10x1.25	M10x1.25	M12x1.25	M12x1.25	M16x1.5	M20x1.5		
Stroke	5, 10, 25	10, 25						
Cushioning	Elastic cushioning rings/plates at both ends							
Theoretical force at 6 bar, advancing [N]	450	700	1120	1800	2900	4500		
Theoretical force at 6 bar, retracting [N]	22	28	40	50	85	140		

1) AEVC-63-5 = 5 N.

Operating conditions													
Piston Ø	4	6	10	12	16	20	25	32	40	50	63	80	100
Operating pressure [bar]	2.5 ... 8	2 ... 8	1.5 ... 8	1.5 ... 10				1 ... 10					
Ambient temperature ²⁾ [°C]	–20 ... +80												

2) Note operating range of proximity sensors.

Materials		
Piston Ø	4	6 ... 100
Piston rod	Anodised wrought aluminium alloy	High-alloy steel
Bearing cap	Anodised wrought aluminium alloy	
Cylinder barrel	Anodised wrought aluminium alloy	
End cap	Anodised wrought aluminium alloy	
Seals	HNBR, NBR	HNBR, TPE-U (PU)

Short-stroke cylinders AEVC ★

01

Order code – Single-acting

Pneumatic drives

AEVC

–

–

–

–

P

–

Type		
AEVC	Single-acting short-stroke cylinder	

Piston Ø [mm]	Stroke [mm]
4	2.5, 5
6, 10, 12	5, 10
16, 20, 25	5, 10, 25
32	5, 10, 25
40, 50, 63, 80, 100	10, 25

Piston rod thread		
A	Male thread	
I	Female thread	1
–	Without thread	2

Cushioning		
P	Elastic cushioning rings/plates at both ends	

Position sensing		
–	None	
A	Via proximity sensor	3

- 1

 Not with piston Ø 4, 6 and 10
- 2

 Only with piston Ø 4, 6, 10 and 12
- 3

 From piston Ø 6

Order example:
AEVC-63-10-I-P-A
Single-acting short-stroke cylinder - piston diameter 63 - stroke 10 mm - female thread - elastic cushioning rings/plates at both ends - position sensing via proximity sensor

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or

[www.festo.com/catalogue/...](#)

Enter the type code in the search field.

172

[www.festo.com/catalogue/...](#)

★ Generally ready for shipping ex works in 24 hours

Subject to change – 2018/11

Short-stroke cylinders AEVC ★

★ Quick ordering¹⁾

Male thread

Part no.	Type
Piston Ø 12 mm	
188086	AEVC-12-5-A-P
188087	AEVC-12-10-A-P
Piston Ø 16 mm	
188105	AEVC-16-5-A-P
188106	AEVC-16-10-A-P
188107	AEVC-16-25-A-P
Piston Ø 20 mm	
188137	AEVC-20-5-A-P
188138	AEVC-20-10-A-P
188139	AEVC-20-25-A-P

Part no.	Type
Piston Ø 25 mm	
188169	AEVC-25-5-A-P
188170	AEVC-25-10-A-P
188171	AEVC-25-25-A-P
Piston Ø 32 mm	
188201	AEVC-32-5-A-P
188202	AEVC-32-10-A-P
188203	AEVC-32-25-A-P
Piston Ø 40 mm	
188230	AEVC-40-10-A-P
188231	AEVC-40-25-A-P

Part no.	Type
Piston Ø 50 mm	
188258	AEVC-50-10-A-P
188259	AEVC-50-25-A-P
Piston Ø 63 mm	
188282	AEVC-63-10-A-P
188283	AEVC-63-25-A-P

Female thread

Part no.	Type
Piston Ø 12 mm	
188082	AEVC-12-5-I-P
188083	AEVC-12-10-I-P
Piston Ø 16 mm	
188099	AEVC-16-5-I-P
188100	AEVC-16-10-I-P
188101	AEVC-16-25-I-P
Piston Ø 20 mm	
188131	AEVC-20-5-I-P
188132	AEVC-20-10-I-P
188133	AEVC-20-25-I-P

Part no.	Type
Piston Ø 25 mm	
188163	AEVC-25-5-I-P
188164	AEVC-25-10-I-P
188165	AEVC-25-25-I-P
Piston Ø 32 mm	
188195	AEVC-32-5-I-P
188196	AEVC-32-10-I-P
188197	AEVC-32-25-I-P

Part no.	Type
Piston Ø 40 mm	
188226	AEVC-40-10-I-P
188227	AEVC-40-25-I-P
Piston Ø 50 mm	
188254	AEVC-50-10-I-P
188255	AEVC-50-25-I-P
Piston Ø 63 mm	
188278	AEVC-63-10-I-P
188279	AEVC-63-25-I-P

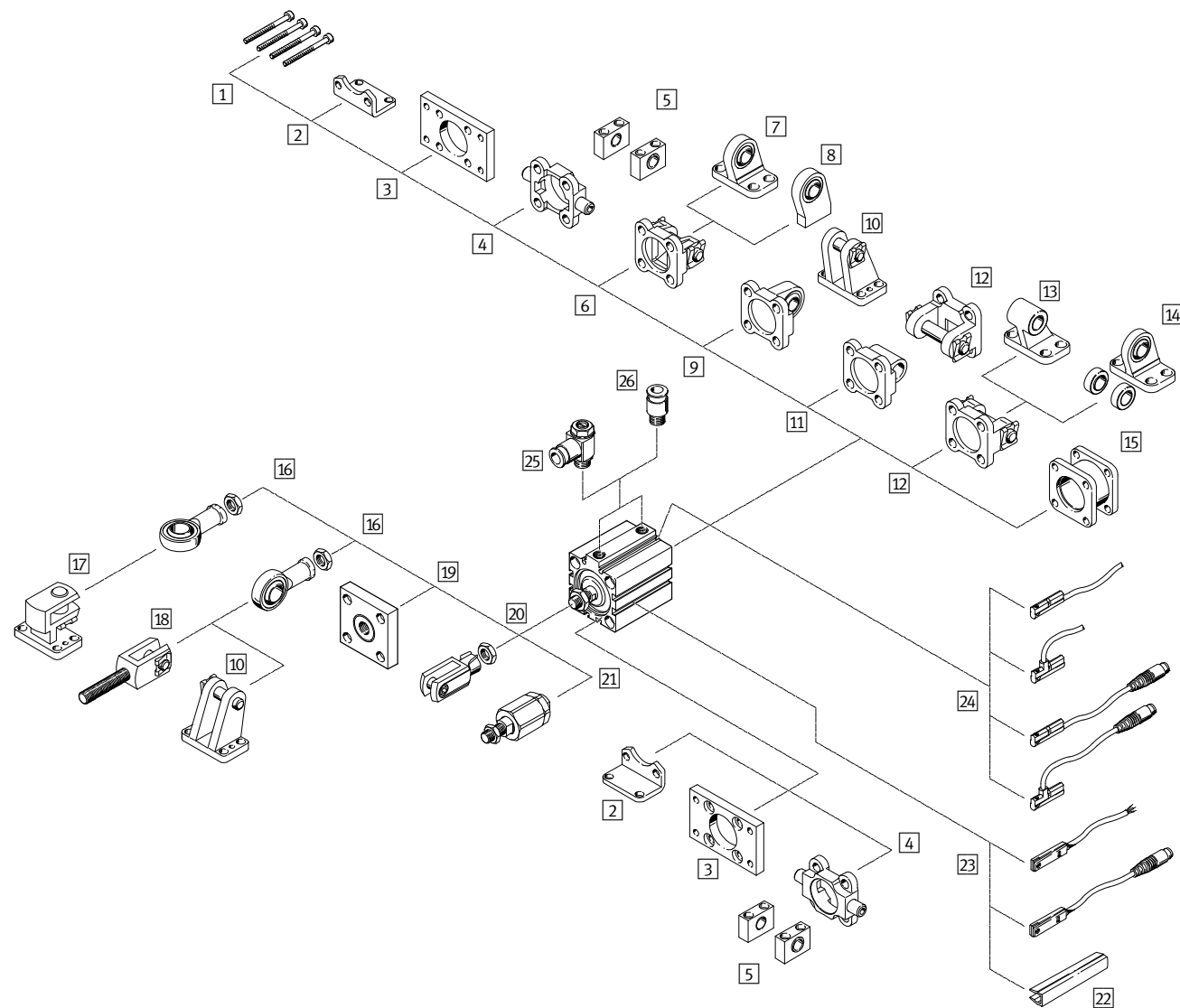
1) All products in this table are easy to select and quick to order.

Cylinders with piston rod > Short-stroke cylinders and compact cylinders >

Short-stroke cylinders ADVC ★ /AEVC ★

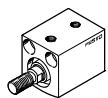
Accessories

Ø 32 ... 100



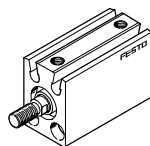
Ø 4 ... 25

Without position sensing



Ø 6 ... 25

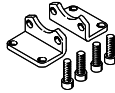
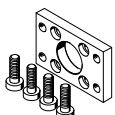
With position sensing



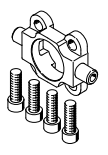
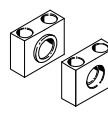
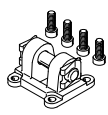
Accessories

	Piston Ø	→ Page/online		
		4, 6, 12	10, 16 ... 25	32 ... 100
1 Mounting screws (not included in the scope of delivery)	■ DIN 84	■ DIN 912	■ DIN 912	–
1 Mounting screws for Ø 80, 100 (not included in the scope of delivery)	–	–	■	175
2 Foot mounting HNC	–	–	■	175
3 Flange mounting FNC	–	–	■	175
4 Trunnion flange ZNCF	–	–	■	175
5 Trunnion support LNZG	–	–	■	175
6 Swivel flange SNC	–	–	■	175
7 Clevis foot LSNG	–	–	■	176
8 Clevis foot LSNSG	–	–	■	176
9 Swivel flange SNCS	–	–	■	176
10 Clevis foot LBG	–	–	■	176
11 Swivel flange SNCL	–	–	■	176
12 Swivel flange SNCB	–	–	■	176
13 Clevis foot LNG	–	–	■	176
14 Clevis foot LSN	–	–	■	176
15 Multi-position kit DPNC	–	–	■	176
16 Rod eye SGS	–	■	■	176
17 Right-angle clevis foot LQG	–	■	■	176
18 Rod clevis SGA	–	–	■	176
19 Coupling piece KSG	–	–	■	176
20 Rod clevis SG	–	■	■	176
21 Self-aligning rod coupler FK	■ Ø 12	■	■	177
22 Slot cover ABP-5-S	–	–	■	177
23 Proximity sensor SMT-/SME-8 and connecting cable NEBU	–	–	■	177
24 Proximity sensor SMT-/SME-10 and connecting cable NEBU	–	■	–	177
25 One-way flow control valve GRLA	■	■	■	177
26 Push-in fitting QS	■	■	■	1443

Accessories – Ordering data

	For Ø	Part no.	Type
1 Screw ¹⁾			
	80, 100		HNC, FNC, SNC, SNCS, SNCL, SNCB
	80		ZNCF
	100		ZNCF
2 Foot mounting			
	32	★ 174369	HNC-32
	40	★ 174370	HNC-40
	50	★ 174371	HNC-50
	63	★ 174372	HNC-63
	80	★ 174373	HNC-80
	100	174374	HNC-100
3 Flange mounting			
	32	★ 174376	FNC-32
	40	★ 174377	FNC-40
	50	★ 174378	FNC-50
	63	★ 174379	FNC-63
	80	★ 174380	FNC-80
	100	174381	FNC-100

1) Packaging unit 1 piece.

	For Ø	Part no.	Type
4 Trunnion flange			
	32	174411	ZNCF-32
	40	174412	ZNCF-40
	50	174413	ZNCF-50
	63	174414	ZNCF-63
	80	174415	ZNCF-80
	100	174416	ZNCF-100
5 Trunnion support			
	32	32959	LNZG-32
	40, 50	32960	LNZG-40/50
	63, 80	32961	LNZG-63/80
	100	32962	LNZG-100/125
6 Swivel flange			
	32	★ 174383	SNC-32
	40	★ 174384	SNC-40
	50	★ 174385	SNC-50
	63	★ 174386	SNC-63
	80	★ 174387	SNC-80
	100	174388	SNC-100

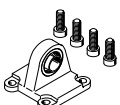
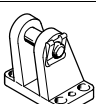
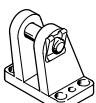
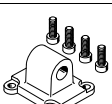
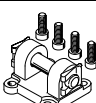
Cylinders with piston rod > Short-stroke cylinders and compact cylinders >

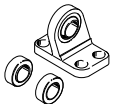
Short-stroke cylinders ADVC ★ /AEVC ★

01

Accessories – Ordering data

Pneumatic drives

	For Ø	Part no.	Type
7 Clevis foot Data sheets online: → lsng			
	32	31740	LSNG-32
	40	31741	LSNG-40
	50	31742	LSNG-50
	63	31743	LSNG-63
	80	31744	LSNG-80
	100	31745	LSNG-100
8 Clevis foot Data sheets online: → lsnsg			
	32	31747	LSNSG-32
	40	31748	LSNSG-40
	50	31749	LSNSG-50
	63	31750	LSNSG-63
	80	31751	LSNSG-80
	100	31752	LSNSG-100
9 Swivel flange Dimensions online: → advc			
	32	★ 174397	SNCS-32
	40	★ 174398	SNCS-40
	50	★ 174399	SNCS-50
	63	★ 174400	SNCS-63
	80	★ 174401	SNCS-80
	100	174402	SNCS-100
10 Clevis foot used with swivel flange SNCS Data sheets online: → lbg			
	32	31761	LBG-32
	40	31762	LBG-40
	50	31763	LBG-50
	63	31764	LBG-63
	80	31765	LBG-80
	100	31766	LBG-100
10 Clevis foot used with rod eye SGS Data sheets online: → lbg			
	32, 40	31761	LBG-32
	50, 63	31762	LBG-40
	80	31763	LBG-50
		31764	LBG-63
	100	31765	LBG-80
		31766	LBG-100
11 Swivel flange Dimensions online: → advc			
	32	★ 174404	SNCL-32
	40	★ 174405	SNCL-40
	50	★ 174406	SNCL-50
	63	★ 174407	SNCL-63
	80	★ 174408	SNCL-80
	100	174409	SNCL-100
12 Swivel flange Dimensions online: → advc			
	32	★ 174390	SNCB-32
	40	★ 174391	SNCB-40
	50	★ 174392	SNCB-50
	63	★ 174393	SNCB-63
	80	★ 174394	SNCB-80
	100	174395	SNCB-100

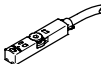
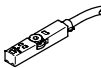
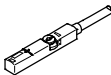
	For Ø	Part no.	Type
13 Clevis foot Data sheets online: → lng			
	32	★ 33890	LNG-32
	40	★ 33891	LNG-40
	50	★ 33892	LNG-50
	63	★ 33893	LNG-63
	80	★ 33894	LNG-80
	100	33895	LNG-100
14 Clevis foot Data sheets online: → lsn			
	32	5561	LSN-32
	40	5562	LSN-40
	50	5563	LSN-50
	63	5564	LSN-63
	80	5565	LSN-80
	100	5566	LSN-100
15 Multi-position kit Dimensions online: → advc			
	32	174418	DPNC-32
	40	174419	DPNC-40
	50	174420	DPNC-50
	63	174421	DPNC-63
	80	174422	DPNC-80
	100	174423	DPNC-100
16 Rod eye Data sheets online: → sgs			
	10	9253	SGS-M4
	16	★ 9254	SGS-M6
	20, 25	★ 9255	SGS-M8
	32, 40	★ 9261	SGS-M10x1,25
	50, 63	★ 9262	SGS-M12x1,25
	80	★ 9263	SGS-M16x1,5
	100	★ 9264	SGS-M20x1,5
17 Right-angle clevis foot Data sheets online: → lqg			
	32, 40	31768	LQG-32
	50, 63	31769	LQG-40
	80	31770	LQG-50
		31771	LQG-63
	100	31772	LQG-80
		31773	LQG-100
18 Rod clevis Data sheets online: → sga			
	32, 40	32954	SGA-M10x1,25
	50, 63	10767	SGA-M12x1,25
	80	10768	SGA-M16x1,5
	100	10769	SGA-M20x1,5
19 Coupling piece Data sheets online: → ksg			
	32, 40	32963	KSG-M10x1,25
	50, 63	32964	KSG-M12x1,25
	80	32965	KSG-M16x1,5
	100	32966	KSG-M20x1,5
20 Rod clevis Data sheets online: → sg			
	10	6532	SG-M4
	16	★ 3110	SG-M6
	20, 25	★ 3111	SG-M8
	32, 40	★ 6144	SG-M10x1,25
	50, 63	★ 6145	SG-M12x1,25
	80	★ 6146	SG-M16x1,5
	100	★ 6147	SG-M20x1,5

Accessories – Ordering data

	For Ø	Part no.	Type
21 Self-aligning rod coupler Data sheets online: → fk			
	10	6528	FK-M4
	12	30984	FK-M5
	16	★ 2061	FK-M6
	20, 25	★ 2062	FK-M8
	32, 40	★ 6140	FK-M10x1,25
	50, 63	★ 6141	FK-M12x1,25
	80	★ 6142	FK-M16x1,5
	100	★ 6143	FK-M20x1,5
22 Slot cover¹⁾			
	32, 40, 50, 63,	151680	ABP-5-S
	80, 100		

	Cable length [m]	Part no.	Type
23/24 Connecting cable, straight socket Data sheets → Page 1543			
	2.5 m	★ 541333	NEBU-M8G3-K-2.5-LE3
	5.0 m	★ 541334	NEBU-M8G3-K-5-LE3
	2.5 m	★ 541363	NEBU-M12G5-K-2.5-LE3
	5.0 m	★ 541364	NEBU-M12G5-K-5-LE3
Angled socket Data sheets → Page 1543			
	2.5 m	★ 541338	NEBU-M8W3-K-2.5-LE3
	5.0 m	★ 541341	NEBU-M8W3-K-5-LE3
	2.5 m	★ 541367	NEBU-M12W5-K-2.5-LE3
	5.0 m	★ 541370	NEBU-M12W5-K-5-LE3

1) Packaging unit 2x 0.5 m.

	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
23 Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets → Page 1206					
	32 ... 100	PNP, cable	2.5	★ 574335	SMT-8M-A-PS-24V-E-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-A-PS-24V-E-0,3-M8D
		PNP, plug	0.3	★ 574337	SMT-8M-A-PS-24V-E-0,3-M12
		NPN, cable	2.5	★ 574338	SMT-8M-A-NS-24V-E-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-A-NS-24V-E-0,3-M8D
Magneto-resistive – N/C contact Data sheets → Page 1206					
	32 ... 100	PNP, cable	7.5	★ 574340	SMT-8M-A-PO-24V-E-7,5-OE
Magnetic reed – N/O contact Data sheets → Page 1201					
	32 ... 100	Contacting, cable	2.5	★ 543862	SME-8M-DS-24V-K-2,5-OE
		Contacting, cable	5.0	★ 543863	SME-8M-DS-24V-K-5,0-OE
		Contacting, cable	2.5	★ 543872	SME-8M-ZS-24V-K-2,5-OE
		Contacting, plug	0.3	★ 543861	SME-8M-DS-24V-K-0,3-M8D
Magnetic reed – N/C contact Data sheets → Page 1203					
	32 ... 100	Contacting, cable	7.5	160251	SME-8-O-K-LED-24
24 Proximity sensor for C-slot, magneto-resistive – N/O contact Data sheets → Page 1222					
	6 ... 25	PNP, cable	2.5	★ 551373	SMT-10M-PS-24V-E-2,5-L-OE
		PNP, plug	0.3	★ 551375	SMT-10M-PS-24V-E-0,3-L-M8D
Magnetic reed – N/O contact Data sheets → Page 1220					
	6 ... 25	Contacting, cable	2.5	173210	SME-10-KL-LED-24
		Contacting, plug	0.3	173212	SME-10-SL-LED-24

Function	For Ø	Connection Thread	O.D.	Part no.	Type
25 One-way flow control valve with slotted head screw, metal²⁾ for exhaust air flow control Data sheets → Page 1031					
	10, 12, 16, 20	M5	3	★ 193137	GRLA-M5-QS-3-D
	25		4	★ 193138	GRLA-M5-QS-4-D
	32	G1/8	6	★ 193144	GRLA-1/8-QS-6-D
	40, 50, 63, 80		8	★ 193145	GRLA-1/8-QS-8-D
	100	G1/4	8	★ 193147	GRLA-1/4-QS-8-D
For supply air flow control Data sheets → Page 1031					
	10, 12, 16, 20	M5	3	★ 193153	GRLZ-M5-QS-3-D
	25		4	★ 193154	GRLZ-M5-QS-4-D
	32	G1/8	6	★ 193158	GRLZ-1/8-QS-6-D
	40, 50, 63, 80		8	★ 193159	GRLZ-1/8-QS-8-D

2) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

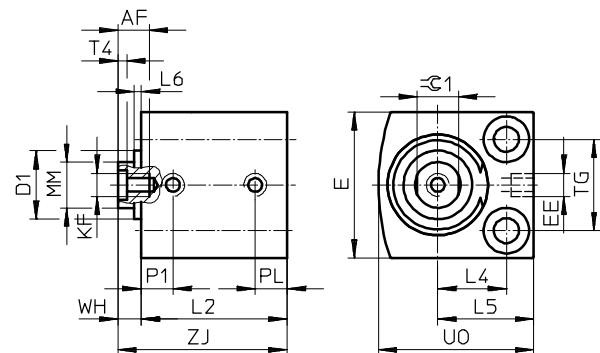
Short-stroke cylinders ADVC

01

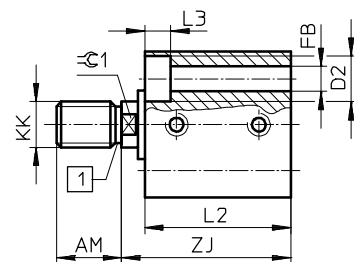
Dimensions

Without position sensing – Ø 4 ... 25

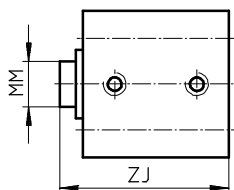
ADVC-...-I-P – With female thread



ADVC-...-A-P – With male thread



ADVC-...-P – Without thread


Download CAD data → www.festo.com

Note
Ø 4
Do not exceed the maximum screw-in depth of 3 mm and maximum tightening torque of 0.7 Nm.
Ø 10
The bearing cap can protrude up to 0.65 mm depending on the tolerance position.
Ø 12
The bearing cap can protrude up to 0.35 mm depending on the tolerance position.

1 No undercut with diameter 4/6/10.

Ø	Stroke	AF	AM	D1	D2	E	EE	FB	KF	KK	L2	L3
[mm]	[mm]	min.	-0.5	Ø max.	Ø	max.		Ø			+0.2	
4	2.5	–	6	–	3.3 ⁺⁰¹	10	M3	1.8	–	M2	13	1.8
	5										15.5	
6	5	–	6	–	5 ⁺⁰¹	13	M3	2.9	–	M3	16	2.9
	10										21	
10	5	–	8	7.5	5.8 ⁺⁰¹	18	M5	3.4	–	M4	21	3.4
	10										24	
12	5	8	8	10.7	6 ^{H13}	20	M5	3.4	M3	M5	23	3.4
	10										28	
16	5	10	12	–	8 ^{H13}	25	M5	4.5	M4	M6	23	4.6
	10										28	
	15										33	
	20										38	
	25										43	
20	5	12	12	–	10 ^{H13}	32	M5	5.5	M5	M8	27	5.7
	10										32	
	15										37	
	20										42	
	25										47	
25	5	12	12	–	10 ^{H13}	38	M5	5.5	M5	M8	27.5	5.7
	10										32.5	
	15										37.5	
	20										42.5	
	25										47.5	

Short-stroke cylinders ADVC ★

Dimensions

Download CAD data → www.festo.com

01

Dimensions

Ø	Stroke	L4	L5	L6	MM Ø	P1	PL	T4	TG	UO	WH	ZJ	≈C1
[mm]	[mm]			max.					±0.1	max.		±0.8	
4	2.5	4	6.5	–	2	3.7	3.2	–	5.8	10	1	14	–
	5											16.5	
6	5	6	9	–	3	4.7	3	–	7	14	1	17	–
	10											22	
10	5	8	11.5	0.7	4	5.2	5.2	–	11	19	1.5	22.5	–
	10					6	5.5					25.5	
12	5	9	13	0.4	6	5.75	5.75	1.5	13	22	4	27	5
	10					9	6					32	
16	5	11.5	16.5	–	8	6	6	2	15	27	4	27	7
	10					7.5						32	
	15											37	
	20											42	
	25											47	
20	5	15	21	–	10	7.5	7	2	20	34	5	32	9
	10											37	
	15											42	
	20											47	
	25											52	
25	5	15.5	21.5	–	10	8	6.5	2	26	37	5	32.5	9
	10											37.5	
	15											42.5	
	20											47.5	
	25											52.5	

Pneumatic drives

Short-stroke cylinders ADVC ★

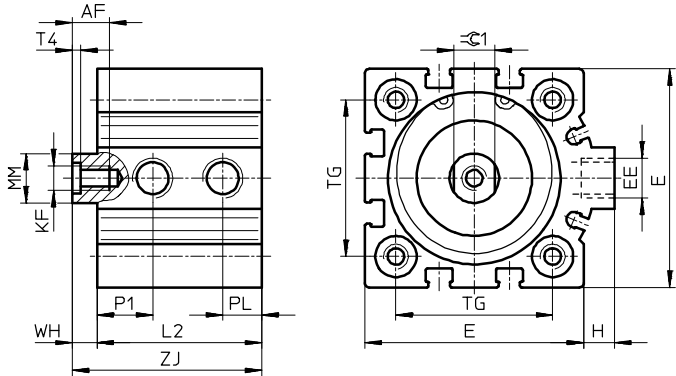
01

Dimensions

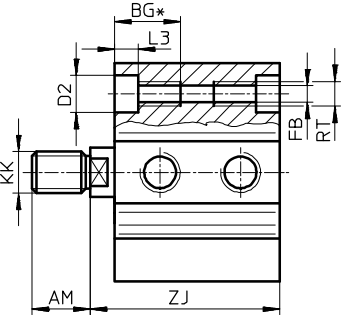
Download CAD data → www.festo.com

Without position sensing – Ø 32 ... 100

ADVC-...-I-P – With female thread



ADVC-...-A-P – With male thread



Ø	AF	AM	BG ¹⁾	D2	E	EE	FB	H	KF	KK ²⁾
[mm]	min.	-0.5	min.	Ø F9	max.		Ø			
32	12	14	21.7	9	45	G1/8	5.2	7	M6	M10x1.25
40	12	14	21.7	9	53.5	G1/8	5.2	7	M6	M10x1.25
50	16	16	22.8	11	63.5	G1/8	6.8	7	M8	M12x1.25
63	16	16	22.8	11	75	G1/8	6.8	7.5	M8	M12x1.25
80	20	22	25	14	93	G1/8	8.5	7	M10	M16x1.5
100	24	28	25	14	113	G1/4	8.5	13	M12	M20x1.5

1) Continuous thread with shorter sizes.
2) Nut for piston rod thread included in the scope of delivery.

Pneumatic drives

Short-stroke cylinders ADVC



Dimensions

Download CAD data www.festo.com

01

∅	Stroke	L2	L3	MM ∅	P1	PL	RT	T4	TG	WH	ZJ	⌀1
[mm]	[mm]	+0.2							±0.1		±0.8	
32	5	34	5.7	12	9	8.5	M6	2.6	32.5	6	40	10
	10	39									45	
	15	44									50	
	20	49									55	
	25	54									60	
40	5	34.5	5.7	12	11	9	M6	2.6	38	6	40.5	10
	10	39.5									45.5	
	15	44.5									50.5	
	20	49.5									55.5	
	25	54.5									60.5	
50	10	38	6.8	16	11.3	9.5	M8	3.3	46.5	8	46	13
	15	43									51	
	20	48									56	
	25	53									61	
63	10	45	6.8	16	12.5	11.5	M8	3.3	56.5	8	53	13
	15	50									58	
	20	55									63	
	25	60									68	
80	10	50	9	20	15	15	M10	4.7	72	8	58	17
	15	55									63	
	20	60									68	
	25	65									73	
100	10	59	9	25	16.5	19	M10	6.1	89	10	69	22
	15	64									74	
	20	69									79	
	25	74									84	

Pneumatic drives

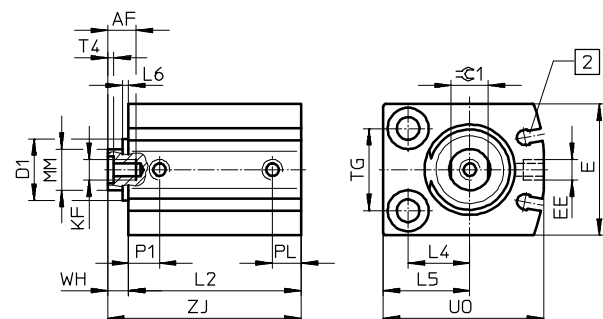
Short-stroke cylinders ADVC ★

01

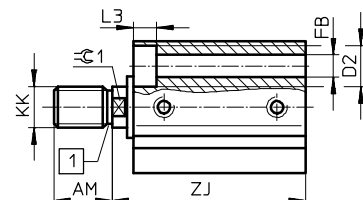
Dimensions

With position sensing – Ø 6 ... 25

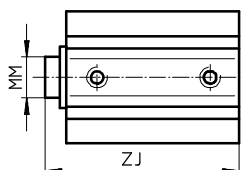
ADVC-...-I-P-A – With female thread



ADVC-...-A-P-A – With male thread



ADVC-...-P-A – Without thread



Download CAD data → www.festo.com

Note

Ø 10

The bearing cap can protrude up to 0.65 mm depending on the tolerance position.

Ø 12

The bearing cap can protrude up to 0.35 mm depending on the tolerance position.

[1] No undercut with diameter 6/10.

[2] Slot for proximity sensor
SME/SMT-10

Ø	Stroke	AF	AM	D1	D2	E	EE	FB	KF	KK	L2	L3
[mm]	[mm]	min.	-0.5	Ø max.	Ø	max.		Ø			+0.2	
6	5	-	6	-	5 +0.1	16	M3	2.9	-	M3	25.5	2.9
	10										30.5	
10	5	-	8	7.5	5.8 +0.1	21	M5	3.4	-	M4	27	3.4
	10										32	
12	5	8	8	10.7	6 H13	24	M5	3.4	M3	M5	36	3.4
	10										41	
16	5	10	12	-	8 H13	28	M5	4.5	M4	M6	35	4.6
	10										40	
	15										45	
	20										50	
	25										55	
20	5	12	12	-	10 H13	32	M5	5.5	M5	M8	37	5.7
	10										42	
	15										47	
	20										52	
	25										57	
25	5	12	12	-	10 H13	38	M5	5.5	M5	M8	37	5.7
	10										42	
	15										47	
	20										52	
	25										57	

Short-stroke cylinders ADVC

Dimensions

Download CAD data → www.festo.com

∅	Stroke	L4	L5	L6	MM	P1	PL	T4	TG	UO	WH	ZJ	≈1
[mm]	[mm]			max.	∅				±0.1	max.		±0.8	
6	5	5	8	–	3	5.2	3	–	10	16	1	26.5	–
	10											31.5	
10	5	7	10.5	0.7	4	6	6	–	14	22	1.5	28.5	–
	10											33.5	
12	5	8	12	0.4	6	7	6	1.5	16	26	4	40	5
	10											45	
16	5	12	17	–	8	8	6	2	18	32	4	39	7
	10											44	
	15											49	
	20											54	
	25											59	
20	5	15	21	–	10	7.5	7	2	20	39	5	42	9
	10											47	
	15											52	
	20											57	
	25											62	
25	5	15.5	21.5	–	10	10	6	2	26	42	5	42	9
	10											47	
	15											52	
	20											57	
	25											62	

Cylinders with piston rod > Short-stroke cylinders and compact cylinders >

Short-stroke cylinders ADVC ★

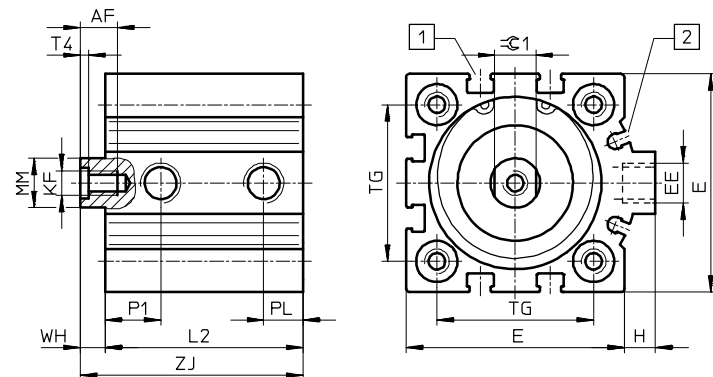
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Dimensions

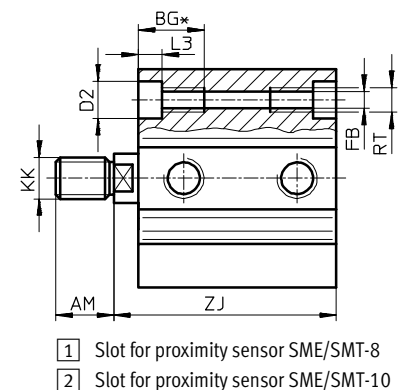
Download CAD data → www.festo.com

With position sensing – Ø 32 ... 100

ADVC-...-I-P-A – With female thread



ADVC-...-A-P-A – With male thread



Ø	AF	AM	BG ¹⁾	D2 Ø F9	E	EE	FB Ø	H	KF	KK ²⁾
[mm]	min.	-0.5	min.		max.					
32	12	14	21.7	9	45	G1/8	5.2	7	M6	M10x1.25
40	12	14	21.7	9	53.5	G1/8	5.2	7	M6	M10x1.25
50	16	16	22.8	11	63.5	G1/8	6.8	7	M8	M12x1.25
63	16	16	22.8	11	75	G1/8	6.8	7.5	M8	M12x1.25
80	20	22	25	14	93	G1/8	8.5	7	M10	M16x1.5
100	24	28	25	14	113	G1/4	8.5	13	M12	M20x1.5

- 1) Continuous thread with shorter sizes.
2) Nut for piston rod thread included in the scope of delivery.

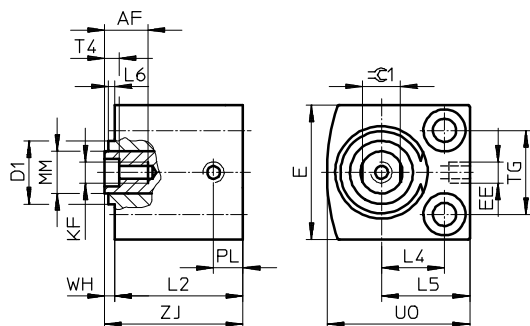
Ø	Stroke	L2	L3	MM Ø	P1	PL	RT	T4	TG	WH	ZJ	⌀C1
[mm]	[mm]	+0.2							±0.1		±0.8	
32	5	38	5.7	12	9	8.5	M6	2.6	32.5	6	44	10
	10	43									49	
	15	48									54	
	20	53									59	
	25	58									64	
40	5	43	5.7	12	13.5	9.5	M6	2.6	38	6	49	10
	10	48									54	
	15	53									59	
	20	58									64	
	25	63									69	
50	10	48	6.8	16	11.3	9.5	M8	3.3	46.5	8	56	13
	15	53									61	
	20	58									66	
	25	63									71	
63	10	51	6.8	16	12.5	10.5	M8	3.3	56.5	8	59	13
	15	56									64	
	20	61									69	
	25	66									74	
80	10	59	9	20	15	8.5	M10	4.7	72	8	67	17
	15	64									72	
	20	69									77	
	25	74									82	
100	10	68	9	25	16.5	10.5	M10	6.1	89	10	78	22
	15	73									83	
	20	78									88	
	25	83									93	

Short-stroke cylinders AEVC

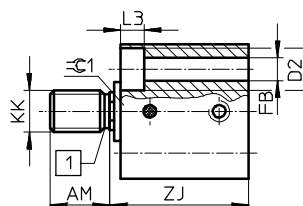
Dimensions

Without position sensing – Ø 4 ... 25

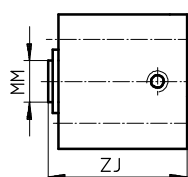
AEVC-...-I-P – With female thread



AEVC-...-A-P – With male thread



AEVC-...-P – Without thread

Download CAD data → www.festo.com

01

Note

Ø 10

The bearing cap can protrude up to 0.65 mm depending on the tolerance position.

Ø 12

The bearing cap can protrude up to 0.35 mm depending on the tolerance position.

1 No undercut
with diameter 4/6/10.

Ø	Stroke	AF	AM	D1 Ø	D2 Ø	E	EE	FB Ø	KF	KK	L2	L3
[mm]	[mm]	min.	−0.5	max.		max.					+0.2	
4	2.5	−	6	−	3.3+0.1	10	M3	1.8	−	M2	13	1.8
	5										15.5	
6	5	−	6	−	5+0.1	13	M3	2.9	−	M3	16	2.9
	10										23.4	
10	5	−	8	7.5	5.8+0.1	18	M5	3.4	−	M4	16	3.4
	10										23	
12	5	8	8	10.7	6 H13	20	M5	3.4	M3	M5	16	3.4
	10										27.5	
16	5	10	12	−	8 H13	25	M5	4.5	M4	M6	20	4.6
	10										27.5	
	25										47	
20	5	8	12	−	10 H13	32	M5	5.5	M5	M8	20	5.7
	10	12									30.5	
	25										48.5	
25	5	12	12	−	10 H13	38	M5	5.5	M5	M8	26.1	5.7
	10										31.1	
	25										50.2	

Ø [mm]	Stroke [mm]	L4	L5	L6 max.	MM Ø	PL	T4	TG ±0.1	UO max.	WH	ZJ ±0.8	⌀C1
4	2.5	4	6.5	-	2	3.2	-	5.8	10	1	14	-
	5										16.5	
6	5	6	9	-	3	3	-	7	14	1	17	-
	10										24.4	
10	5	8	11.5	0.7	4	5.5	-	11	19	1	17	-
	10										24	
12	5	9	13	0.4	6	6	1.5	13	22	1	17	-
	10										28.5	
16	5	11.5	16.5	-	8	6	2	15	27	1	21	7
	10										28.5	
	25										48	
20	5	15	21	-	10	7	2	20	34	1	21	9
	10										31.5	
	25										49.5	
25	5	15.5	21.5	-	10	6.5	2	26	37	1	27.1	9
	10										32.1	
	25										51.2	

Cylinders with piston rod > Short-stroke cylinders and compact cylinders >

Short-stroke cylinders AEVC ★

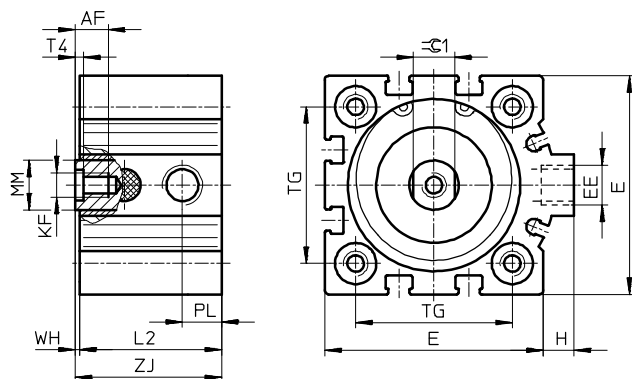
01

Dimensions

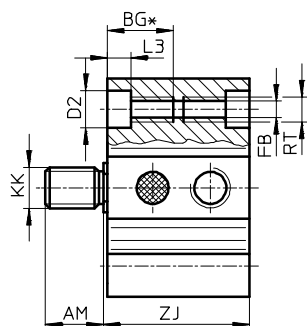
Download CAD data → www.festo.com

Without position sensing – Ø 32 ... 100

AEVC-...-I-P – With female thread



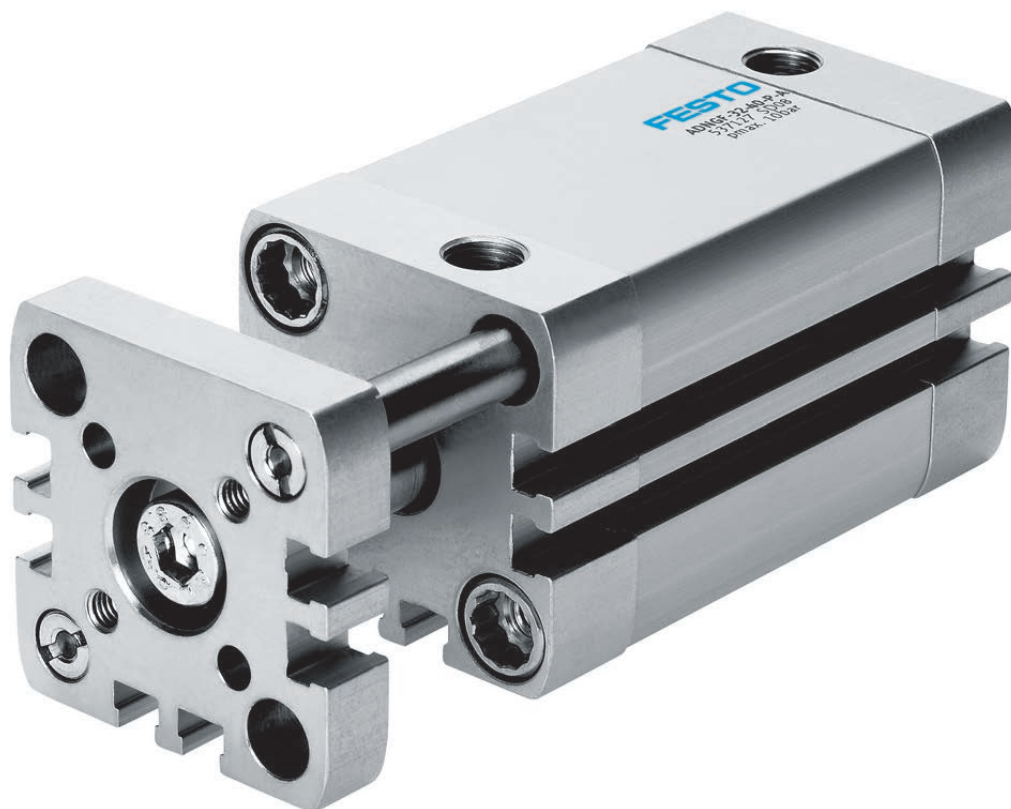
AEVC-...-A-P – With male thread



Ø	Stroke	AF	AM	BG ¹⁾	D2	E	EE	FB	H	KF	KK ²⁾	L2	L3	MM	PL	RT	T4	TG	WH	ZJ	≙1
[mm]	[mm]	min.	-0.5	min.	Ø F9	max.		Ø				+0.2		Ø				±0.1		±0.8	
32	5	12	14	21.7	9	45	G1/8	5.2	7	M6	M10x1.25	26	5.7	12	9.5	M6	2.6	32.5	1	27	10
	10											35								36	
	25											50								51	
40	10	12	14	21.7	9	53.5	G1/8	5.2	7	M6	M10x1.25	34.5	5.7	12	9.5	M6	2.6	38	1	35.5	10
	25											54.5								55.5	
50	10	16	16	22.8	11	63.5	G1/8	6.8	7	M8	M12x1.25	30.6	6.8	16	9.5	M8	3.3	46.5	0.5	31.1	13
	25											53								53.5	
63	10	16	16	22.8	11	75	G1/8	6.8	7.5	M8	M12x1.25	35	6.8	16	11.5	M8	3.3	56.5	1	36	13
	25											57								58	
80	10	20	22	25	14	93	G1/8	8.5	7	M10	M16x1.5	52	9	20	15	M10	4.7	72	1	53	17
	25											67								68	
100	10	24	28	25	14	113	G1/4	8.5	13	M12	M20x1.5	59	9	25	19	M10	6.1	89	1	60	22
	25											74								75	

1) Continuous thread with shorter sizes.

2) Nut for male piston rod thread included in the scope of delivery.



Gain space and save money during engineering

- + With compact dimensions
- + With integrated protection against rotation
- + Thanks to standardised interfaces to ISO 21287

Drives with guides › Drives with guide rods ›

Compact cylinders,
standard hole pattern

ADNGF

Drives with guides > Drives with guide rods >

Compact cylinders, standard hole pattern

ADNGF



Overview, configuration and ordering

→ www.festo.com/catalogue/adngf

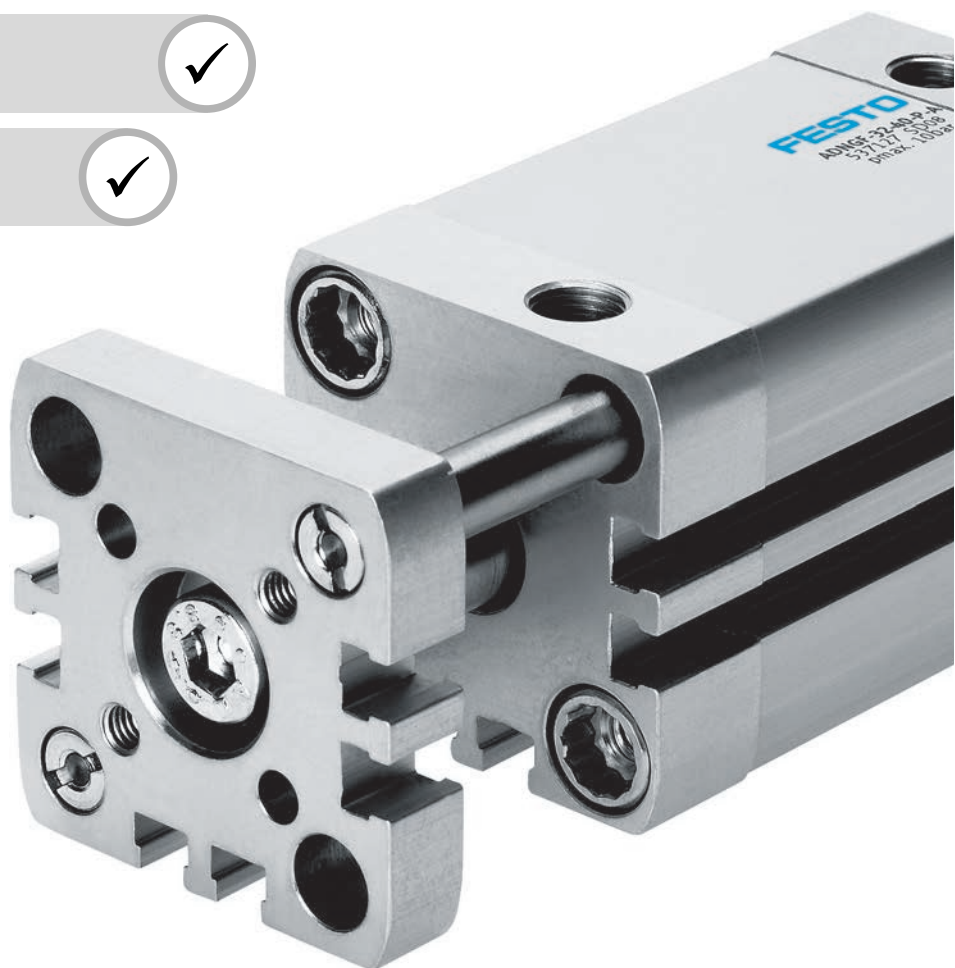


Additional information, support and user documentation

→ www.festo.com/sp/adngf



Spare parts service



- + Mounting hole pattern to ISO 21287
- + Piston rod secured against rotation by means of guide rods and a yoke plate
- + Robust plain-bearing guide
- + For position sensing
- + Optionally with through piston rod

Compact cylinders ADNGF, standard hole pattern

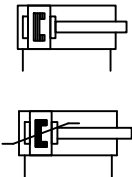
Product range overview

Type/function	Version	Piston Ø [mm]	Stroke [mm]	Force [N]	Product options				
					P	PPS	A	S2	S6
ADNGF									
Double-acting	Non-rotating with yoke	12, 16, 20, 25, 32, 40, 50, 63, 80, 100	1 ... 400	68 ... 4712	■	■	■	■	■

Product options

P	Elastic cushioning rings/plates at both ends	A	Position sensing	S6	Heat-resistant seals up to max. 120°C
PPS	Pneumatic cushioning, self-adjusting at both ends	S2	Through piston rod	TL	Laser etched rating plate

Data sheet – Double-acting



Technical data				Dimensions → Page 194								
Piston Ø		12	16	20	25	32	40	50	63	80	100	
Pneumatic connection		M5	M5	M5	M5	G1/8	G1/8	G1/8	G1/8	G1/8	G1/8	
Stroke		1 ... 200		3 ... 200		5 ... 300				5 ... 400		
Cushioning	ADNGF-...-P		Elastic cushioning rings/plates at both ends									
	ADNGF-...-PPS		Pneumatic cushioning, self-adjusting at both ends									
Cushioning length	ADNGF-...-PPS	[mm]	–		3	3.5	4	5	6	7	7.5	10
Theoretical force	ADNGF-...	[N]	68	121	188	295	483	754	1178	1870	3016	4712
at 6 bar, advancing	ADNGF-...-S2	[N]	51	90	141	247	415	686	1057	1750	2827	4524
Theoretical force	ADNGF-...	[N]	51	90	141	247	415	686	1057	1750	2827	4524
at 6 bar, retracting	ADNGF-...-S2	[N]	51	90	141	247	415	686	1057	1750	2827	4524

Compact cylinders ADNGF, standard hole pattern

Data sheet – Double-acting

Operating conditions			12	16	20	25	32	40	50	63	80	100
Piston Ø												
Operating pressure	ADNGF-...	[bar]	1.5 ... 10				1 ... 10					
	ADNGF-...-PPS	[bar]	–			1.9 ... 10			1.4 ... 10			
	ADNGF-...-S2	[bar]	1.5 ... 10					1 ... 10				
Ambient temperature ¹⁾	ADNGF-...	[°C]	–20 ... +80									
	ADNGF-...-S6	[°C]	0 ... +120									

1) Note operating range of proximity sensors.

Materials			12 ... 80	100
Piston Ø				
End cap			Anodised aluminium	Coated die-cast aluminium
Cylinder barrel			Anodised aluminium	
Piston rod			High-alloy steel	
Seals	ADNGF-...		TPE-U(PUR)	
	ADNGF-...-S6		FPM	

Order code

ADNGF – – – – A – – – –

Type

ADNGFDouble-acting compact cylinder

Piston Ø [mm]

	Stroke [mm]	
12	5, 10, 15, 20, 25, 30, 40	1 ... 200
16	5, 10, 15, 20, 25, 30, 40, 50	1 ... 200
20, 25	5, 10, 15, 20, 25, 30, 40, 50, 60	3 ... 200
32, 40, 50	5, 10, 15, 20, 25, 30, 40, 50, 60, 80	5 ... 300
63, 80	10, 15, 20, 25, 30, 40, 50, 60, 80	5 ... 300
100	10, 15, 20, 25, 30, 40, 50, 60, 80	5 ... 400

Cushioning

P	Elastic cushioning rings/plates at both ends
PPS	Pneumatic cushioning, self-adjusting at both ends1

Position sensing

A	Via proximity sensor
---	----------------------

Piston rod

–	Yoke plate at one end
S2	Through piston rod

Temperature resistance

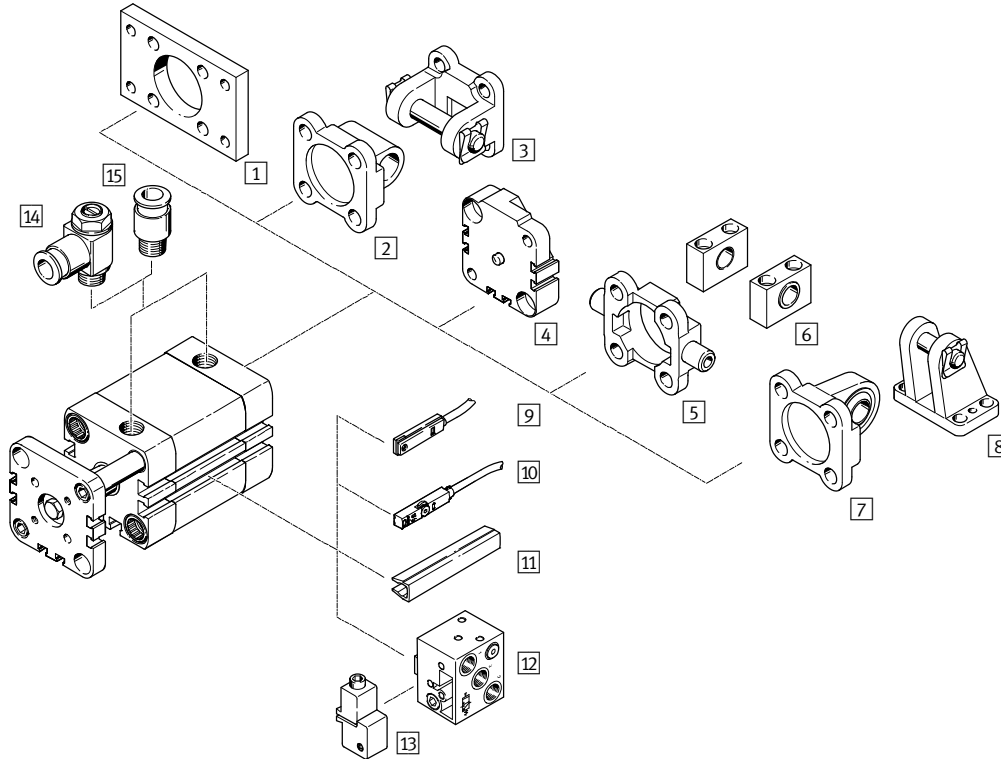
S6	Heat-resistant seals up to max. 120°C2
----	--

- 1 Not with piston Ø 12, 16
Not with temperature resistance S6.
Minimum stroke 5 mm
- 2 Maximum stroke 250 mm

Order example:
ADNGF-50-50-P-A-S2-S6
Double-acting compact cylinder ADNGF - piston diameter 50 mm - stroke 50 mm - elastic cushioning rings/plates at both ends - position sensing via proximity sensor - through piston rod - heat-resistant seals up to max. 120°C

Compact cylinders ADNGF, standard hole pattern

Accessories



		Basic design	S2	→ Page/online
1	Flange mounting FNC	■	■	191
2	Swivel flange SNCL	■	–	191
3	Swivel flange SNCB	■	–	191
4	Multi-position kit DPNA	■	–	192
5	Trunnion flange ZNCF	■	■	192
6	Trunnion support LNZG	■	■	192
7	Swivel flange SNCS	■	–	192
8	Clevis foot LBG	■	–	192

		Basic design	S2	→ Page/online
9	Proximity sensor SME-/SMT-8	■	■	192
10	Proximity sensor SME-/SMT-8M	■	■	192
11	Slot cover ABP-5-S	■	■	193
12	Proximity sensor SMPO-8E	■	■	smpo-8e
13	Mounting kit SMB-8E	■	■	smb-8e
14	One-way flow control valve GRLA/GRLZ	■	■	193
15	Push-in fitting QS	■	■	1443
–	Connecting cable NEBU	■	■	193

Accessories – Ordering data

	For Ø	Part no.	Type
1 Flange mounting Dimensions online: → adngf			
	12	537245	FNC-12
	16	537246	FNC-16
	20	537247	FNC-20
	25	537248	FNC-25
	32	★ 174376	FNC-32
	40	★ 174377	FNC-40
	50	★ 174378	FNC-50
	63	★ 174379	FNC-63
	80	★ 174380	FNC-80
	100	174381	FNC-100
2 Swivel flange Dimensions online: → adn			
	12	537790	SNCL-12
	16	537791	SNCL-16
	20	537792	SNCL-20
	25	537793	SNCL-25

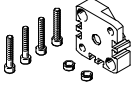
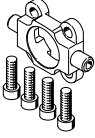
	For Ø	Part no.	Type
2 Swivel flange Dimensions online: → adn			
	32	★ 174404	SNCL-32
	40	★ 174405	SNCL-40
	50	★ 174406	SNCL-50
	63	★ 174407	SNCL-63
	80	★ 174408	SNCL-80
	100	174409	SNCL-100
3 Swivel flange Dimensions online: → adn			
	32	★ 174390	SNCB-32
	40	★ 174391	SNCB-40
	50	★ 174392	SNCB-50
	63	★ 174393	SNCB-63
	80	★ 174394	SNCB-80
	100	174395	SNCB-100

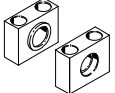
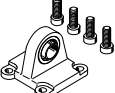
Drives with guides > Drives with guide rods >

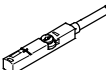
Compact cylinders ADNGF, standard hole pattern

01

Accessories – Ordering data

	For Ø	Part no.	Type
4 Multi-position kit Dimensions online: → adn			
	12	537263	DPNA-12
	16	537264	DPNA-16
	20	537265	DPNA-20
	25	537266	DPNA-25
	32	537267	DPNA-32
	40	537268	DPNA-40
	50	537269	DPNA-50
	63	537270	DPNA-63
	80	537271	DPNA-80
	100	537272	DPNA-100
5 Trunnion flange Dimensions online: → adn			
	32	174411	ZNCF-32
	40	174412	ZNCF-40
	50	174413	ZNCF-50
	63	174414	ZNCF-63
	80	174415	ZNCF-80
	100	174416	ZNCF-100

	For Ø	Part no.	Type
6 Trunnion support Dimensions online: → adn			
	32	32959	LNZG-32
	40, 50	32960	LNZG-40/50
	63, 80	32961	LNZG-63/80
	100	32962	LNZG-100/125
7 Swivel flange Dimensions online: → adn			
	32	★ 174397	SNCS-32
	40	★ 174398	SNCS-40
	50	★ 174399	SNCS-50
	63	★ 174400	SNCS-63
	80	★ 174401	SNCS-80
	100	174402	SNCS-100
8 Clevis foot Dimensions online: → adn			
	32	31761	LBG-32
	40	31762	LBG-40
	50	31763	LBG-50
	63	31764	LBG-63
	80	31765	LBG-80
	100	31766	LBG-100

	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
9/10 Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets → Page 1206					
	12 ... 100	PNP, cable	2.5	★ 574335	SMT-8M-PS-24V-K-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-PS-24V-K-0,3-M8D
		PNP, plug	0.3	★ 574337	SMT-8M-PS-24V-K-0,3-M12
		NPN, cable	2.5	★ 574338	SMT-8M-NS-24V-K-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-NS-24V-K-0,3-M8D
Magneto-resistive – N/C contact Data sheets → Page 1206					
	12 ... 100	PNP, cable	7.5	★ 574340	SMT-8M-A-PO-24V-K7,5-OE
Magnetic reed – N/O contact Data sheets → Page 1201					
	12 ... 100	Contacting, cable	2.5	★ 543862	SME-8M-DS-24V-K-2,5-OE
		Contacting, cable	5.0	★ 543863	SME-8M-DS-24V-K-5,0-OE
		Contacting, cable	2.5	★ 543872	SME-8M-ZS-24V-K-2,5-OE
		Contacting, plug	0.3	★ 543861	SME-8M-DS-24V-K-0,3-M8D
Magnetic reed – N/C contact Data sheets → Page 1203					
	12 ... 100	Contacting, cable	2.5	150855	SME-8-K-LED-24
		Contacting, plug	0.3	150857	SME-8-S-LED-24
Magnetic reed – N/C contact Data sheets → Page 1203					
	12 ... 100	Contacting, cable	7.5	160251	SME-8-O-K-LED-24

Pneumatic drives

Compact cylinders ADNGF, standard hole pattern

Accessories – Ordering data

	For Ø	Connection	Cable length [m]	Part no.	Type
Connecting cable, straight socket					
	12 ... 100	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
		M12x1, 5-pin	2.5	★ 541363	NEBU-M12G5-K-2.5-LE3
			5.0	★ 541364	NEBU-M12G5-K-5-LE3
Angled socket					
	12 ... 100	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3
		M12x1, 5-pin	2.5	541367	NEBU-M12W5-K-2.5-LE3
			5.0	541370	NEBU-M12W5-K-5-LE3

	For Ø	Part no.	Type
11 Slot cover¹⁾			
	12 ... 100	151680	ABP-5-S

1) Packaging unit 2x 0.5 m.

Function	For Ø	Connection		Part no.	Type
		Thread	O.D.		
14 One-way flow control valve with slotted head screw, metal ²⁾					
for exhaust air flow control					
	12, 16, 20, 25	M5	3	★ 193137	GRLA-M5-QS-3-D
	32	G1/8	4	★ 193143	GRLA-1/8-QS-4-D
	40, 50, 63, 80, 100		6	★ 193144	GRLA-1/8-QS-6-D
For supply air flow control					
	12, 16, 20, 25	M5	3	★ 193153	GRLZ-M5-QS-3-D
	32	G1/8	4	★ 193157	GRLZ-1/8-QS-4-D
	40, 50, 63, 80, 100		6	★ 193158	GRLZ-1/8-QS-6-D

2) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

01

Pneumatic drives

Drives with guides > Drives with guide rods >

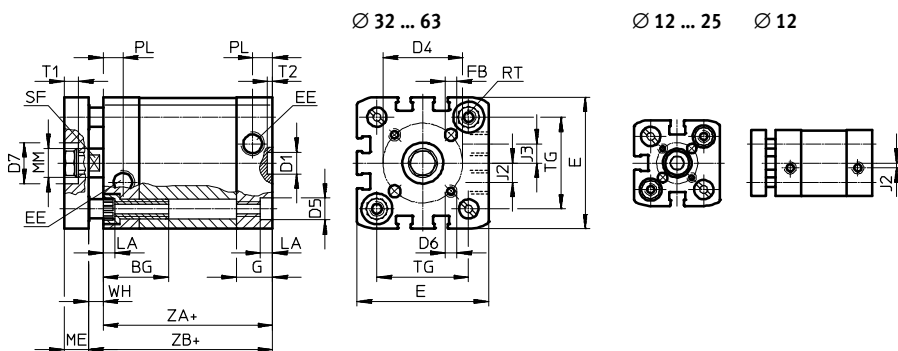
Compact cylinders ADNGF, standard hole pattern

01

Dimensions

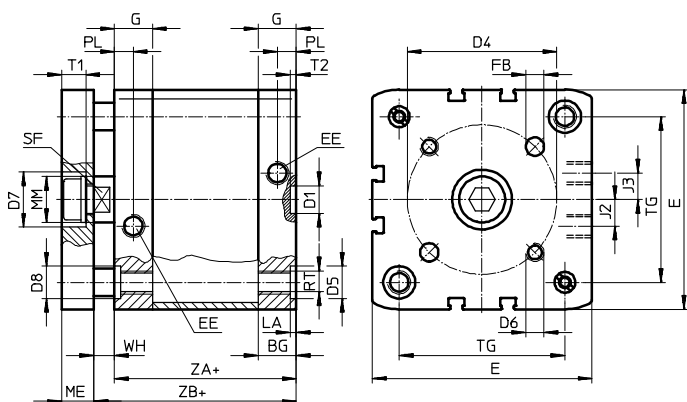
Download CAD data → www.festo.com

Basic design – Ø 12 ... 63



+ = plus stroke length

Basic design – Ø 80, 100



+ = plus stroke length

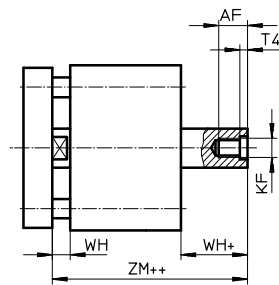
Ø	BG	D1 Ø	D4	D5 Ø	D6	D7 Ø	D8	E	EE	FB Ø	G	J2	J3	LA
[mm]	min.	H9	±0.1			H9				H8				+0.2
12	17	9	12	6 ^{F9}	M3	–	–	27.5 ^{+0.3}	M5	3	10.5	2	–	3.5
16			14					29 ^{+0.3}			11	2.6		
20	19.5		17	9 ^{F9}	M4	14		35.5 ^{+0.3}		4	12			5
25			22		M5			17			39.5 ^{+0.3}			
32	26		28			47 ^{+0.3}				G1/8	5	15	6	
40			33		54.5 ^{+0.3}	8								
50	27	12	42	12 ^{F9}	M6	22	14	65.5 ^{+0.3}		6	11.5	2.6		
63			50					75.5 ^{+0.3}						
80	17		65	15	M8	24		95.5 ^{+0.6}		8			16.5	
100	21.5		80		M10			113.5 ^{+0.6}		10	21.5		20	

Ø [mm]	ME	MM Ø h8	PL +0.2	RT	SF h13	T1	T2 +0.1	TG ±0.2	WH		ZA ±0.3	ZB	
									+1.3	PPS +1.4		+1.2	PPS +1.3
12	6	6	6	M4	5	–	2.1	16	4.2	–	35	39.2	–
16		8			7			18	4.7			39.7	
20	8	10		M5	9	5		22	5.5	5.5	37	42.5	42.5
25					26			39			44.5	45.3	
32	10	12	8.2	M6	10	6	2.6	32.5	6	6.5	44	50	50.6
40								38	6.1	6.6		45	51.1
50	12	16		M8	13	7.5		46.5	7.7	8.2	49		52.7
63								56.5	7.5	8		56.5	57
80	14	20		M10	17	10.5		72	8.9	9.4	54	62.9	63.4
100			89					9	9.8	67	76	76.8	

Compact cylinders ADNGF, standard hole pattern

Dimensions

S2 – Through piston rod



Download CAD data → www.festo.com

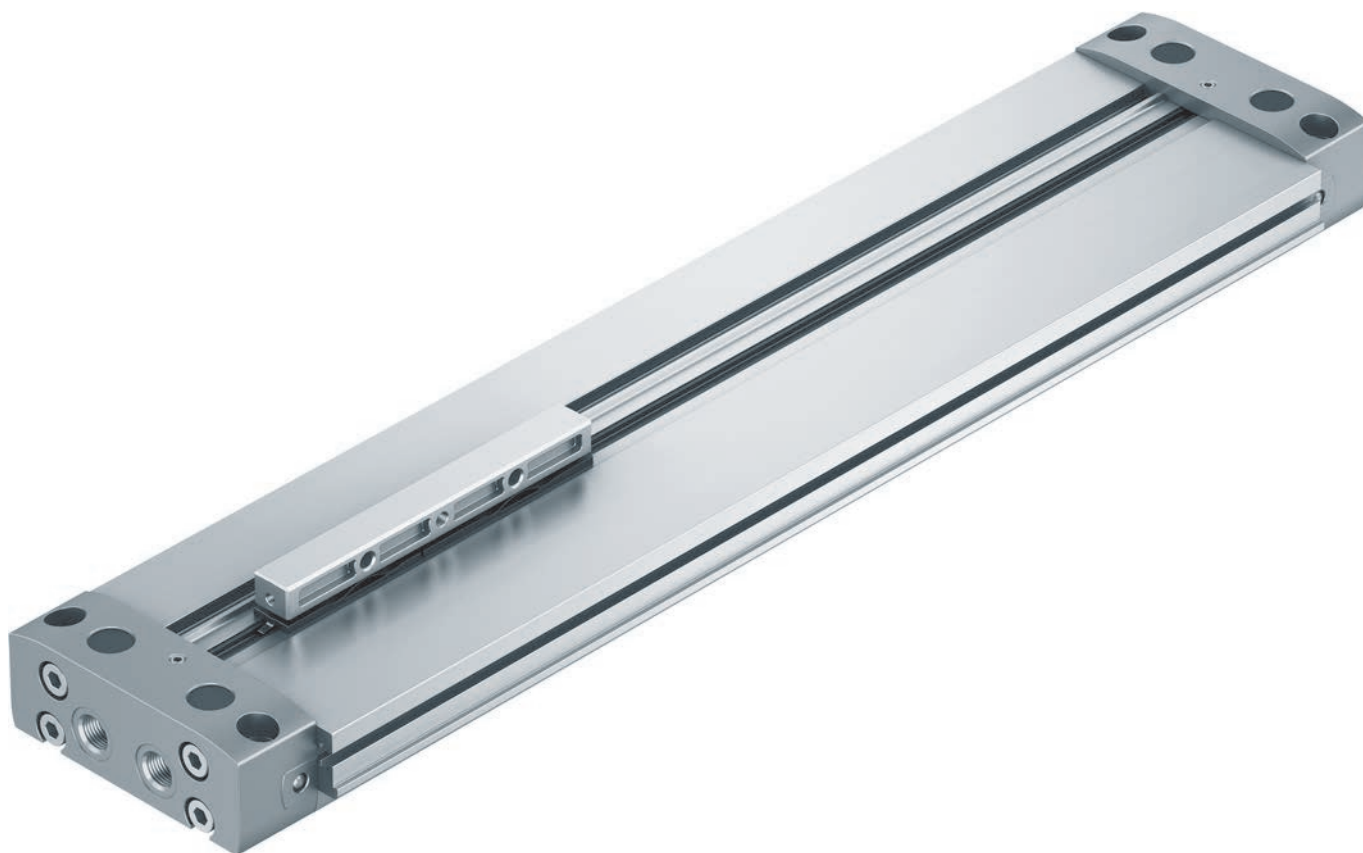
01

+ = plus stroke length
++ = plus 2x stroke length

Ø [mm]	AF min.	KF	T4	WH		ZM	
				P +1.3	PPS +1.4	P	PPS
12	8	M3	1.5	4.2	–	44.5 ^{+0.5}	–
16	10	M4		4.7		45.7 ^{+0.5}	
20	14	M6	2.6	5.5	5.5	49.5 ^{+0.5}	49.5 ^{+0.5}
25						51.5 ^{+0.5}	51.5 ^{+0.5}
32	16	M8	3.3	6	6.5	57.5 ^{+0.5}	58.6 ^{+0.6}
40				6.1	6.6	58.6 ^{+0.6}	59.7 ^{+0.7}
50	20	M10	4.7	8.2	8.2	62.0 ^{+0.6}	63.1 ^{+0.7}
63				8.1	8	65.4 ^{+0.6}	66.5 ^{+0.7}
80		M12	6.1	8.9	9.4	73.2 ^{+0.6}	74.3 ^{+0.7}
100				9	9.8	86.4 ^{+0.6}	88 ^{+0.7}

Pneumatic drives

New New series



Impressive on its own but also a great team player!

- + Suitable for table mounting
- + Loads and devices can be mounted directly on the slide
- + Extremely flat
- + Ideal for applications in small parts assembly

Rodless cylinders › Mechanically coupled cylinders ›
Linear drives

DLGF

Rodless cylinders > Mechanically coupled cylinders >

Linear drives

DLGF



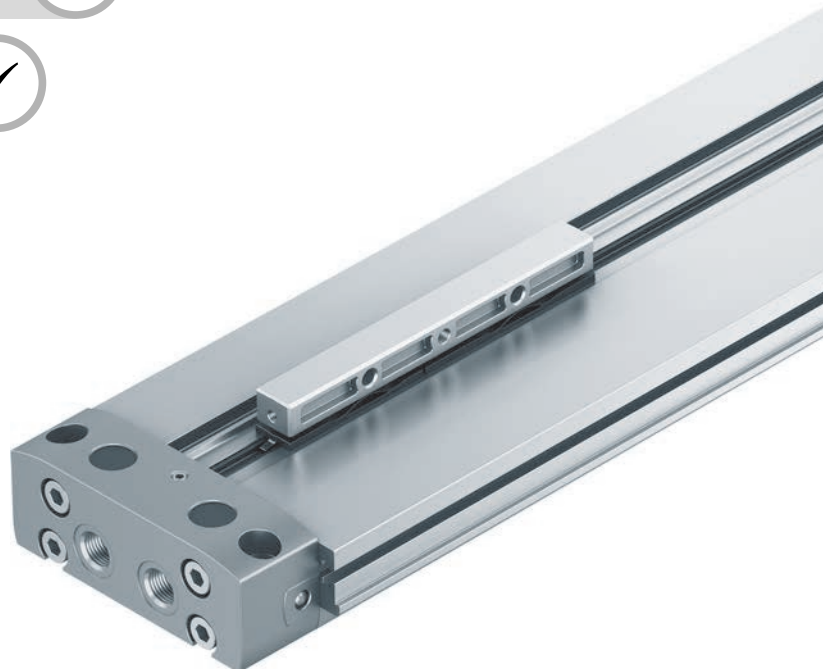
Overview, configuration and ordering

→ www.festo.com/catalogue/dlgf



Additional information, support and user documentation

→ www.festo.com/sp/dlgf



- + Piston diameter 20 ... 40 mm
- + Stroke lengths from 50 ... 1000 mm
- + Guide backlash = 0 mm
- + For medium and large loads
- + Very good operating behaviour under torque load

NEW

Rodless cylinders > Mechanically coupled cylinders >

Linear drives DLGF

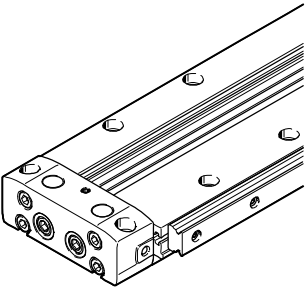
Product range overview

Type/function	Piston Ø [mm]	Stroke [mm]	Force [N]	Product options			➔ Page/ online
				PPS	A	W	
Double-acting	DLGF-...-KF – Recirculating ball bearing guide						
	20, 25, 32, 40	50 ... 1000	188 ... 754	■	■	■	200
	DLGF-...-G – Basic design						
	20, 25, 32, 40	50 ... 1000	188 ... 754	■	■	■	203

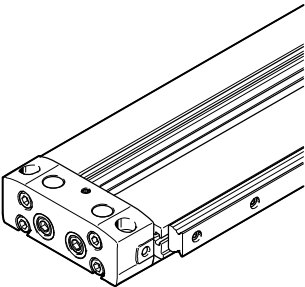
Product options

- PPS Pneumatic cushioning,
self-adjusting at both ends
- A Position sensing
- W Profile design
without mounting holes

- Profile design**
with mounting holes
- In the end cap: Yes
 - In the profile: Yes

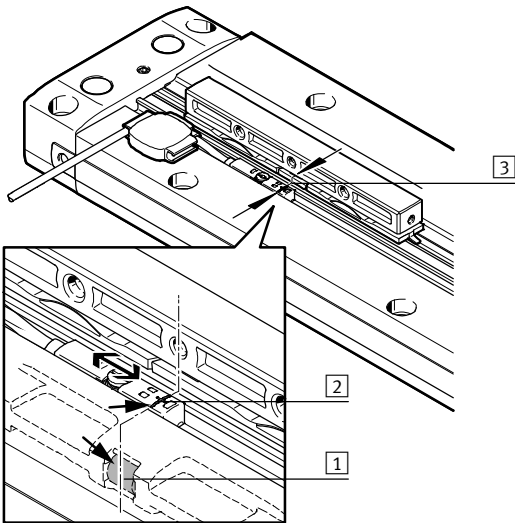


- Profile design**
without mounting holes
- In the end cap: Yes
 - In the profile: No



Easy preassembly of the proximity sensors

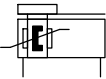
The magnet **1** for sensing the slide position is located in the centre of the slide. The cross **2** on the proximity sensor SMT-8M-A marks the location of the switching point. The switching point is set when both locations are level **3**.



Linear drives DLGF-KF, with recirculating ball bearing guide

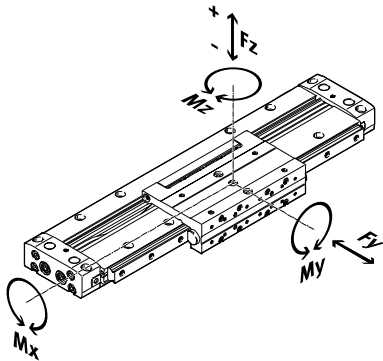
NEW

Data sheet



Technical data

Dimensions → Page 207



Piston Ø	20	25	32	40
Pneumatic connection	M5	G1/8	G1/8	G1/4
Stroke	50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000			
Cushioning	Pneumatic cushioning, self-adjusting at both ends			
Cushioning length [mm]	9.6	9	11.6	12.9
Theoretical force at 6 bar [N]	188	295	483	754
Max. permissible force F_y [N]	600	1000	1300	1700
Max. permissible force F_{z+} [N]	400	700	950	1150
Max. permissible force F_{z-} [N]	700	1200	1600	2000
Max. permissible torque M_x [Nm]	5.4	12.3	30	54
Max. permissible torque M_y [Nm]	15	30	50	90
Max. permissible torque M_z [Nm]	15	30	50	90

Operating conditions					
Piston Ø		20	25	32	40
Operating pressure	[bar]	2 ... 8		1.5 ... 8	
Ambient temperature ¹⁾	[°C]	0 ... +60			

1) Note operating range of proximity sensors.

Materials	
End cap	Coated die-cast aluminium
Housing	Anodised aluminium
Seals	NBR
	TPE-U(PU)

NEW

Rodless cylinders > Mechanically coupled cylinders >

Linear drives, DLGF-KF, with recirculating ball bearing guide

Order code

01

Pneumatic drives

DLGF

—

KF

—

—

—

PPS

A

—

Type	
DLGF	Linear drive

Guide	
KF	Recirculating ball bearing guide

Piston Ø [mm]	
	Stroke [mm]
20	50, 100, 150, 200, 250, 300, 350, 400, 450,
25	500, 550, 600, 650, 700, 750, 800, 850, 900,
32	950, 1000
40	

Cushioning	
PPS	Pneumatic cushioning, self-adjusting at both ends

Position sensing	
A	Via proximity sensor

Profile design	
—	With mounting holes
W	Without mounting holes

Order example:
DLGF-KF-32-300-PPSA-W
Linear drive DLGF - recirculating ball bearing guide - piston diameter 32 mm - stroke 300 mm - pneumatic cushioning, self-adjusting at both ends - position sensing via proximity sensor - without mounting holes

Ordering – Product options

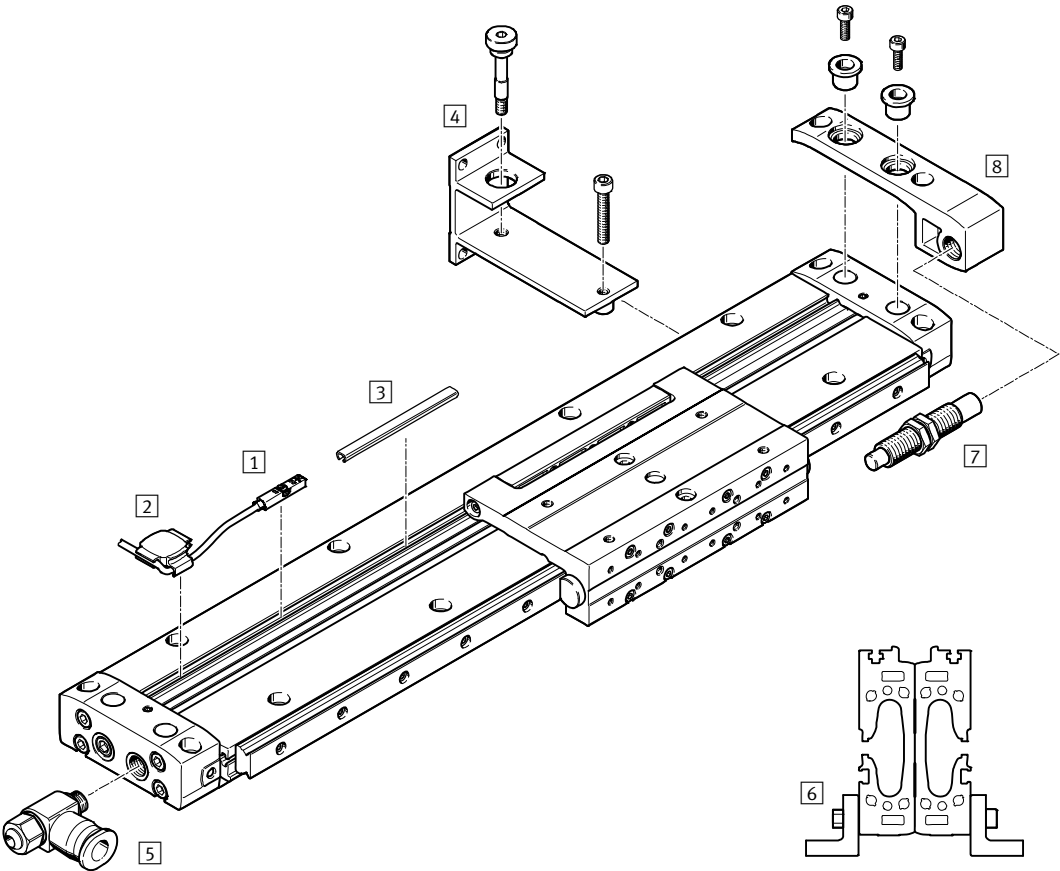
Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
➔ www.festo.com/catalogue/...

Enter the type code in the search field.

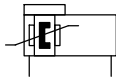
Accessories



	→ Page/online
1 Proximity sensor SMT-8M	206
2 Cable holder DADG	206
3 Slot cover ABP-5-S1	206
4 Profile mounting DAMH-L8-P	206
5 One-way flow control valve GRLA	206

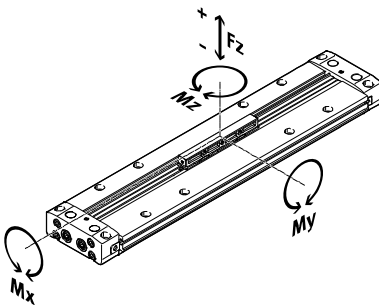
	→ Page/online
6 Profile mounting DAMH-L8-PL	206
7 Shock absorber DYSS	206
8 Shock absorber retainer DAYP-L8	206
- Connector sleeve ZBV	206
- Connecting cable NEBU	206

Data sheet



Technical data

Dimensions → Page 210



Pneumatic drives

Piston Ø	20	25	32	40
Pneumatic connection	M5	G1/8	G1/8	G1/4
Stroke [mm]	50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000			
Cushioning	Pneumatic cushioning, self-adjusting at both ends			
Cushioning length ¹⁾ [mm]	9.6	9	11.6	12.9
Theoretical force at 6 bar [N]	188	295	483	754
Max. permissible force Fz+ [N]	54	95	138	456
Max. permissible force Fz- [N]	98	164	276	662
Max. permissible torque Mx [Nm]	0.6	1.1	1.8	7.7
Max. permissible torque My [Nm]	2.2	4.5	7.6	37.6
Max. permissible torque Mz [Nm]	0.7	1.4	2.9	11.2

Operating conditions					
Piston Ø		20	25	32	40
Operating pressure	[bar]	2 ... 8		1.5 ... 8	
Ambient temperature ¹⁾	[°C]	0 ... +60			

1) Note operating range of proximity sensors.

Materials	
End cap	Coated die-cast aluminium
Housing	Anodised aluminium
Seals	NBR
	TPE-U(PU)

Linear drives DLGF-G

NEW

Order code

Pneumatic drives

		DLGF	–	G	–		–		–	PPS	A	–	
Type													
DLGF	Linear drive												
Guide													
G	Basic design												
Piston Ø [mm]													
	Stroke [mm]												
20	50, 100, 150, 200, 250, 300, 350, 400, 450,												
25	500, 550, 600, 650, 700, 750, 800, 850,												
32	900, 950, 1000												
40													
Cushioning													
PPS	Pneumatic cushioning, self-adjusting at both ends												
Position sensing													
A	Via proximity sensor												
Profile design													
–	With mounting holes												
W	Without mounting holes												

Order example:
DLGF-G-32-300-PPSA-W
Linear drive DLGF - basic design - piston diameter 32 mm - stroke 300 mm - pneumatic cushioning, self-adjusting at both ends - position sensing via proximity sensor - without mounting holes

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or

[www.festo.com/catalogue/...](#)

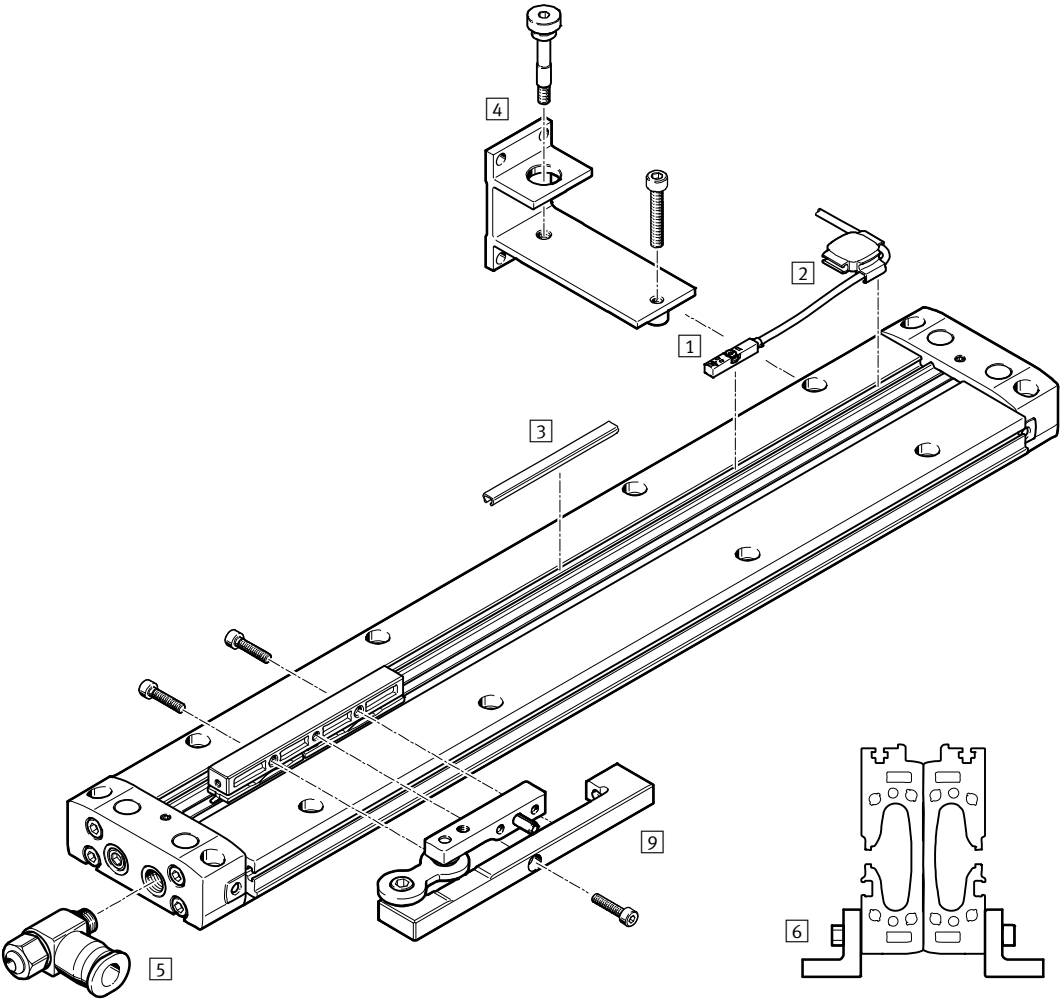
Enter the type code in the search field.

NEW

Rodless cylinders > Mechanically coupled cylinders >
Linear drives DLGF-G

Accessories

01



Pneumatic drives

	→ Page/online
1 Proximity sensor SMT-8M	206
2 Cable holder DADG	206
3 Slot cover ABP-5-S1	206
4 Profile mounting DAMH-L8-P	206
5 One-way flow control valve GRLA	206

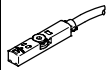
	→ Page/online
6 Profile mounting DAMH-L8-PL	206
9 Moment compensator DARD-L8	206
– Connector sleeve ZBV	206
– Connecting cable NEBU	206

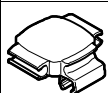
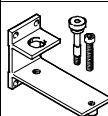
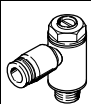
Linear drives DLGF

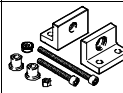
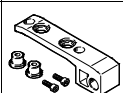
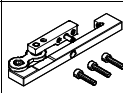
NEW

01

Accessories – Ordering data

	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
1 Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets → Page 1222					
	20 ... 40	PNP, cable	2.5	★ 574335	SMT-8M-A-PS-24V-E-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-A-PS-24V-E-0,3-M8D
		NPN, cable	2.5	★ 574338	SMT-8M-A-NS-24V-E-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-A-NS-24V-E-0,3-M8D

	For Ø	Part no.	Type
2 Cable holder DADG			
	20 ... 40	8069000	DADG-HL-N8-P2
3 Slot cover ABP¹⁾			
	20 ... 40	563360	ABP-5-S1
4 Profile mounting DAMH-L8-P1			
	20	8069009	DAMH-L8-20-P1
	25	8069010	DAMH-L8-25-P1
	32	8069011	DAMH-L8-32-P1
	40	8069012	DAMH-L8-40-P1
5 One-way flow control valve GRLA			
	20	★ 193137	GRLA-M5-QS-3-D
		★ 193138	GRLA-M5-QS-4-D
	25, 32	★ 193142	GRLA-1/8-QS-3D
		★ 193143	GRLA-1/8-QS-4-D
		★ 193144	GRLA-1/8-QS-6-D
	40	★ 193146	GRLA-1/4-QS-6-D
		★ 193147	GRLA-1/4-QS-8-D
		★ 193148	GRLA-1/4-QS-10-D

	For Ø	Part no.	Type
6 Profile mounting DAMH-L8-PL1			
	20	8069013	DAMH-L8-20-PL1
	25	8069014	DAMH-L8-25-PL1
	32	8069015	DAMH-L8-32-PL1
	40	8069016	DAMH-L8-40-PL1
7 Shock absorber DYSS			
	20	8069001	DYSS-7-5-Y1F
	25	8069002	DYSS-8-8-Y1F
	32	8069003	DYSS-10-10-Y1F
	40	8069004	DYSS-12-12-Y1F
8 Shock absorber retainer DAYP-L8			
	20	8069005	DAYP-L8-20
	25	8069006	DAYP-L8-25
	32	8069007	DAYP-L8-32
	40	8069008	DAYP-L8-40
9 Moment compensator DARD-L8			
	20	8081466	DARD-L8-20-S
	25	4134871	DARD-L8-25-S
	32	8081467	DARD-L8-32-S
	40	4448222	DARD-L8-40-S

1) Packaging unit 2x 0.5 m

	For Ø	Connection	Cable length [m]	Part no.	Type
Connecting cable, straight socket					
	20 ... 40	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
Angled socket					
	20 ... 40	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3

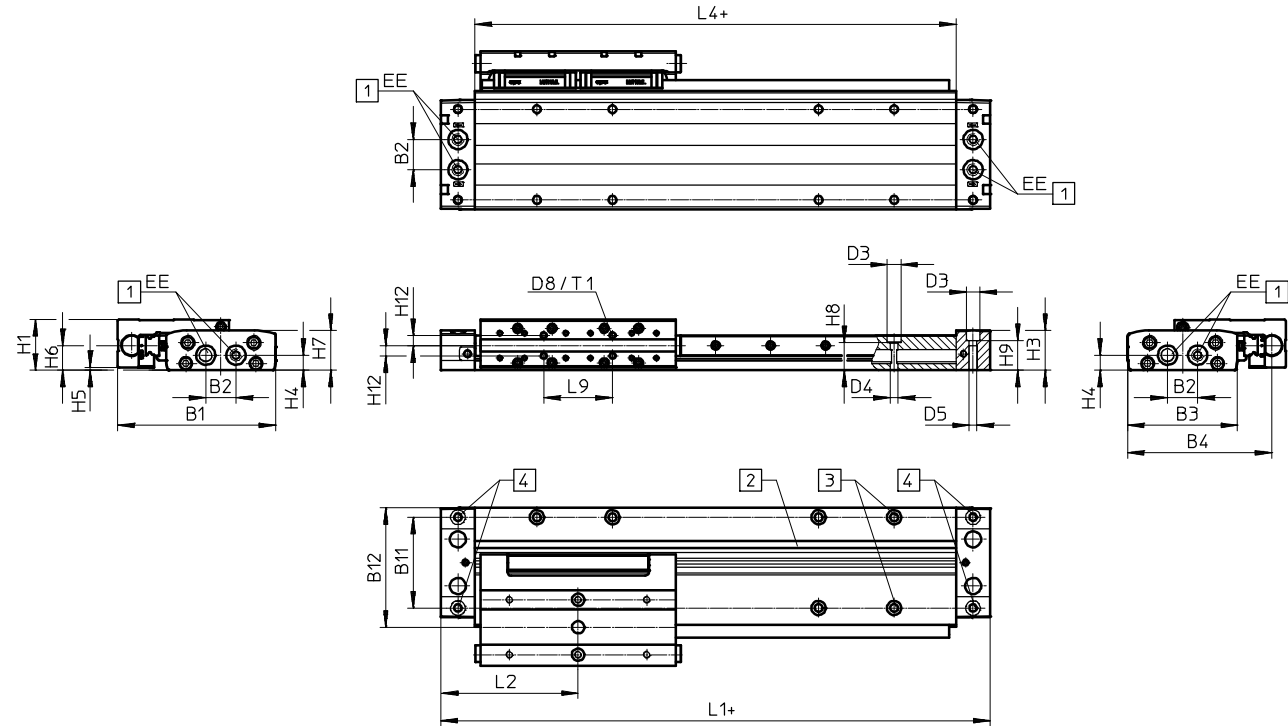
	For Ø	Comment	Part no.	Type
Connector sleeve				
	25, 32	For centring in combination with direct mounting of mini slides DGSL	548005	ZBV-9-7
	40		548006	ZBV-12-9

Dimensions

Download CAD data → www.festo.com

01

Pneumatic drives



- + plus stroke length
- 1 Supply ports
- 2 Slot for proximity sensor
- 3 Mounting holes for accessories
→ Page 208
- 4 Mounting holes

Matching O-rings for supply ports underneath:
For piston Ø 20: Ø 5x2
For piston Ø 25: Ø 12x2
For piston Ø 32: Ø 12x2
For piston Ø 40: Ø 16x2

Ø	B1	B2	B3	B4	B11	B12	D3 Ø	D4 Ø
[mm]								
20	105	17	71.8	95	60	78	8	4.7
25	115	22	79.8	105	66	87	10	5.8
32	145	26	99.6	134.5	82	115	11	6.8
40	175	32	119.8	160.5	100	141	11	6.8

Ø	D5 Ø	D8	EE	H1	H3	H4	H5	H6	H7
[mm]									
20	4.5	M4	M5	32	21	9	1.5	15	24
25	5.5	M4	G1/8	37	25.5	11	2	18	29
32	6.5	M5	G1/8	45	32	14	2	19	35
40	6.6	M6	G1/4	52	39.5	19.5	3	24	42.7

Ø	H8	H9	H12	L1 ±0.35	L2	L4	L9	T1	Stroke tolerance
[mm]									
20	15.6	17.6	7.5	160	80	120	45	7	+1.5
25	20.1	21.8	7.5	200	100	150	50	9	
32	24.6	26.5	10	230	115	170	80	10	
40	32.1	34.7	12.5	300	150	238.8	125	10	

Download CAD data → www.festo.com

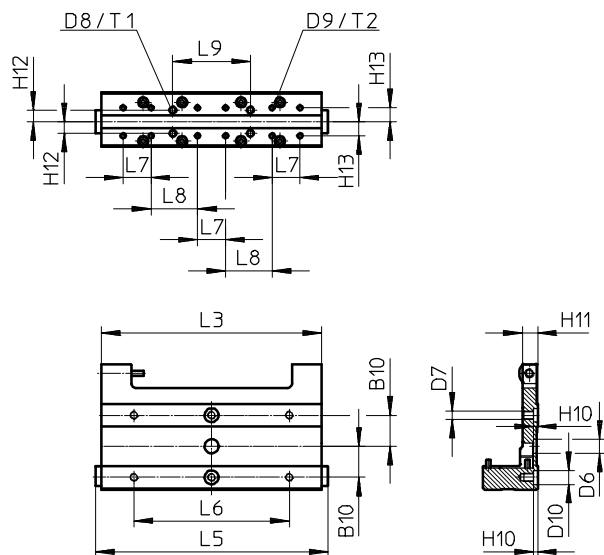
Mounting holes

NEW

Rodless cylinders > Mechanically coupled cylinders >

Linear drives DLGF-KFDownload CAD data → www.festo.com

01

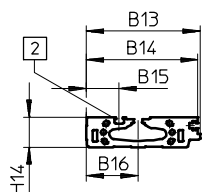
Dimensions**Slide**

Ø	B10	D6 Ø H7	D7	D8	D9	D10 Ø	H10	H11	H12
[mm]									
20	20	7	M4	M4	M3	7	2.5	8.8	7.5
25	20	9	M5	M4	M3	9	2.5	9.8	7.5
32	20	9	M5	M5	M4	9	2.5	10.3	10
40	20	12	M6	M6	M4	–	2.5	10.3	12.5

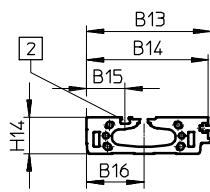
Ø	H13	L3	L5	L6	L7	L8	L9	T1	T2
[mm]									
20	8	112	119.8	64	16	20	45	7	7
25	9	142	149.8	100	18	30	50	9	7
32	11	161	170	100	22	35	80	10	7.5
40	13	230.6	239.6	140	26	62	125	10	8

Profile barrel

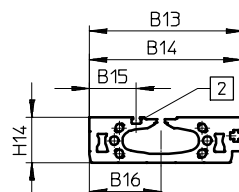
Ø 20



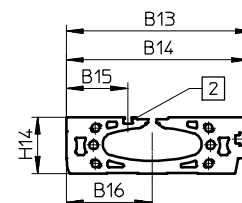
Ø 25



Ø 32



Ø 40



2 Slot for proximity sensor

Ø	B13	B14	B15	B16	H14
[mm]					
20	79.5	78	23	36	21
25	86.5	85	27	40	25.5
32	108	106	33	50	32
40	130	127.5	43	60	39.5

Linear drives DLGF-G

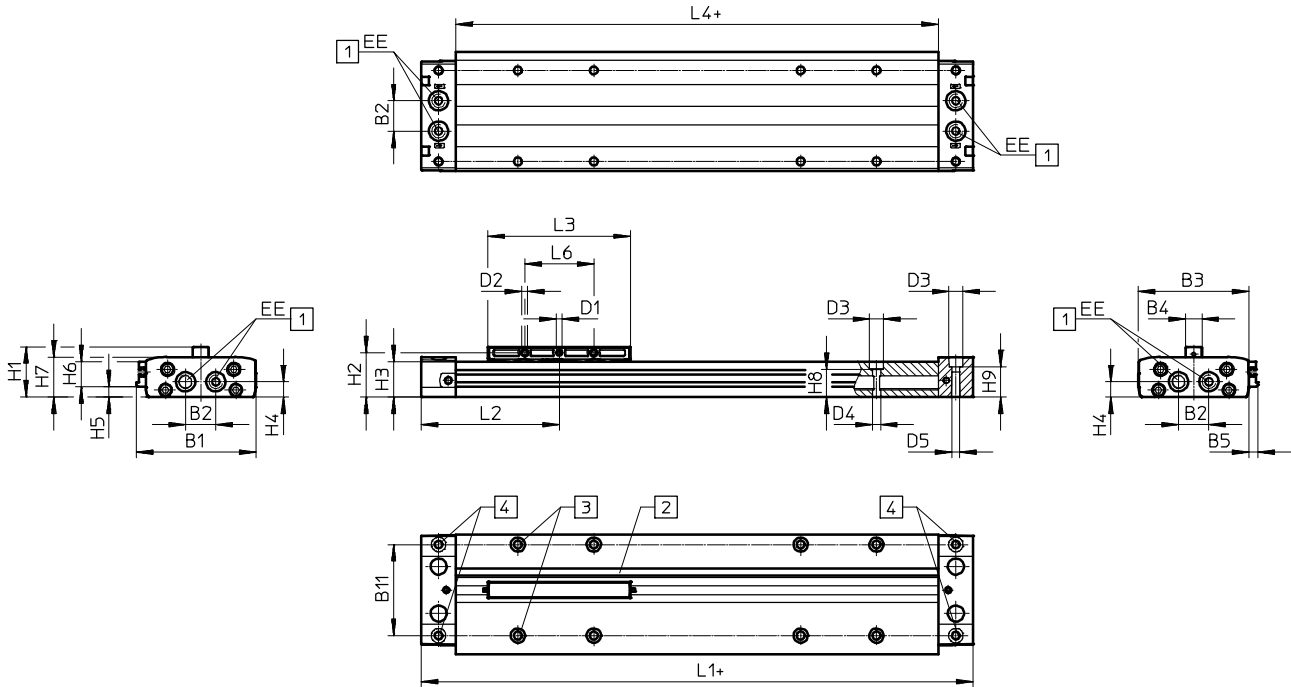
NEW

Download CAD data → www.festo.com

Dimensions

01

Pneumatic drives



- + plus stroke length
- 1 Supply ports
- 2 Slot for proximity sensor
- 3 Mounting holes for accessories
→ Page 211
- 4 Mounting holes

Matching O-rings for supply ports underneath:
For piston Ø 20: Ø 5x2
For piston Ø 25: Ø 10x2
For piston Ø 32: Ø 12x2
For piston Ø 40: Ø 16x2

Ø	B1	B2	B3	B4	B5	B11	D1	D2 Ø	D3 Ø
[mm]									
20	79.5	17	71.8	12	7.6	60	M4	4.2	8
25	86.5	22	79.8	12	6.6	66	M4	4.2	10
32	108	26	99.6	16	8.2	82	M4	4.2	11
40	130	32	119.8	16	10.1	100	M4	4.2	11

Ø	D4 Ø	D5 Ø	EE	H1	H2	H3	H4	H5	H6
[mm]									
20	4.7	4.5	M5	31.5	27	21	9	5	16
25	5.8	5.5	G1/8	36.5	32	25.5	11	7.3	18.2
32	6.8	6.5	G1/8	44.5	40	32	14	8.1	23.9
40	6.8	6.6	G1/4	51.5	46.5	39.5	19.5	10.8	28.7

Ø	H7	H8	H9	L1	L2	L3	L4	L6	Stroke tolerance
[mm]				±0.05					
20	24	15.6	17.6	160	80	87.6	120	40	+1.5
25	29	20.1	21.8	200	100	103.2	150	50	
32	35	24.6	26.5	230	115	121.6	170	60	
40	42.7	32.1	34.7	300	150	180	238.8	70	

NEW

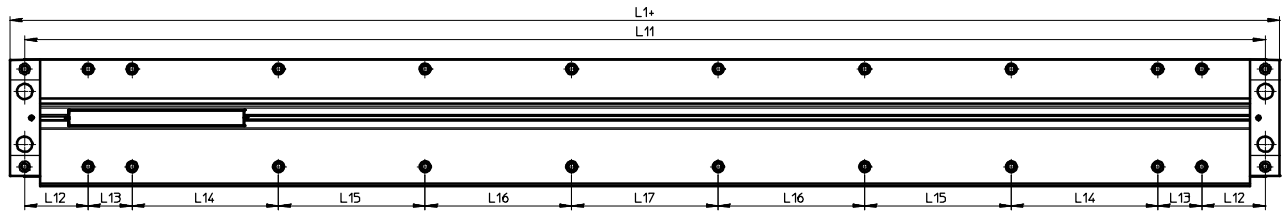
Rodless cylinders > Mechanically coupled cylinders >

Linear drives DLGF-G

Dimensions

Download CAD data → www.festo.com

Mounting holes



Dimension	L1				L11				L12				L13			
Ø	20	25	32	40	20	25	32	40	20	25	32	40	20	25	32	40
Stroke																
50	210	250	280	350	190	225	250	320	55	57.5	65	65	40	55	60	20
100	260	300	330	400	240	275	300	370					65	80	80	45
150	310	350	380	450	290	325	350	420					90	105	110	70
200	360	400	430	500	340	375	400	470					40	55	60	20
250	410	450	480	550	390	425	450	520					65	80	80	45
300	460	500	530	600	440	475	500	570					90	105	110	70
350	510	550	580	650	490	525	550	620					40	55	60	20
400	560	600	630	700	540	575	600	670					65	80	80	45
450	610	650	680	750	590	625	650	720					90	105	110	70
500	660	700	730	800	640	675	700	770					40	55	60	20
550	710	750	780	850	690	725	750	820					65	80	80	45
600	760	800	830	900	740	775	800	870					90	105	110	70
650	810	850	880	950	790	825	850	920					40	55	60	20
700	860	900	930	1000	840	875	900	970					65	80	80	45
750	910	950	980	1050	890	925	950	1020					90	105	110	70
800	960	1000	1030	1100	940	975	1000	1070					40	55	60	20
850	1010	1050	1080	1150	990	1025	1050	1120					65	80	80	45
900	1060	1100	1130	1200	1040	1075	1100	1170					90	105	110	70
950	1110	1150	1180	1250	1090	1125	1150	1220					40	55	60	20
1000	1160	1200	1230	1300	1140	1175	1200	1370					65	80	80	45

Dimension	L14				L15				L16				L17										
Ø Stroke	20	25	32	40	20	25	32	40	20	25	32	40	20	25	32	40							
50	-	-	-	75	-	-	-	-	-	-	-	-	-	-	-	-							
100				150													150	150					
150																							
200																							
250			150	150									150	-	-	-	-	-	-	-	-	-	-
300																							
350																							
400																							
450																							
500																							
550	150	150	150	-	-	-	-	-	-	-	-	-	-										
600																							
650																							
700																							
750																							
800																							
850	150	150	150	150	150	150	150	-	-	-	-	-	-	-									
900																							
950																							
1000																							

Pneumatic drives

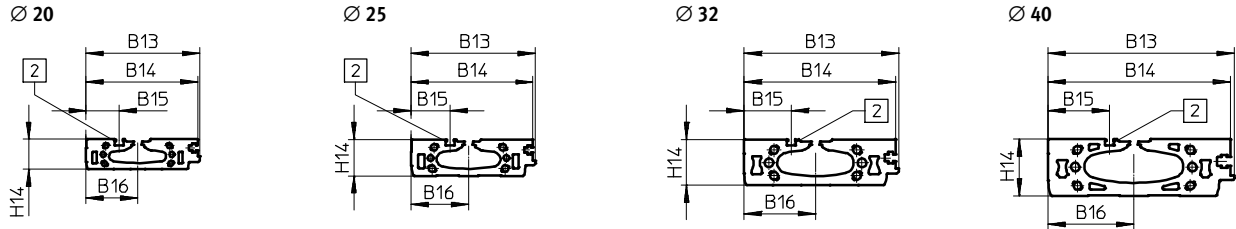
Linear drives DLGF-G

NEW

Download CAD data [→ www.festo.com](#)

Dimensions

Profile barrel



2 Slot for proximity sensor

Ø	B13	B14	B15	B16	H14
[mm]					
20	79.5	78	23	36	21
25	86.5	85	27	40	25.5
32	108	106	33	50	32
40	130	127.5	43	60	39.5



Gain space and save money

- + Thanks to a housing that is 30% narrower than on the DGC-G
- + Thanks to a symmetrical design
- + Thanks to an attractively priced drive function with no guide

Rodless cylinders › Mechanically coupled cylinders ›
Linear drives

DGC-K

Rodless cylinders > Mechanically coupled cylinders >

Linear drives

DGC-K



Overview, configuration and ordering

→ www.festo.com/catalogue/dgc-k



Additional information, support and user documentation

→ www.festo.com/sp/dgc-k



Selected types in accordance with the ATEX Directive
for explosive atmospheres

→ www.festo.com/catalogue/ex



Spare parts service



- + Compact design: 30% narrower than the basic variant DGC-G
- + Symmetrical design
- + Low moving dead weight
- + Without guide, for simple drive functions
- + Easy assembly and installation
- + Optional: Lubricant with NSF-H1 approval for the food industry

Linear drives DGC-K

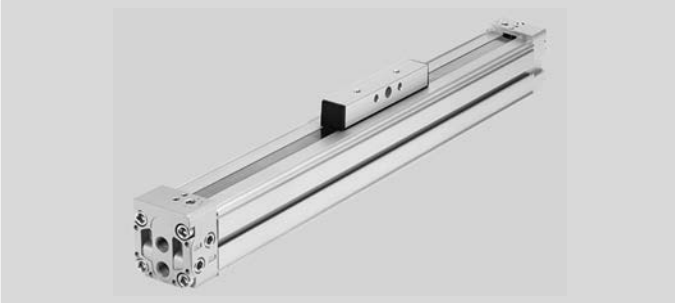
Product range overview

Type/function	PistonØ [mm]	Stroke [mm]	Force [N]	Product options					→ Page/ online
				PPV	A	GK	D2	FK	
Double-acting	DGC-...-K – Compact design								
	18, 25, 32, 40, 50, 63, 80	1 ... 8500	153 ... 3016	■	■	■	■	■	215
	DGC-...-G – Basic design								
	8, 12, 18, 25, 32, 40, 50, 63	1 ... 8500	30 ... 1870	■	■	–		■	230
	DGC-...-GF – Plain-bearing guide								
	18, 25, 32, 40, 50, 63	1 ... 8500	153 ... 1870	■	■	–	–	–	233
	DGC-...-KF – Recirculating ball bearing guide								
	8, 12, 18, 25, 32, 40, 50, 63	1 ... 8500	30 ... 1870	■	■	–	–	–	236
Without drive	DGC-...-HD – Heavy-duty design								
	18, 25, 40	10 ... 5000	153 ... 754	–	–	–	–	–	260
	DGC-FA – Passive guide axis								
	8, 12, 18, 25, 32, 40, 50, 63	1 ... 5000	–	–	–	–	–	–	dgc-fa

Product options

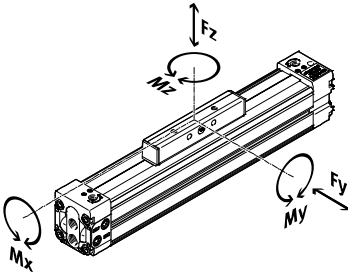
PPV	Pneumatic cushioning, adjustable at both ends	GK	Basic design	H1	Lubrication approved for use in food applications	EX2	EU certification (II 3GD)
A	Position sensing	GV	Extended piston rod			EX3	EU certification (II 2G)
		D2	Supply port at both ends	FK	Moment compensator		

Data sheet



Technical data

Dimensions → Page 222



Piston Ø	18	25	32	40	50	63	80
Pneumatic connection	M5	G1/8		G1/4		G3/8	G1/2
Stroke [mm]	1 ... 3000	1 ... 8500			1 ... 6000	1 ... 5000	1 ... 3000 ¹⁾
Cushioning	Pneumatic cushioning, adjustable at both ends						
Cushioning length [mm]	16	18	20	30			83
Theoretical force at 6 bar [N]	153	295	483	754	1178	1870	3016
Max. permissible force F _z [N]	120	330	480	800	1200	1600	2500
Max. permissible torque M _x [Nm]	0.8	1.2	1.9	3.8	6	5.7	30.6
Max. permissible torque M _y [Nm]	11	20	40	60	120	150	400
Max. permissible torque M _z [Nm]	1	3	5	8	15	24	100

1) Additional strokes on request.

Linear drives DGC-K

Data sheet

Operating conditions								
Piston Ø		18	25	32	40	50	63	80
Operating pressure	[bar]	2 ... 8				1.5 ... 8		
Ambient temperature ¹⁾	[°C]	-10 ... +60						

1) Note operating range of proximity sensors.

Materials							
Piston Ø	18	25	32	40	50	63	80
End cap	Die-cast aluminium				Gravity die-cast aluminium		
Seals	NBR						
	TPE-U (PU)						

Order code

DGC

-

K

-

-

-

PPV

-

A

-

GK

-

Type

DGC

Linear drive

Guide

K

Compact

Piston Ø [mm]

Stroke [mm]

18

1 ... 3000

25, 32, 40

1 ... 8500

50

1 ... 6000

63

1 ... 5000

80

1 ... 3000

Cushioning

PPV

Pneumatic cushioning, adjustable at both ends

Position sensing

A

Via proximity sensor

Basic design

GK

Standard piston

Supply port

-

At one end

D2

At both ends

Order example:

DGC-K-25-200-PPV-A-GK

Linear drive DGC - compact - piston diameter 25 mm - stroke 200 mm - pneumatic cushioning, adjustable at both ends - position sensing via proximity sensor - standard piston - supply port at one end

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

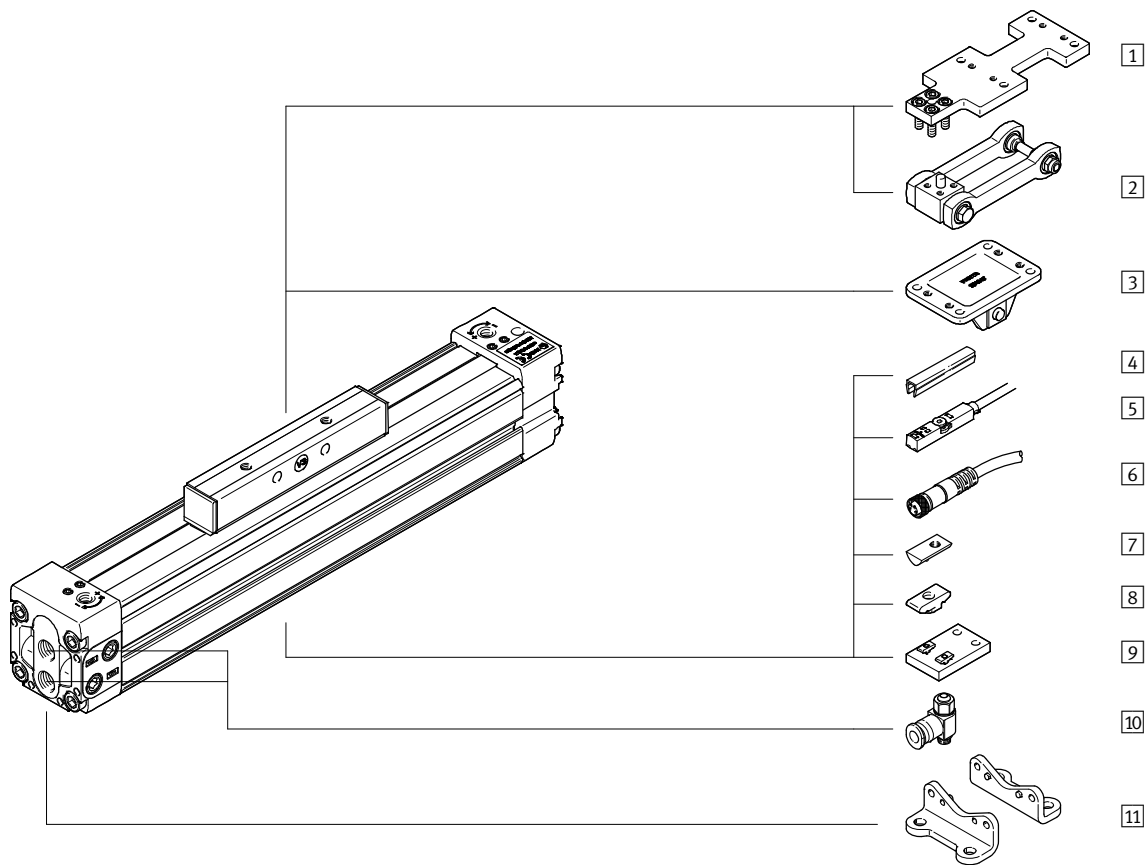
The configurator can be found under Products on the DVD or www.festo.com/catalogue/...

Enter the type code in the search field.

Accessories

01

Pneumatic drives



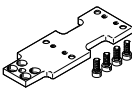
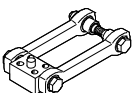
	→ Page/online
1 Adapter plate DAMF	218
2 Moment compensator DARD-...-M	218
3 Moment compensator DARD-...-S	218
4 Slot cover ABP	218
5 Proximity sensor SMT-8M/SME-8M	218
6 Connecting cable NEBU	218

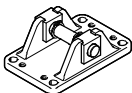
	→ Page/online
7 Slot nut for mounting slot NST	218
8 Slot nut for mounting slot ABAN	219
9 Central support MUP	219
10 One-way flow control valve GRLA	219
11 Foot mounting HP	219

Linear drives DGC-K

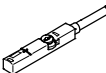
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Accessories – Ordering data

	For Ø	Part no.	Type
1 Adapter plate Dimensions online: → dgc			
	18	2349281	DAMF-18-FKP
	25	2349282	DAMF-25-FKP
	32	2349283	DAMF-32-FKP
	40	2349284	DAMF-40-FKP
	50	2349285	DAMF-50-FKP
	63	2349286	DAMF-63-FKP
	80	2349287	DAMF-80-FKP
2 Moment compensator Dimensions online: → dgc			
	18	2349274	DARD-L1-18-M
	25	2349275	DARD-L1-25-M
	32	2349276	DARD-L1-32-M
	40	2349277	DARD-L1-40-M
	50	2349278	DARD-L1-50-M
	63	2349279	DARD-L1-63-M
	80	2349280	DARD-L1-80-M

	For Ø	Part no.	Type
3 Moment compensator Dimensions online: → dgc			
	18	8001411	DARD-L1-18-S
	25	8001412	DARD-L1-32-S
	32	8001412	DARD-L1-32-S
	40	8001413	DARD-L1-40-S
	50	8001414	DARD-L1-63-S
	63	8001414	DARD-L1-63-S
	80	8001415	DARD-L1-80-S
4 Slot cover¹⁾			
	32, 40	151681	ABP-5
	50, 63, 80	151682	ABP-8
	18, 25, 32, 40, 50, 63, 80	563360	ABP-5-S1

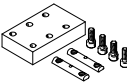
1) Packaging unit 2x 0.5 m.

	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
5 Proximity sensor for T-slot, magneto-resistive – N/O contact ²⁾ Data sheets → Page 1206					
	18 ... 80	PNP, cable	2.5	★ 574335	SMT-8M-A-PS-24V-E-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-A-PS-24V-E-0,3-M8D
		PNP, plug	0.3	★ 574337	SMT-8M-A-PS-24V-E-0,3-M12
		NPN, cable	2.5	★ 574338	SMT-8M-A-NS-24V-E-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-A-NS-24V-E-0,3-M8D
Magneto-resistive – N/C contact Data sheets → Page 1206					
	18 ... 80	PNP, cable	7.5	★ 574340	SMT-8M-A-PO-24V-E-7,5-OE
Magnetic reed – N/O contact Data sheets → Page 1201					
	18 ... 80	Contacting, cable	2.5	★ 543862	SME-8M-DS-24V-K-2,5-OE
		Contacting, cable	5.0	★ 543863	SME-8M-DS-24V-K-5,0-OE
		Contacting, cable	2.5	★ 543872	SME-8M-ZS-24V-K-2,5-OE
		Contacting, plug	0.3	★ 543861	SME-8M-DS-24V-K-0,3-M8D
Magnetic reed – N/C contact Data sheets → Page 1203					
	18 ... 80	Contacting, cable	7.5	★ 546799	SME-8M-DO-24V-K-7,5-OE

	For Ø	Connection	Cable length [m]	Part no.	Type
6 Connecting cable, straight socket Data sheets → Page 1543					
	18 ... 80	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
		M12x1, 5-pin	2.5	★ 541363	NEBU-M12G5-K-2.5-LE3
			5.0	★ 541364	NEBU-M12G5-K-5-LE3
Angled socket Data sheets → Page 1543					
	18 ... 80	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3
		M12x1, 5-pin	2.5	★ 541367	NEBU-M12W5-K-2.5-LE3
			5.0	★ 541370	NEBU-M12W5-K-5-LE3

2) When using the variant DGC-K...D2 (supply port at both ends), it is only possible to use proximity sensors that can be inserted in the slot from above.

Accessories – Ordering data

	For Ø	Part no.	Type
7/8 Slot nut Dimensions online: → dgc			
	18, 25	526091	NST-HMV-M4-2),3)
	32, 40	150914	NST-5-M5
	50, 63, 80	150915	NST-8-M6
	18, 25	8003032	ABAN-1M4-5 ¹⁾
9 Central support Dimensions online: → dgc			
	18	150736	MUP-18/25
		1711704	MUP-18/25-P
	25	150736	MUP-25/25
		1711704	MUP-18/25-P
	32	150737	MUP-32
	40	150738	MUP-40
	50	150739	MUP-50
	63	150800	MUP-63
	80	158455	MUP-80

	For Ø	Connection		Part no.	Type
		Thread	O.D.		
10 One-way flow control valve with slotted head screw, metal Data sheets → Page 1031					
	18	M5	3	★ 193137	GRLA-M5-QS-3-D
			6	★ 193139	GRLA-M5-QS-6-D
	25, 32	G1/8	8	★ 534337	GRLA-1/8-QS-8-RS-D
	40, 50	G1/4	8	★ 534339	GRLA-1/4-QS-8-RS-D
	63	G3/8	8	★ 534342	GRLA-3/8-QS-8-RS-D
	80	G1/2	12	★ 193152	GRLA-1/2-QS-12-D

	For Ø	Part no.	Type
11 Foot mounting Dimensions online: → dgc			
	18	158472	HP-18
	25	150731	HP-25
	32	150732	HP-32
	40	150733	HP-40
	50	150734	HP-50
	63	150735	HP-63
	80	158453	HP-80

1) Packaging unit 4 pieces.

2) Packaging unit 10 pieces.

3) Piston size 18 and 25 cannot be used with DGC-...-D2 (supply port at both ends).

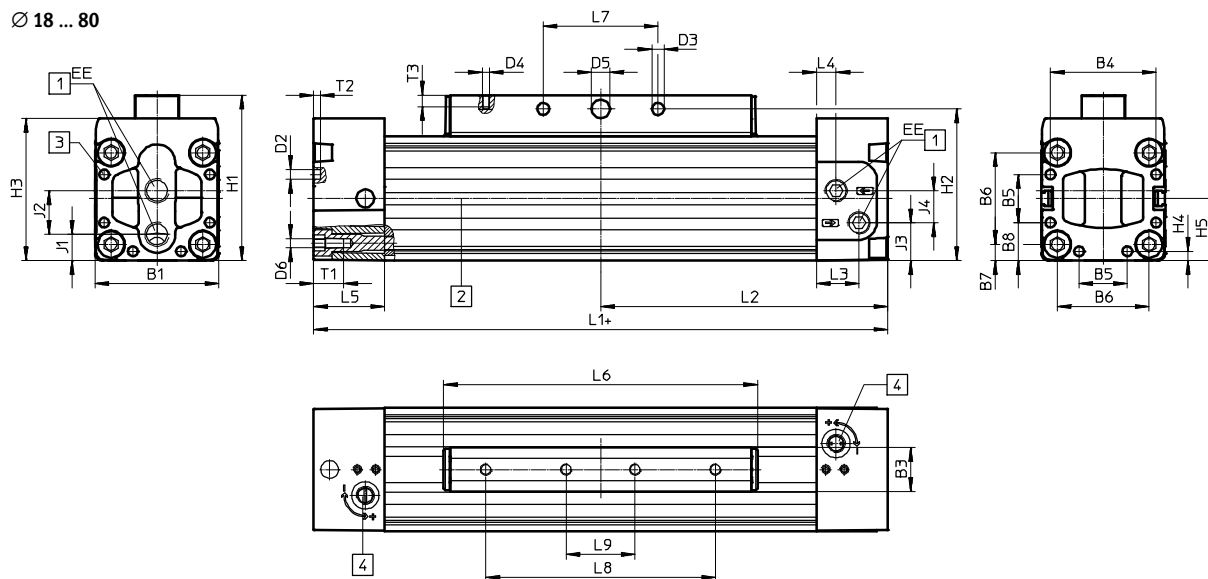
Linear drives DGC-K

01

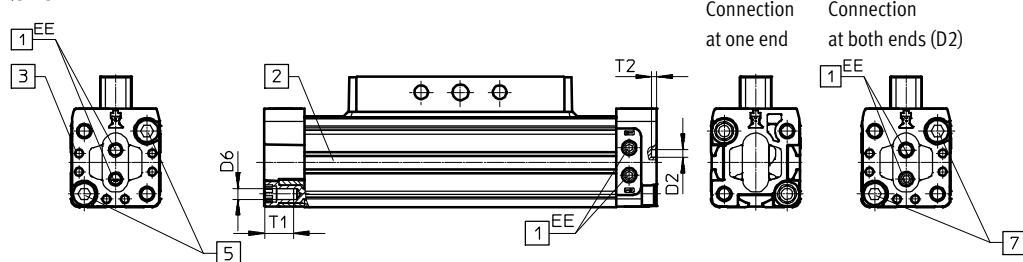
Dimensions

Download CAD data → www.festo.com

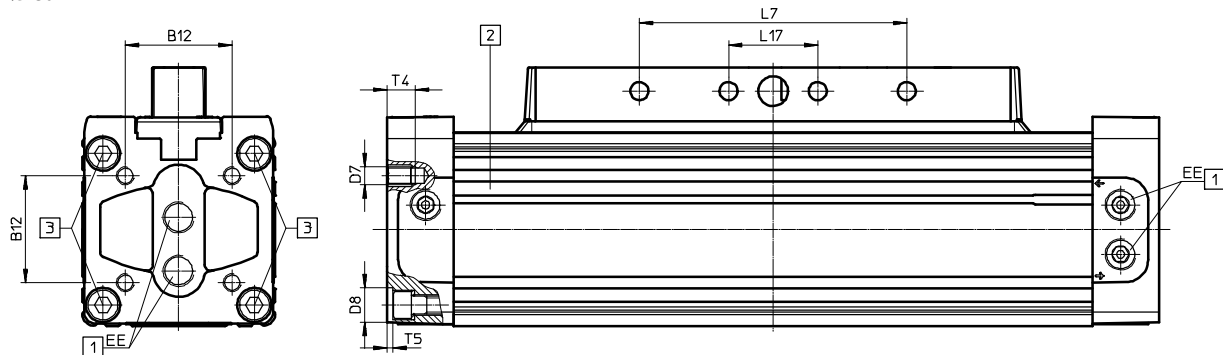
Ø 18 ... 80



Ø 18



Ø 80



- 1 Supply port options on 3 sides
- 2 Slot for proximity sensor

- 3 Mounting hole for foot mounting HP
- 4 Regulating screw for adjustable end-position cushioning

- 5 No mounting thread with Ø 18 + plus stroke length
- 7 No mounting thread with Ø 18, in combination with variant D2

Linear drives DGC-K

Dimensions

Download CAD data → www.festo.com

∅	B1	B3	B4	B5	B6	B7	B8	B12	D2 ∅	D3 ∅
[mm]		±0.2								+0.2
18	34 ^{+0.2/-0.05}	12	28	7	24	5	13.5	–	3	5.2
25	45 ^{+0.4}	19	39.1	18	32.5	6.3	13.5	–	3.3	5.2
32	54 ^{+0.4}	19	46	21	40	7	16.5	–	4.3	5.2
40	64 ^{+0.4}	21	53	28	49	7.5	18	–	4.3	6.5
50	90 ^{+0.4}	24	76	44	72	9	23	–	6.3	8.5
63	106 ^{+0.4}	24	89	44	83	11.5	31	–	6.3	8.5
80	130 ^{+0.8}	36	–	–	102	14	29	72	–	12.2

∅	D4	D5 ∅	D6	D7	D8 ∅	EE	H1	H2	H3	H4	H5
[mm]											
18	M5	6 ^{H7}	M5	–	–	M5	49.8	43.8	37.6	3	17
25	M5	8 ^{H7}	M4	–	–	G1/8	63	57	51	3	22.5
32	M5	8 ^{H7}	M5	–	–	G1/8	72	66	61.8	4	27
40	M6	10 ^{H7}	M5	–	–	G1/4	86	78	71.8	5.5	32
50	M8	12 ^{H7}	M6	–	–	G1/4	115	106	99	7	45
63	M8	12 ^{H7}	M8	–	–	G3/8	131	122	115	8.5	53
80	M12	20 ^{H10}	–	M12	23	G1/2	174	158	140.5	–	85

∅	J1	J2	J3	J4	L1		L2		L3	L4	L5
					GK	GV	GK	GV			
[mm]											
18	10.7	11.1	12.2	10.4	150	230	75	115	5	5	15.5
25	9	16.7	15.7	13	200	300	100	150	17	7	25
32	11.4	19	17.1	14	250	380	125	190	18.5	8.5	31
40	13.5	22	19.5	21	300	470	150	235	11.5	11.5	31
50	21	30.8	27	29.3	350	550	175	275	14	14	34
63	25	36	32	33	400	650	200	325	13.5	13.5	34
80	37	36	48.1	33.3	520	–	260	–	19	19	45

∅	L6		L7	L8	L9	L17	T1	T2	T3	T4	T5
	GK	GV									
[mm]											
18	85	165	30±0.1	60±0.1	–	–	11	2	10	–	–
25	109	209	30±0.1	50±0.1	–	–	13	2	7.5	–	–
32	135	265	50±0.1	100±0.1	30±0.1	–	13.2	3	7.5	–	–
40	171	341	70±0.1	130±0.1	40±0.1	–	13.2	4	10.5	–	–
50	206	406	80±0.1	150±0.1	50±0.1	–	15.2	6	12.5	–	–
63	234	484	110±0.1	190±0.1	70±0.1	–	21.2	6	12.5	–	–
80	334	–	180±0.15	230±0.15	115±0.15	60±0.15	–	–	19	18	4

Length tolerance											
For stroke	[mm]	≤ 1000	≤ 2000	≤ 3000	≤ 4000	≤ 5000	≤ 6000	≤ 7000	≤ 8000	≤ 9000	
L1	[mm]	±0.45	±0.55	±0.70	±0.75	±0.80	±0.85	±1.10	±1.15	±1.20	

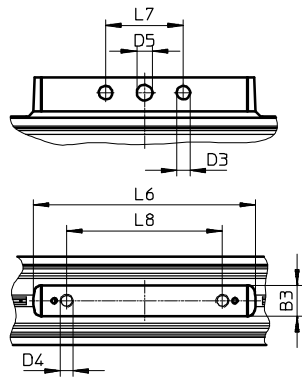
Linear drives DGC-K

Dimensions

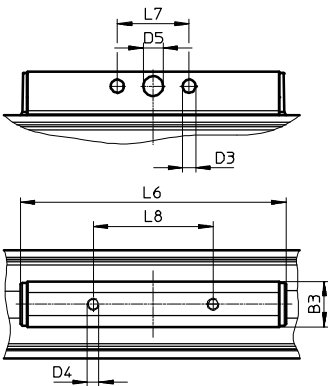
Download CAD data [→ www.festo.com](#)

GK – Standard piston

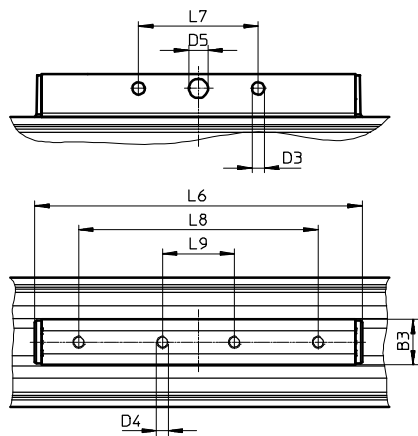
Ø 18



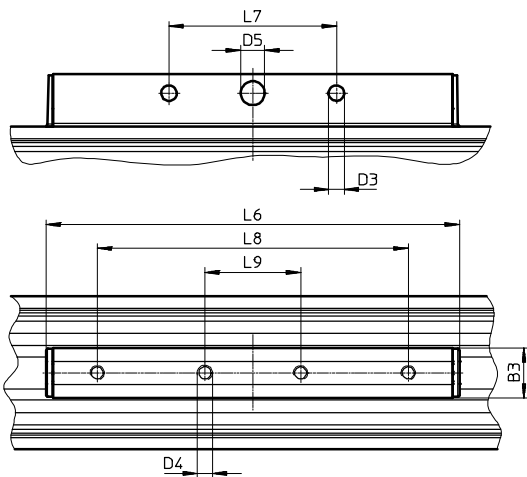
Ø 25



Ø 32



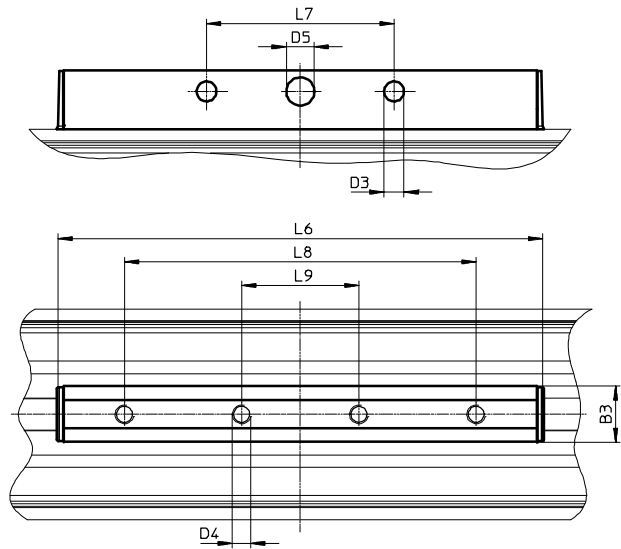
Ø 40



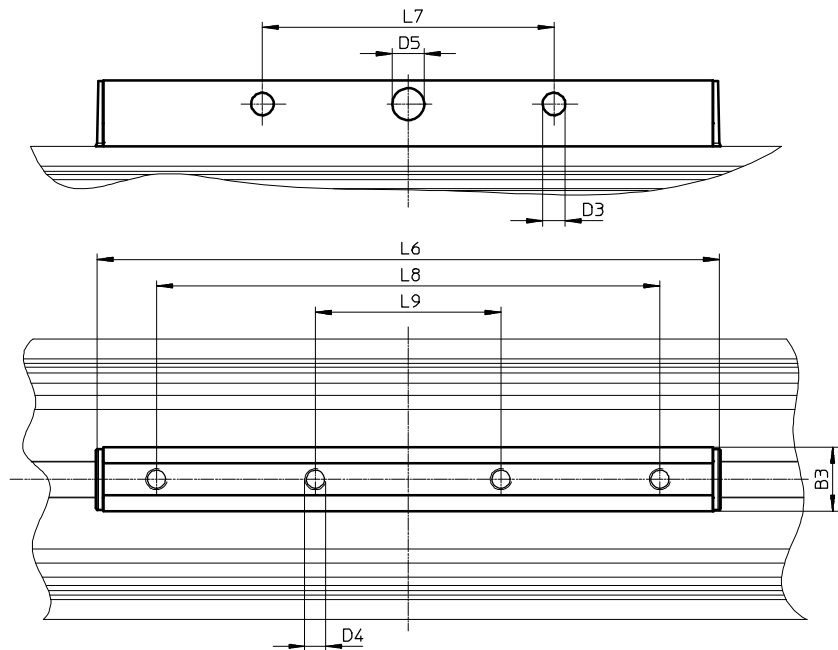
Ø	B3	D3	D4	D5	L6	L7	L8	L9
[mm]	±0.2	Ø +0.2		Ø H7		±0.1	±0.1	±0.1
18	12	5.2	M5	6	85	30	60	–
25	19	5.2	M5	8	109	30	50	–
32	19	5.2	M5	8	135	50	100	30
40	21	6.5	M6	10	171	70	130	40

Dimensions

GK – Standard piston
Ø 50



Ø 63

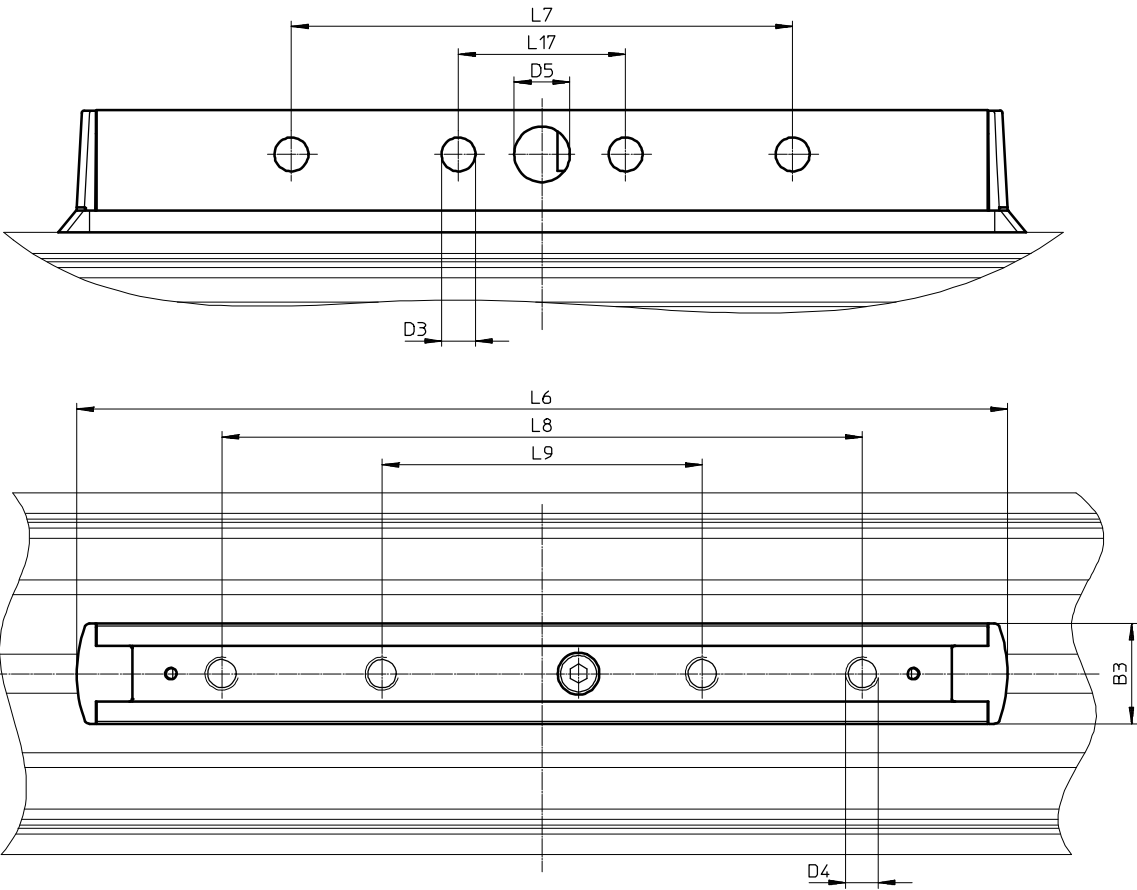


Ø	B3	D3	D4	D5	L6	L7	L8	L9
[mm]	±0.2	Ø +0.2		Ø H7		±0.1	±0.1	±0.1
50	24	8.5	M8	12	206	80	150	50
63	24	8.5	M8	12	234	110	190	70

Linear drives DGC-K

Download CAD data [→ www.festo.com](#)

Dimensions
GK – Standard piston
Ø 80

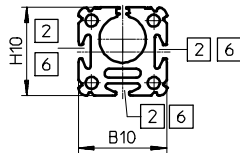


Ø	B3	D3	D4	D5	L6	L7	L8	L9	L17
[mm]	±0.2	Ø +0.2		Ø H10		±0.15	±0.15	±0.15	
80	36	12.2	M12	20	334	180	230	115	60

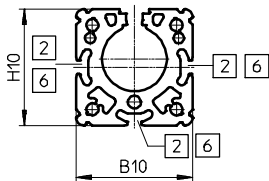
Dimensions

Profile barrel

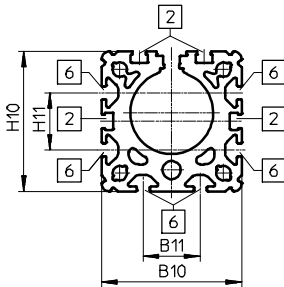
Ø 18



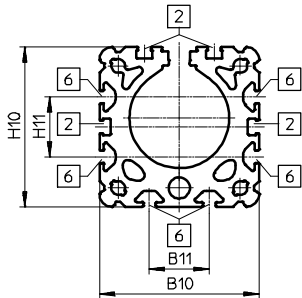
Ø 25



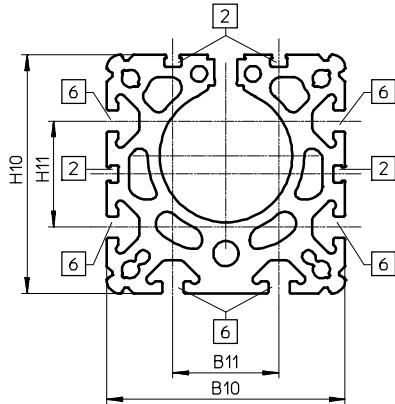
Ø 32



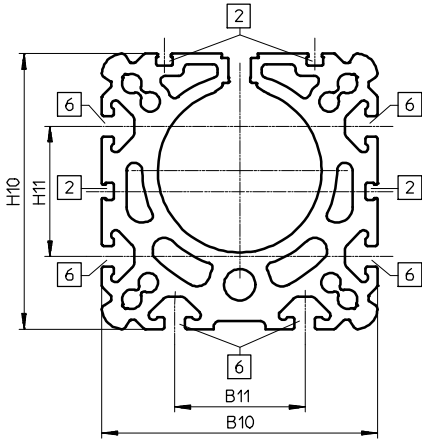
Ø 40



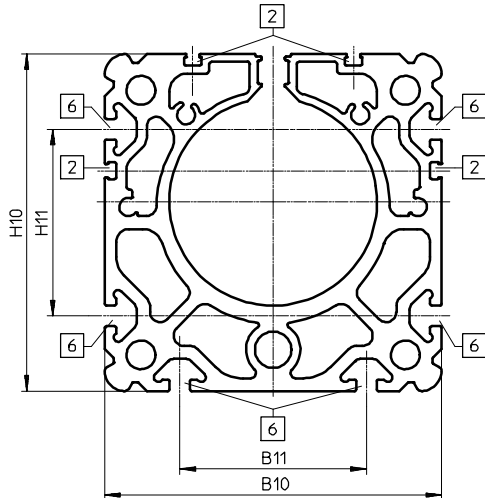
Ø 50



Ø 63

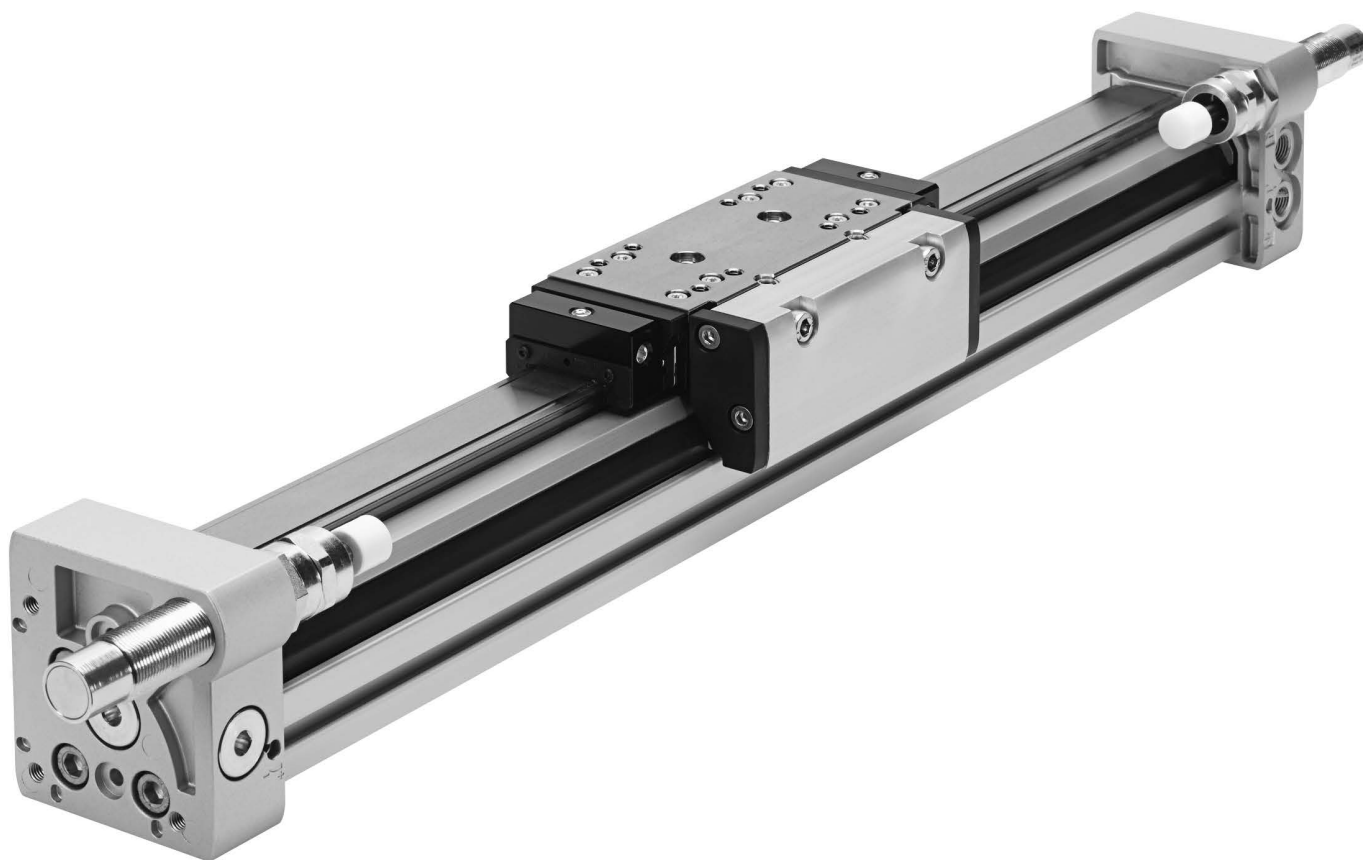


Ø 80



- 2 Slot for proximity sensor
- 6 Mounting slot for slot nut

Ø	B10	B11	H10	H11
[mm]				
18	34	–	34	–
25	45	–	45	–
32	54	22	54	22
40	64	24	64	24
50	90	40	90	40
63	106	50	106	50
80	130	72	130	72



Gain time and increase safety

- + Thanks to all connections being accessible from one side
- + Thanks to quick and easy mounting
- + With the optional integrated clamping unit

Rodless cylinders › Mechanically coupled cylinders ›
Linear drives

DGC

DGC-G
DGC-GF
DGC-KF

Rodless cylinders > Mechanically coupled cylinders >

Linear drives

DGC



Overview, configuration and ordering

→ www.festo.com/catalogue/dgc

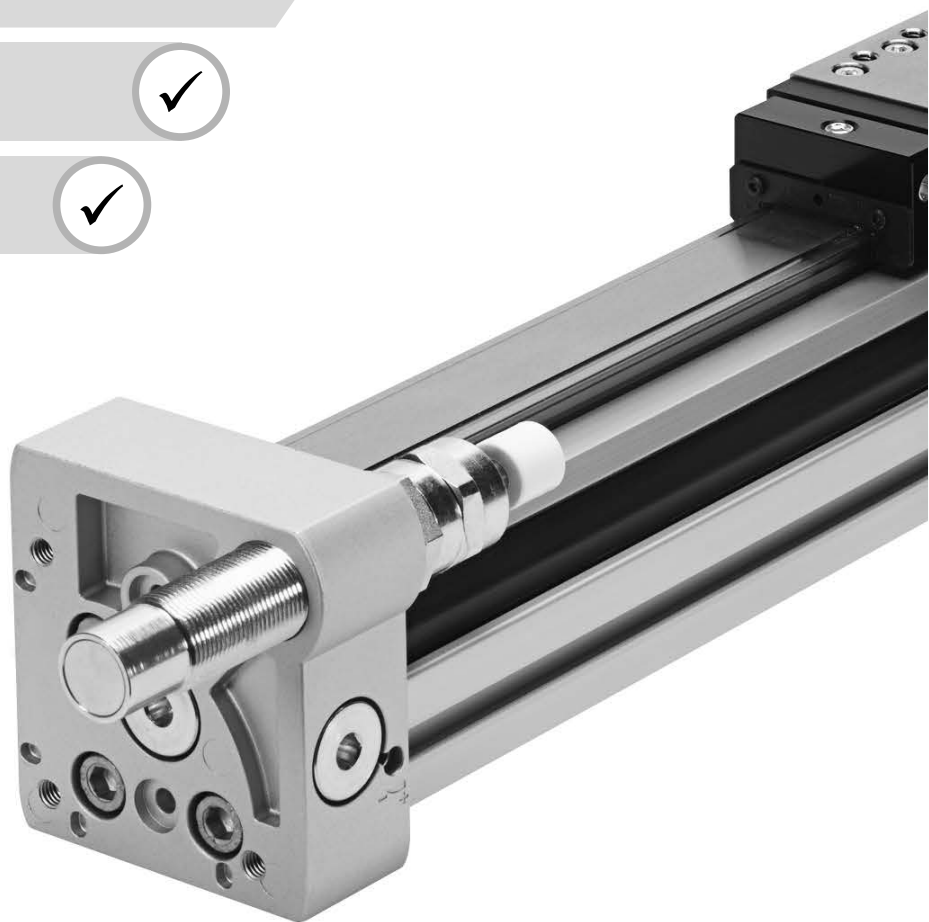


Additional information, support and user documentation

→ www.festo.com/sp/dgc



Spare parts service



- + Basic design, plain or recirculating ball bearing guide
- + High-precision guide
- + Optimised sealing system
- + All settings accessible from one side
- + Optionally with variable end stops and intermediate position module
- + Optional: NSF-H1 lubricant for the food industry
- + Optional: clamping unit for holding loads

Product range overview

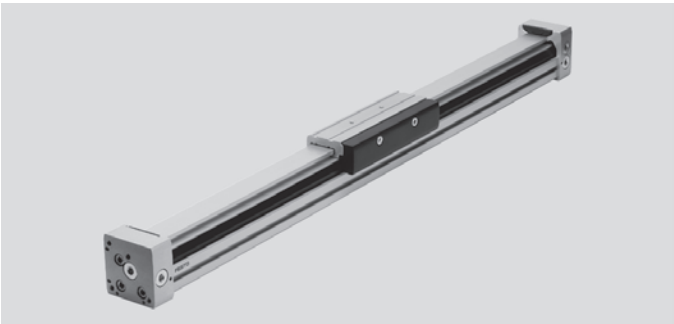
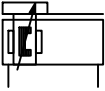
Type/function	PistonØ [mm]	Stroke [mm]	Force [N]	Product options					➔ Page/ online
				P	PPV	YSR	YSRW	A	
Double-acting	DGC-...-K – Compact design								
	18, 25, 32, 40, 50, 63, 80	1 ... 8500	153 ... 3016	–	■	–	–	■	215
	DGC-...-G – Basic design								
	8, 12, 18, 25, 32, 40, 50, 63	1 ... 8500	30 ... 1870	■	■	■	■	■	230
	DGC-...-GF – Plain-bearing guide								
	18, 25, 32, 40, 50, 63	1 ... 8500	153 ... 1870	–	■	■	■	■	233
	DGC-...-KF – Recirculating ball bearing guide								
	8, 12, 18, 25, 32, 40, 50, 63	1 ... 8500	30 ... 1870	■	■	■	■	■	236
Without drive	DGC-...-HD – Heavy-duty design								
	18, 25, 40	10 ... 5000	153 ... 754	–	–	■	■	■	260
	DGC-FA – Passive guide axis								
	8, 12, 18, 25, 32, 40, 50, 63	1 ... 5000	–	■	–	■	■	–	dgc-fa

Product options

N	NPT thread	YSRW	Self-adjusting shock absorber, progressive	H1	Food-safe lubrication	1H	Clamping unit
P	Elastic cushioning rings/plates at both ends	A	Position sensing	C	Lubrication adapter	PN	Pneumatically actuated clamping unit
PPV	Pneumatic cushioning, adjustable at both ends	DL	Supply port at the left end or at both ends	KL	Additional slide on left	EX2	EU certification (II 3GD)
YSR	Self-adjusting shock absorber	GP	Protected recirculating ball bearing guide	KR	Additional slide on right	EX3	EU certification (II 2G)
						O	Without operating instructions

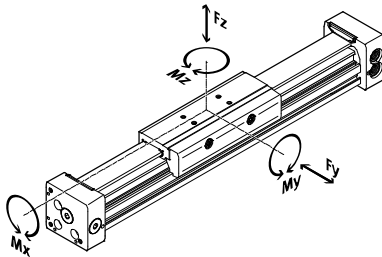
01

Data sheet



Technical data

Dimensions → Page 241



Piston Ø	8	12	18	25	32	40	50	63
Pneumatic connection	M5			G1/8		G1/4		G3/8
Stroke [mm]	1 ... 1500	1 ... 2000	1 ... 3000	1 ... 8500			1 ... 5000	
Cushioning								
DGC-...-P	Elastic cushioning rings/plates at both ends		–					
DGC-...-PPV	–		Pneumatic cushioning, adjustable at both ends					
DGC-...-YSR...	Self-adjusting shock absorber at both ends		–					
Cushioning length ¹⁾ [mm]	–		16.5	15.5	17.5	29.5	29.8	31.1
Theoretical force at 6 bar [N]	30	68	153	295	483	754	1178	1870
Max. permissible force F _y [N]	150	300	70	180	250	370	480	650
Max. permissible force F _z [N]	150	300	340	540	800	1100	1600	2000
Max. permissible torque M _x [Nm]	0.5	1.3	1.9	4	9	12	20	26
Max. permissible torque M _y [Nm]	2	5	12	20	40	60	150	150
Max. permissible torque M _z [Nm]	2	5	4	5	12	25	37	48

1) With PPV cushioning.

Operating conditions

PistonØ	8	12	18	25	32	40	50	63
Operating pressure [bar]	2.5 ... 8		2 ... 8			1.5 ... 8		
Ambient temperature ²⁾ [°C]	+5 ... +60		-10 ... +60					

2) Note operating range of proximity sensors.

Materials

Guide rail	Anodised aluminium
Slide	Anodised aluminium
End cap	Anodised aluminium
Cylinder barrel	Anodised aluminium
Piston seal	TPE-U (PU)
Sealing band/cover band	TPE-U (PU)
Slide elements	PA

Order code

01

Pneumatic drives

DGC

—

—

—

G

—

—

A

Type	
DGC	Linear drive

Piston Ø [mm]	
Stroke [mm]	
8	1 ... 1500
12	1 ... 2000
18	1 ... 3000
25, 32, 40	1 ... 8500
50, 63	1 ... 5000

Guide	
G	Basic design

Cushioning		
P	Elastic cushioning rings/ plates at both ends	1
PPV	Pneumatic cushioning, adjustable at both ends	2
YSR	Self-adjusting shock absorber at both ends	1
YSRW	Self-adjusting progressive shock absorber at both ends	1

Position sensing	
A	Via proximity sensor

- 1 Only with piston Ø 8 and 12
- 2 Not with piston Ø 8 and 12

Order example:
DGC-25-200-G-PPV-A
Linear drive DGC - piston diameter 25 mm - stroke 200 mm - basic design - pneumatic cushioning, adjustable at both ends - position sensing via proximity sensor

Ordering – Product options

Configurable
product

This product and all its options can
be ordered using the configurator.

The configurator can be found under
Products on the DVD or
➔ www.festo.com/catalogue/...

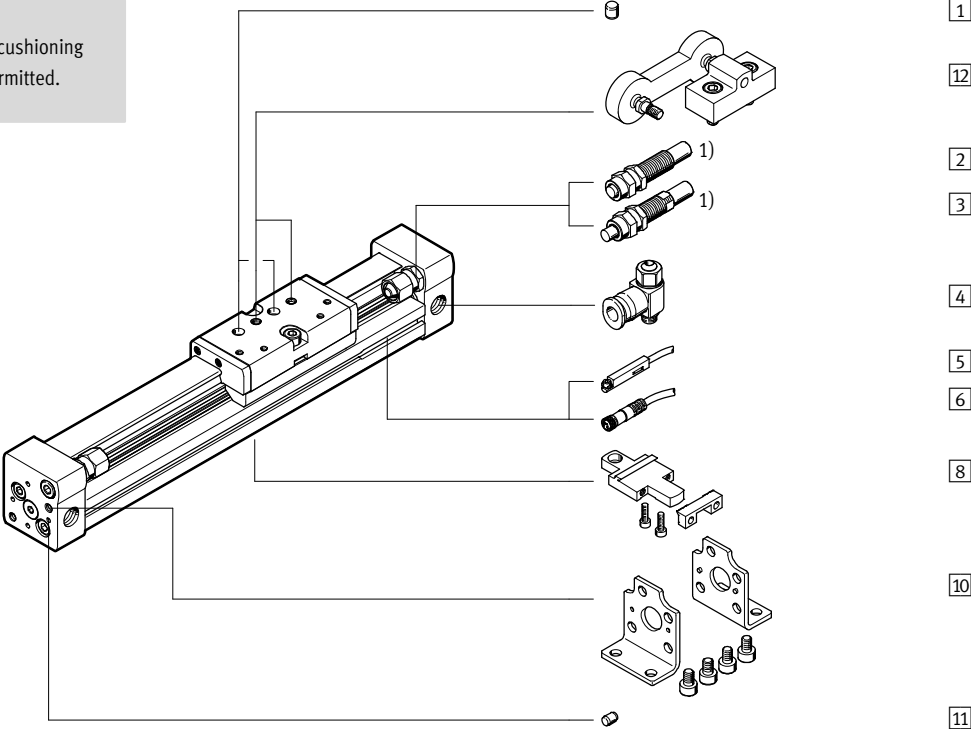
Enter the type code in the search field.

01

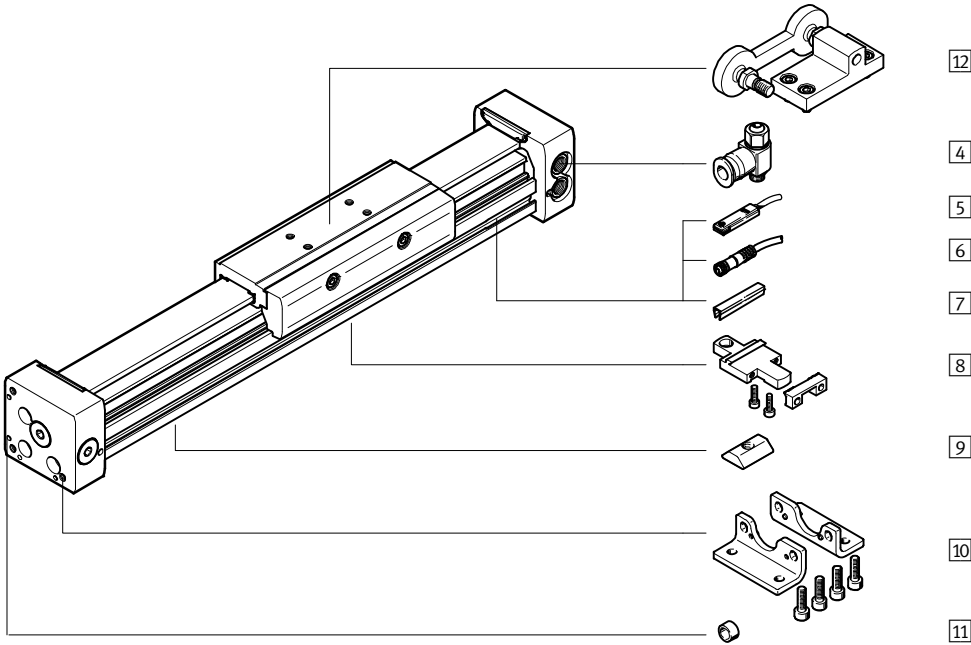
Accessories

DGC-8/-12

Note
1) Operation without cushioning components is not permitted.



DGC-18 ... 63



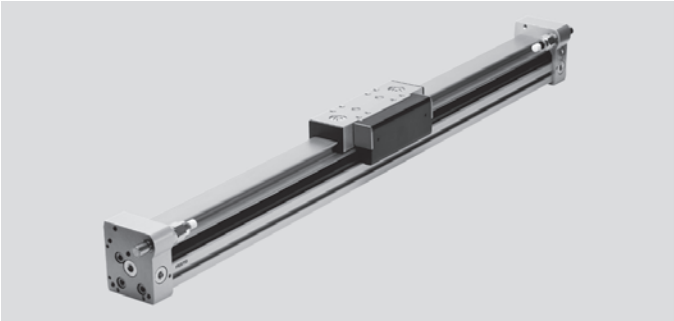
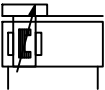
	→ Page/online
1 Centring pin ZBS ¹⁾	238
2 Shock absorber YSR	231
3 Shock absorber YSRW-DGC	238
4 One-way flow control valve GRLA	239
5 Proximity sensor SME/SMT	239
6 Connecting cable NEBU	239

	→ Page/online
7 Slot cover ABP-S	240
8 Profile mounting MUC	240
9 Slot nut HMBN	240
10 Foot mounting HPC	240
11 Centring pin ZBS/centring sleeve ZBH	238
12 Moment compensator FKC	240

1) Included in the scope of delivery of the drive.

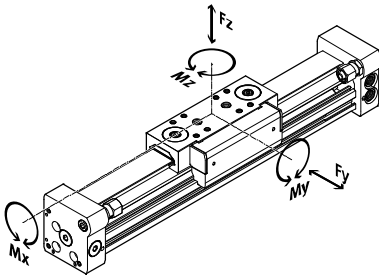
Linear drives DGC-GF, with plain-bearing guide

Data sheet



Technical data

Dimensions → Page 246



Pneumatic drives

Piston Ø	18	25	32	40	50	63
Pneumatic connection	M5	G1/8		G1/4		G3/8
Stroke [mm]	1 ... 3000	1 ... 8500			1 ... 5000	
Cushioning						
DGC-...-PPV	Pneumatic cushioning, adjustable at both ends					
DGC-...-YSR...	Self-adjusting shock absorber at both ends					
Cushioning length ¹⁾ [mm]	16.5	15.5	17.5	29.5	29.8	31.1
Theoretical force at 6 bar [N]	153	295	483	754	1178	1870
Max. permissible force F _y [N]	440	640	900	1380	1500	2300
Max. permissible force F _z [N]	540	1300	1800	2000	2870	4460
Max. permissible torque M _x [Nm]	3.4	8.5	15	28	54	96
Max. permissible torque M _y [Nm]	20	40	70	110	270	450
Max. permissible torque M _z [Nm]	8.5	20	33	54	103	187

1) With PPV cushioning.

Operating conditions						
Piston Ø	18	25	32	40	50	63
Operating pressure [bar]	2 ... 8			1.5 ... 8		
Ambient temperature ²⁾ [°C]	−10 ... +60					

2) Note operating range of proximity sensors.

Materials						
Guide rail	Anodised aluminium					
Slide	Anodised aluminium					
End cap	Anodised aluminium					
Cylinder barrel	Anodised aluminium					
Piston seal	TPE-U (PU)					
Sealing band/cover band	TPE-U (PU)					
Slide elements	PA					

Linear drives DGC-GF, with plain-bearing guide

01 Order code

Pneumatic drives

		DGC	–		–		–	GF	–		–	A
Type												
DGC	Linear drive											
Piston Ø [mm]												
	Stroke [mm]											
18	1 ... 3000											
25, 32, 40	1 ... 8500											
50, 63	1 ... 5000											
Guide												
GF	Plain-bearing guide											
Cushioning												
PPV	Pneumatic cushioning, adjustable at both ends											
YSR	Self-adjusting shock absorber at both ends											
YSRW	Self-adjusting progressive shock absorber at both ends											
Position sensing												
A	Via proximity sensor											

Order example:
DGC-18-250-GF-PPV-A
Linear drive DGC - piston diameter 18 mm - stroke 250 mm - plain-bearing guide - pneumatic cushioning, adjustable at both ends - position sensing via proximity sensor

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

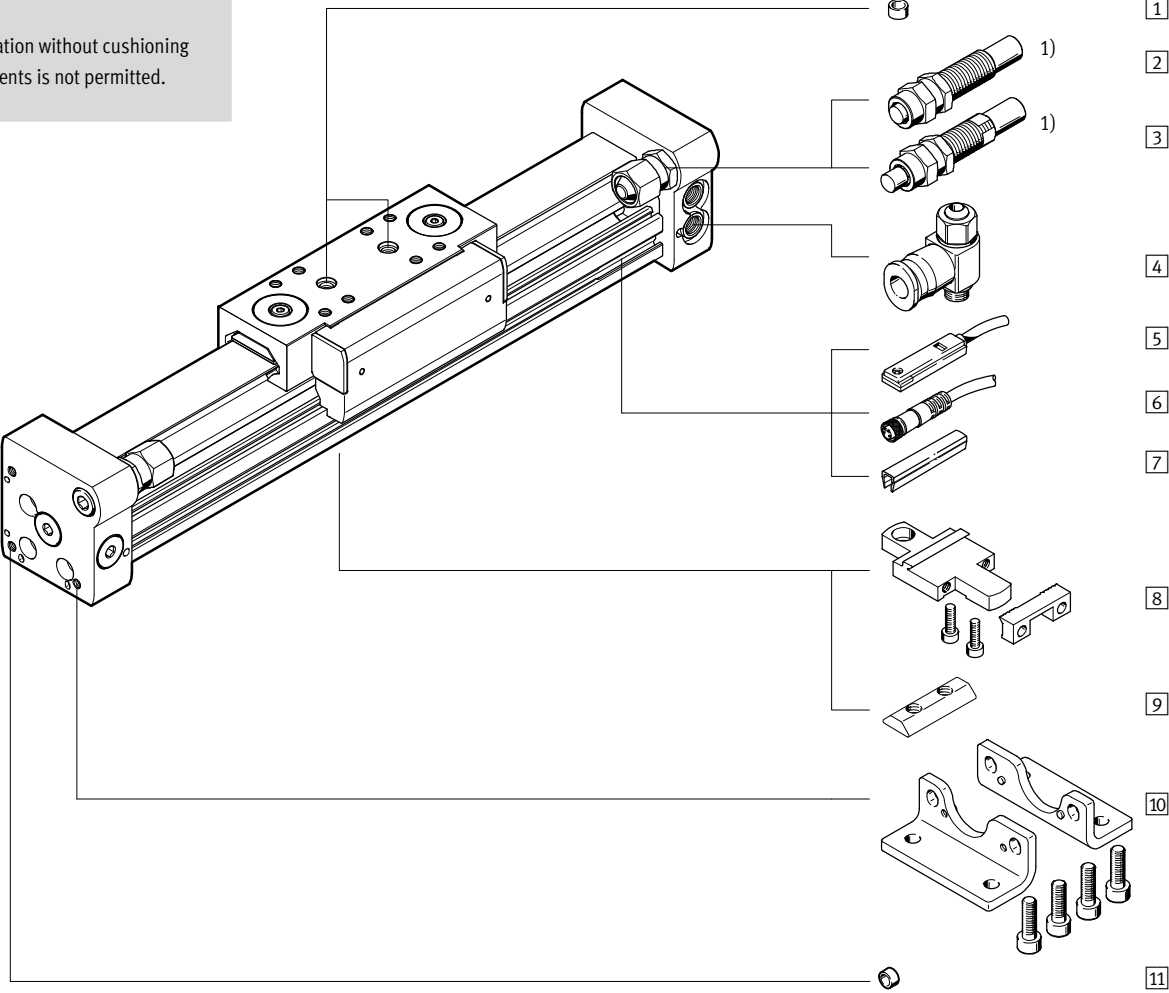
The configurator can be found under Products on the DVD or
➔ www.festo.com/catalogue/...

Enter the type code in the search field.

Linear drives DGC-GF, with plain-bearing guide

Accessories

Note
1) Operation without cushioning components is not permitted.



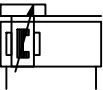
	→ Page/online
1 Centring pin ZBS/centring sleeve ZBH ¹⁾	238
2 Shock absorber YSR	234
3 Shock absorber YSRW-DGC	238
4 One-way flow control valve GRLA	239
5 Proximity sensor SME-/SMT-8	239
6 Connecting cable NEBU	239

	→ Page/online
7 Slot cover ABP-S	240
8 Profile mounting MUC	240
9 Slot nut HMBN	240
10 Foot mounting HPC	240
11 Centring sleeve ZBH	238

1) Included in the scope of delivery of the axis.

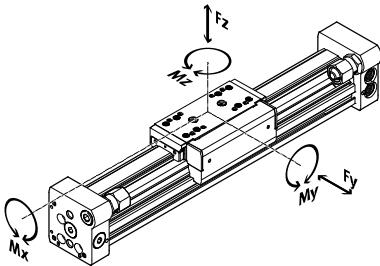
Linear drives DGC-KF, with recirculating ball bearing guide

01 Data sheet



Technical data

Dimensions → Page 251



Piston Ø	8	12	18	25	32	40	50	63
Pneumatic connection	M5			G1/8		G1/4		G3/8
Stroke [mm]	1 ... 1300	1 ... 1900	1 ... 3000	1 ... 8500			1 ... 5000	
Cushioning								
DGC-...-P	Elastic cushioning rings/plates at both ends		–					
DGC-...-PPV	–		Pneumatic cushioning, adjustable at both ends					
DGC-...-YSR...	Self-adjusting shock absorber at both ends							
Cushioning length ¹⁾ [mm]	–		16.5	15.5	17.5	29.5	29.8	31.1
Theoretical force at 6 bar [N]	30	68	153	295	483	754	1178	1870
Max. permissible force F _y [N]	300	650	1850	3050	3310	6890	6890	15200
Max. permissible force F _z [N]	300	650	1850	3050	3310	6890	6890	15200
Max. permissible torque M _x [Nm]	1.7	3.5	16	36	54	144	144	529
Max. permissible torque M _y [Nm]	4.5	10	51	97	150	380	634	1157
Max. permissible torque M _z [Nm]	4.5	10	51	97	150	380	634	1157

1) With PPV cushioning.

Operating conditions									
Piston Ø		8	15	18	25	32	40	50	63
Operating pressure	[bar]	2.5 ... 8		2 ... 8			1.5 ... 8		
Ambient temperature ²⁾	[°C]	-10 ... +60							

2) Note operating range of proximity sensors.

Materials	
Guide rail	High-alloy steel
Slide	High-alloy steel
End cap	Anodised aluminium
Cylinder barrel	Anodised aluminium
Piston seal	TPE-U (PU)
Sealing band/cover band	TPE-U (PU)
Slide elements	PA

Linear drives DGC-KF, with recirculating ball bearing guide

01

Pneumatic drives

Order code

		DGC	–		–		–	KF	–		–	A
Type												
DGC	Linear drive											
Piston Ø [mm]												
	Stroke [mm]											
8	1 ... 1300											
12	1 ... 1900											
18	1 ... 3000											
25, 32, 40	1 ... 8500											
50, 63	1 ... 5000											
Guide												
KF	Recirculating ball bearing guide											
Cushioning												
P	Elastic cushioning rings/ plates at both ends	1										
PPV	Pneumatic cushioning, adjustable at both ends	2										
YSR	Self-adjusting shock absorber at both ends											
YSRW	Self-adjusting progressive shock absorber at both ends											
Position sensing												
A	Via proximity sensor											

1 Only with piston Ø 8 and 12

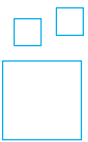
2 Not with piston Ø 8 and 12

Order example:

DGC-12-200-KF-YSRW-A

Linear drive DGC - piston diameter 12 mm - stroke 200 mm - recirculating ball bearing guide - shock absorber at both ends, self-adjusting, progressive - position sensing via proximity sensor

Ordering – Product options

**Configurable
product****This product and all its options can
be ordered using the configurator.**The configurator can be found under
Products on the DVD or
→ www.festo.com/catalogue/...

Enter the type code in the search field.

Rodless cylinders > Mechanically coupled cylinders >

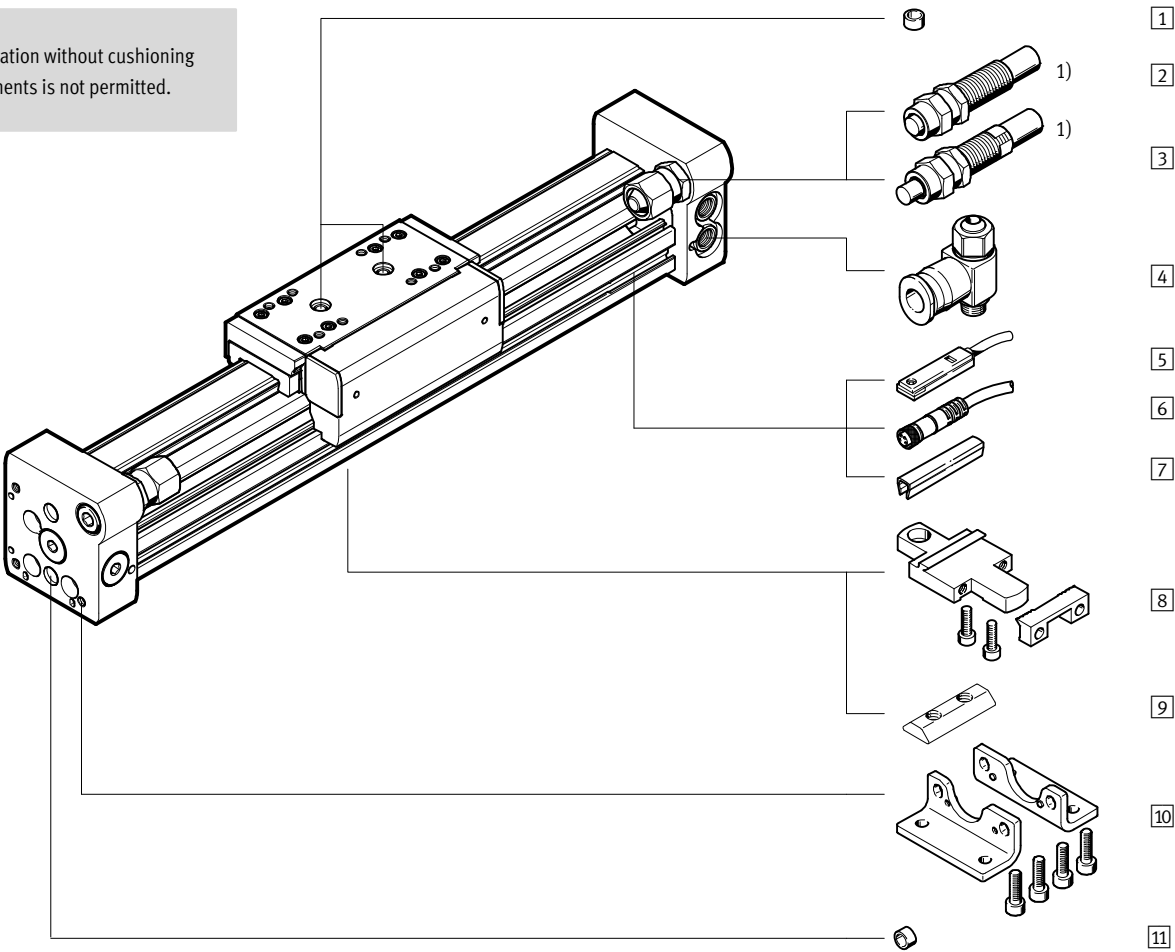
Linear drives DGC-KF, with recirculating ball bearing guide

01

Accessories

Note

1) Operation without cushioning components is not permitted.



		→ Page/online
1	Centring pin ZBS/centring sleeve ZBH ¹⁾	238
2	Shock absorber YSR	237
3	Shock absorber YSRW-DGC	238
4	One-way flow control valve GRLA	239
5	Proximity sensor SME-/SMT-8	239
6	Connecting cable NEBU	239

1) Included in the scope of delivery of the axis.

		→ Page/online
7	Slot cover ABP-S	240
8	Profile mounting MUC	240
9	Slot nut HMBN	240
10	Foot mounting HPC	240
11	Centring pin ZBS/centring sleeve ZBH	238

Accessories – Ordering data

	For Ø	Description	Part no.	Type
1	Centring pin/sleeve ¹⁾ Data sheets online: → zbh			
	For DGC-G			
	8, 12	For slide	150928	ZBS-5
	8, 12	For end cap	525273	ZBS-2
	50, 63		150927	ZBH-9
	For DGC-GF			
	18	For slide	150928	ZBS-5
	25 ... 63		150927	ZBH-9
	50, 63	For end cap	150927	ZBH-9
	For DGC-KF			
	8, 12, 18	For slide	150928	ZBS-5
	25 ... 63		150927	ZBH-9
	8, 12	For end cap	525273	ZBS-2
	18		150928	ZBS-5
	25 ... 63		150927	ZBH-9

1) Packaging unit 10 pieces.

	For Ø	Description	Part no.	Type
3	Shock absorber			
	For DGC-G			
	8	–	540344	YSRW-DGC-8
	12	–	540345	YSRW-DGC-12
	For DGC-GF			
	18	–	540346	YSRW-DGC-18-GF
	25	–	540348	YSRW-DGC-25-GF
	32	–	540350	YSRW-DGC-32-GF
	40	–	540352	YSRW-DGC-40-GF
	50	–	1232870	YSRW-DGC-40/50-B
	63	–	543069	YSRW-DGC-63
	For DGC-KF			
	18	–	540347	YSRW-DGC-18-KF
	25	–	540349	YSRW-DGC-25-KF
	32	–	540351	YSRW-DGC-32-KF
	40	–	1232870	YSRW-DGC-40/50-B
	50	–	1232870	YSRW-DGC-40/50-B
	63	–	543069	YSRW-DGC-63

Accessories – Ordering data

01

	For Ø	Connection		Part no.	Type
		Thread	O.D.		
4 One-way flow control valve with slotted head screw, metal ¹⁾ Data sheets ➔ Page 1033					
	8, 12	M5	3	★ 193137	GRLA-M5-QS-3-D
	18		6	★ 193139	GRLA-M5-QS-6-D
	25, 32	G1/8	8	★ 534337	GRLA-1/8-QS-8-RS-D
	40, 50	G1/4	8	★ 534339	GRLA-1/4-QS-8-RS-D
	63	G3/8	8	★ 534342	GRLA-3/8-QS-8-RS-D

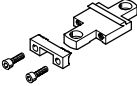
1) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
5 Proximity sensor for C-slot, magneto-resistive – N/O contact Data sheets → Page 1222					
	8, 12	PNP, cable	2.5	★ 551373	SMT-10M-PS-24V-E-2,5-L-OE
		PNP, plug	0.3	★ 551375	SMT-10M-PS-24V-E-0,3-L-M8D
Magnetic reed – N/O contact Data sheets → Page 1218					
	8, 12	Contacting, cable	2.5	★ 551365	SME-10M-DS-24V-E-2,5-L-OE
		Contacting, plug	0.3	★ 551367	SME-10M-DS-24V-E-0,3-L-M8D
		Contacting, cable	2.5	★ 551369	SME-10M-ZS-24V-E-2,5-L-OE
Data sheets → Page 1220					
	8, 12	Contacting, cable	2.5	173210	SME-10-KL-LED-24
		Contacting, plug	0.3	173212	SME-10-SL-LED-24
Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets → Page 1206					
	18 ... 63	PNP, cable	2.5	★ 574335	SMT-8M-A-PS-24V-E-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-A-PS-24V-E-0,3-M8D
		PNP, plug	0.3	★ 574337	SMT-8M-A-PS-24V-E-0,3-M12
		NPN, cable	2.5	★ 574338	SMT-8M-A-NS-24V-E-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-A-NS-24V-E-0,3-M8D
Magneto-resistive – N/C contact Data sheets → Page 1206					
	18 ... 63	PNP, cable	7.5	★ 574340	SMT-8M-A-PO-24V-E-7,5-OE
Magnetic reed – N/O contact Data sheets → Page 1201					
	18 ... 63	Contacting, cable	2.5	★ 543862	SME-8M-DS-24V-K-2,5-OE
		Contacting, cable	5.0	★ 543863	SME-8M-DS-24V-K-5,0-OE
		Contacting, cable	2.5	★ 543872	SME-8M-ZS-24V-K-2,5-OE
		Contacting, plug	0.3	★ 543861	SME-8M-DS-24V-K-0,3-M8D
Magnetic reed – N/C contact Data sheets → Page 1203					
	18 ... 63	Contacting, cable	7.5	★ 546799	SME-8M-DO-24V-K-7,5-OE

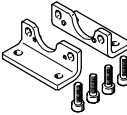
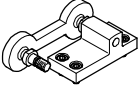
	For Ø	Connection	Cable length [m]	Part no.	Type
6 Connecting cable, straight socket Data sheets ➔ Page 1543					
	18 ... 63	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
		M12x1, 5-pin	2.5	★ 541363	NEBU-M12G5-K-2.5-LE3
			5.0	★ 541364	NEBU-M12G5-K-5-LE3
Angled socket Data sheets ➔ Page 1543					
	18 ... 63	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3
		M12x1, 5-pin	2.5	541367	NEBU-M12W5-K-2.5-LE3
			5.0	541370	NEBU-M12W5-K-5-LE3

Linear drives DGC

Accessories – Ordering data

	For Ø	Part no.	Type
7 Slot cover ¹⁾			
	18 ... 63	151680	ABP-5-S
8 Profile mounting			
Dimensions online: dgc			
	8	526384	MUC-8
	12	526387	MUC-12
	18	531752	MUC-18
	25	531753	MUC-25
	32	531754	MUC-32
	40	531755	MUC-40
	50	531756	MUC-50
	63	531757	MUC-63
9 Slot nut ²⁾			
Dimensions online: dgc			
	25, 32, 40	547264	HMBN-5-1M5
	50, 63	186566	HMBN-5-2M5

1) Packaging unit 2x 0.5 m.
2) Packaging unit 10 pieces.

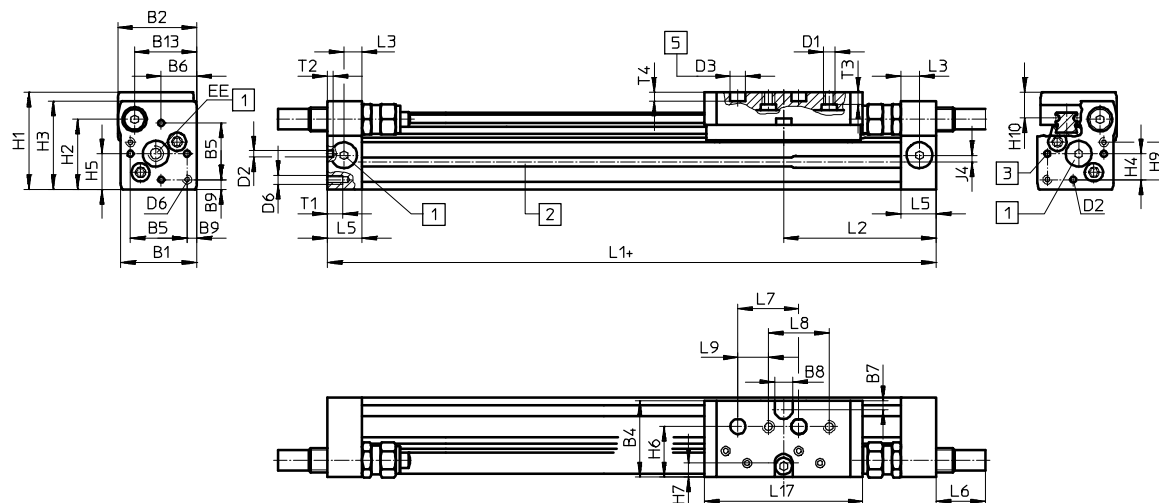
	For Ø	Part no.	Type
10 Foot mounting			
Dimensions online: dgc			
	8	526385	HPC-8
	12	526388	HPC-12
	18	533667	HPC-18
	25	533668	HPC-25
	32	533669	HPC-32
	40	533670	HPC-40
	50	545236	HPC-50
	63	545237	HPC-63
12 Moment compensator			
Dimensions online: dgc			
	8	529350	FKC-8/12
	12	529350	FKC-8/12
	18	538714	FKC-18
	25	538715	FKC-25
	32	538961	FKC-32
	40	538962	FKC-40
	50	545240	FKC-50/63
	63	545240	FKC-50/63

Dimensions

Download CAD data → www.festo.com

01

Ø 8, 12



1 Supply port
options on 3 sides

2 Slot for proximity sensor

3 Mounting hole for foot mounting
or centring pin

4 Hole for centring pin ZBS
+ plus stroke length

Ø	B1	B2	B4	B5	B6	B7	B8	B9	B13	D1	D2	D3	D6
[mm]							±0.05	±0.1			Ø H8	Ø H7	
8	25	26	25.5	18.6	11.7	3	6	3.2	20.5	M4	2	5	M3
12	30.2	31	30.5	20.6	13.5	3	8	4.8	25	M4	2	5	M4

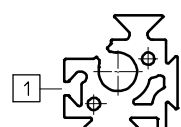
Ø	EE	H1	H2	H3	H4	H5	H6	H7	H9	H10	J4	L1	L2
[mm]													
8	M5	32	23	29	8.5	11.7	16.5	4.5	12.3	8.7	2.2	100	50.1
12	M5	37.5	28.5	34.5	8.7	13.5	20.5	5	14.7	9.8	3	125	62.4

Ø	L3	L5	L6			L7	L8	L9	L17	T1	T2	T3	T4	Stroke tolerance
[mm]			P	YSR	YSRW	±0.03	±0.1	±0.1					+0.2	
8	6	11.4	0	16	16.2	20	20	10	52	5	2	4	3	0 ... 1.7
12	8	15.9	0	11.3	12.3	20	20	10	65	6	2	5	3	

Length tolerance														
For stroke	[mm]	≤ 1000								≤ 2000				
L1	[mm]	+0.90								+1.10				

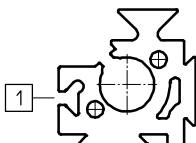
Profile

Ø 8



1 Sensor slot for proximity sensor

Ø 12



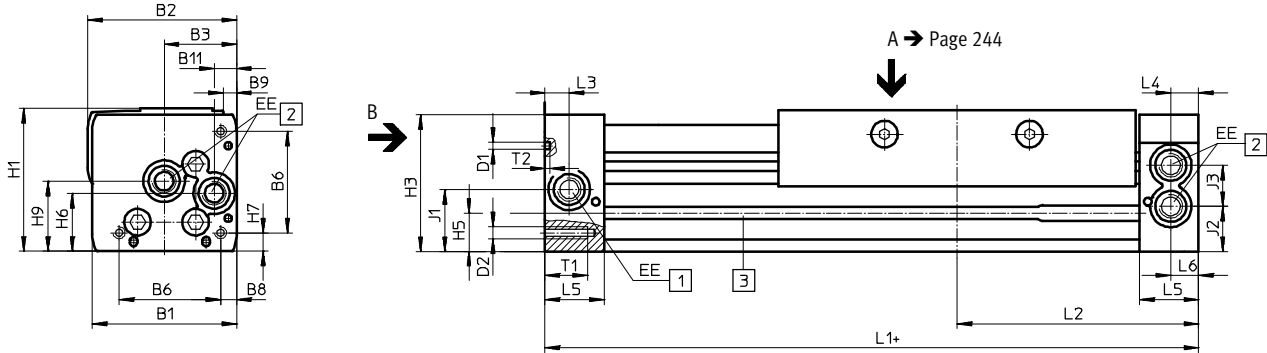
Linear drives DGC-G, basic design

01

Dimensions

Download CAD data → www.festo.com

Ø 18 ... 40

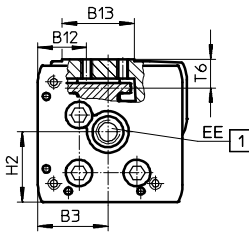
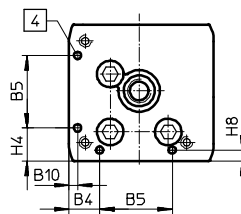
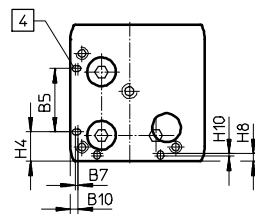


View B

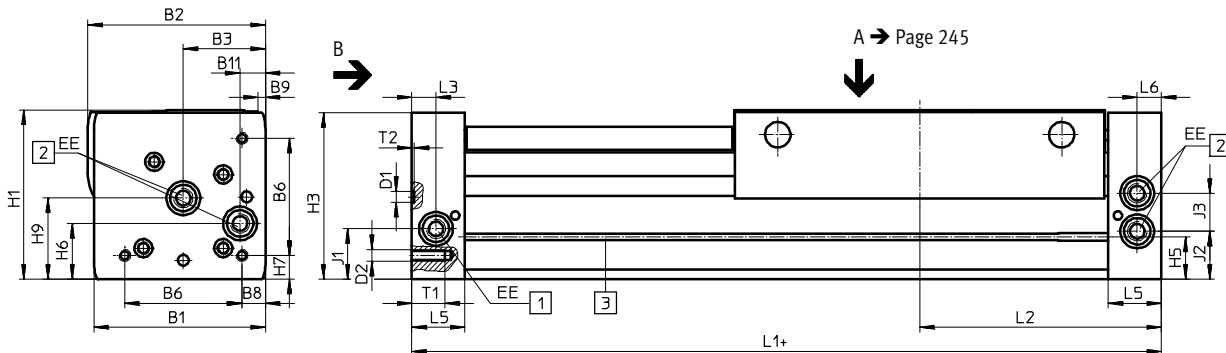
Ø 18

Ø 25 ... 40

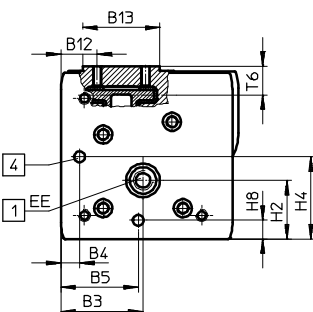
Ø 18 ... 40



Ø 50, 63



View B



+ plus stroke length

- 1 Supply port options on 2 sides
- 2 Supply port options on 2 sides, for supply port at one end
- 3 Sensor slot for proximity sensor
- 4 Mounting hole for foot mounting HPC

Linear drives DGC-G, basic design

Dimensions

Download CAD data → www.festo.com

01

∅	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
[mm]					±0.05					
18	44.5	46.3	19.5	8.8	21	31	0.3	3.8	3.3	2.4
25	59.8	61.6	30	12.65	30	42		6.65	5.6	3.5
32	73	75.5	38.5	5.7	63.1	57.5		8.5	5	14
40	91	94.5	45	17.2	55	65		12.2	5.3	8
50	113	122	60	8	52.8	81.6	–	12	0	–
63	142	147	68	15.5	68	97	–	19.5	6	–

∅	B11	B12	B13	D1	D2	EE	H1	H2	H3	H4
[mm]				∅						±0.2
18	5.5	19.3	20	2±0.05	M4	M5	49.8	23.1	48.3	10.3
25	9.3	20.15	30	3±0.05	M5	G1/8	58.5	29	56.5	13
32	14.9	20.5	35	3±0.05	M6	G1/8	73	30	71.5	5.7
40	16.5	19.8	45	4±0.05	M6	G1/4	88	41.5	85	17.2
50	21	24	64	9 ^{H7}	M8	G1/4	120	38.5	116	52.8
63	21	30	64	9 ^{H7}	M10	G3/8	140	48.5	137.5	68

∅	H5	H6	H7	H8	H9	H10	J1	J2	J3	L1
[mm]										
18	13.4	20	5.3	2.4	25.2	0.4	20	16.5	11	150
25	15.8	24	7	4.5	29		26.1	18.6	17	200
32	17	27.7	8.5	14	35.2		30	22	18.5	250
40	25	36.5	12.2	8	44		35	26	26	300
50	29.3	36	12	8	53	–	30.5	30.5	28	350
63	34.8	46	19.5	15.5	67	–	41.5	39.5	31.5	400

∅	L2	L3	L4	L5	L6	T1	T2	T6	Stroke tolerance	
[mm]										
18	74.5	5.7	5.8	15	5.5	9	2	10.7	0 ... 2.5	
25	100	10.5	10.6	24.5	10.6	17.5	2	12		
32	124.8	14.5	14.5	30.5	14.5	15	2	13.8		
40	150	14.6	14.6	33.5	14.6	20	3	16.8		
50	175	17	–	41	17	24	2.1 ^{+0.2}	20.75		
63	200	20	–	44	20	27.5	2.1 ^{+0.2}	20.75		

• • Note: This product conforms to ISO 1179-1 and ISO 228-1.

Length tolerance										
For stroke	[mm]	≤ 1000	≤ 2000	≤ 3000	≤ 4000	≤ 5000	≤ 6000	≤ 7000	≤ 8000	≤ 9000
L1	[mm]	+0.90	+1.10	+1.40	+1.50	+1.60	+1.70	+2.20	+2.30	+2.40

Pneumatic drives

Linear drives DGC-G, basic design

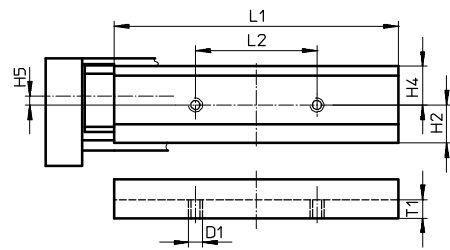
01

Dimensions

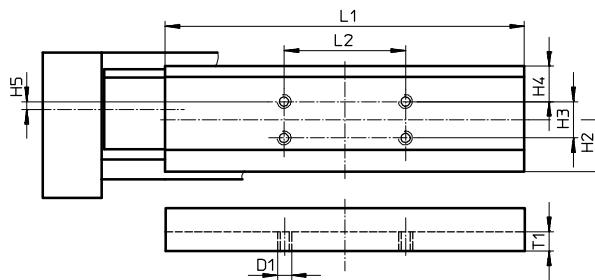
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Slide – View A

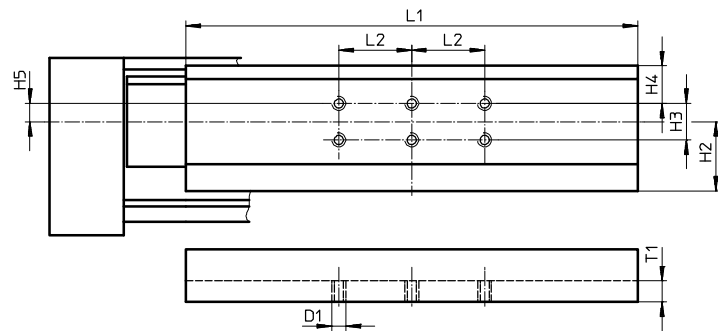
Ø 18



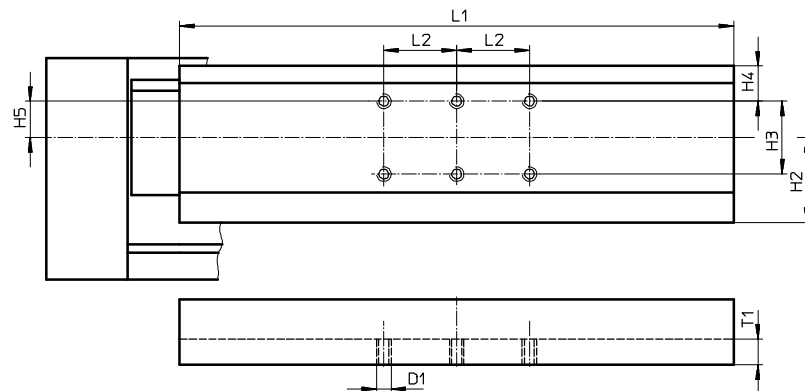
Ø 25



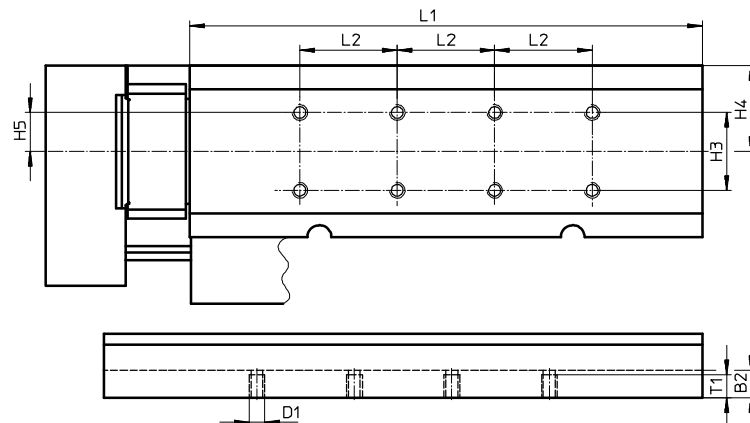
Ø 32



Ø 40



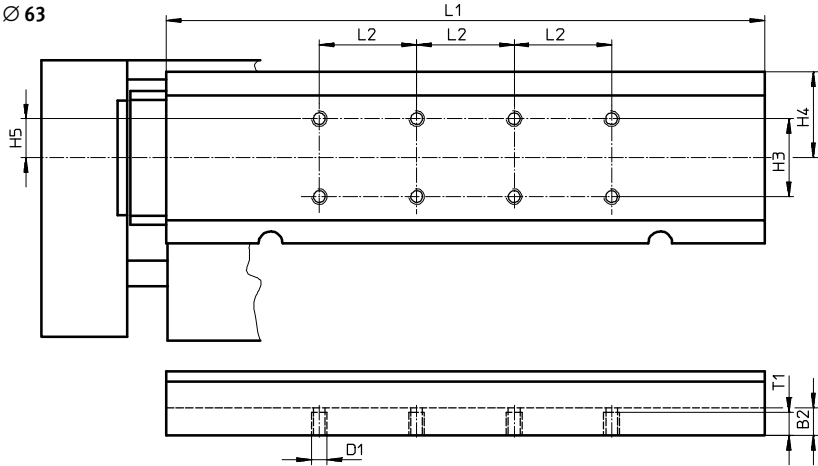
Ø 50



Pneumatic drives

Dimensions

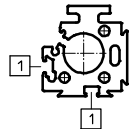
Slide – View A



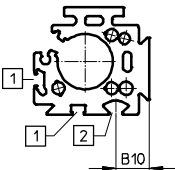
Ø	B2	D1	H2	H3	H4	H5	L1	L2	T1
[mm]			±0.1	±0.1				±0.1	
18	–	M5	15.6	–	16	2	117±0.05	50	7
25	–	M5	21.35	15	14.55	4.85	148±0.05	50	8
32	–	M5	28.5	15	15.5	7.5	186±0.05	30	8.6
40	–	M6	35	30	14.5	15	228±0.05	30	10.5
50	14	M8	–	40	44	20	263±0.1	50	13
63	14	M8	–	40	44	20	307±0.1	50	13

Profile barrel

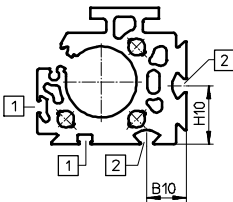
Ø 18



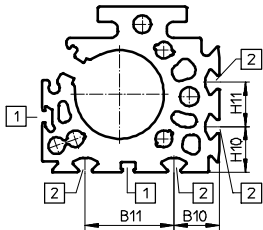
Ø 25



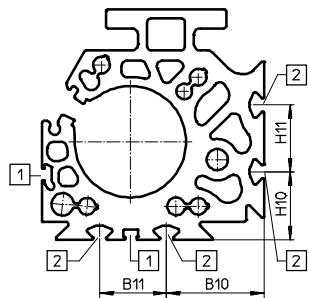
Ø 32



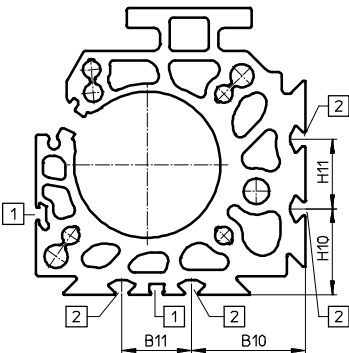
Ø 40



Ø 50



Ø 63



- 1 Sensor slot for proximity sensor
2 Mounting slot for slot nut

Ø	B10	B11	H10	H11
[mm]				
25	15.23	–	–	–
32	18	–	26.5	–
40	20.5	40	20.5	20
50	43.8	30	30.5	30
63	49	30	37	30

Rodless cylinders > Mechanically coupled cylinders >

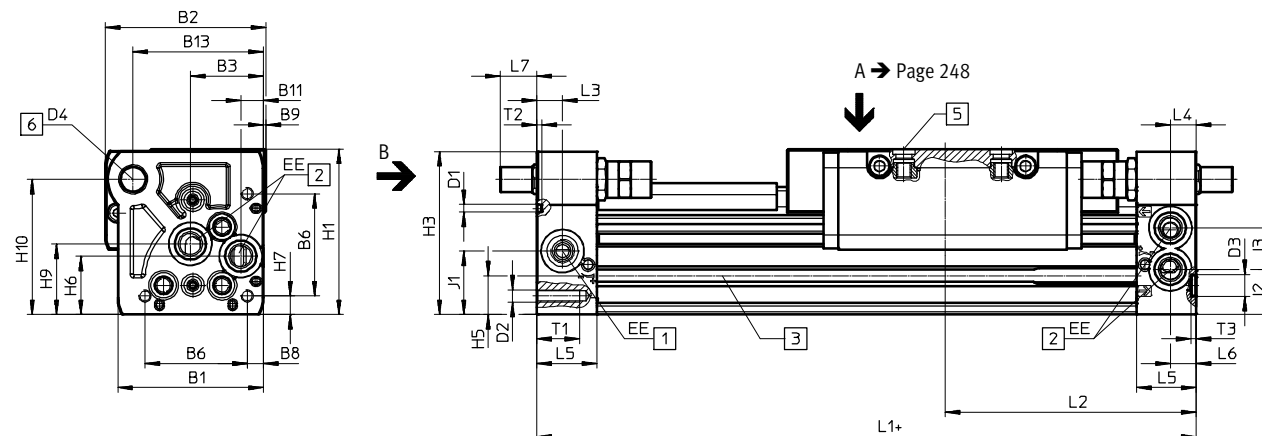
Linear drives DGC-GF, with plain-bearing guide

01

Dimensions

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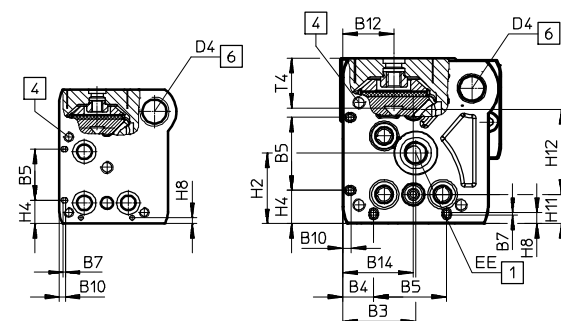
Ø 18 ... 40



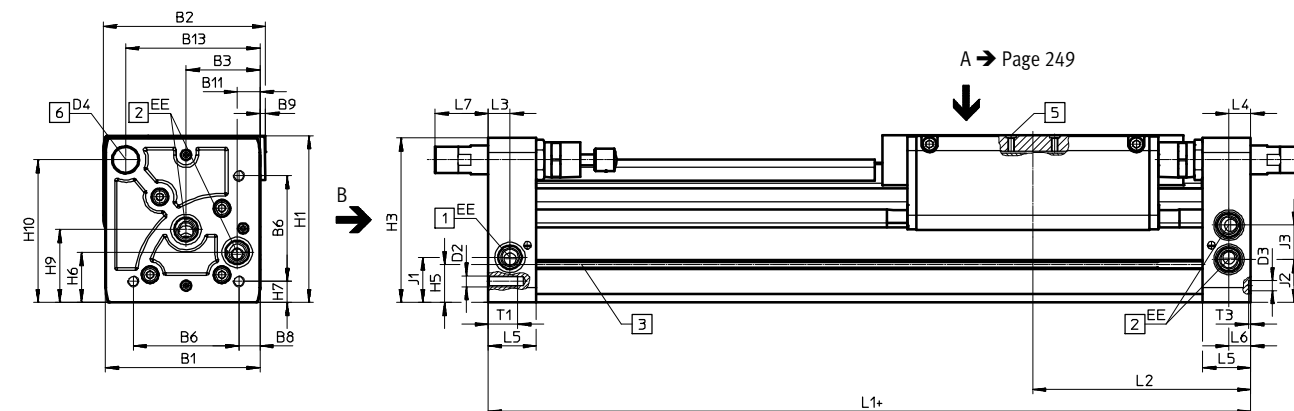
View B

Ø 18

Ø 18 ... 40



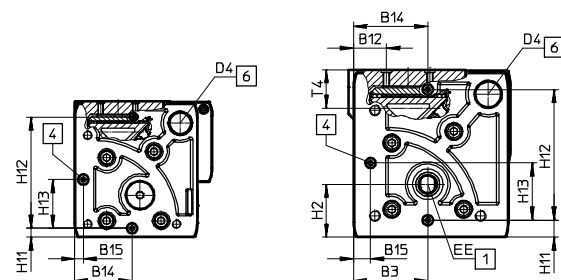
Ø 50, 63



View B

Ø 50

Ø 50/63



+ plus stroke length

- 1 Supply port options on 2 sides
- 2 Supply port options on 2 sides, for supply port at one end
- 3 Sensor slot for proximity sensor
- 4 Mounting hole for foot mounting HPC
- 5 Hole for centring pin/sleeve
- 6 Thread for end stop

Linear drives DGC-GF, with plain-bearing guide

Dimensions

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01

∅	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13
[mm]					±0.05								
18	44.5	49.9	19.5	8.8	21	31	0.8	3.8	1	2.4	5.5	15.5	39
25	59.8	66	30	12.65	30	42	1	6.65	1	3.5	9.3	21	53.5
32	73	79	38.5	5.7	63.1	57.5	–	8.5	1.5	14	14.9	18	66.5
40	91	98.5	45	17.2	55	65	–	12.2	2	8	16.5	24.8	80.5
50	113	126.5	60	–	–	81.6	–	12	–	–	21	24	97
63	142	149	68	–	–	97	–	19.5	5	–	21	30	123.5

∅	B14	B15	D1	D2	D3	D4	EE	H1	H2	H3	H4	H5	H6
[mm]			∅ ±0.05		∅ H7						±0.2		
18	19.5	–	2	M4	5	M10x1	M5	56.3	23.1	55	9.6	13.4	20
25	30	–	3	M5	9	M12x1	G1/8	68	29	67	13.65	15.8	24
32	38.5	–	3	M6	9	M14x1	G1/8	78.5	30	77	5.7	17	27.7
40	45	–	4	M6	9	M16x1	G1/4	99.5	41.5	97.5	17.2	25	36.5
50	52.8 ±0.05	8	–	M8	9	M22x1.5	G1/4	124.5	38.5	122.5	–	29.3	36
63	68 ±0.05	15.5	–	M10	9	M26x1.5	G3/8	153.5	48.5	151	–	34.8	46

∅	H7	H8	H9	H10	H11	H12	H13	J1	J2	J3	L1	L2	L3
[mm]					±0.15	±0.05							
18	4.6	2.4	25.2	46	8.5	30	–	20	16.5	11	150	74.5	5.7
25	7.65	4.5	29	55.5	12	35	–	26.1	18.6	17	200	100	10.5
32	8.5	14	35.2	63.8	11.45	50	–	30	22	18.5	250	124.8	14.5
40	12.2	8	44	81.5	15	60	–	35	26	26	300	150	14.6
50	12	–	53	104.5	8 ±0.2	100	52.8	30.5	30.5	28	350	175	17
63	19.5	–	67	131	15.5 ±0.2	120	68	41.5	39.5	31.5	400	200	20

∅	L4	L5	L6	L7			T1	T2	T3	T4	Stroke tolerance
[mm]				PPV	YSR	YSRW			±0.2		
18	5.8	15	5.5	0	15.9	19.4	9	2	3.1	17.1	0 ... 2.5
25	10.6	24.5	10.6	0	12.5	15	17.5	2	2.1	20.5	
32	14.5	30.5	14.5	0	8.5	15.5	15	2	2.1	21.3	
40	14.6	33.5	14.6	0	12.8	21	20	3	2.1	30.7	
50	17	41	17	0	31	36.3	24	–	2.1	30.4	
63	20	44	20	0	38.3	48.3	27.5	–	2.1	36.2	

Note: This product conforms to ISO 1179-1 and ISO 228-1.

Length tolerance											
∅ [mm]	For stroke	[mm]	≤ 1000	≤ 2000	≤ 3000	≤ 4000	≤ 5000	≤ 6000	≤ 7000	≤ 8000	≤ 9000
18 ... 40	L1	[mm]	+0.90	+1.10	+1.40	+1.50	+1.60	+1.70	+2.20	+2.30	+2.40
50, 63	L1	[mm]	+0.90	+1.10	+1.40	+1.50	+1.60	–	–	–	–

Rodless cylinders > Mechanically coupled cylinders >

Linear drives DGC-GF, with plain-bearing guide

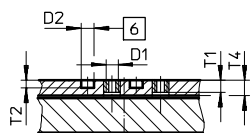
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01

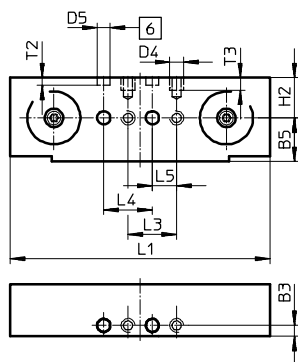
Dimensions

Slide

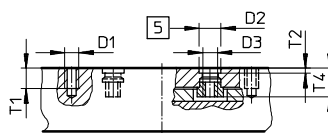
Ø 18



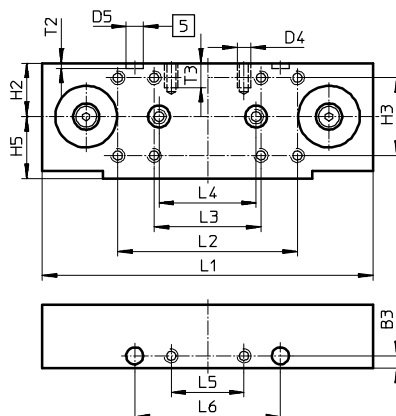
View A



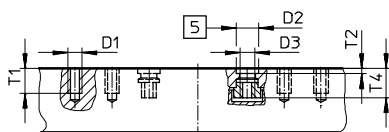
Ø 25



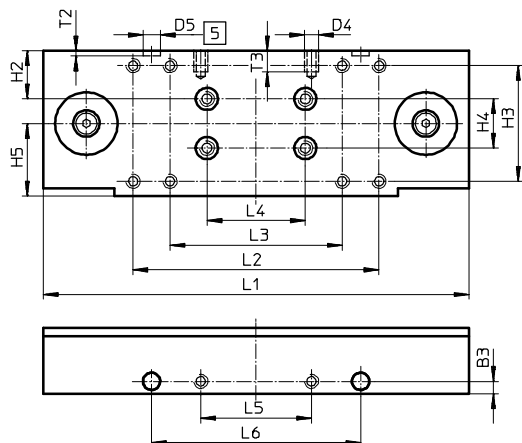
View A



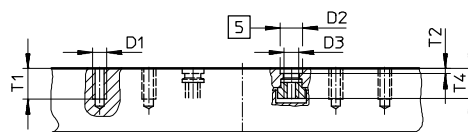
Ø 32



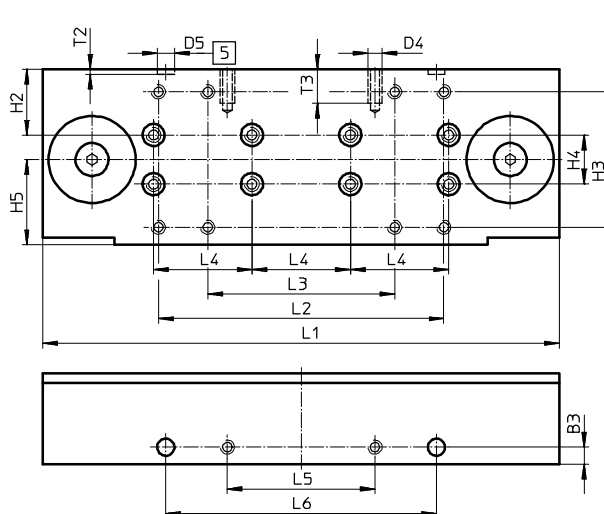
View A



Ø 40



View A



5 Hole for centring sleeve ZBH

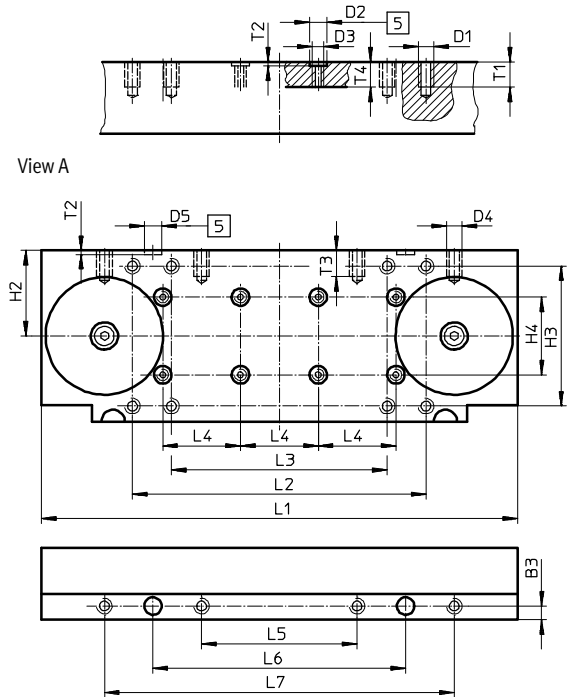
6 Hole for centring pin ZBS

Linear drives DGC-GF, with plain-bearing guide

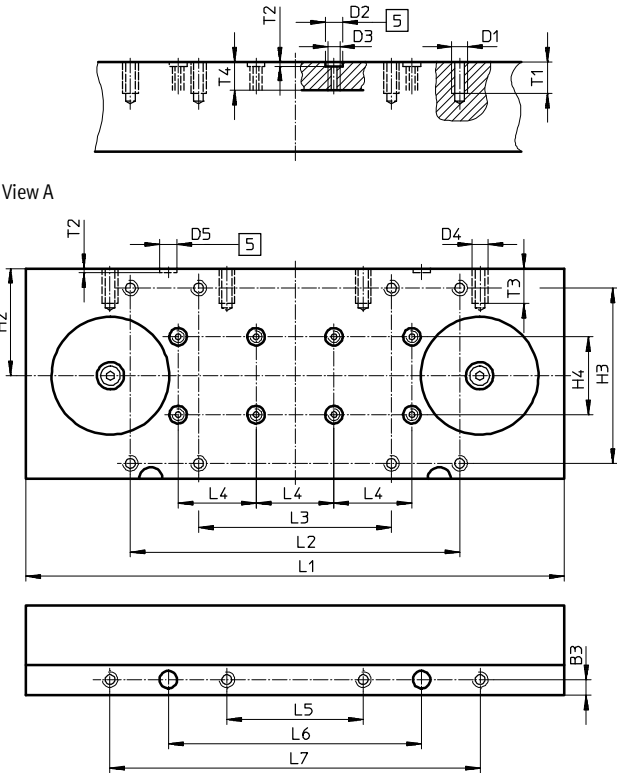
Dimensions

Slide

Ø 50



Ø 63



5 Hole for centring sleeve ZBH

Ø	B3	D1	D2	D3	D4	D5	H2	H3	H4	H5	L1
[mm]	±0.05		Ø H7			Ø H7			±0.03	±0.1	±0.1
18	4.5	M5	5	–	M5	5	16.5	–	–	18	107
25	5	M5	9	M6	M5	7	22	32±0.2	–	25.5	136
32	5	M5	9	M6	M5	7	19.5	47±0.2	20	29.5	173
40	7	M5	9	M6	M6	7	26.8	55±0.2	20	34.7	210
50	7	M8	9	M6	M8	9	44	72±0.3	40	–	245
63	8	M8	9	M6	M8	9	55	90±0.3	40	–	276

Ø	L2	L3	L4	L5	L6	L7	T1	T2	T3	T4
[mm]	±0.1		±0.03	±0.1	±0.05	±0.1				
18	–	20±0.1	20	10	–	–	5	3.1±0.1	5	6.3
25	74	44±0.2	40	30	60	–	8.5	2.1±0.2	10	11.8
32	100	70±0.2	40	45	85	–	10	2.1±0.2	8.5	11.8
40	116	76±0.2	40	60	110	–	12.5	2.1±0.2	14	12.1
50	151	111±0.2	40	80	130	180	13	2.1±0.2	13.5	13
63	169	99±0.2	40	70	130	190	16	2.1±0.2	18	14.5

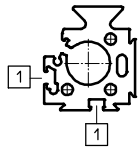
01

Dimensions

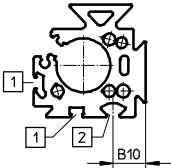
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Profile barrel

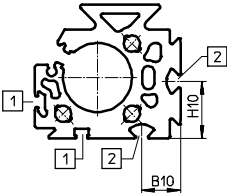
Ø 18



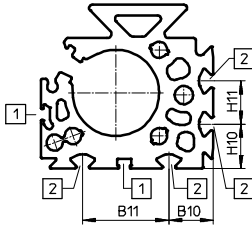
Ø 25



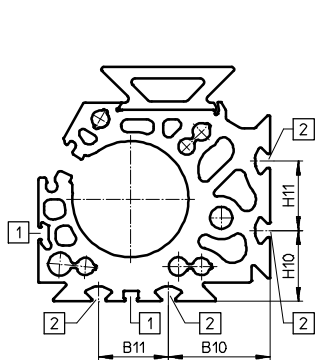
Ø 32



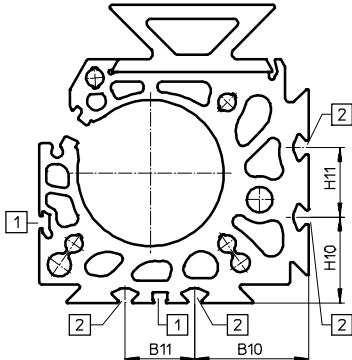
Ø 40



Ø 50



Ø 63



- 1 Sensor slot for proximity sensor
- 2 Mounting slot for slot nut

Ø	B10	B11	H10	H11
[mm]				
25	15.23	–	–	–
32	18	–	26.5	–
40	20.5	40	20.5	20
50	43.8	30	30.5	30
63	49	30	37	30

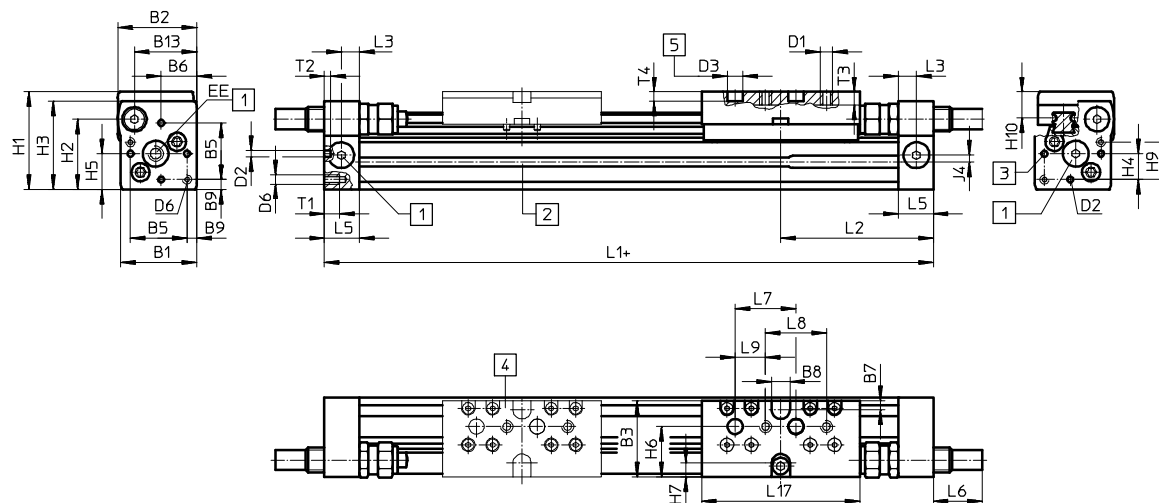
Linear drives DGC-KF, with recirculating ball bearing guide

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01

Dimensions

Ø 8, 12



- [1] Supply port options on 3 sides
[2] Sensor slot for proximity sensor
[3] Mounting hole for foot mounting or centring pin
[4] Additional slide KL
[5] Hole for centring pin ZBS + plus stroke length

Ø	B1	B2	B3	B5	B6	B7	B8	B9	B13	D1	D2	D3	D6
[mm]							±0.05	±0.1			Ø H8	Ø H7	
8	25	26	25	18.6	11.7	3	6	3.2	20.5	M4	2	5	M3
12	30.2	31	31	20.6	13.5	3	8	4.8	25	M4	2	5	M4

Ø	EE	H1	H2	H3	H4	H5	H6	H7	H9	H10	J4	L1	L2
[mm]													
8	M5	32	23	29	8.5	11.7	16.5	4.5	12.3	8.7	2.2	100	50.1
12	M5	37.5	28.5	34.5	8.7	13.5	20.5	5	14.7	9.8	3	125	62.4

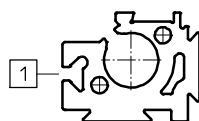
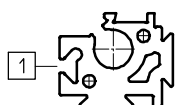
Ø	L3	L5	L6			L7	L8	L9	L17	T1	T2	T3	T4	Stroke tolerance
[mm]			P	YSR	YSRW	±0.03	±0.1	±0.1					+0.2	
8	6	11.4	0	16	16.2	20	20	10	52	5	2	4.3	3	0 ... 1.7
12	8	15.9	0	11.3	12.3	20	20	10	65	6	2	5	3	

Length tolerance			
For stroke	[mm]	≤ 1000	≤ 2000
L1	[mm]	+0.90	+1.10

Profile barrel

Ø 8

Ø 12



- [1] Sensor slot for proximity sensor

Rodless cylinders > Mechanically coupled cylinders >

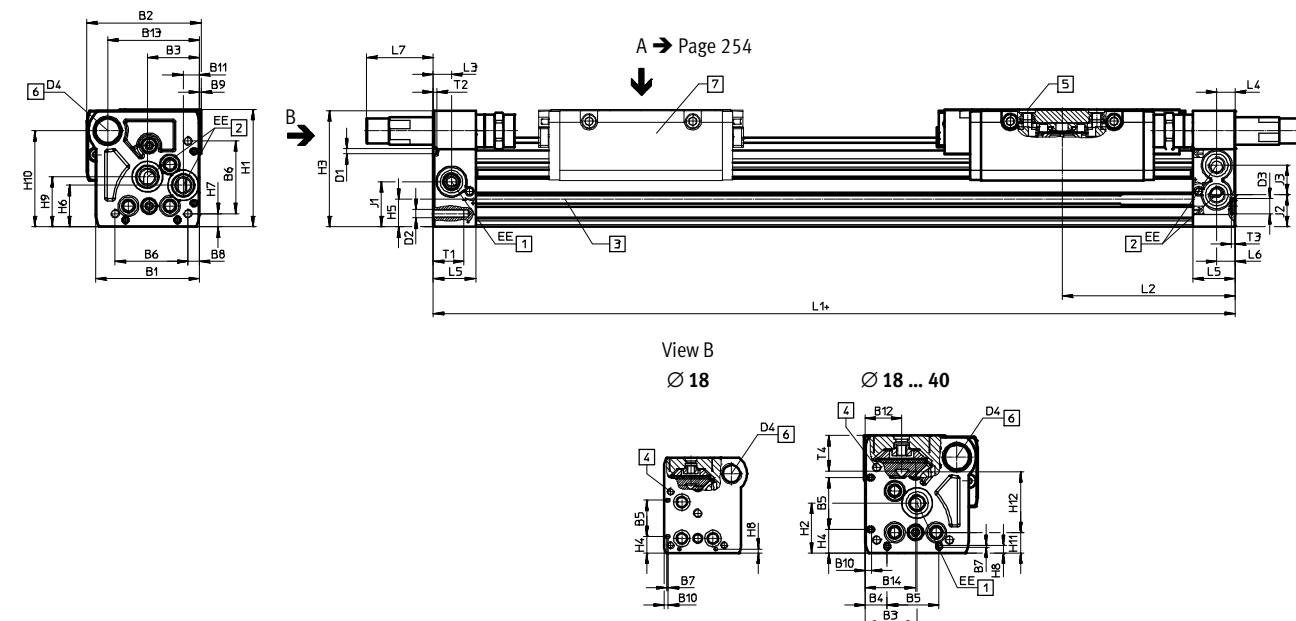
Linear drives DGC-KF, with recirculating ball bearing guide

01

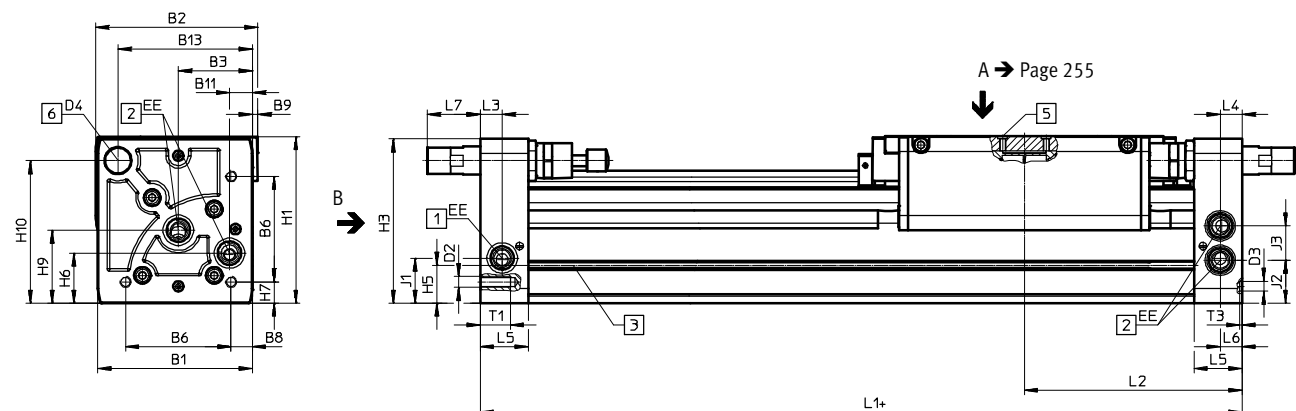
Dimensions

Download CAD data → www.festo.com

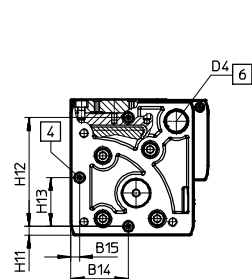
Ø 18 ... 40



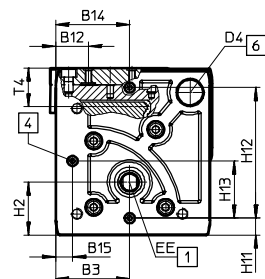
Ø 50, 63



View B
Ø 50



Ø 50/63



- + plus stroke length
- 1 Supply port options on 2 sides
- 2 Supply port options on 2 sides, for supply port at one end
- 3 Sensor slot for proximity sensor
- 4 Mounting hole for foot mounting HPC
- 5 Hole for centring pin/sleeve
- 6 Thread for end stop
- 7 Additional slide

Linear drives DGC-KF, with recirculating ball bearing guide

Dimensions

Download CAD data → www.festo.com

01

∅	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11
[mm]			±0.05	±0.1	±0.05			±0.1			
18	44.5	49.9	19.5	8.8	21	31	0.8	3.8	1	2.4	5.5
25	59.8	66	29	12.65	30	42	1	6.65	1	3.5	9.3
32	73	79	38.5	5.7	63.1	57.5	–	8.5	1.5	14	14.9
40	91	98.5	45	17.2	55	65	–	12.2	2	8	16.5
50	113	126.5	60	–	–	81.6	–	12	–	–	21
63	142	149	68	–	–	97	–	19.5	5	–	21

∅	B12	B13	B14	B15	D1 ∅ ±0.05	D2	D3 ∅ H7	D4	EE	H1	H2
[mm]											
18	15.5	39	19.5	–	2	M4	5	M12x1	M5	56.3	23.1
25	21	53	30	–	3	M5	9	M16x1	G1/8	68	29
32	18	65	38.5	–	3	M6	9	M16x1	G1/8	78.5	30
40	24.5	80.5	45	–	4	M6	9	M22x1.5	G1/4	99.5	41.5
50	24	97	52.8	8	–	M8	9	M22x1.5	G1/4	124.5	38.5
63	30	123.5	68	15.5	–	M10	9	M26x1.5	G3/8	153.5	48.5

∅	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13
[mm]		±0.2								±0.05	
18	55	9.6	13.4	20	4.6	2.4	25.2	46	8.5±0.15	30	–
25	67	13.65	15.8	24	7.65	4.5	29	55.5	12±0.15	35	–
32	77	13.65	17	27.7	8.5	14	35.2	63.8	11.45±0.15	50	–
40	97.5	17.2	25	36.5	12.2	8	44	81.5	15±0.15	60	–
50	122.5	–	29.3	36	12	–	53	104.5	8±0.2	100±0.05	52.8
63	151	–	34.8	46	19.5	–	67	131	15.5±0.2	120±0.05	68

∅	J1	J2	J3	L1			L2			L3	L4
				KF	KF-GP	1H-PN	KF	KF-GP	1H-PN		
[mm]											
18	20	16.5	11	150	157	–	74.5	78	–	5.7	5.8
25	26.1	18.6	17	200	205	271	100	102.5	100	10.5	10.6
32	30	22	18.5	250	250	320.5	124.8	124.8	124.8	14.5	14.5
40	35	26	26	300	312	458	150	156	150	14.6	14.6
50	30.5	30.5	28	350	–	555.8	175	–	–	17	17
63	41.5	39.5	31.5	400	–	–	200	–	–	20	20

∅	L5	L6	L7			T1	T2	T3	T6	Stroke tolerance
			PPV	YSR	YSRW					
[mm]								+0.2		
18	15	5.5	0	29.9	32.4	9	2	3.1	15	0 ... 2.5
25	24.5	10.6	0	35.6	38.6	17.5	2	2.1	17.3	
32	30.5	14.5	0	19.5	28	15	2	2.1	20	
40	33.5	14.6	0	38.5	43.5	20	3	2.1	25.7	
50	41	17	0	31	36.3	24	–	2.1	28.75	
63	44	20	0	38.3	48.3	27.5	–	2.1	36.1	

Note: This product conforms to ISO 1179-1 and ISO 228-1.

Length tolerance										
For stroke	[mm]	≤ 1000	≤ 2000	≤ 3000	≤ 4000	≤ 5000	≤ 6000	≤ 7000	≤ 8000	≤ 9000
L1	[mm]	+0.90	+1.10	+1.40	+1.50	+1.60	+1.70	+2.20	+2.30	+2.40

Rodless cylinders > Mechanically coupled cylinders >

Linear drives DGC-KF, with recirculating ball bearing guide

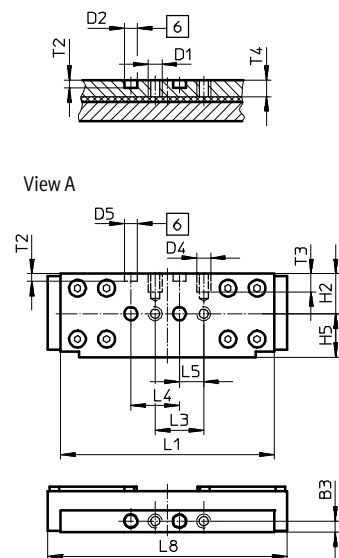
Download CAD data → www.festo.com

01

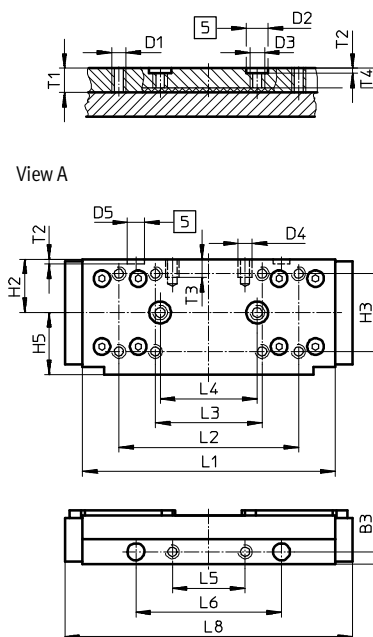
Dimensions

Slide

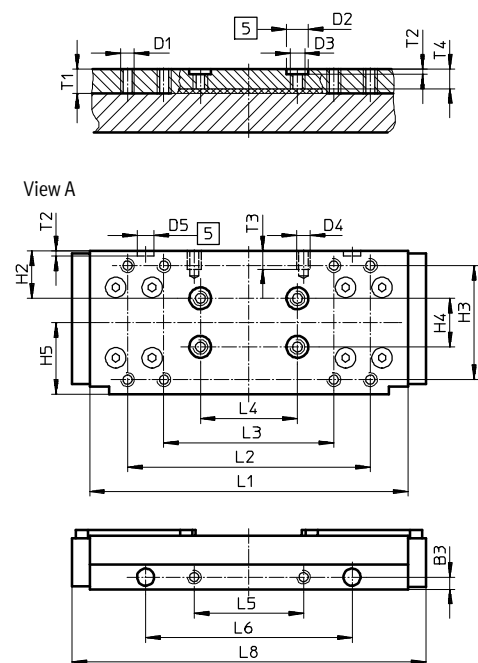
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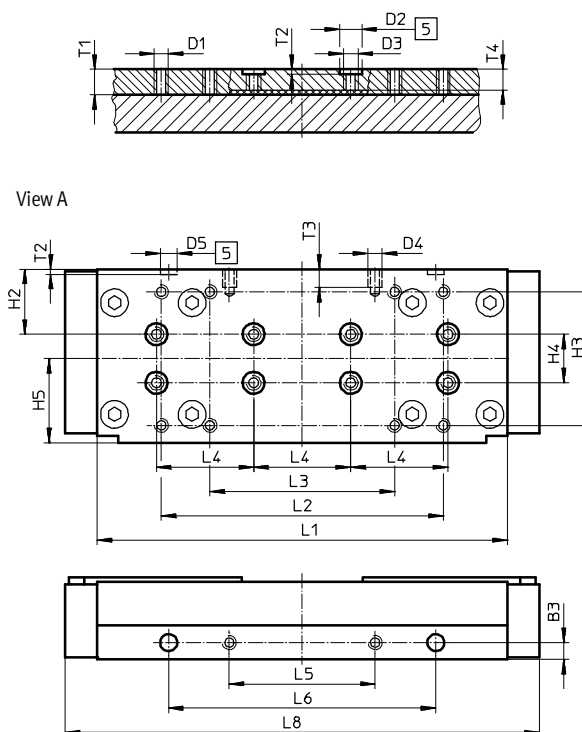
Ø 25



Ø 32



Ø 40



- 5 Hole for centring sleeve ZBH
- 6 Hole for centring pin ZBS

Linear drives DGC-KF, with recirculating ball bearing guide

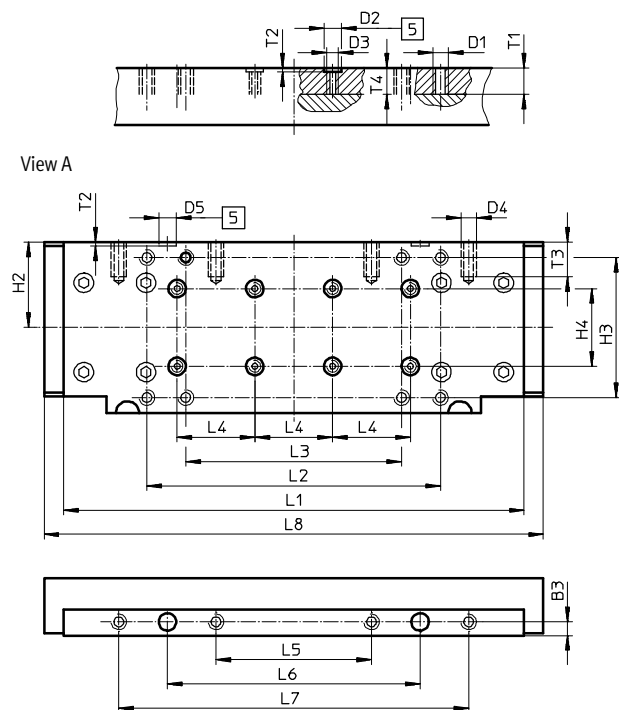
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01

Dimensions

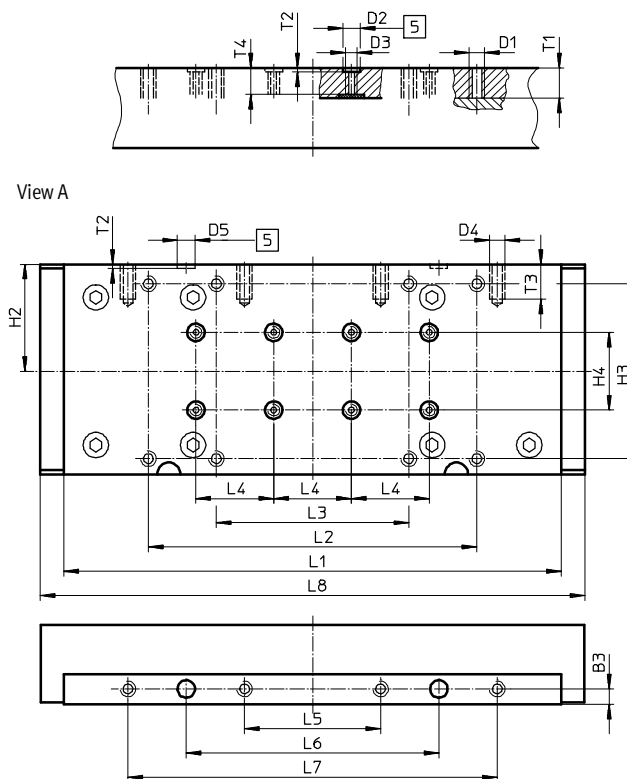
Slide

Ø 50



[5] Hole for centring sleeve ZBH

Ø 63



Ø	B3	D1	D2	D3	D4	D5	H2	H3	H4	H5	L1
[mm]	±0.05		Ø H7			Ø H7			±0.03	±0.1	
18	4.5	M5	5	–	M5	5	16.5	–	–	18	88±0.1
25	5	M5	9	M6	M5	7	22	32±0.2	–	25.5	104±0.2
32	5	M5	9	M6	M5	7	19.5	47±0.2	20	29.5	131±0.2
40	7	M5	9	M6	M6	7	26.8	55±0.2	20	34.7	169±0.2
50	7	M8	9	M6	M8	9	44	72±0.3	40	–	237±0.1
63	8	M8	9	M6	M8	9	55	90±0.3	40	–	256±0.1

Ø	L2	L3	L4	L5	L6	L7	L8	T1	T2	T3	T4
[mm]	±0.1		±0.03	±0.1	±0.05	±0.1					
18	–	20±0.1	20	10	–	–	99	–	3.1±0.1	7.5	6.7
25	74	44±0.2	40	30	60	–	118.5	10	2.1±0.2	7.5	8
32	100	70±0.2	40	45	85	–	145.7	10	2.1±0.2	7.5	8
40	116	76±0.2	40	60	110	–	195.4	10.5	2.1±0.2	7.5	8.5
50	151	111±0.2	40	80	130	180	256.8	13.5	2.1±0.2	18	13.5
63	169	99±0.2	40	70	130	190	280	15.5	2.1±0.2	18	13.6

Rodless cylinders > Mechanically coupled cylinders >

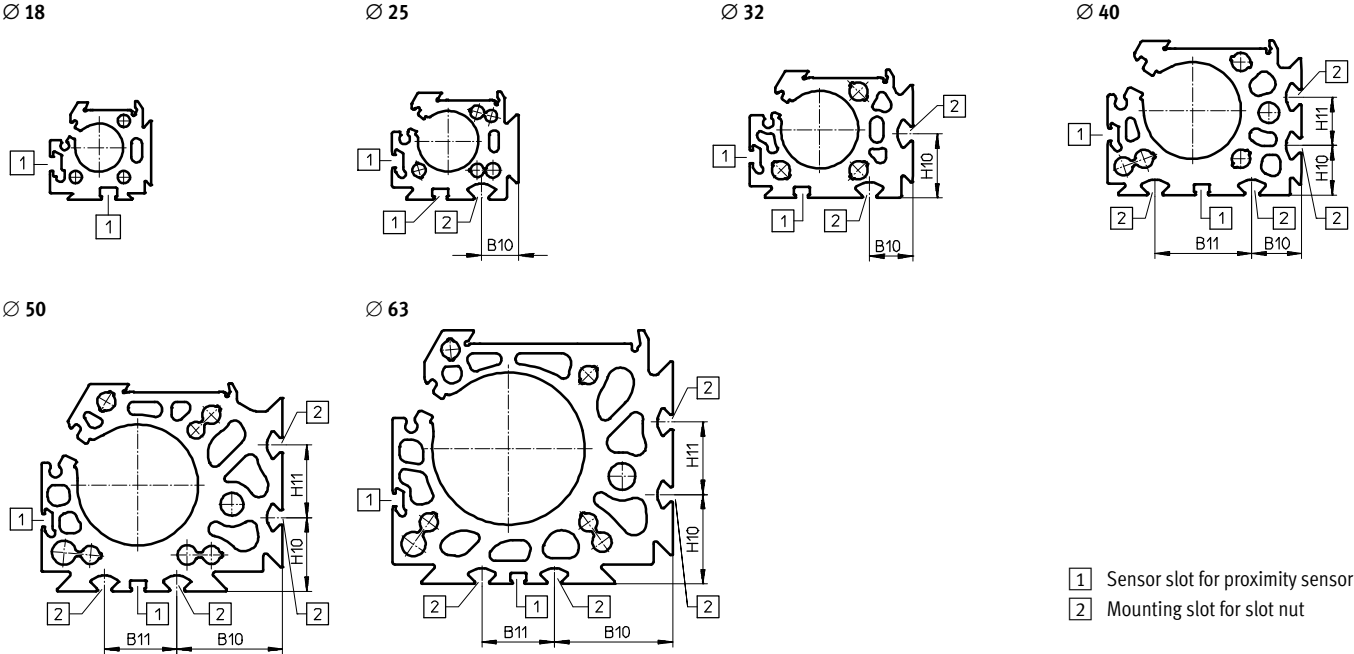
Linear drives DGC-KF, with recirculating ball bearing guide

01

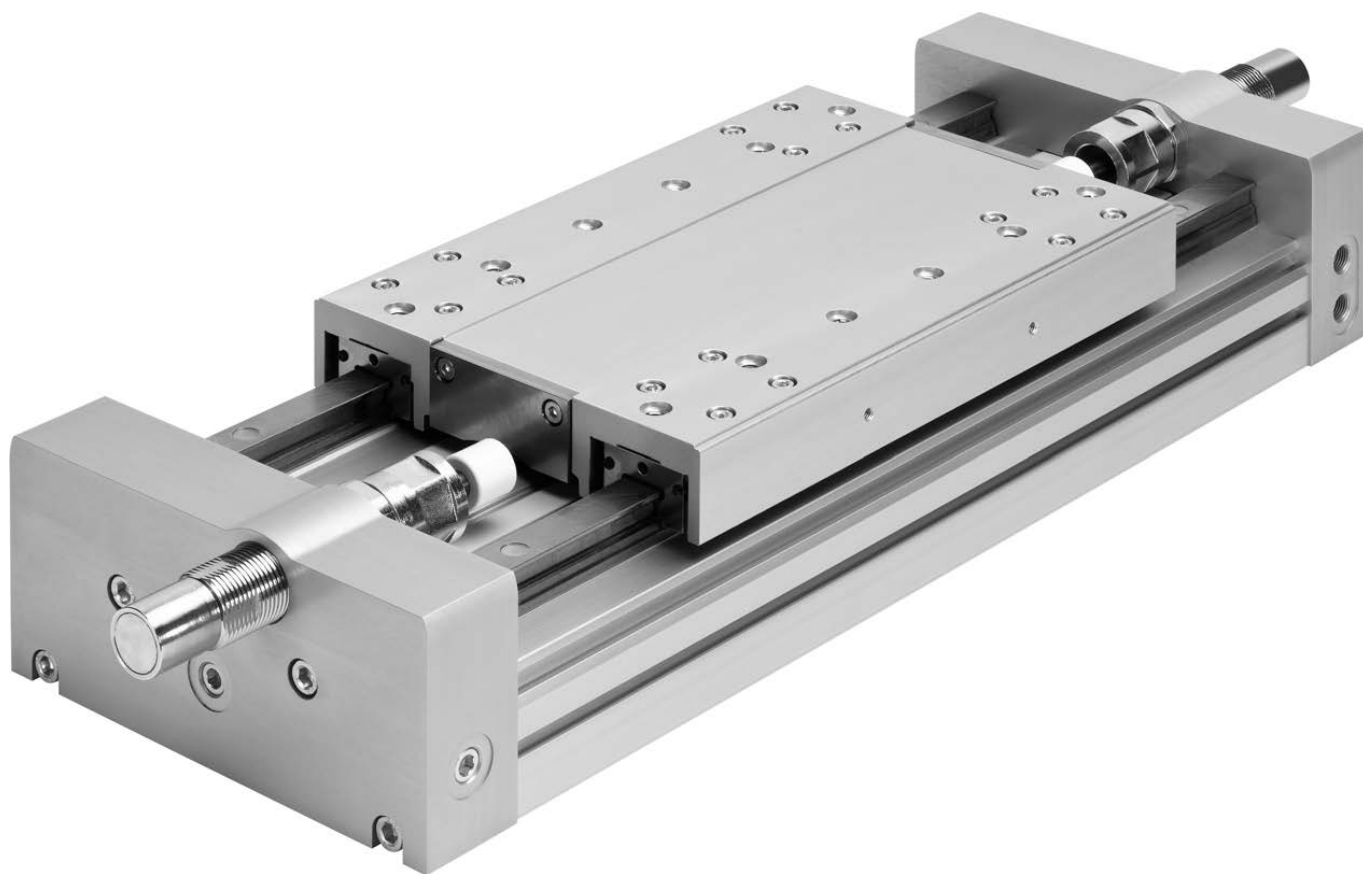
Dimensions

Profile barrel

Download CAD data → www.festo.com



Ø	B10	B11	H10	H11
[mm]				
25	15.23	–	–	–
32	18	–	26.5	–
40	20.5	40	20.5	20
50	43.8	30	30.5	30
63	49	30	37	30



Increase your productivity and lower your costs

- + With the durable heavy-duty guide
- + Thanks to the double recirculating ball bearing guide with extremely high load capacity
- + Thanks to a wide range of mounting options

Rodless cylinders › Mechanically coupled cylinders ›

Linear drives with heavy-duty guide

DGC-HD

Rodless cylinders > Mechanically coupled cylinders >

Linear drives with heavy-duty guide

DGC-HD



Overview, configuration and ordering

→ www.festo.com/catalogue/dgc-hd

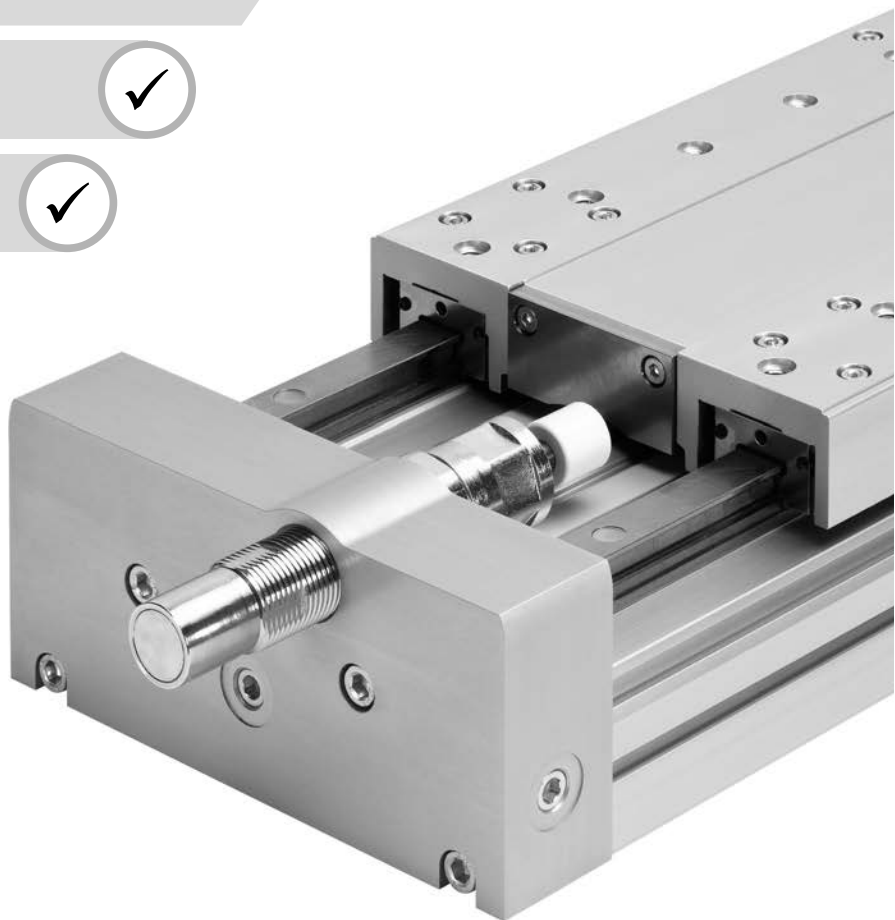


Additional information, support and user documentation

→ www.festo.com/sp/dgc-hd



Spare parts service



- + Double recirculating ball bearing guide for maximum loads and torques
- + Very good operating behaviour under torque load
- + Long service life
- + Ideal as a basic axis for linear gantries and cantilever axes
- + Excellent price/performance ratio
- + Wide range of options for mounting on drives

Linear drives DGC-HD, with heavy-duty guide

Product range overview

Type/function	Piston Ø [mm]	Stroke [mm]	Force [N]	Product options		→ Page/ online
				YSR	YSRW	
Double-acting	DGC-...-K – Compact design					
	18, 25, 32, 40, 50, 63, 80	1 ... 8500	153 ... 3016	–	–	215
	DGC-...-G – Basic design					
	8, 12, 18, 25, 32, 40, 50, 63	1 ... 8500	30 ... 1870	■	■	230
	DGC-...-GF – Plain-bearing guide					
	18, 25, 32, 40, 50, 63	1 ... 8500	153 ... 1870	■	■	233
	DGC-...-KF – Recirculating ball bearing guide					
	8, 12, 18, 25, 32, 40, 50, 63	1 ... 8500	30 ... 1870	■	■	236
Without drive	DGC-...-HD – Heavy-duty design					
	18, 25, 40	10 ... 5000	153 ... 754	■	■	260
	DGC-FA – Passive guide axis					
	8, 12, 18, 25, 32, 40, 50, 63	1 ... 5000	–	■	■	dgc-fa

Product options

- YSR

Linear shock absorber, self-adjusting
- YSRW

Progressive shock absorber, self-adjusting
- GP

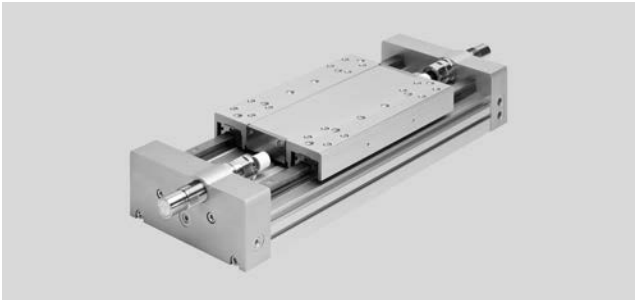
Standard slide, protected
- KL

Standard slide, left
- KR

Standard slide, right

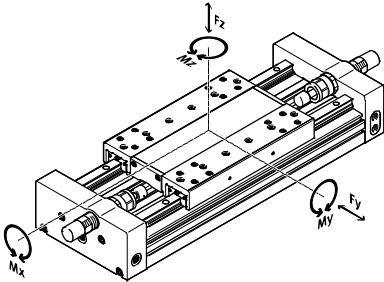
Linear drives DGC-HD, with heavy-duty guide

Data sheet



Technical data

Dimensions → Page 265



Piston Ø		18	25	40
Pneumatic connection		M5	G1/8	G1/4
Stroke	[mm]	10 ... 3000	10 ... 5000	10 ... 3500
Cushioning				
DGC-...-YSR		Linear shock absorber, self-adjusting		
DGC-...-YSRW		Progressive shock absorber, self-adjusting		
Theoretical force at 6 bar	[N]	153	295	754
Max. permissible force F_y	[N]	3650	5600	13,000
Max. permissible force F_z	[N]	3650	5600	13,000
Max. permissible torque M_x	[Nm]	140	300	900
Max. permissible torque M_y	[Nm]	275	500	1450
Max. permissible torque M_z	[Nm]	275	500	1450

Operating conditions				
Piston Ø		18	25	40
Operating pressure	[bar]	2.5 ... 8		1.5 ... 8
Ambient temperature ¹⁾	[°C]	-10 ... +60		

1) Note operating range of proximity sensors.

Materials	
End cap	Anodised aluminium
Slide	Anodised aluminium
Cylinder barrel	Anodised aluminium
Seals	NBR, TPE-U (PU)
Sealing band/cover band	PU/steel

Linear drives DGC-HD, with heavy-duty guide

Order code

01

Pneumatic drives

DGC

—

—

—

HD

—

Type	
DGC	Linear drive

Piston Ø [mm]	
Stroke [mm]	
18	10 ... 3000
25	10 ... 5000
40	10 ... 3500

Guide	
HD	Heavy-duty guide

Cushioning	
YSR	Linear shock absorber, self-adjusting
YSRW	Progressive shock absorber, self-adjusting

Order example:
DGC-18-200-HD-YSRW
Linear drive DGC - piston diameter 18 mm - stroke 200 mm - heavy-duty guide - progressive shock absorber, self-adjusting

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or

www.festo.com/catalogue/...

Enter the type code in the search field.

2018/11 – Subject to change

★ Generally ready for shipping ex works in 24 hours

www.festo.com/catalogue/...

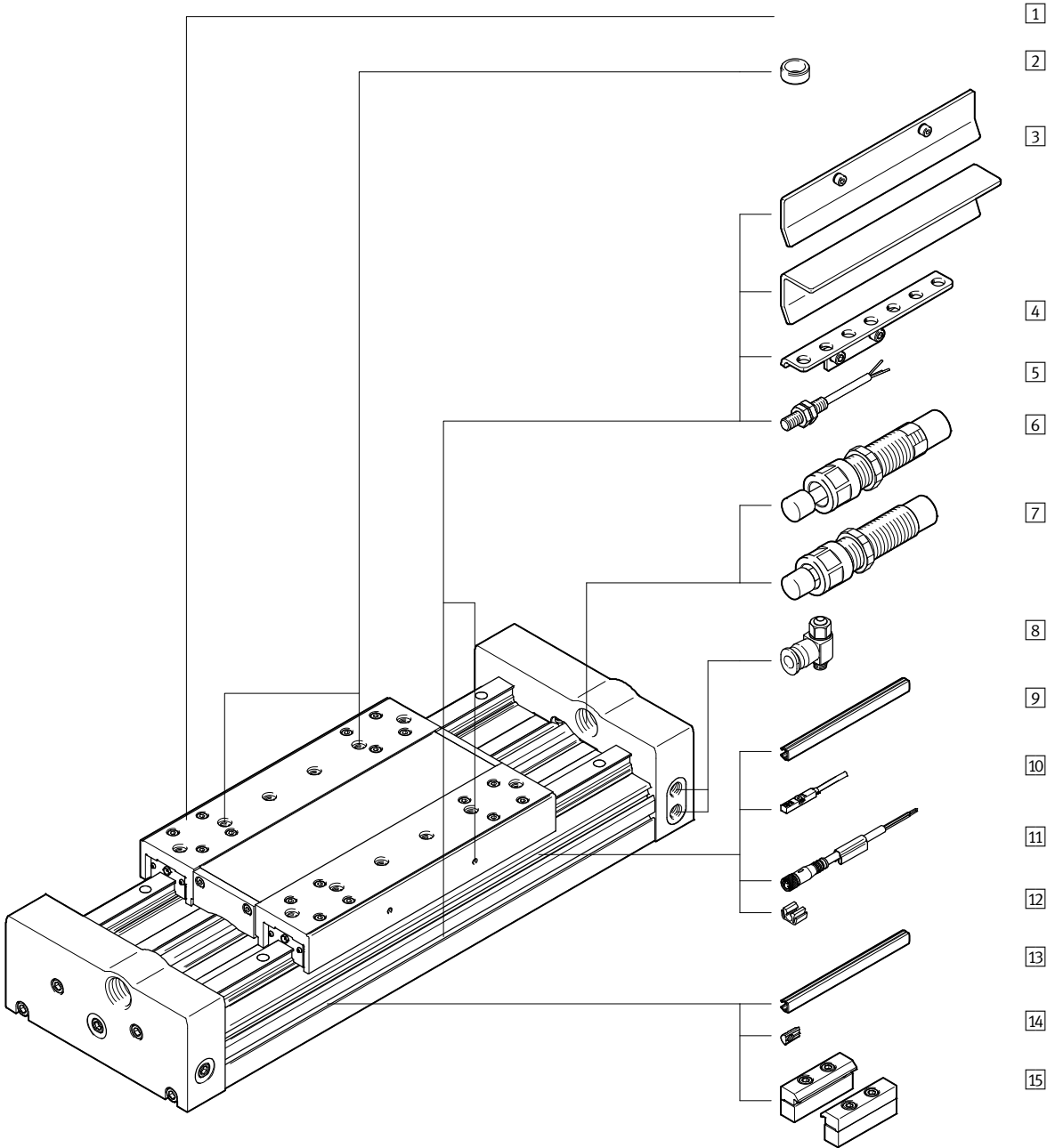
261

Rodless cylinders > Mechanically coupled cylinders >

Linear drives DGC-HD, with heavy-duty guide

01

Accessories

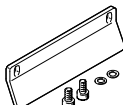
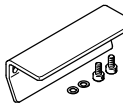
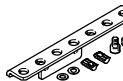


	→ Page/online
1 Linear drive DGC-HD	260
2 Centring sleeve ZBH	263
3 Switch lug SF-EGC-HD	263
4 Sensor bracket HWS-EGC	263
5 Proximity sensor, M8 SIEN	263
6 Shock absorber YSR	261
7 Shock absorber YSRW	263
8 One-way flow control valve GRLA	263

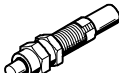
	→ Page/online
9 Slot cover ABP-S	264
10 Proximity sensor, T-slot SIES	264
10 Proximity sensor, T-slot SMT/SME-8	264
11 Connecting cable NEBU	264
12 Clip SMBK	264
13 Slot cover ABP	264
14 Slot nut NST	264
15 Profile mounting MUE	264

Linear drives DGC-HD, with heavy-duty guide

Accessories – Ordering data

	For Ø	Part no.	Type
2 Centring pin/sleeve¹⁾²⁾ Data sheets online: → zbh			
	18	150928	ZBS-5
	25, 40	150927	ZBH-9
3 Switch lug³⁾ Dimensions online: → dgc-hd			
	18	570027	SF-EGC-HD-1-125
	25	1645872	SF-EGC-HD-1-160
	40	1645866	SF-EGC-HD-1-220
3 Switch lug⁴⁾ Dimensions online: → dgc-hd			
	18	570030	SF-EGC-HD-2-125
	25	1645865	SF-EGC-HD-2-160
	40	1645868	SF-EGC-HD-2-220
4 Sensor bracket⁵⁾ Dimensions online: → dgc-hd			
	18	558057	HWS-EGC-M5
	25	558057	HWS-EGC-M5
	40	570365	HWS-EGC-M8-B

- 1) Packaging unit 10 pieces.
2) 2 centring pins/sleeves included in the scope of delivery of the axis.
3) For sensing via proximity sensor SIES-8M.
4) For sensing via proximity sensor SIEN-M8B or SIES-8M.
5) For proximity sensor SIEN-M8B.

	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
5 Inductive proximity sensor – N/O contact, M8 Data sheets → Page 1230					
	18 ... 40	PNP, cable	2.5	★ 150386	SIEN-M8B-PS-K-L
		PNP, plug	–	★ 150387	SIEN-M8B-PS-S-L
N/C contact, M8 Data sheets → Page 1230					
	18 ... 40	PNP, cable	2.5	150390	SIEN-M8B-PO-K-L
		PNP, plug	–	150391	SIEN-M8B-PO-S-L
7 Shock absorber					
	18	18	–	540351	YSRW-DGC-32-KF
	25	25	–	1232870	YSRW-DGC-40/50-B
	40	40	–	543069	YSRW-DGC-63

Function	For Ø	Connection		Part no.	Type
		Thread	O.D.		
8 One-way flow control valve with slotted head screw, metal ⁶⁾ Data sheets → Page 1033					
	18	M5	6	★ 193139	GRLA-M5-QS-6-D
	25	G1/8	8	★ 534337	GRLA-1/8-QS-8-RS-D
	40	G1/4		★ 534339	GRLA-1/4-QS-8-RS-D

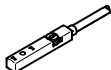
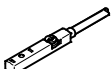
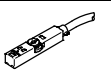
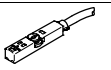
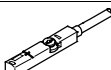
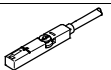
- 6) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

Rodless cylinders > Mechanically coupled cylinders >

Linear drives DGC-HD, with heavy-duty guide

01

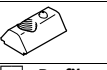
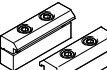
Accessories – Ordering data

	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
9 Slot cover ¹⁾					
	18, 25, 40	–	–	563360	ABP-5-S1
10 Proximity sensor for T-slot, inductive – N/O contact Data sheets → Page 1235					
	18 ... 40	PNP, cable	7.5	551386	SIES-8M-PS-24V-K-7,5-OE
		PNP, plug	0.3	551387	SIES-8M-PS-24V-K-0,3-M8D
		NPN, cable	7.5	551396	SIES-8M-NS-24V-K-7,5-OE
		NPN, plug	0.3	551397	SIES-8M-NS-24V-K-0,3-M8D
Inductive – N/C contact Data sheets → Page 1235					
	18 ... 40	PNP, cable	7.5	551391	SIES-8M-PO-24V-K-7,5-OE
		PNP, plug	0.3	551392	SIES-8M-PO-24V-K-0,3-M8D
		NPN, cable	7.5	551401	SIES-8M-NO-24V-K-7,5-OE
		NPN, plug	0.3	551402	SIES-8M-NO-24V-K-0,3-M8D
Magneto-resistive – N/O contact Data sheets → Page 1206					
	18 ... 40	PNP, cable	2.5	★ 574335	SMT-8M-A-PS-24V-E-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-A-PS-24V-E-0,3-M8D
		PNP, plug	0.3	★ 574337	SMT-8M-A-PS-24V-E-0,3-M12
		NPN, cable	2.5	★ 574338	SMT-8M-A-NS-24V-E-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-A-NS-24V-E-0,3-M8D
Magneto-resistive – N/C contact Data sheets → Page 1206					
	18 ... 40	PNP, cable	7.5	★ 574340	SMT-8M-A-PO-24V-E-7,5-OE
Magnetic reed – N/O contact Data sheets → Page 1201					
	18 ... 40	Contacting, cable	2.5	★ 543862	SME-8M-DS-24V-K-2,5-OE
		Contacting, cable	5.0	★ 543863	SME-8M-DS-24V-K-5,0-OE
		Contacting, cable	2.5	★ 543872	SME-8M-ZS-24V-K-2,5-OE
		Contacting, plug	0.3	★ 543861	SME-8M-DS-24V-K-0,3-M8D
Magnetic reed – N/C contact Data sheets → Page 1203					
	18 ... 40	Contacting, cable	7.5	★ 546799	SME-8M-DO-24V-K-7,5-OE

	For Ø	Connection	Cable length [m]	Part no. Type	
[11] Connecting cable, straight socket				Data sheets → Page 1543	
	18 ... 40	M8x1, 3-pin	2.5	★	541333 NEBU-M8G3-K-2.5-LE3
			5.0	★	541334 NEBU-M8G3-K-5-LE3
		M12x1, 5-pin	2.5	★	541363 NEBU-M12G5-K-2.5-LE3
			5.0	★	541364 NEBU-M12G5-K-5-LE3
Angled socket				Data sheets → Page 1543	
	18 ... 40	M8x1, 3-pin	2.5	★	541338 NEBU-M8W3-K-2.5-LE3
			5.0	★	541341 NEBU-M8W3-K-5-LE3
		M12x1, 5-pin	2.5		541367 NEBU-M12W5-K-2.5-LE3
			5.0		541370 NEBU-M12W5-K-5-LE3

	For Ø	Part no.	Type
12 Clip			
	18, 25, 40	534254	SMBK-8
13 Slot cover¹⁾			
	18	151681	ABP-5
	25	151680	ABP-5-S
	40	151682	ABP-8

1) Packaging unit 2x Q.5 m.

	For Ø	Part no.	Type
14 Slot nut			
	18, 25 ²⁾	150914	NST-5-M5
	25 ³⁾ , 40	150915	NST-8-M6
15 Profile mounting Dimensions online: → dgc-hd			
	18, 25	558043	MUE-70/80
	40	558044	MUE-120/185

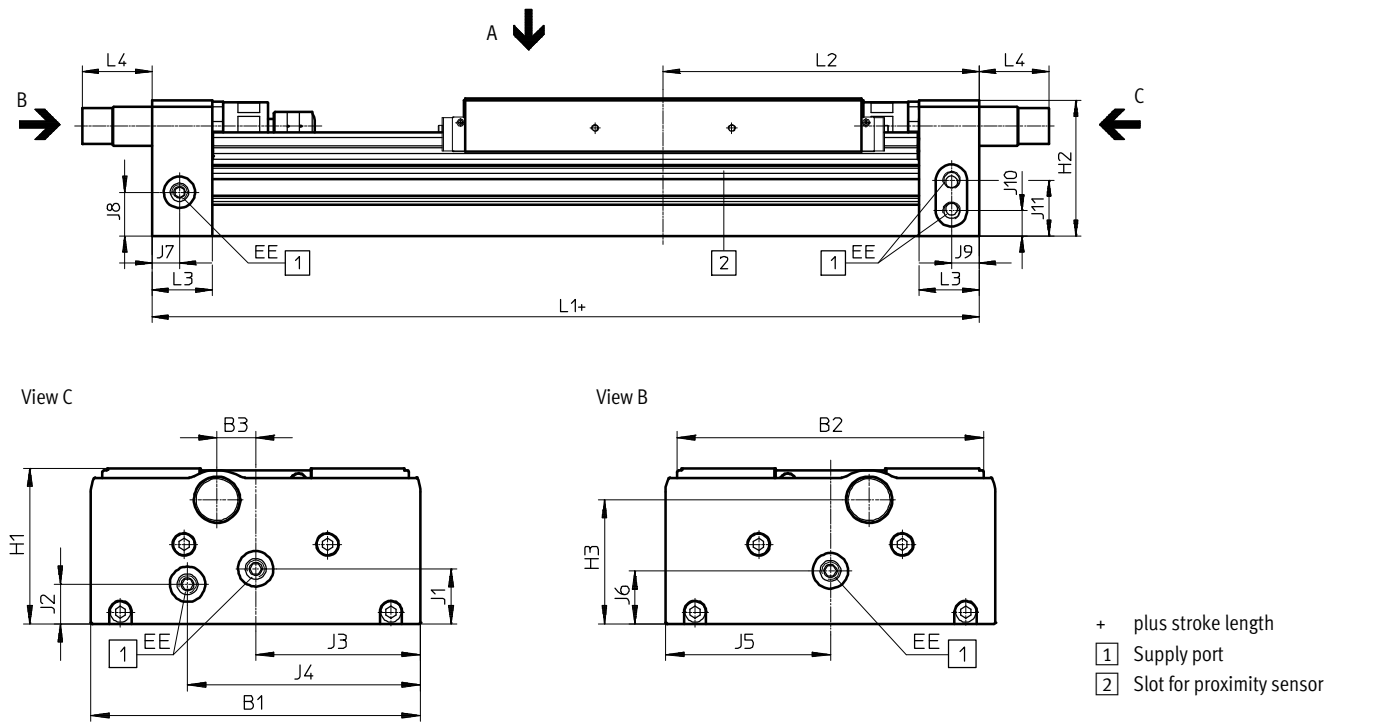
2) For mounting slot at the side.
3) For mounting slot underneath.

Linear drives DGC-HD, with heavy-duty guide

Dimensions

Download CAD data → www.festo.com

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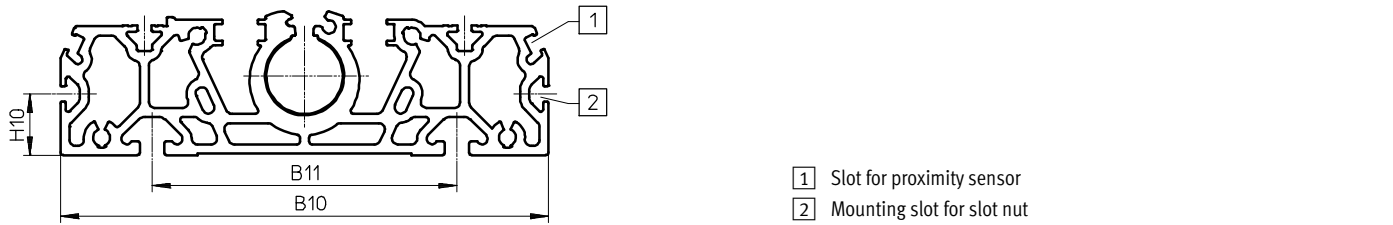


Ø	B1	B2	B3	EE	H1	H2	H3	J1	J2	J3	J4
[mm]											
18	124	120	10	M5	64	63.1	51.7	25.5	15	59	88
25	162	150.7	19	G1/8	76.5	75.5	61	27	19.4	81	114.5
40	222	204	12	G1/4	111.5	109.5	91	43	25	105	157

Ø	J5	J6	J7	J8	J9	J10	J11	L1	L2	L3	L4	
[mm]											YSR	YSRW
18	59	25.5	14.9	21.6	14.9	15	25.6	306.5	153	24.5	34	20.5
25	81	26	15.4	24.3	15.4	14	31	351.5	175.5	33.5	43.8	38.8
40	111	37	25.1	31	25.1	23	45	472.5	236	44	48.3	38.3

Length tolerance												
For stroke	[mm]	≤ 1000			≤ 2000			≤ 3000			≤ 4000	
L1	[mm]	+0.90			+1.10			+1.40			+1.50	
											+1.60	

Profile barrel



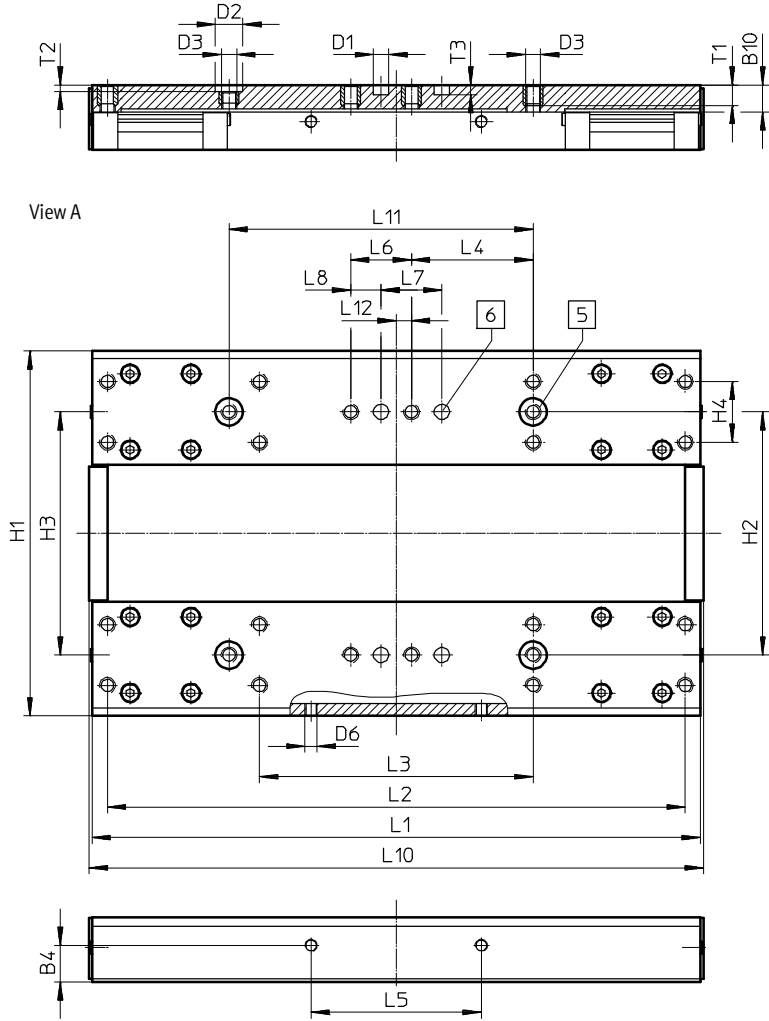
Ø	B10	B11	H10
[mm]			
18	122	80	20
25	160	100	20
40	220	140	20

Linear drives DGC-HD, with heavy-duty guide

Download CAD data [→ www.festo.com](#)

Dimensions

Ø 18



Ø	B4	B10	D1	D2	D3	D6	H1	H2	H3	H4	L1	L2
[mm]	±0.1		Ø H7	Ø H7			±0.3	±0.05		±0.1	±0.1	±0.2
18	12	8.8	5	9	M5	M4	120	80	80	20	200	190

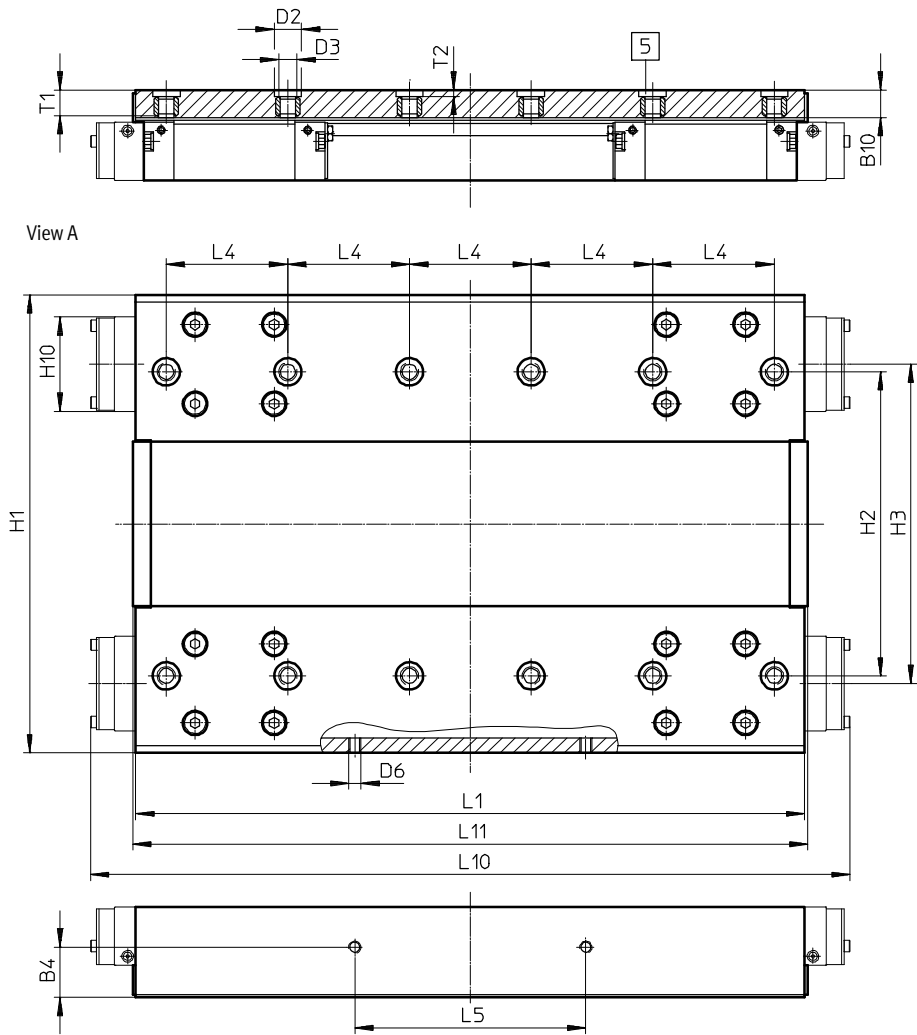
Ø	L3	L4	L5	L6	L7	L8	L10	L11	L12	T1	T2	T3
[mm]	±0.2	±0.1	±0.2	±0.1	±0.03	±0.1		±0.03			+0.1	+0.1
18	90	40	56	20	20	10	202	100	5	7.8	2.1	3.1

Dimensions

Ø 25

Download CAD data → www.festo.com

01



5 Hole for centring sleeve ZBH

Ø	B4	B10*	D2 Ø H7	D3	D6	H1	H2	H3
[mm]	±0.1					±0.3	±0.05	
25	16.5	10	9	M6	M4	150.7	100	105

Ø	H10*	L1	L4	L5	L10*	L11	T1	T2
[mm]		±0.1	±0.03	±0.1				+0.1
25	31	220	40	76	249.8	222	9	2.1

* Protected version

Rodless cylinders > Mechanically coupled cylinders >

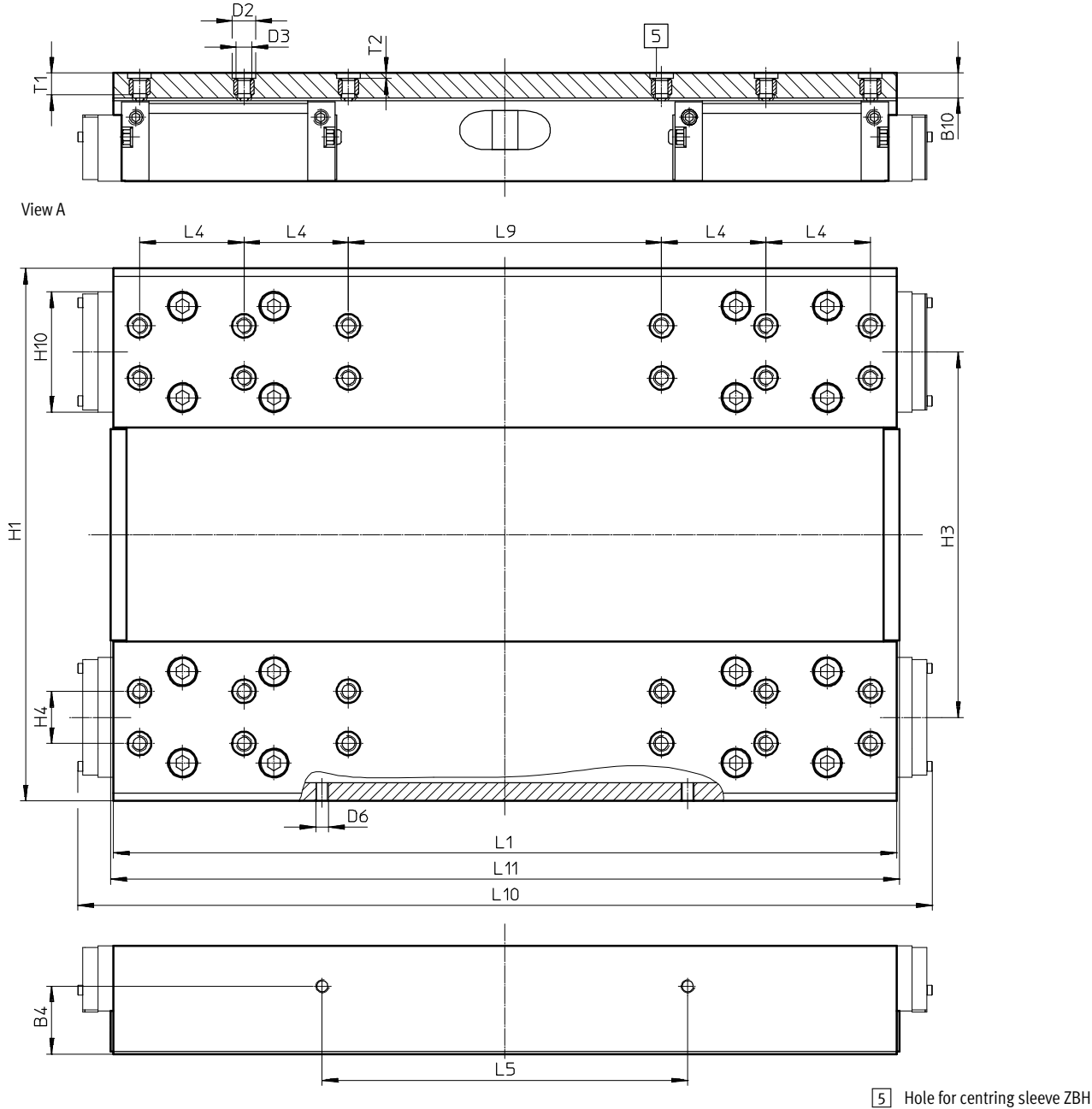
Linear drives DGC-HD, with heavy-duty guide

01

Dimensions

Download CAD data → www.festo.com

Ø 40



Ø	B4	B10*	D2 Ø H7	D3	D6	H1	H3	H4
[mm]	±0.1					±0.3		±0.05
40	26	10.5	9	M6	M5	204	140	20

Ø	H10*	L1	L4	L5	L9	L10*	L11	T1	T2
[mm]		±0.1	±0.05	±0.1	±0.05				+0.1
40	46	300	40	140	120	327.3	302	9.5	2.1

* Protected version



Gain space and lower costs

- + Thanks to their compact design
- + Thanks to an attractive price
- + With the innovative sensor solution SRBS for position sensing

Semi-rotary drives › Semi-rotary drives with rotary vane ›
Semi-rotary drives

DRVS ★

Semi-rotary drives > Semi-rotary drives with rotary vane >

Semi-rotary drives

DRVS



Overview, configuration and ordering

→ www.festo.com/catalogue/drvs



Additional information, support and user documentation

→ www.festo.com/sp/drvs



Quick ordering of basic designs

→ page 273



Selected types in accordance with the ATEX Directive
for explosive atmospheres

→ www.festo.com/catalogue/ex



- + Modern and compact design
- + Swivel angle of 90°, 180° and 270°
- + Lighter than other semi-rotary drives
- + Housing protected against splash water and dust

Product range overview

Type/function	Version	Size	Swivel angle [°]	Torque [Nm]	Product options
					P
DRVS					
Double-acting	With fixed swivel angle ¹⁾	6, 8	90, 180	0.15 ... 0.35	■
		12, 16, 25, 32, 40	90, 180, 270	1 ... 20	■

1) Swivel angle can be adjusted with the help of accessories.

Product options

- P Elastic cushioning at both ends
- EX4 EU certification (II 2GD)

Data sheet



Technical data			Dimensions → Page 277					
Size		6	8	12	16	25	32	40
Pneumatic connection		M3		M5			G1/8	
Cushioning		Elastic cushioning at both ends						
Swivel angle	[°]	90, 180		90, 180, 270				
Torque at 6 bar	[Nm]	0.15	0.35	1	2	5	10	20
Swivel frequency at 6 bar								
Swivel angle 90°, 180°	[Hz]	3						
Swivel angle 270°	[Hz]	–		2				
Max. perm. radial force ²⁾	[N]	15	20	25	30	60	200	350
Max. perm. axial force ²⁾	[N]	10		20	25	40	75	120
Cushioning angle	[°]	0.5						
Max. perm. mass moment of inertia ³⁾	[kgm²x10 ⁻⁴]	6.5	13	50	100	120	200	350

2) The axis of rotation and the centre of the drive shaft are the point of reference for the forces.
3) → See also graphs.

Operating conditions								
Size		6	8	12	16	25	32	40
Operating pressure	[bar]	3.5 ... 8		2.5 ... 8		2 ... 8		
Ambient temperature ⁴⁾	[°C]	0 ... +60						

4) Note operating range of proximity sensors.

Materials							
Size	6	8	12	16	25	32	40
Drive shaft	High-alloy stainless steel			Nickel-plated steel			
Housing	Anodised wrought aluminium alloy		Painted die-cast aluminium				
Rotary vane	Reinforced PET						
Ball bearing	Rolled steel						
Screws	Galvanised steel						
Shaft seal	–		PU				NBR
Seals	TPE-U (PU)						

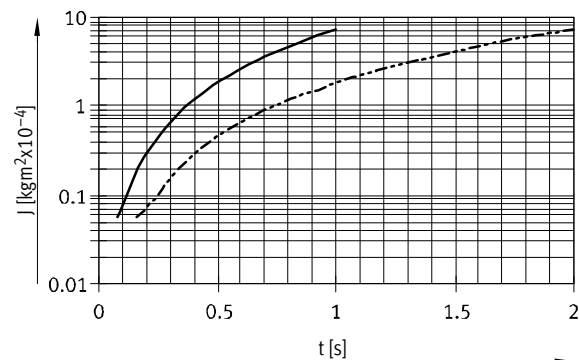
Semi-rotary drives DRVS ★

01

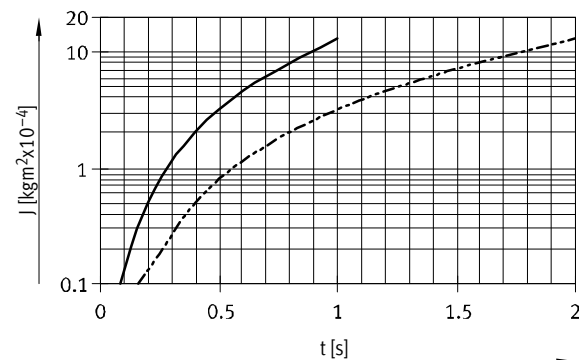
Data sheet

Mass moment of inertia J as a function of swivel time t

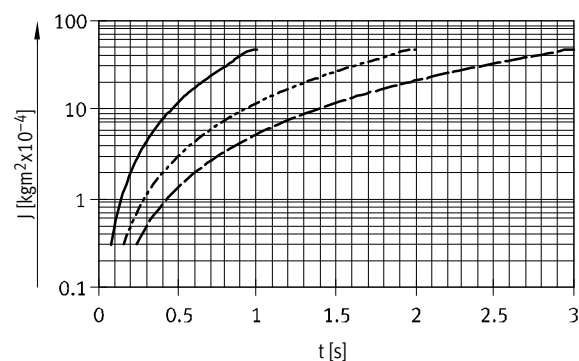
DRVS-6



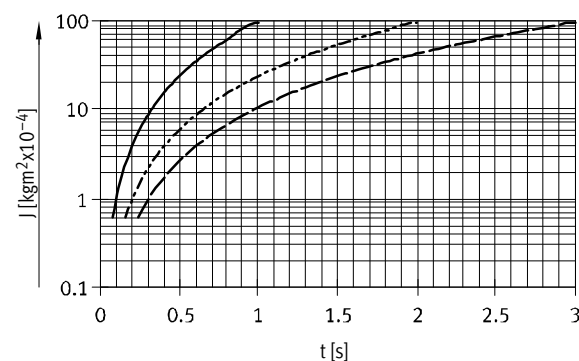
DRVS-8



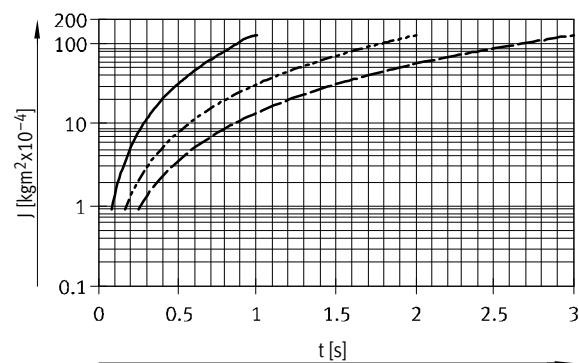
DRVS-12



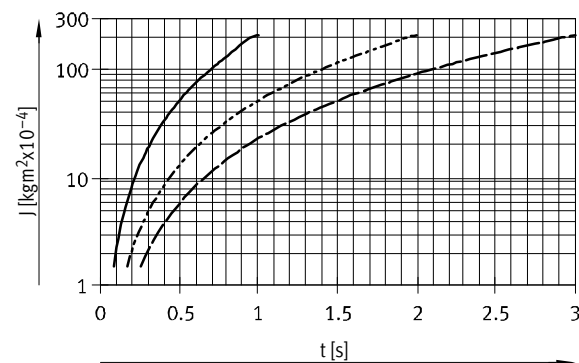
DRVS-16



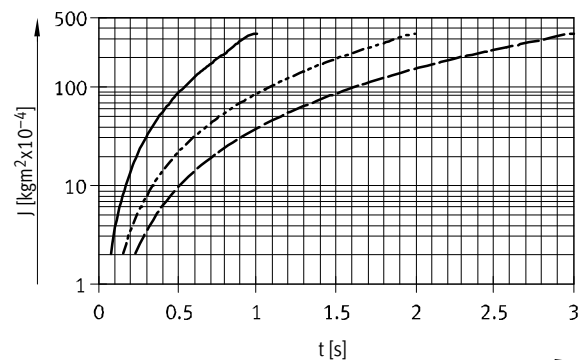
DRVS-25



DRVS-32



DRVS-40



— 90°
 - - - 180°
 - · - 270°

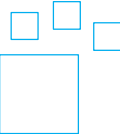
 Quick ordering¹⁾

Part no.	Type
Size 6 mm	
1845706	DRVS-6-90-P
1845707	DRVS-6-180-P
Size 8 mm	
1845708	DRVS-8-90-P
1845709	DRVS-8-180-P
Size 12 mm	
1845710	DRVS-12-90-P
1845711	DRVS-12-180-P
1845712	DRVS-12-270-P
Size 16 mm	
1845713	DRVS-16-90-P
1845714	DRVS-16-180-P
1845715	DRVS-16-270-P

Part no.	Type
Size 25 mm	
1845716	DRVS-25-90-P
1845717	DRVS-25-180-P
1845718	DRVS-25-270-P
Size 32 mm	
1845719	DRVS-32-90-P
1845720	DRVS-32-180-P
1845721	DRVS-32-270-P
Size 40 mm	
1845722	DRVS-40-90-P
1845723	DRVS-40-180-P
1845724	DRVS-40-270-P

1) All products in this table are easy to select and quick to order.

Ordering – Product options



Configurable product

This product and all its options can be ordered using the configurator.

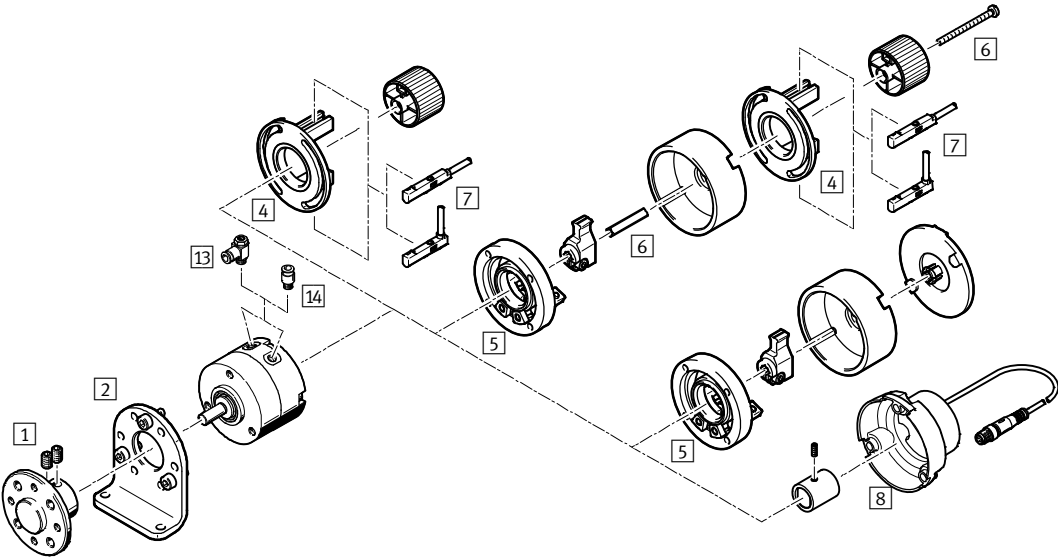
The configurator can be found under Products on the DVD or
www.festo.com/catalogue/...

Enter the type code in the search field.

Semi-rotary drives DRVS ★

01 Accessories

Size 6, 8

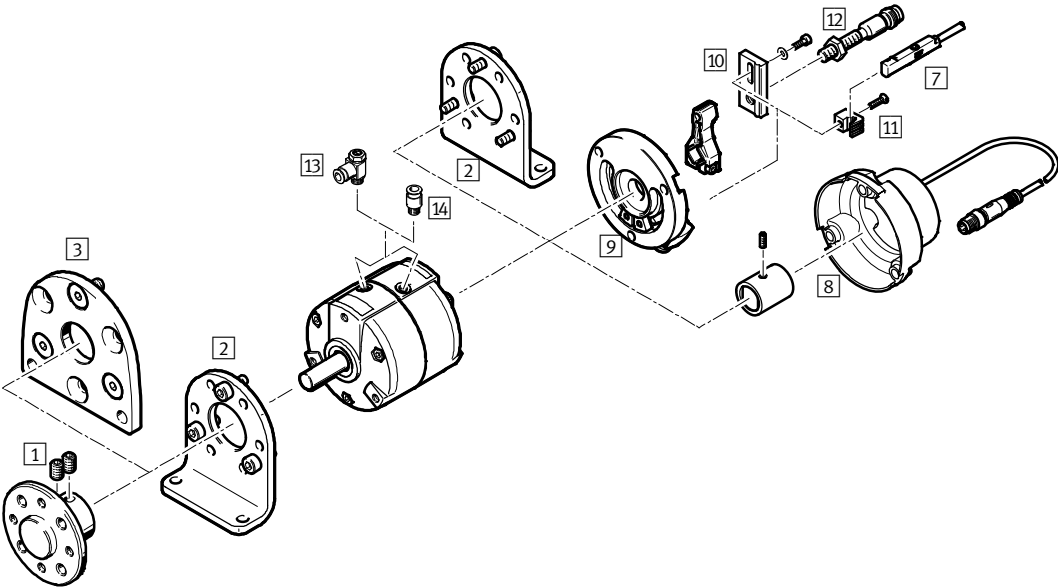


	→ Page/online
1 Push-on flange FWSR/DARF	275
2 Foot mounting DAMH ¹⁾	275
4 Mounting kit WSM-....-SME-10	275
5 Stop kit KSM	275
6 Adapter kit DADP-AK	275

	→ Page/online
7 Proximity sensor SME/SMT-10	275
8 Position sensor SRBS	275
13 One-way flow control valve GRLA	276
14 Push-in fitting QS	1443
- Connecting cable NEBU	275

1) The foot mounting can only be mounted at the front.

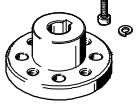
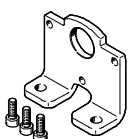
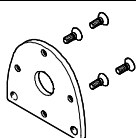
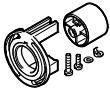
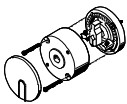
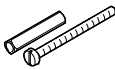
Size 12 ... 40



	→ Page/online
1 Push-on flange FWSR/DARF	275
2 Foot mounting DAMH	275
3 Flange mounting DAMF	275
7 Proximity sensor SME/SMT-10	275
8 Position sensor SRBS	275
9 Adapter kit DADP-ES	276

	→ Page/online
10 Sensor bracket SL-DSM-S	276
11 Sensor bracket SL-DSM-B	276
12 Proximity sensor SIEN	276
13 One-way flow control valve GRLA	276
14 Push-in fitting QS	1443
- Connecting cable NEBU	275

Accessories – Ordering data

	For size	Part no.	Type
1 Push-on flange¹⁾ Dimensions online: → drvs			
	6	185948	FWSR-6
	8	185949	FWSR-8
	12	4886221	DARF-Q12-12
	16	4886222	DARF-Q12-16
	25	4886223	DARF-Q12-25
	32	4886224	DARF-Q12-32
	40	4886225	DARF-Q12-40
2 Foot mounting Dimensions online: → drvs			
	6	3371840	DAMH-Q12-6
	8	3371841	DAMH-Q12-8
	12	3371842	DAMH-Q12-12
	16	3371843	DAMH-Q12-16
	25	3371844	DAMH-Q12-25
	32	3371845	DAMH-Q12-32
	40	3371846	DAMH-Q12-40
3 Flange mounting¹⁾ Dimensions online: → drvs			
	12	4965018	DAMF-Q12-12
	16	4965019	DAMF-Q12-16
	25	4965020	DAMF-Q12-25
	32	4965021	DAMF-Q12-32
	40	4965022	DAMF-Q12-40
4 Mounting kit for proximity sensor SME/SMT-10			
	6	173205	WSM-6-SME-10
	8	173206	WSM-8-SME-10
5 Stop kit			
	6	175833	KSM-6
	8	175834	KSM-8
6 Adapter kit Dimensions online: → drvs			
	6	3617044	DADP-AK-Q1-6
	8	3617045	DADP-AK-Q1-8

1) Suitable for ATEX

	For size	Switching output, connection	Cable length [m]	Part no.	Type
7 Proximity sensor for C-slot, magneto-resistive – N/O contact¹⁾ Data sheet → Page 1222					
	6 ... 40	PNP, cable	2.5	★	551373 SMT-10M-PS-24V-E-2,5-L-OE
		PNP, plug	0.3	★	551375 SMT-10M-PS-24V-E-0,3-L-M8D
Magnetic reed – N/O contact Data sheets → Page 1220					
	6 ... 40	Contacting, cable	2.5		173210 SME-10-KL-LED-24
		Contacting, plug	0.3		173212 SME-10-SL-LED-24
	12 ... 40	Contacting, cable	2.5	★	551365 SME-10M-DS-24V-E-2,5-L-OE
		Contacting, plug	0.3	★	551367 SME-10M-DS-24V-E-0,3-L-M8D
8 Position sensor Dimensions online: → srbs					
	6	Only one connecting cable is required for sensing the end positions	0.3	★	2619969 SRBS-Q12-6-E270-EP-1-S-M8
	8			★	2619972 SRBS-Q12-8-E270-EP-1-S-M8
	12			★	2393546 SRBS-Q12-12-E270-EP-1-S-M8
	16			★	2393547 SRBS-Q12-16-E270-EP-1-S-M8
	25			★	2393548 SRBS-Q12-25-E270-EP-1-S-M8
	32			★	2393549 SRBS-Q12-32-E270-EP-1-S-M8
	40			★	2393550 SRBS-Q12-40-E270-EP-1-S-M8
Connecting cables for position sensor SRBS, straight socket Data sheets online: → nebu					
	6 ... 40	M8x1, 4-pin	2.5	541342	NEBU-M8G4-K-2.5-LE4
			5	541343	NEBU-M8G4-K-5-LE4
	6 ... 40	M8x1, 4-pin	2.5	554035	NEBU-M8G4-K-2.5-M8G4

1) For size 6, 8: with mounting kit WSM-...-SME-10
For size 12 ... 40: mounted on the DRVS using sensor bracket SL-DSM-B

Semi-rotary drives > Semi-rotary drives with rotary vane >

Semi-rotary drives DRVS ★

01

Accessories – Ordering data

	For size	Part no.	Type
9 Stop kit Dimensions online: → drvs			
	12	2536502	DADP-ES-Q12-12
	16	2536503	DADP-ES-Q12-16
	25	2536504	DADP-ES-Q12-25
	32	2536505	DADP-ES-Q12-32
	40	2536506	DADP-ES-Q12-40

10/ 11 Sensor bracket¹⁾			
	12 ... 40	For mounting the proximity sensor SIEN-M5	1130882 SL-DSM-S-M5-B
	12 ... 40	For mounting the proximity sensor SIEN-M8	1132360 SL-DSM-S-M8-B
	12 ... 40	For mounting the proximity sensor SME/SMT-10	550661 SL-DSM-B

	For size	Switching output, connection	Cable length [m]	Part no.	Type
12 Inductive proximity sensor – N/O contact, M5 Data sheets → Page 1230					
	12 ... 40	PNP, cable	2.5	★ 150370	SIEN-M5B-PS-K-L
		PNP, plug	–	★ 150371	SIEN-M5B-PS-S-L

N/O contact, M8					
	12 ... 40	PNP, cable	2.5	★ 150386	SIEN-M8B-PS-K-L
		PNP, plug	–	★ 150387	SIEN-M8B-PS-S-L

Connecting cables, straight socket						Data sheets → Page 1543
	6 ... 40	M8x1, 3-pin	2.5	★	541333	NEBU-M8G3-K-2.5-LE3
			5.0	★	541334	NEBU-M8G3-K-5-LE3

Angled socket							Data sheets → Page 1543	
	6 ... 40	M8x1, 3-pin	2.5	★	541338	NEBU-M8W3-K-2.5-LE3		
			5.0	★	541341	NEBU-M8W3-K-5-LE3		

	For size	Connection		Part no.	Type
		Thread	O.D.		
13 One-way flow control valve with slotted head screw, metal²⁾ for exhaust air flow control Data sheets → Page 1033					
	6, 8	M3	3	175041	GRLA-M3-QS-3
	12, 16, 25	M5	3	★ 193137	GRLA-M5-QS-3-D
			4	★ 193138	GRLA-M5-QS-4-D
	32, 40	G1/8	3	★ 193142	GRLA-1/8-QS-3-D
			4	★ 193143	GRLA-1/8-QS-4-D
			6	★ 193144	GRLA-1/8-QS-6-D
			8	★ 193145	GRLA-1/8-QS-8-D

1) Packaging unit 2 pieces.

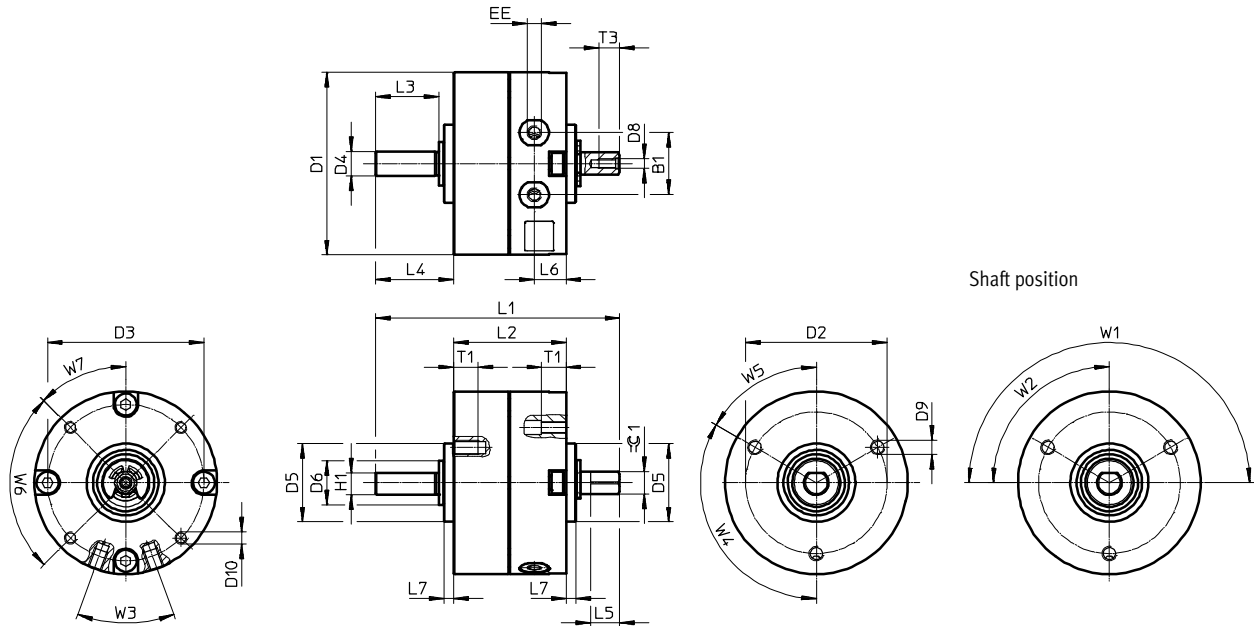
2) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

Dimensions

Size 6, 8

Download CAD data www.festo.com

01



Size	B1	D1 Ø ±0.2	D2 Ø ±0.1	D3 Ø ±0.1	D4 Ø g7	D5 Ø f8	D6 Ø	D8	D9
6	10	29.4	24	25	4	14	8	M2	M3
8	12.8	37.4	29	32	5	16	9	M2	M3

Size	D10	EE	H1 -0.2	L1	L2	L3	L4	L5 -0.2	L6	L7
6	M2	M3	3.5	43	21	10	13	5	6	2
8	M2.5	M3	4.5	50	23	13	16	6	6.5	2

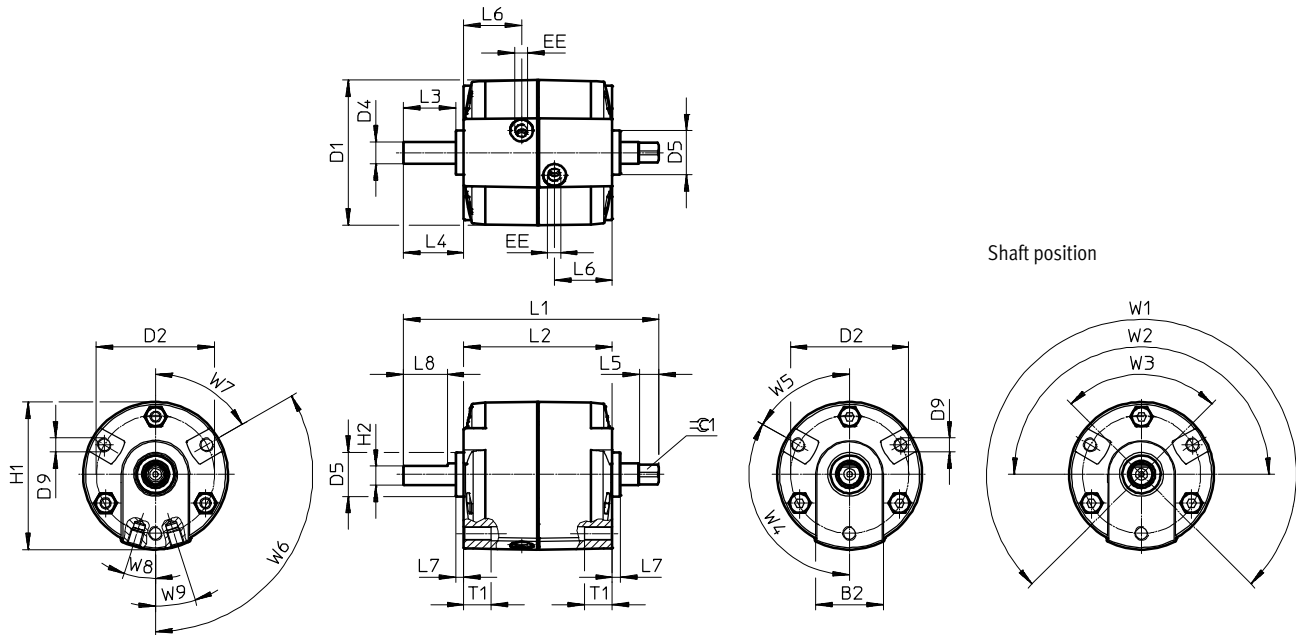
Size	T1 +0.5	T3 +0.5	W1 +5°	W2 +5°	W3	W4	W5	W6	W7	≈ 1
6	5	3.5	180°	90°	40°	120°	60°	90°	45°	3
8	5	4.3								3.5

Semi-rotary drives DRVS

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Dimensions

Size 12, 16



Size	B2	D1 Ø	D2 Ø ±0.2	D4 Ø g7	D5 Ø -0.1	D9	EE	H1
12	24	45.5	36	6	14	M4	M5	46.3
16	24.5	52.7	43	8	16	M5	M5	53.7

Size	H2 ±0.1	L1	L2 +0.6/-0.2	L3	L4	L5	L6	L7 +0.1/-0.1	L8 +0.4	T1
12	5	73+0.2/-0.1	40.5	17	20+0.4/-0.6	9±0.1	14.8	3	14	8
16	7	93+0.2/-0.2	54	19	22+0.4/-0.7	7.2+0.1	21	3	16	10

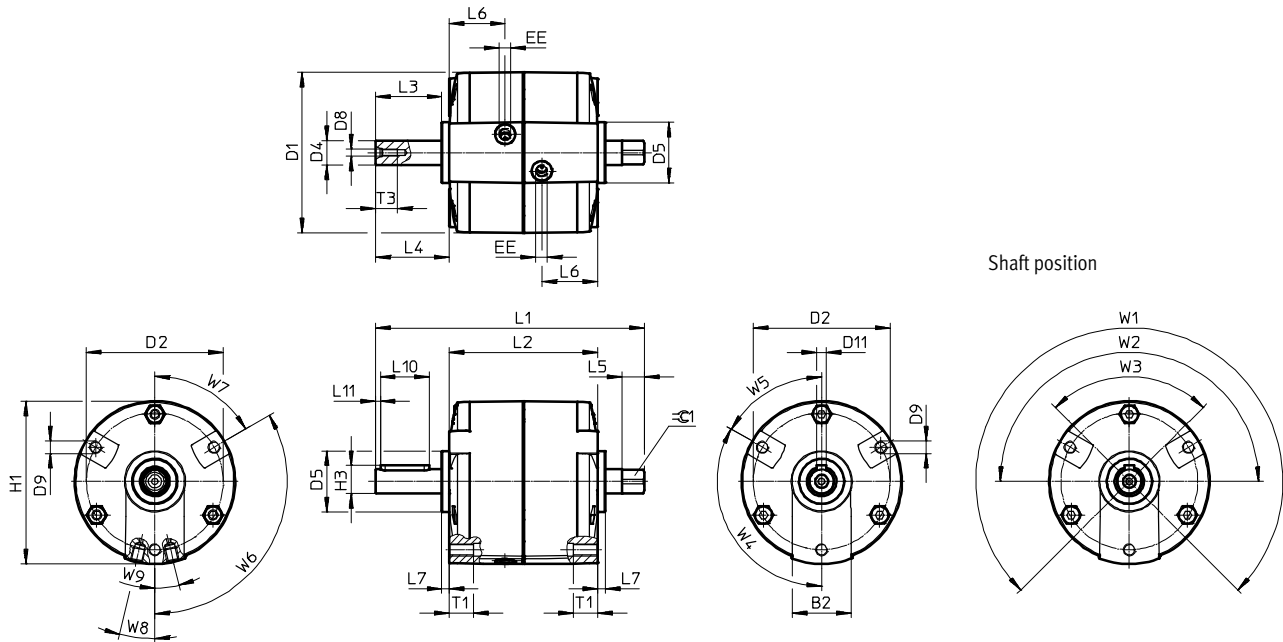
Size	W1 +7°	W2 +7°	W3 +7°	W4	W5	W6	W7	W8	W9	⌀ 1
12	270°	180°	90°	120°	60°	120°	60°	19.5°	19.5°	4.5 _{h11}
16								17.5°	17.5°	6 _{-0.1}

Dimensions

Size 25

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01



Pneumatic drives

Size	B2	D1 Ø	D2 Ø ±0.2	D4 Ø g7	D5 Ø -0.1	D8	D9	D11
25	24	65.7	56	10	25	M3	M5	4

Size	EE	H1	H3	L1	L2	L3	L4	L5
			-0.2	+0.2/-0.3	+0.3/-0.2		+0.3/-0.4	
25	M5	66.7	11.5	110.2	61	27.1	30.1	9.2

Size	L6	L7	L10	L11	T1	T3	W1	W2
		+0.1/-0.1	+0.1			+3	+7°	+7°
25	23	3	20	2	10	9	270°	180°

Size	W3	W4	W5	W6	W7	W8	W9	⌀ 1	Feather key ¹⁾
	+7°							-0.1	
25	90°	120°	60°	120°	60°	13°	13°	8	A4x4x20

1) Included in the scope of delivery.

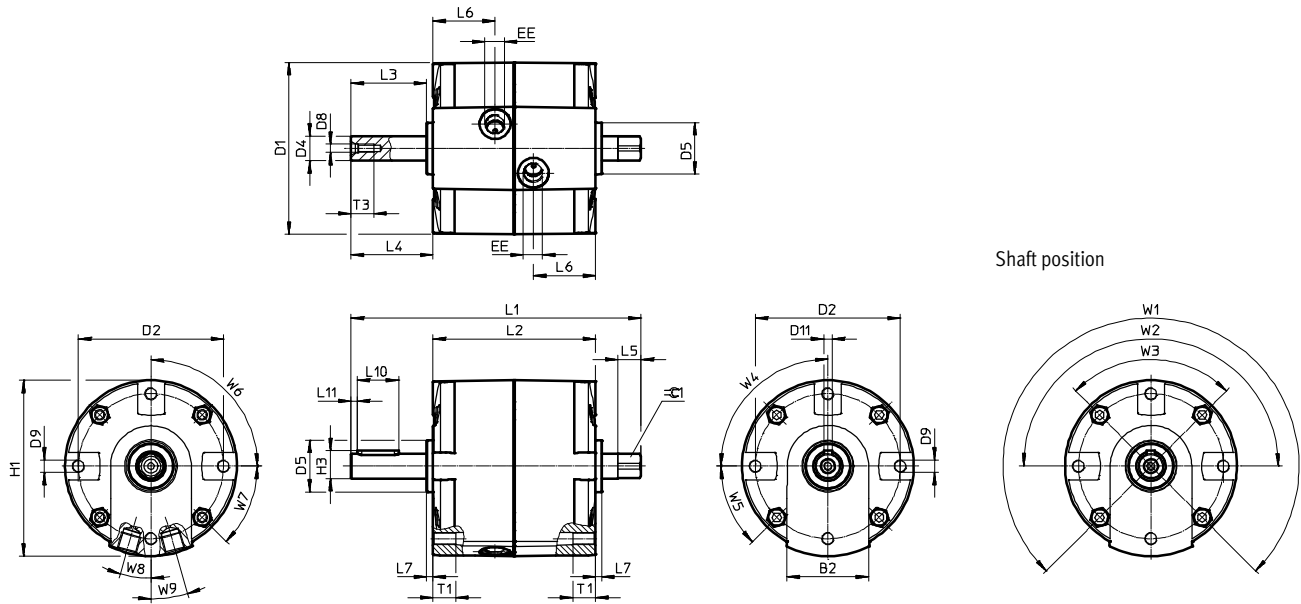
Semi-rotary drives DRVS ★

Download CAD data → www.festo.com

Dimensions

Size 32, 40

Pneumatic drives



Size	B2	D1 Ø	D2 Ø ±0.2	D4 Ø g7	D5 Ø -0.1	D8	D9	D11 N9
32	39	83	70	12	25	M4	M6	4
40	42	100.1	87	17	30	M5	M8	5

Size	EE	H1	H3 -0.2	L1 +0.2/-0.3	L2	L3	L4 +0.3/-0.6	L5
32	G1/8	85	13.5	140	78.5+0.5/-0.1	36.5	39.5	11.2
40	G1/8	102.6	19	170	93+0.4	50.5	53.5	16+0.3

Size	L6	L7	L10 +0.1	L11	T1	T3 +3	W1 +7°	W2 +7°
32	30	3+0.1/-0.2	20+0.1	3	11	11	270°	180°
40	37	3+0.2	36.1+0.3	5	13+3	13		

Size	W3 +7°	W4	W5	W6	W7	W8	W9	≈ 1	Feather key to DIN 6885 ¹⁾
32	90°	90°	45°	90°	45°	16°	16°	10	A4x4x20
40						14.5°	14.5°	13	A5x5x36

1) Included in the scope of delivery.



Gain space and save costs

- + Thanks to their compact design
- + Thanks to the drive's durability

Semi-rotary drives › Semi-rotary drives with rotary vane ›
Semi-rotary drives

DSM
Size 6 ... 10

Semi-rotary drives > Semi-rotary drives with rotary vane >

Semi-rotary drives

DSM



Overview, configuration and ordering

→ www.festo.com/catalogue/dsm



Additional information, support and user documentation

→ www.festo.com/sp/dsm



Selected types in accordance with the ATEX Directive
for explosive atmospheres

→ www.festo.com/catalogue/ex



Spare parts service



- + Force transmitted directly to the drive shaft via a rotary vane
- + With spigot or hollow flanged shaft
- + Compact semi-rotary drives with adjustable swivel angles up to 240°
- + Elastic cushioning plates in the end positions

Swivel modules DSM

Product range overview – Size 6 ... 10

Type/function	Version	Size	Swivel angle [°]	Torque [Nm]	Product options			
					P	A	FF	FW
Double-acting	DSM							
	With fixed swivel angle	6, 8	90, 180	0.15 ... 0.35	■	■	–	■
		10	90, 180, 240	0.85	■	■	–	■
	DSM-...-FF							
	With adjustable swivel angle	6, 8	180	0.15 ... 0.35	■	■	■	■
		10	200	0.85	■	■	■	■
	DSM-T-...							
	With tandem rotary vanes	6, 8	90, 180	0.3 ... 0.7	■	■	■	■
		10	90, 180, 240	1.7	■	■	■	■

Product options – Size 6 ... 10

P

Elastic cushioning components at both ends

A

Position sensing

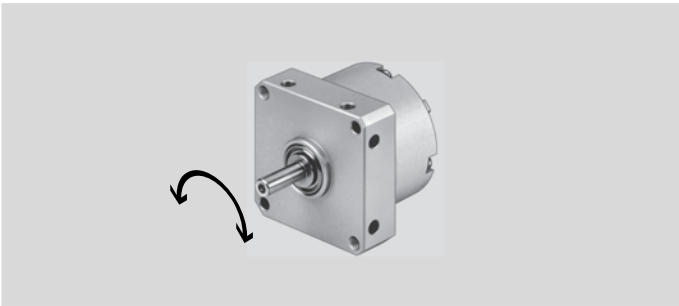
FF

Adjustable swivel angle

FW

Flanged shaft

Data sheet – Size 6 ... 10



Technical data			Dimensions ➔ Page 288	
Size		6	8	10
Pneumatic connection		M3		
Cushioning		Elastic cushioning rings/plates at both ends		
Swivel angle				
Fixed	[°]	90 or 180	90 or 180	90, 180 or 240
Adjustable	[°]	0 ... 180		0 ... 200
Torque at 6 bar	[Nm]	0.15	0.35	0.85
Max. perm. swivel frequency	[Hz]	3		3 (at 240°: 2 Hz)
Max. perm. radial force ¹⁾	[N]	15	20	30
Max. perm. axial force ¹⁾	[N]	10		
Max. cushioning angle	[°]	0.5		
Max. perm. mass moment of inertia ²⁾	[kgm ²]	0.00065	0.0013	0.0026

1) On the drive shaft.
2) Maximum value → Graphs.

Operating conditions				
Size		6	8	10
Operating pressure	[bar]	3.5 ... 8		
Temperature range ³⁾	[°C]	0 ... +60		

3) Note operating range of proximity sensors.

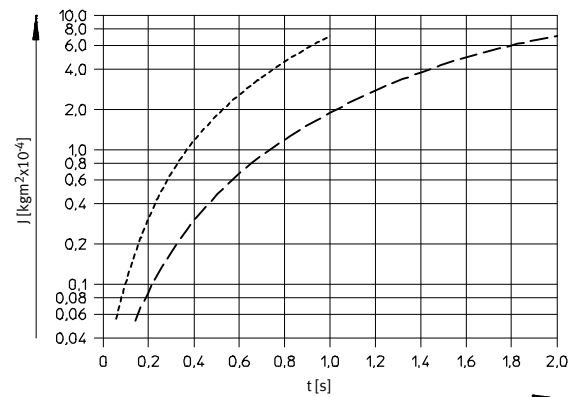
Materials	
Drive shaft	High-alloy stainless steel
End cap	Aluminium
Housing	Anodised aluminium
Rotary vane	Glass fibre-reinforced plastic
Screws	Galvanised steel
Seals	NBR, TPE-U (PUR)

Swivel modules DSM

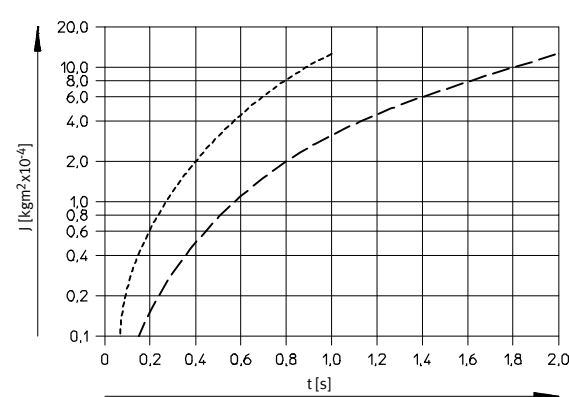
Data sheet – Size 6 ... 10

Mass moment of inertia J on the drive shaft as a function of swivel time t

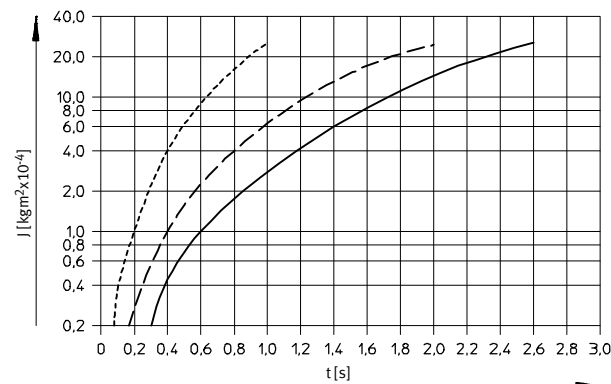
DSM-6



DSM-8



DSM-10



- - - 90°
 - - - 180°
 — 240°

Order code – Size 6 ... 10

01

Pneumatic drives

DSM

P

Type	
DSM	Semi-rotary drive

Size	
	Max. swivel angle [°]
6, 8	90, 180 1
10	90, 180, 240 2

Cushioning	
P	Elastic cushioning rings/plates at both ends

Position sensing	
–	Without
A	Via proximity sensor

Swivel angle	
–	Fixed
FF	Adjustable

Shaft	
–	Spigot shaft
FW	Flanged shaft

- 1

With adjustable swivel angle only 180°
- 2

With adjustable swivel angle only 200°

Order example:

DSM-8-180-P-A-FF

Swivel module DSM - size 8 - max. swivel angle 180° - elastic cushioning at both ends - position sensing via proximity sensor - swivel angle adjustable - spigot shaft

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

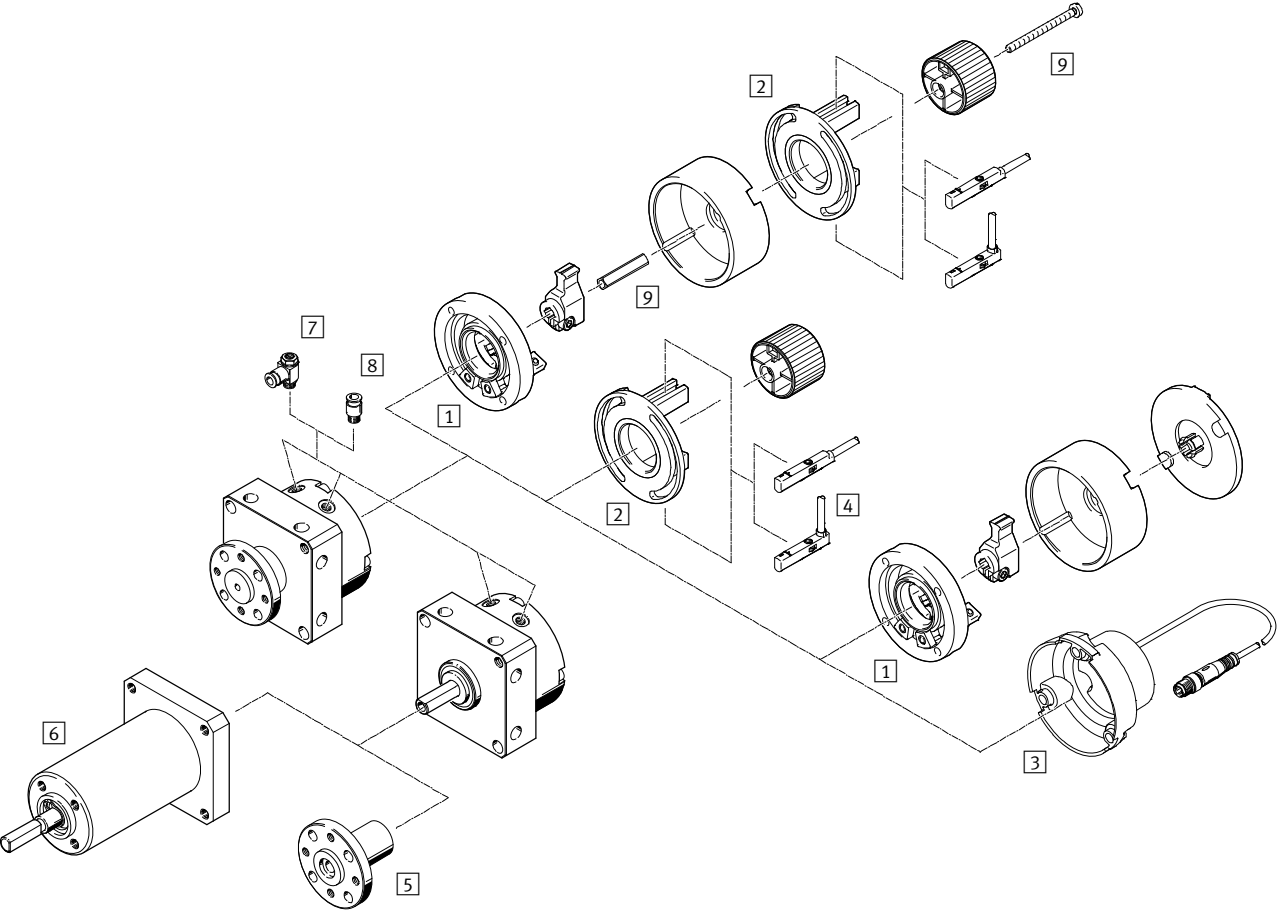
The configurator can be found under Products on the DVD or

www.festo.com/catalogue/...

Enter the type code in the search field.

Swivel modules DSM

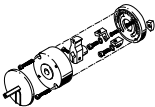
Accessories – Size 6 ... 10



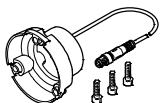
	→ Page/online
1 Stop kit KSM	286
2 Mounting kit WSM-...-SME-10	286
3 Position sensor SRBS	287
4 Proximity sensor SME-/SMT-10	287
5 Push-on flange FWSR	287

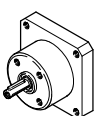
	→ Page/online
6 Freewheel unit FLSM	287
7 One-way flow control valve GRLA	287
8 Push-in fitting QSM	qs
9 Adapter kit DADP-AK	287
– Drive/gripper connections	dsm

Accessories – Ordering data – Size 6 ... 10

	For size	Part no.	Type
1 Stop kit			
	6	175833	KSM-6
	8	175834	KSM-8
	10	175835	KSM-10
2 Mounting kit for proximity sensor			
	6	173205	WSM-6-SME-10
	8	173206	WSM-8-SME-10
	10	173207	WSM-10-SME-10

Accessories – Ordering data – Size 6 ... 10

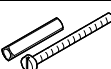
	For size	Switching output, connection	Cable length [m]	Part no.	Type
3 Position sensor Dimensions online: → srbs					
	6	–	0.3	★ 2619969	SRBS-Q12-6-E270-EP-1-S-M8
	8	–	0.3	★ 2619972	SRBS-Q12-8-E270-EP-1-S-M8
	10	–	0.3	★ 2412001	SRBS-Q1-10-E270-EP-1-S-M8
4 Proximity sensor for C-slot, magneto-resistive – N/O contact Data sheets → Page 1222					
	6, 8	PNP, cable	2.5	★ 551373	SMT-10M-PS-24V-E-2,5-L-OE
		PNP, plug	0.3	★ 551375	SMT-10M-PS-24V-E-0,3-L-M8D
Magnetic reed – N/O contact Data sheets → Page 1218					
	6, 8, 10	Contacting, cable	2.5	173210	SME-10-KL-LED-24
		Contacting, plug	0.3	173212	SME-10-SL-LED-24
5 Push-on flange Dimensions online: → dsm					
	6	–	–	185948	FWSR-6
	8	–	–	185949	FWSR-6
	10	–	–	32798	FWSR-10

	For size	Direction of rotation ¹⁾	Part no.	Type
6 Freewheel unit Dimensions online: → dsm				
	6	Anti-clockwise rotation	188253	FLSM-6-L
		Clockwise rotation	188522	FLSM-6-R
	8	Anti-clockwise rotation	188525	FLSM-8-L
		Clockwise rotation	188524	FLSM-8-R
	10	Anti-clockwise rotation	188527	FLSM-10-L
		Clockwise rotation	188526	FLSM-10-R

1) View of the drive shaft side.

Function	For size	Connection		Part no.	Type
		Thread	O.D.		
7 One-way flow control valve with slotted head screw, metal²⁾ for exhaust air flow control Data sheets → Page 1033					
	6, 8, 10	M3	3	175041	GRLA-M3-QS-3

2) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

	For size	Part no.	Type
9 Adapter kit Dimensions online: → dadp			
	6	3617044	DADP-AK-Q1-6
	8	3617045	DADP-AK-Q1-8
	10	3617046	DADP-AK-Q1-10

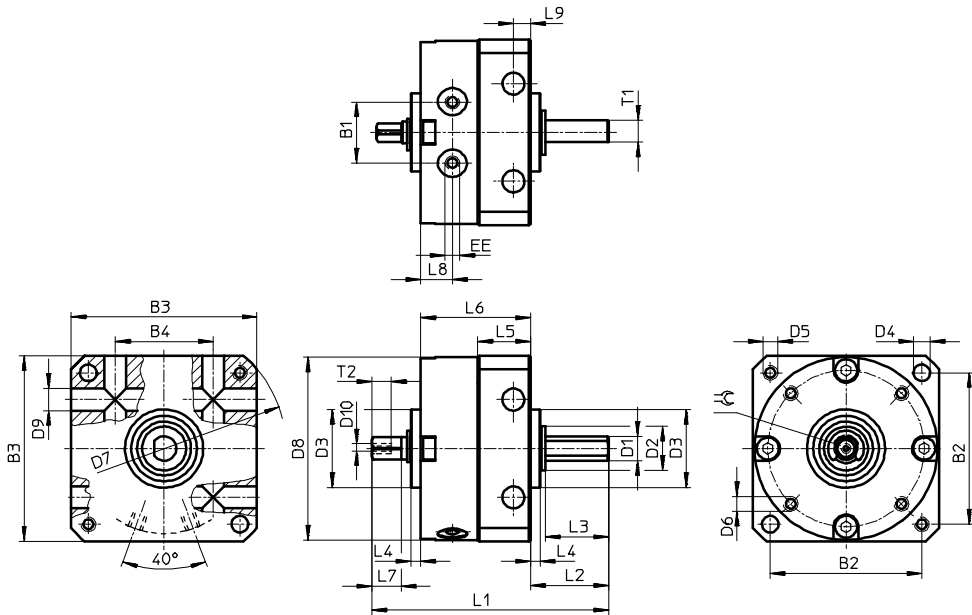
Swivel modules DSM

Download CAD data [→ www.festo.com](#)

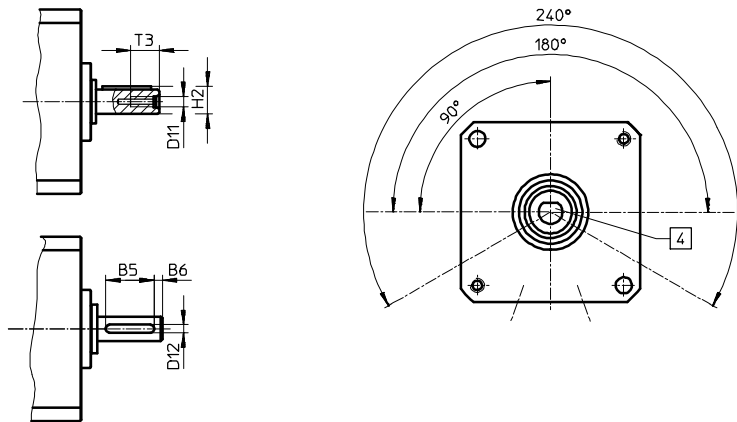
Dimensions – Size 6 ... 10

With spigot shaft and fixed stop

Pneumatic drives



Size 10



Note
For swivel angle tolerance
→ table below. The supply ports
are at the bottom in this drawing.

Size	B1	B2	B3	B4	B5	B6	D1 Ø g7	D2 Ø	D3 Ø f8	D4 Ø H12	D5	D6	D7 Ø H12	D8 Ø	D9 Ø H12	D10	D11	D12 h9
6	10	25	30	17	–	–	4	8	14	3.2	M3	M2	40	29.4	3.5	M2	–	–
8	12.8	31	38	20	–	–	5	9	16	3.2	M3	M2.5	50	37.4	3.5	M2	–	–
10	15.9	38	47	26	12	2	6	12	19	4.3	M4	M3	62	46.4	4.5	M2.5	M2.5	2

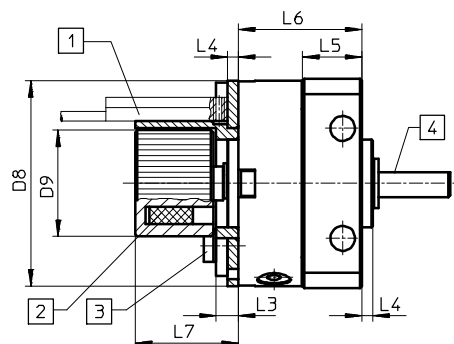
Size	EE	H2 max.	L1	L2	L3	L4	L5	L6	L7	L8	L9	T1	T2 h12	T3	≅	Swivel angle tolerance
6	M3	–	43	13	10	2	9.8	21	5	6	3	3.5	4	–	3	0/+5°
8	M3	–	50	16	13	2	11.3	23	6	6.5	3	4.5	4.3	–	3.5	0/+5°
10	M3	6.8	61	19.6	16	2	14.3	28.4	8	7.5	4	–	5	7	4.5	0/+5°

Dimensions – Size 6 ... 10

Download CAD data → www.festo.com

01

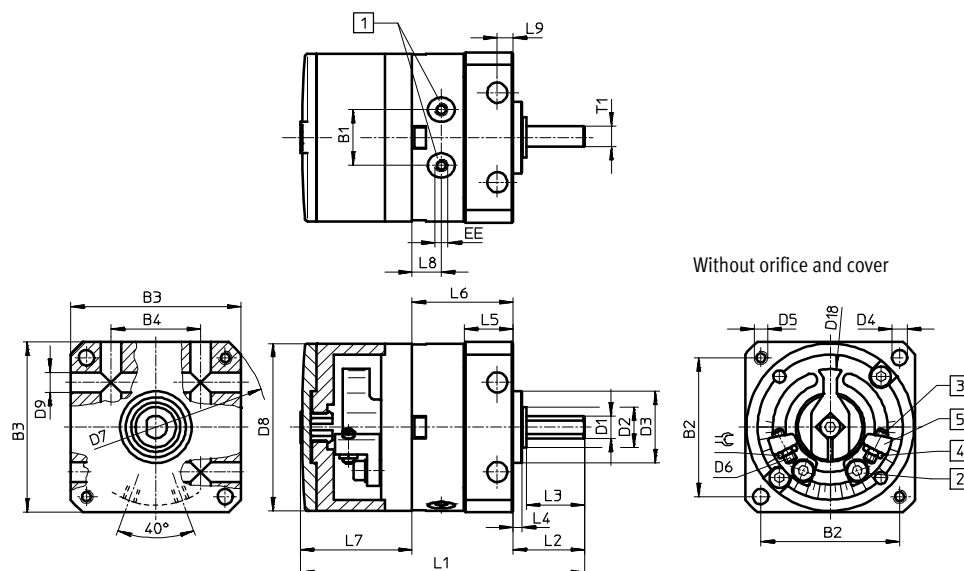
With spigot shaft, fixed stop and position sensing



- 1 Proximity sensor not included in the scope of delivery. Observe fitting space for proximity sensor and cable
- 2 Magnet position
- 3 Max. tightening torque for sensor bracket screws → table below
- 4 The flat or the feather key on the shaft indicates the position of the rotary vane

Size	D8 Ø	D9 Ø	L3	L4	L5	L6	L7	Tightening torque [Nm]
6	29.4	17.3	4	2	9.8	21	19.5	0.19
8	37.4	19.3	4	2	11.3	23	19.5	0.32
10	46.4	22.3	4	2	14.3	28	19.5	0.44

With spigot shaft, fixed stop and adjustable swivel angle



Note

The swivel angle is infinitely adjustable over the entire swivel range.
Size 6 can only be adjusted symmetrically around the centre position.

- 1 Supply ports
- 2 Locking screw for clamping the stop
- 3 End-position adjustment
- 4 Lock nut for end-position adjustment
- 5 Infinitely adjustable stops

Size	B1	B2	B3	B4	D1 Ø g7	D2 Ø	D3 Ø f8	D4 Ø H12	D5	D6	D7 Ø H12	D8 Ø	D9 Ø H12	D18 Ø	EE
6	10	25	30	17	4	8	14	3.2	M3	M2	40	29.4	3.5	22	M3
8	12.8	31	38	20	5	9	16	3.2	M3	M2.5	50	37.4	3.5	26	M3
10	15.9	38	47	26	6	12	19	4.3	M4	M3	62	46.4	4.5	35.8	M3

Size	L1	L2	L3	L4	L5	L6	L7	L8	L9	T1	⌀	Max. swivel angle	Precision adjustment per side
6	52	13	10	2	9.8	21	17.8	6	3	3.5	4	180°+5°	+1°/-5°
8	64	16	13	2	11.3	23	24.9	6.5	3	4.5	5	180°+5°	+1°/-5°
10	76	19.6	16	2	14.3	28.4	28.2	7.5	4	–	5.5	200°+5°	+1°/-5°

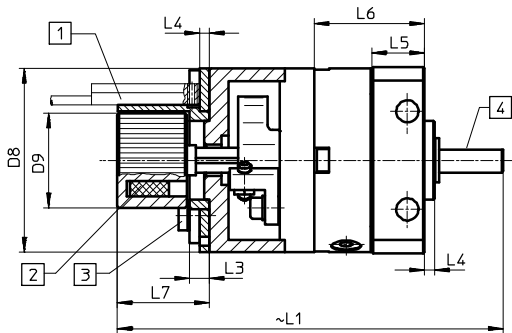
Swivel modules DSM

01

Dimensions – Size 6 ... 10

Download CAD data → www.festo.com

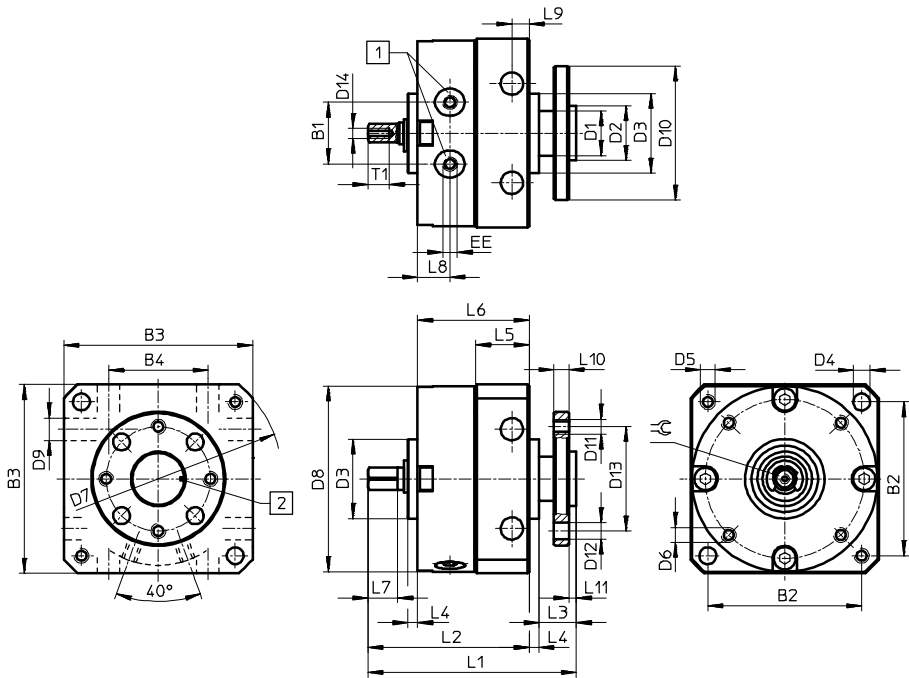
With spigot shaft, fixed stop, adjustable swivel angle and position sensing



- 1 Sensor not included in the scope of delivery. Observe fitting space for proximity sensor and cable
- 2 Magnet position
- 3 Max. tightening torque for sensor bracket screw → table below
- 4 The flat or the feather key on the shaft indicates the position of the rotary vane

Size	D8 Ø	D9	L1	L3	L4	L5	L6	L7	Tightening torque [Nm]
6	29.4	17.3	68.5	4	2	9.8	21	19.5	0.19
8	37.4	19.3	80	4	2	11.3	23	19.5	0.32
10	46.4	22.3	91.5	4	2	14.3	28.4	19.5	0.44

With flanged shaft and fixed stop



- 1 Supply ports
- 2 Mark indicating rotary vane position

Size	B1	B2	B3	B4	D1 Ø	D2 Ø g7	D3 Ø f8	D4 Ø	D5	D6	D7 Ø H12	D8 Ø	D9 Ø H12	D10 Ø	D11	D12 Ø H13	D13 Ø
6	10	25	30	17	8	8	14	3.2	M3	M2	40	29.4	3.5	23	M3	3.4	16
8	12.8	31	38	20	9	11	16	3.2	M3	M2.5	50	37.4	3.5	27	M3	3.4	21
10	15.9	38	47	26	10	11	19	4.3	M4	M3	62	46.4	4.5	30	M3	3.4	21

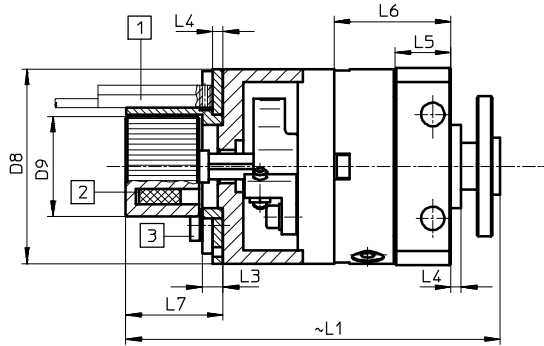
Size	D14	EE	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	T1	≈	Swivel angle tolerance
6	M2	M3	39.5	30	7.5	2	9.8	21	5	6	3	3	1.5	4	3	0/+5°
8	M2	M3	43.5	34	7.5	2	11.3	23	6	6.5	3	3	1.5	4.3	3.5	0/+5°
10	M2.5	M3	53	41.4	9.6	2	14.3	28.4	8	7.5	4	3	1.6	5	4.5	0/+5°

Swivel modules DSM

Dimensions – Size 6 ... 10

Download CAD data [→ www.festo.com](#)

With flanged shaft, fixed stop, adjustable swivel angle and position sensing



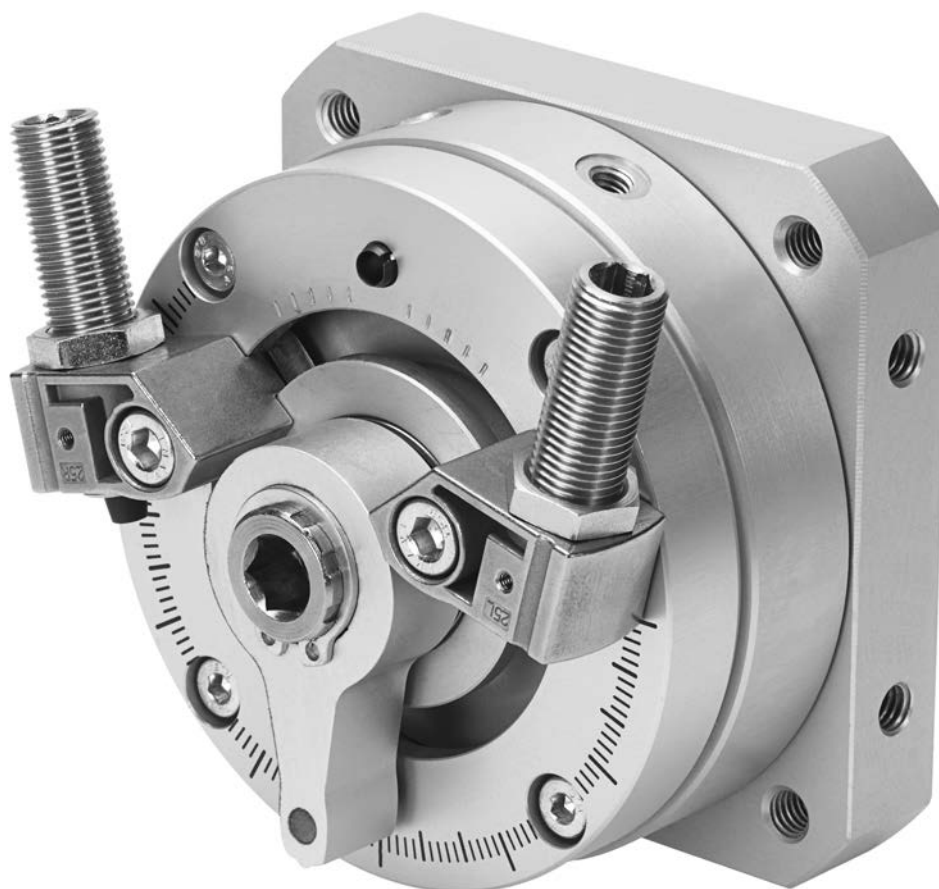
Note

The swivel angle is infinitely adjustable over the entire swivel range. Size 6 can only be adjusted symmetrically around the centre position.

- 1 Proximity sensor not included in the scope of delivery. Observe fitting space for proximity sensor and cable

2 Magnet position
- 3 Max. tightening torque for sensor bracket screws → table below

Size	D8 Ø	D9 Ø	L1	L3	L4	L5	L6	L7	Tightening torque [Nm]
6	29.4	17.3	65	4	2	9.8	21	19.5	0.19
8	37.4	19.3	73.5	4	2	11.3	23	19.5	0.32
10	46.4	22.3	83	4	2	14.3	28.4	19.5	0.44



Increase productivity

- + Thanks to minimum cycle times with the right cushioning variant
- + Tandem design for option of twice the driving torque
- + Heavy-duty design for high bearing load capacity

Semi-rotary drives › Semi-rotary drives with rotary vane ›
Semi-rotary drives

DSM-B

Size 12 ... 63

Semi-rotary drives > Semi-rotary drives with rotary vane >

Semi-rotary drives

DSM-B



Overview, configuration and ordering

→ www.festo.com/catalogue/dsm-b



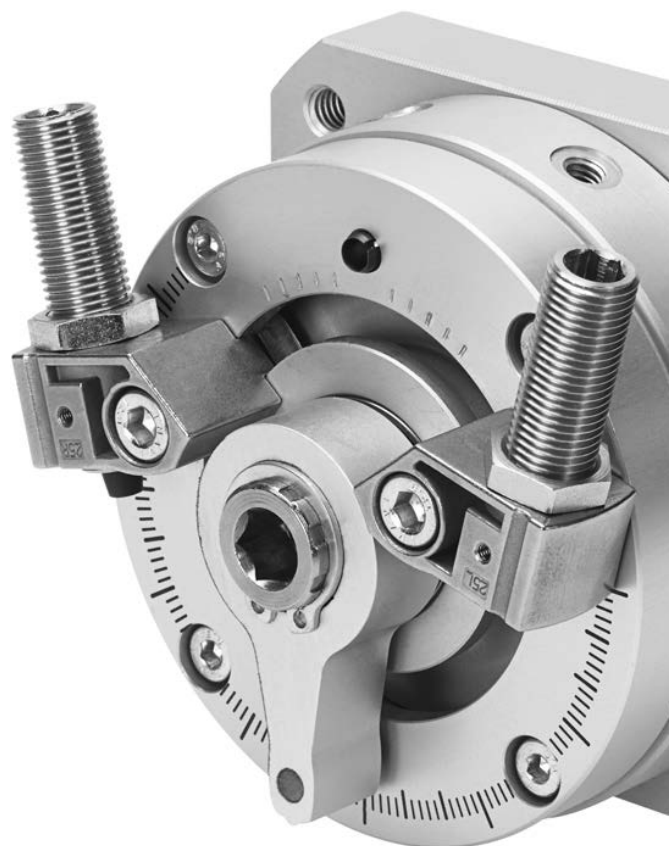
Additional information, support and user documentation

→ www.festo.com/sp/dsm-b



Selected types in accordance with the ATEX Directive
for explosive atmospheres

→ www.festo.com/catalogue/ex



- + Force transmitted directly to the drive shaft via a rotary vane
- + Swivel angle freely adjustable up to 270°
- + High-performance cushioning
- + With spigot shaft, hollow flanged shaft, tandem rotary vane and spigot shaft, tandem rotary vane and flanged shaft or heavy-duty bearing (HD)

Product range overview – Size 12 ... 63-B

Type/function	Version	Size	Swivel angle [°]	Torque [Nm]	Product options					
					P	P1	CC	–	FW	A
Double-acting	DSM- ... -B									
	Basic design	12, 16, 25, 32, 40, 63	270	1.25 ... 40	■	–	–	■	■	■
		12, 16, 25, 32	246	1.25 ... 10	–	■	■	■	■	■
		40, 63	240	20 ... 40	–	■	■	■	■	■
	DSM-T- ... -B									
	Tandem rotary vanes	12, 16, 25, 32, 40, 63	270	2.5 ... 80	■	–	–	■	■	■
		12, 16, 25, 32	246	2.5 ... 20	–	–	■	■	■	■
		40, 63	240	40 ... 80	–	–	■	■	■	■
	DSM- ... -HD- ... -B									
	Heavy-duty bearing	12, 16, 25, 32, 40, 63	270	1.25 ... 40	–	–	–	–	–	■
		12, 16, 25, 32	246	1.25 ... 10	–	■	■	–	–	■
		40, 63	240	20 ... 40	–	■	■	–	–	■

Product options – Size 12 ... 63-B

P Elastic cushioning components at both ends, with fixed stop

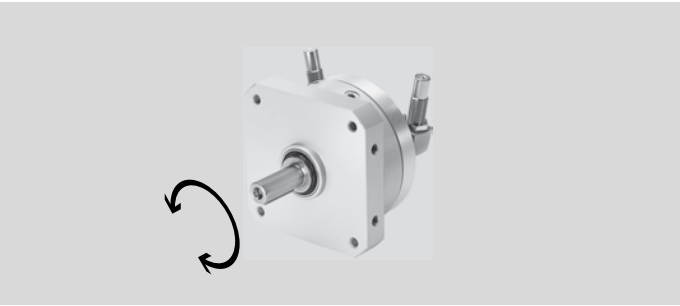
P1 Adjustable elastic cushioning components at both ends, with fixed stop

CC Self-adjusting shock absorber at both ends, with fixed stop
– Shaft with woodruff keyFW Flanged shaft
HD Heavy-duty bearing
A Position sensing
B B series

Swivel modules DSM-B

01

Data sheet – Size 12 ... 63-B



Technical data		Dimensions → Page 304					
Size		12	16	25	32	40	63
Pneumatic connection		M5			G1/8		G1/4
Cushioning							
DSM-...-P		Elastic cushioning components at both ends					
DSM-...-P1		Elastic cushioning components, adjustable at both ends					
DSM-...-CC		Self-adjusting shock absorber at both ends					
Torque at 6 bar							
DSM-...	[Nm]	1.25	2.5	5	10	20	40
DSM-...-T	[Nm]	2.5	5	10	20	40	80
Swivel angle							
DSM-...-P	[°]	270/262 ¹⁾		270			
DSM-...-P1	[°]	246				240	
DSM-...-CC	[°]	246				240	
Swivel frequency (at max. swivel angle)							
DSM-...-P	[Hz]	2					1.6
DSM-...-P1	[Hz]	2					1.6
DSM-...-CC	[Hz]	1.5	1		0.7		0.6
Max. perm. radial force ²⁾	[N]	45	75	120	200	350	500
Max. perm. axial force ²⁾	[N]	18	30	50	75	120	500
Max. cushioning angle							
DSM-...-P1	[°]	10	9	7.5	6.5	6.5	6
DSM-...-CC	[°]	15	12	10	12	16	17.5
Max. perm. mass moment of inertia	[kgm ²]	➔ Page 297					

1) Restricted swivel angle in combination with sensor bracket SL-DSM-S-....
2) On the drive shaft.

Operating conditions							
Size		12	16	25	32	40	63
Operating pressure							
DSM-...	[bar]	2 ... 10	1.8 ... 10	1.5 ... 10			
DSM-...-T	[bar]	2.5 ... 10		2 ... 10			
Ambient temperature ³⁾	[°C]	-10 ... +60					

3) Note operating range of proximity sensors.

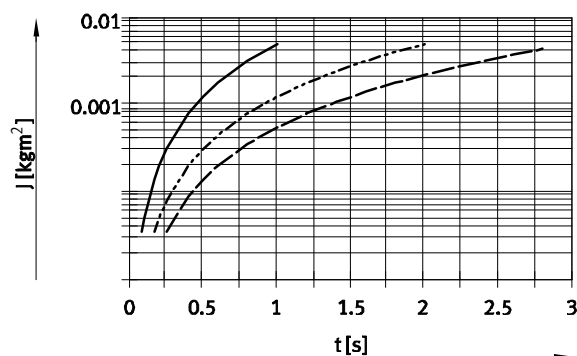
Materials	
Drive shaft	Nickel-plated steel
Housing	Anodised aluminium
Flange	Anodised aluminium
Stop lever	Anodised aluminium
Rotary vane	Glass fibre-reinforced plastic
Fixed stops	Galvanised steel
Seals	TPE-U (PUR)

Data sheet – Size 12 ... 63-B

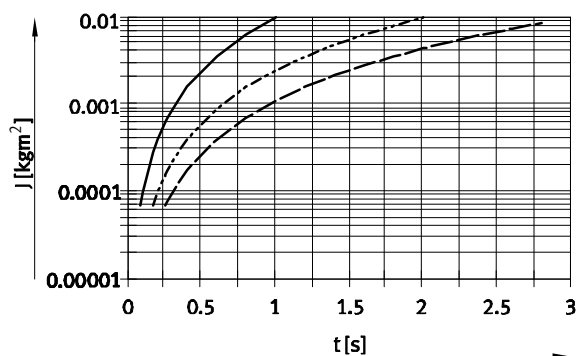
Mass moment of inertia J on the drive shaft as a function of swivel time t

With elastic cushioning components (P)

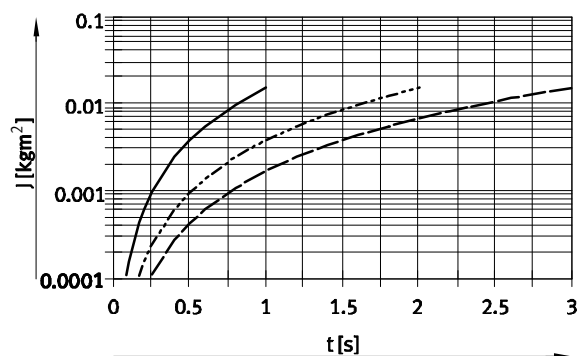
DSM-12-270-P-...



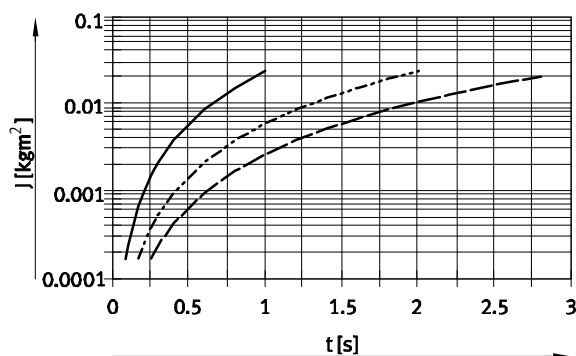
DSM-16-270-P-...



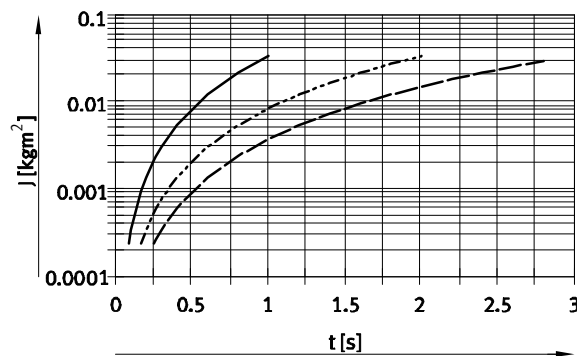
DSM-25-270-P-...



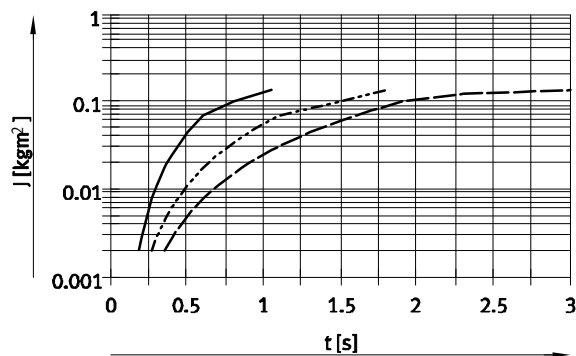
DSM-32-270-P-...



DSM-40-270-P-...



DSM-63-270-P-...



— 90°
- - - 180°
- · - 270°

Note

Configuration software for
calculating the mass moment of inertia

→ www.festo.com

Semi-rotary drives > Semi-rotary drives with rotary vane >

Swivel modules DSM-B

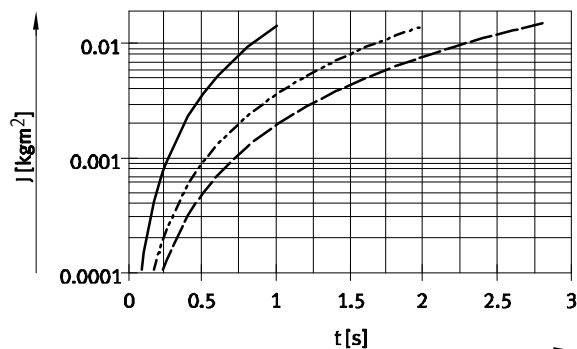
01

Data sheet – Size 12 ... 63-B

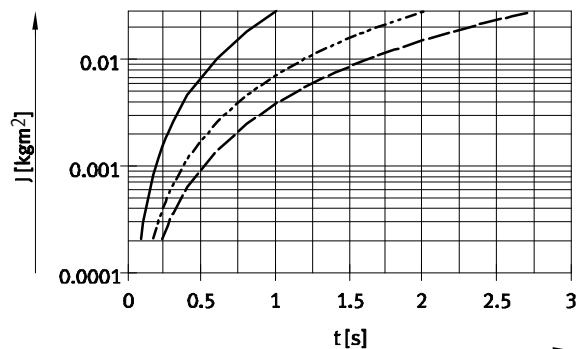
Mass moment of inertia J on the drive shaft as a function of swivel time t

With adjustable, elastic cushioning components (P1)

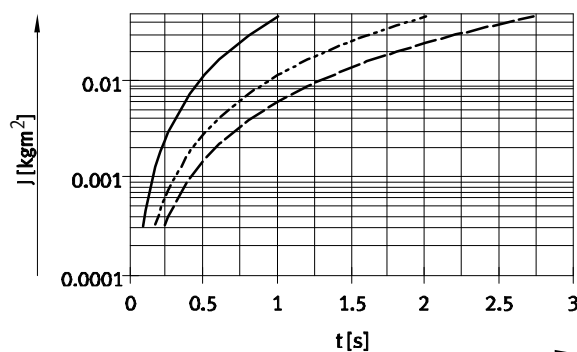
DSM-12-270-P1-...



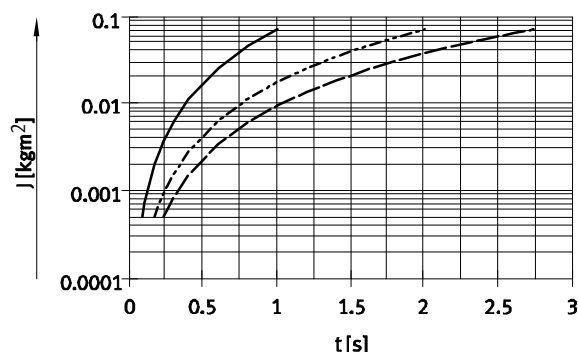
DSM-16-270-P1-...



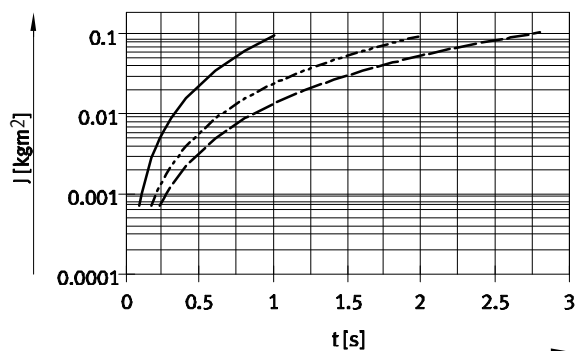
DSM-25-270-P1-...



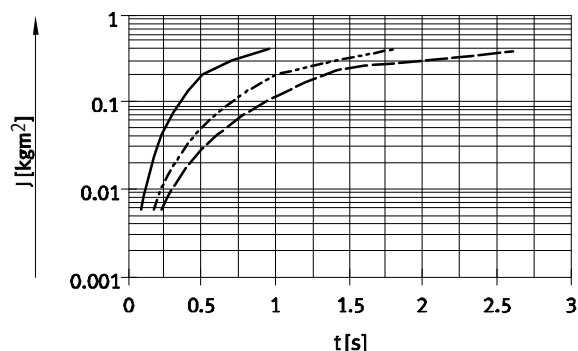
DSM-32-270-P1-...



DSM-40-270-P1-...



DSM-63-270-P1-...



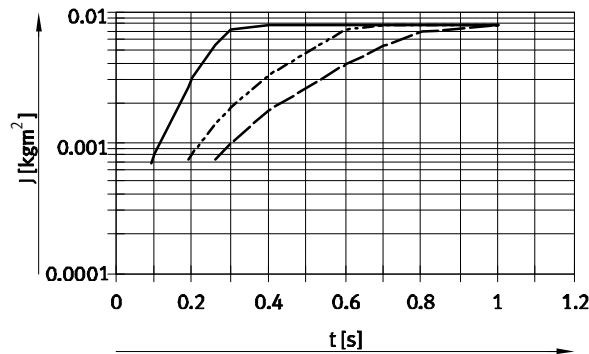
— 90°
 - - - 180°
 - · - 240°

Data sheet – Size 12 ... 63-B

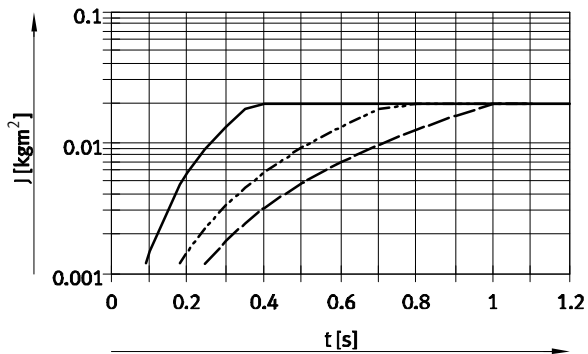
Mass moment of inertia J on the drive shaft as a function of swivel time t

With shock absorbers (CC)

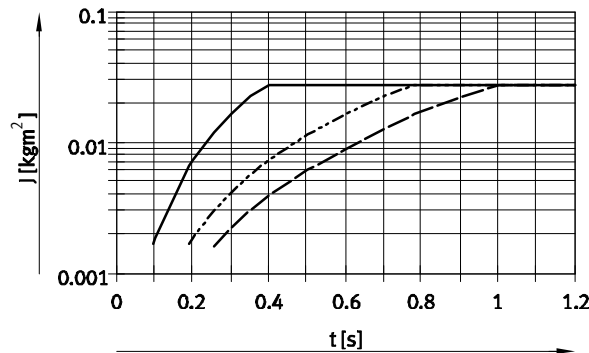
DSM-12-270-CC-...



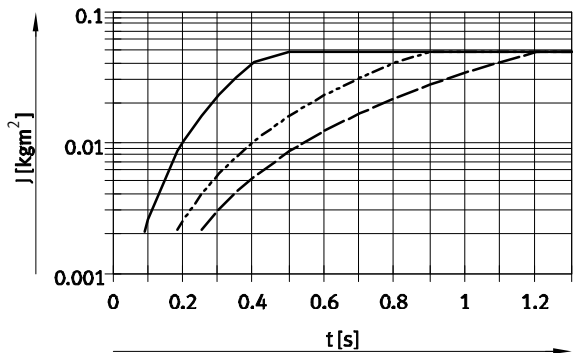
DSM-16-270-CC-...



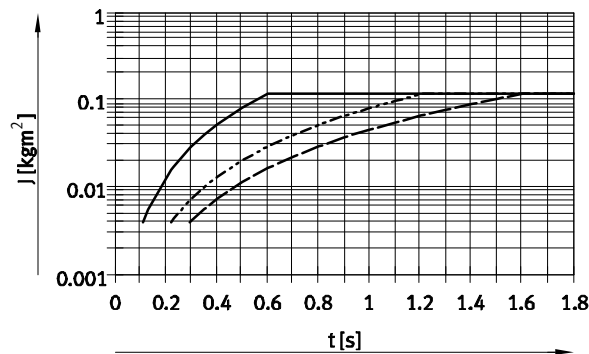
DSM-25-270-CC-...



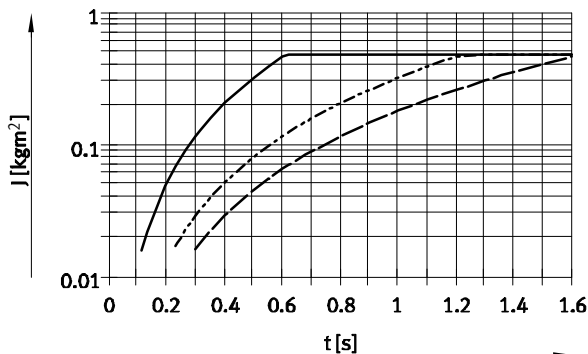
DSM-32-270-CC-...



DSM-40-270-CC-...



DSM-63-270-CC-...



- 90°
- - - 180°
- · - 240°

The graphs for the DSM-...-CC show the swivel time up to the point where the stop lever meets the shock absorber. The cushioning time of the shock absorber must be added in order to obtain the total swivel time.

Cushioning time of the shock absorber				
Size	12/16/25	32	40	63
Cushioning time [s]	0.1	0.25	0.3	0.4

Swivel modules DSM-B

Order code – Size 12 ... 63-B

Pneumatic drives

DSM

–

–

–

270

–

–

–

A

–

B

Type	
DSM	Swivel module
Design	
T	Tandem rotary vanes
Size	
	Max. swivel angle [°]
12, 16, 25, 32, 40, 63	270
Cushioning	
–	Without cushioning components
P	Elastic cushioning components at both ends
P1	Adjustable elastic cushioning components at both ends 1 2
CC	Shock absorber at both ends 1
Shaft	
–	Spigot shaft
FW	Flanged shaft
Position sensing	
A	Via proximity sensor
Variant	
B	B series

- 1

 Max. swivel angle 246° with size 12 ... 32.
Max. swivel angle 240° with size 40, 63.
- 2

 Not with tandem rotary vanes T.

Order example:
DSM-12-270-CC-A-B
Swivel module DSM - without tandem rotary vanes - size 12 - swivel angle 270° - shock absorber at both ends - spigot shaft - position sensing via proximity sensor - B series

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
[www.festo.com/catalogue/...](#)

Enter the type code in the search field.

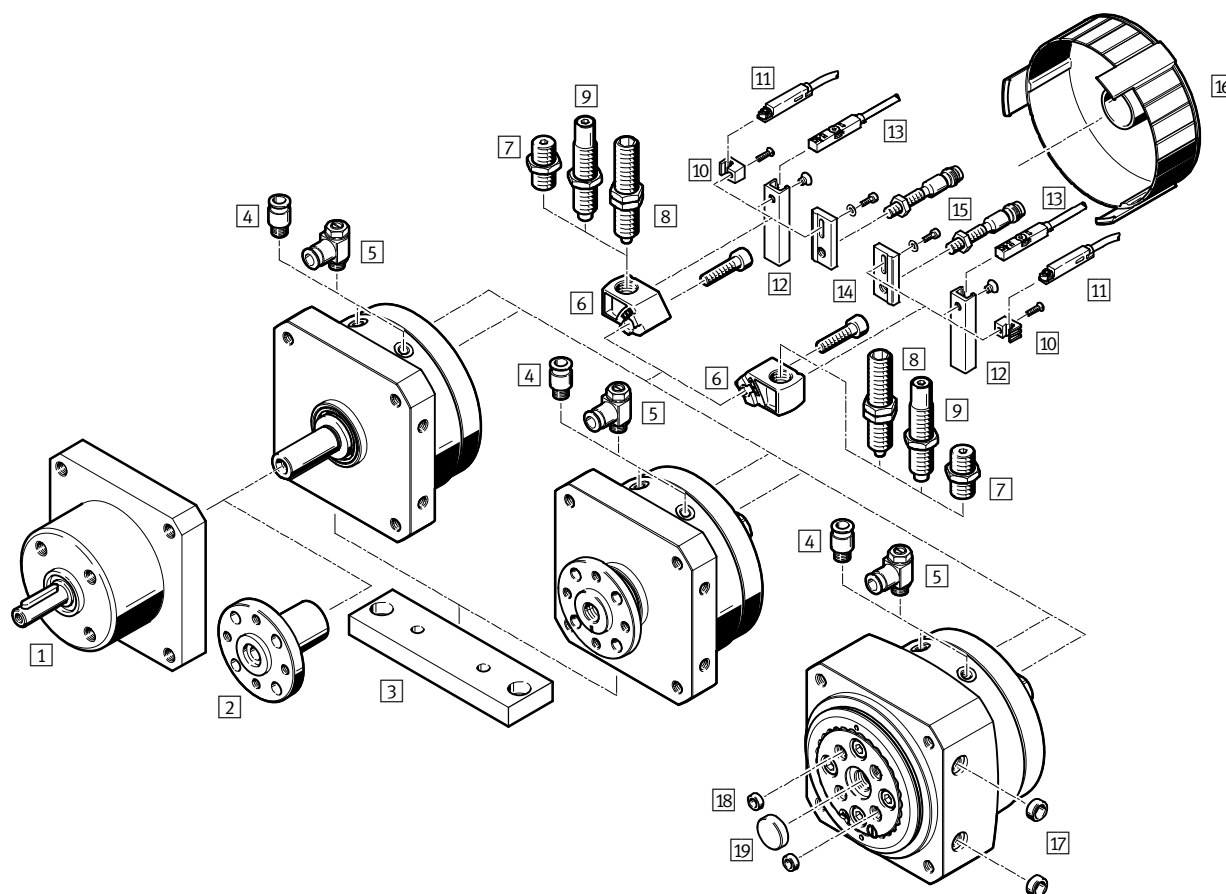
300

[www.festo.com/catalogue/...](#)

★ Generally ready for shipping ex works in 24 hours

Subject to change – 2018/11

Accessories – Size 12 ... 63-B



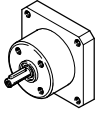
		→ Page/ online
1	Freewheel unit FLSM	302
2	Push-on flange FWSR	302
3	Mounting plate HSM	302
4	Push-in fitting QS	1443
5	One-way flow control valve GRLA	302
6	Shock absorber retainer DSM-...-B	302
7	Cushioning kit DSM-...-P-B (P cushioning)	302
8	Shock absorber DYEF (P1 cushioning)	302
9	Shock absorber DYSC (CC cushioning)	302
10	Sensor bracket SL-DSM-B	302
11	Proximity sensor SME-/SMT-10 for size 12 ... 40	303

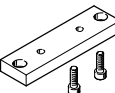
		→ Page/ online
12	Sensor bracket SL-DSM-63-B	302
13	Proximity sensor SME-/SMT-8 for size 63	303
14	Sensor bracket SL-DSM-S	302
15	Inductive proximity sensor SIEN	303
16	Cover cap AKM	303
17	Centring sleeve ZBH (for centring drive)	–
18	Centring sleeve ZBH (for centring attachments)	–
19	Centring sleeve ZBH/disc SLZZ	–
–	Connecting cable NEBU	303
–	Drive/gripper connections	dsm

Semi-rotary drives > Semi-rotary drives with rotary vane >

Swivel modules DSM-B

01 Accessories – Ordering data – Size 12 ... 63-B

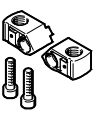
	For size	Direction of rotation ¹⁾	Part no.	Type
1 Freewheel unit Dimensions online: → dsm				
	12	Anti-clockwise rotation	164229	FLSM-12-L
		Clockwise rotation	164234	FLSM-12-R
	16	Anti-clockwise rotation	164230	FLSM-16-L
		Clockwise rotation	164235	FLSM-16-R
	25	Anti-clockwise rotation	164231	FLSM-25-L
		Clockwise rotation	164236	FLSM-25-R
	32	Anti-clockwise rotation	164232	FLSM-32-L
		Clockwise rotation	164237	FLSM-32-R
	40	Anti-clockwise rotation	164233	FLSM-40-L
		Clockwise rotation	164238	FLSM-40-R

	For size	Part no.	Type
2 Push-on flange Dimensions online: → dsm			
	12	14659	FWSR-12
	16	13239	FWSR-16
	25	13240	FWSR-25
	32	13241	FWSR-32
	40	14656	FWSR-40
3 Mounting plate Dimensions online: → dsm			
	12	165571	HSM-12
	16	165572	HSM-16
	25	165573	HSM-25
	32	165574	HSM-32
	40	165575	HSM-40

1) View of the drive shaft side.

Function	For size	Connection	Part no.	Type
		Thread	O.D.	
5 One-way flow control valve with slotted head screw, metal²⁾ for exhaust air flow control Data sheets → Page 1033				
	12, 16	M5	3	★ 193137 GRLA-M5-QS-3-D
	25		4	★ 193138 GRLA-M5-QS-4-D
	32, 40	G1/8	6	★ 193144 GRLA-1/8-QS-6-D
	63	G1/4	8	★ 193147 GRLA-1/4-QS-8-D
	63	G1/4	10	★ 193148 GRLA-1/4-QS-10-D

2) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

	For size	Part no.	Type
6 Shock absorber retainer³⁾			
	12	547900	DSM-12-B
	16	547901	DSM-16-B
	25	547902	DSM-25-B
	32	547903	DSM-32-B
	40	547904	DSM-40-B
	63	552085	DSM-63-B
7 Cushioning kit³⁾, P cushioning			
	12	550657	DSM-12-P-B
	16, 25	550658	DSM-16/25-P-B
	32	550659	DSM-32-P-B
	40	550060	DSM-40-P-B
	63	552086	DSM-63-P-B
8 Shock absorber⁴⁾, P1 cushioning Data sheets online: → dyef			
	12	548373	DYEF-M8-Y1F
	16, 25	548374	DYEF-M10-Y1F
	32	548375	DYEF-M12-Y1F
	40	548377	DYEF-M16-Y1F
	63	1113706	DYEF-M22-Y1F

	For size	Part no.	Type
9 Shock absorber⁴⁾, CC cushioning Data sheets online: → dysc			
	12	548011	DYSC-5-5-Y1F
	16/25	548012	DYSC-7-5-Y1F
	32	548013	DYSC-8-8-Y1F
	40	548014	DYSC-12-12-Y1F
	63	553593	DYSC-16-18-Y1F
10/12/14 Sensor bracket			
	12, 16, 25, 32, 40	550661	SL-DSM-B ^{3),5)}
	63	552088	SL-DSM-63-B ^{3),6)}
	12, 16, 25, 32, 40	1130882	SL-DSM-S-M5-B ^{3),7)}
		1132360	SL-DSM-S-M8-B ^{3),8)}

3) Packaging unit 2 pieces.

4) Packaging unit 1 piece.

5) For proximity sensor SME-/SMT-10.

6) For proximity sensor SME-/SMT-8.

7) For inductive proximity sensor SIEN-M5.

8) For inductive proximity sensor SIEN-M8.

Accessories – Ordering data – Size 12 ... 63-B

01

	For size	Switching output, connection	Cable length [m]	Part no.	Type
11 Proximity sensor for C-slot, magneto-resistive – N/O contact Data sheets → Page 1222					
	12 ... 40	PNP, cable	2.5	★ 551373	SMT-10M-PS-24V-E-2,5-L-OE
		PNP, plug	0.3	★ 551375	SMT-10M-PS-24V-E-0,3-L-M8D
	Magnetic reed – N/O contact Data sheets → Page 1218				
	12 ... 40	Contacting, cable	2.5	★ 551365	SME-10M-DS-24V-E-2,5-L-OE
		Contacting, plug	0.3	★ 551367	SME-10M-DS-24V-E-0,3-L-M8D
	Data sheets → Page 1220				
	12 ... 40	Contacting, cable	2.5	173210	SME-10-KL-LED-24
		Contacting, plug	0.3	173212	SME-10-SL-LED-24
13 Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets → Page 1206					
	63	PNP, cable	2.5	★ 574335	SMT-8M-A-PS-24V-E-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-A-PS-24V-E-0,3-M8D
		PNP, plug	0.3	★ 574337	SMT-8M-A-PS-24V-E-0,3-M12
		NPN, cable	2.5	★ 574338	SMT-8M-A-NS-24V-E-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-A-NS-24V-E-0,3-M8D
Magneto-resistive – N/C contact Data sheets → Page 1206					
	63	PNP, cable	7.5	★ 574340	SMT-8M-A-PO-24V-E-7,5-OE
Magnetic reed – N/O contact Data sheets → Page 1201					
	63	Contacting, cable	2.5	★ 543862	SME-8M-DS-24V-K-2,5-OE
		Contacting, cable	5.0	★ 543863	SME-8M-DS-24V-K-5,0-OE
		Contacting, cable	2.5	★ 543872	SME-8M-ZS-24V-K-2,5-OE
		Contacting, plug	0.3	★ 543861	SME-8M-DS-24V-K-0,3-M8D
Data sheets → Page 1203					
	63	Contacting, cable	2.5	150855	SME-8-K-LED-24
		Contacting, plug	0.3	150857	SME-8-S-LED-24
15 Inductive proximity sensor – N/O contact, M5 Data sheets → Page 1230					
	12 ... 40	PNP, cable	2.5	★ 150370	SIEN-M5B-PS-K-L
		PNP, plug	–	★ 150371	SIEN-M5B-PS-S-L
N/O contact, M8 Data sheets → Page 1230					
	12 ... 40	PNP, cable	2.5	★ 150386	SIEN-M8B-PS-K-L
		PNP, plug	–	★ 150387	SIEN-M8B-PS-S-L
11/13/15 Connecting cable, straight socket Data sheets → Page 1543					
	12 ... 63	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
Angled socket Data sheets → Page 1543					
	12 ... 63	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3
16 Cover cap Dimensions online: → dsm					
	12	–	–	549194	AKM-12
	16	–	–	549195	AKM-16
	25	–	–	549196	AKM-25
	32	–	–	549197	AKM-32
	40	–	–	549198	AKM-40

Pneumatic drives

Semi-rotary drives > Semi-rotary drives with rotary vane >

Swivel modules DSM-B

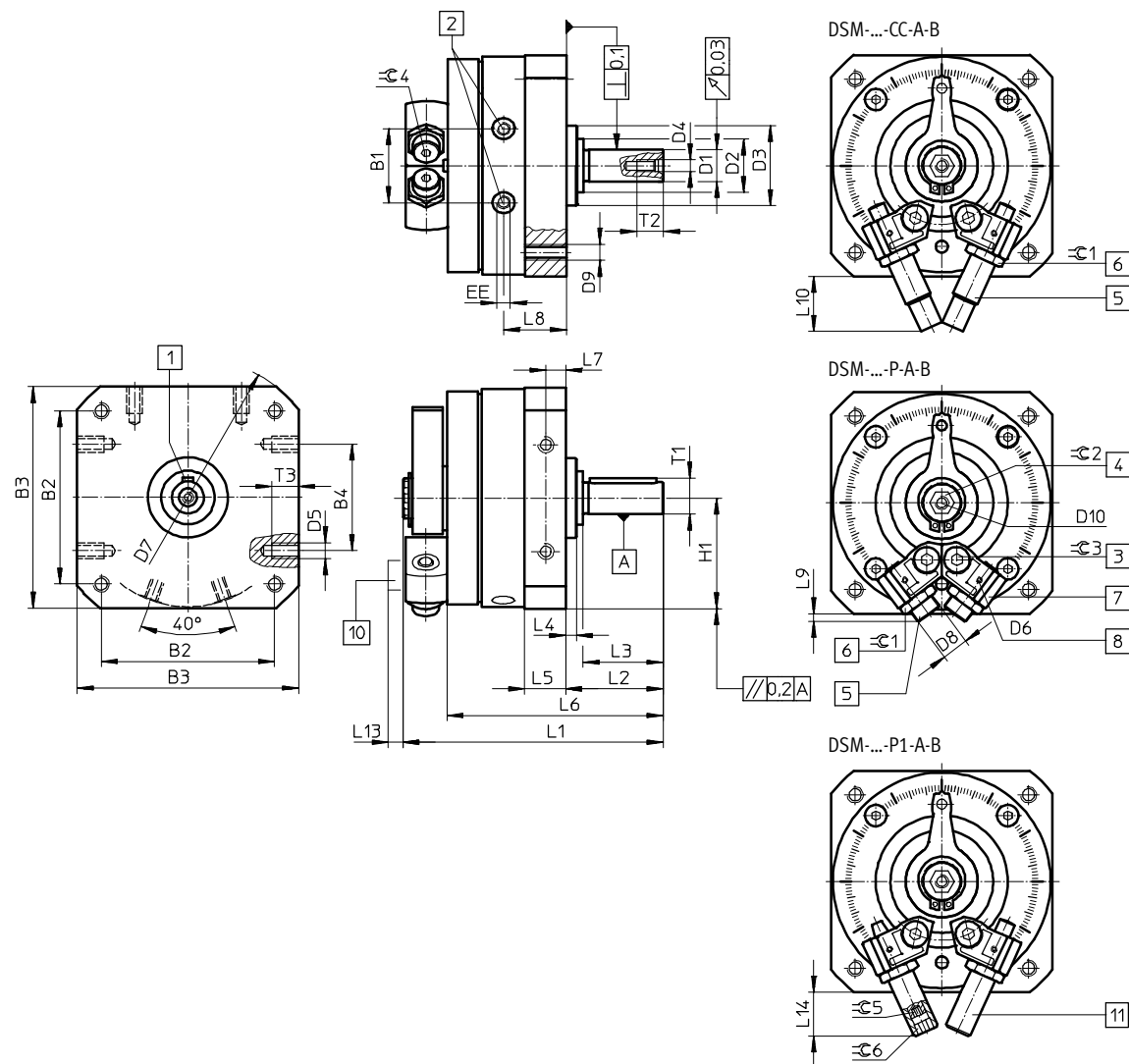
01

Dimensions – Size 12 ... 63-B

Download CAD data → www.festo.com

DSM- ... -B – With spigot shaft

Pneumatic drives



- 1 Woodruff key position at 0°
- 2 Supply ports
- 3 Locking screw for clamping the stop

- 4 Manual override (internal hex). The position of the internal hex is not defined

- 5 End-position adjustment
- 6 Lock nut for end-position adjustment
- 7 Infinitely adjustable stops

- 8 Mounting thread for sensor bracket
- 10 Sensor bracket
- 11 End-position adjustment

Swivel modules DSM-B

Dimensions – Size 12 ... 63-B

Download CAD data → www.festo.com

01

Size	B1 ±0.5	B2	B3	B4	D1 Ø g7	D2 Ø	D3 Ø f8	D4
12	19.8	48±0.3	59±0.3	30±0.2	8	15±0.2	24	M3
16	23.5	57±0.3	70±0.3	40±0.2	10	18 _{-0.3}	28	M3
25	28	65±0.3	83±0.3	40±0.2	12	20 _{-0.3}	30	M4
32	35.5	85±0.3	105±0.3	60±0.3	16	27 _{-0.4}	42	M5
40	43.8	105±0.3	130±0.5	80±0.3	20	36 _{-0.4}	52	M6
63	50.3	125±0.5	152 ^{+0.2}	80±0.3	25	40±0.3	70	M10

Size	D5	D6	D7 Ø	D8	D9	D10	EE
12	M4	M2	78±0.3	M8x1	M4	M4	M5
16	M5	M2	91±0.3	M10x1	M5	M5	M5
25	M6	M2	106±0.3	M10x1	M6	M5	M5
32	M8	M2	135±0.3	M12x1	M8	M5	G1/8
40	M10	M2	168±0.5	M16x1	M10	M6	G1/8
63	M10	M3	200±0.5	M22x1.5	M12	M6	G1/4

Pneumatic drives

Size	H1 ±0.2	L1	L2 +0.6 -0.7	L3	L4 ±0.4	L5	L6	L7
12	29.5	68.3±0.3	24.5	20±0.2	3	10.3+0.2/-0.3	55.5±0.8	5±0.1
16	35	82.7±1	28	23±0.2	2.6	13+0.2/-0.4	67.1±0.9	6.5±0.2
25	41.5	97.5±0.5	36.5	30±0.2	4	15.2+0.2/-0.4	81±1	7.5±0.2
32	52.5	127.1±0.5	51	40±0.2	8	19.2+0.2/-0.4	107±1.1	9.5±0.2
40	65	155.5±0.6	62	50±0.3	8	23.7+0.2/-0.4	131±1.2	12±0.2
63	76	197+0.4/-0.55	75.5	60±0.3	10.5	28.5+0.3/-0.5	159.5±1.2	14±0.2

Size	L8	L9	L10	L13	L14 max.	T1 max.	T2 +2	T3 +0.2
12	16.5	3	22.7	6.5	21.2	8.8	9	8
16	20.2	7.2	26.1	6.5	22	11.2	9	8
25	23.5	2.9	20.7	6.5	17	13.5	10	10
32	30.5	3.8	29.1	6.5	23	18	12.5	12
40	36	3.4	43.5	6.5	36.5	22.5	16	15
63	45	10	72.5	4.5	–	28	22	16

Size	⌀ 1	⌀ 2	⌀ 3	⌀ 4	⌀ 5	⌀ 6	Woodruff key to DIN 6885 ¹⁾
12	10	6	2.5	2.5	2.5	2.5	A2x2x16
16	13	8	3	3	3	5	A3x3x18
25	13	8	4	3	3	6	A4x4x25
32	15	10	5	4	4	8	A5x5x36
40	19	10	6	5	5	10	A6x6x45
63	27	10	8	5	–	–	A8x7x50

1) Included in the scope of delivery.

– ♯ – Note: This product conforms to ISO 1179-1 and ISO 228-1.

Semi-rotary drives > Semi-rotary drives with rotary vane >

Swivel modules DSM-B

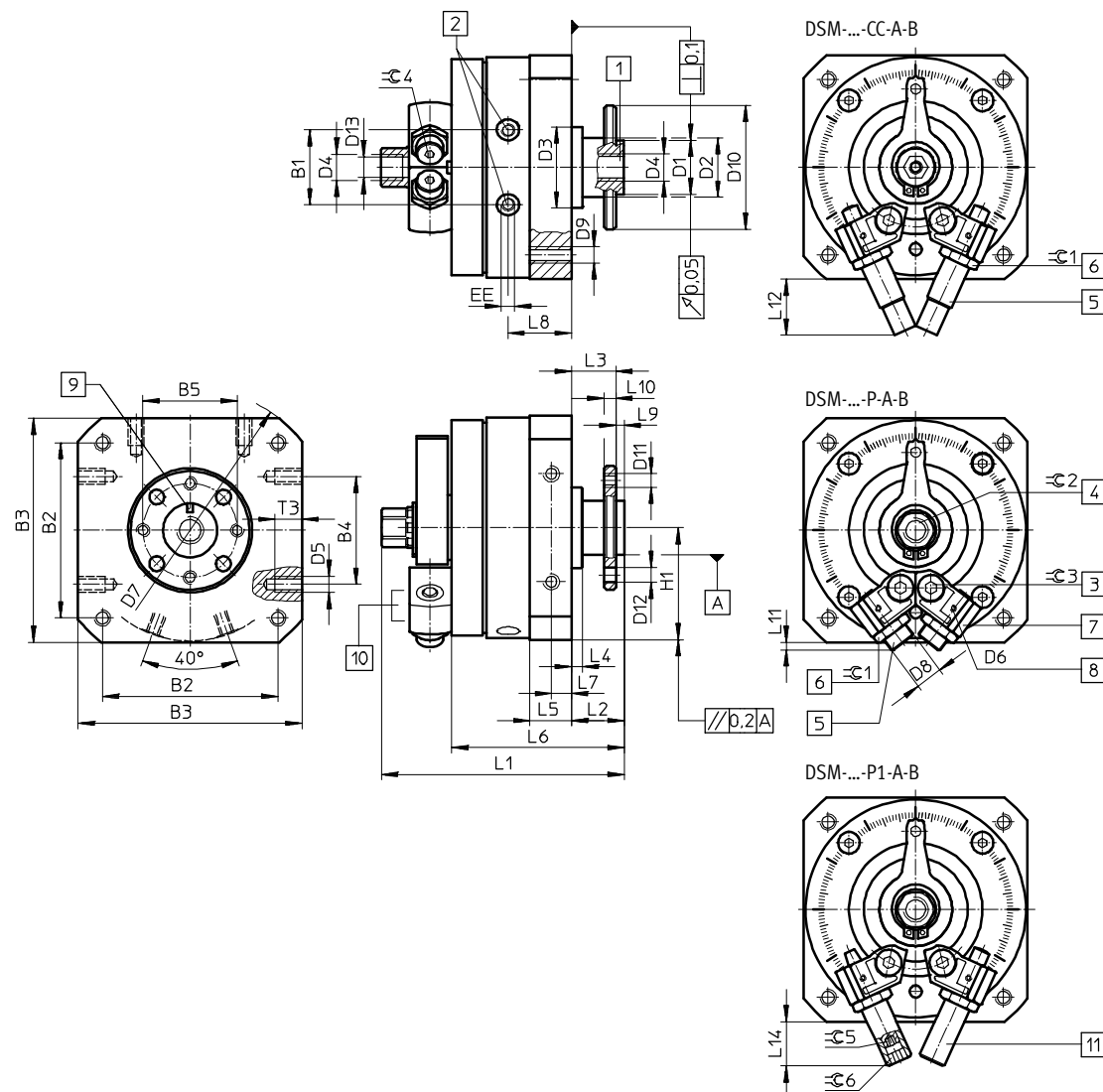
01

Dimensions – Size 12 ... 63-B

Download CAD data → www.festo.com

DSM- ... -B – With flanged shaft

Pneumatic drives



- 1 Flanged shaft with through-hole
- 2 Supply ports
- 3 Locking screw for clamping the stop

- 4 Manual override (internal hex). The position of the internal hex is not defined

- 5 End-position adjustment
- 6 Lock nut for end-position adjustment
- 7 Infinitely adjustable stops

- 8 Mounting thread for sensor bracket
- 9 Position of marking corresponds to position of stop
- 10 Sensor bracket
- 11 End-position adjustment

Swivel modules DSM-B

Dimensions – Size 12 ... 63-B

Download CAD data → www.festo.com

01

Size	B1 ±0.5	B2	B3	B4	B5	D1 Ø f8	D2 Ø	D3 Ø f8	D4	D5
12	19.8	48±0.3	59±0.3	30±0.2	25	14	15±0.2	24	M5	M4
16	23.5	57±0.3	70±0.3	40±0.2	28	16	18 _{-0.3}	28	M5	M5
25	28	65±0.3	83±0.3	40±0.2	35	20	20 _{-0.3}	30	G1/8	M6
32	35.5	85±0.3	105±0.3	60±0.3	45	28	27 _{-0.4}	42	G1/8	M8
40	43.8	105±0.3	130±0.5	80±0.3	54	36	36 _{-0.4}	52	G1/4	M10
63	50.3	125±0.5	152±0.2	80±0.3	64	38	40±0.3	70	G1/4	M10

Size	D6	D7 Ø	D8	D9	D10 Ø	D11	D12 H13	D13	EE	H1 ±0.2
12	M2	78±0.3	M8x1	M4	33	M3	3.4	4.2	M5	29.5
16	M2	91±0.3	M10x1	M5	38	M4	4.5	4.2	M5	35
25	M2	106±0.3	M10x1	M6	46	M5	5.5	8.6	M5	41.5
32	M2	135±0.3	M12x1	M8	60	M6	6.5	8.6	G1/8	52.5
40	M2	168±0.5	M16x1	M10	70	M8	9	11.5	G1/8	65
63	M3	200±0.5	M22x1.5	M12	88	M8	12	11.5	G1/4	76

Size	L1	L2 +0.5 -0.85	L3 +0.5 -0.62	L4 ±0.4	L5	L6 ±1	L7	L8	L9 -0.2	L10
12	67.3+0.4/-0.65	13	11	3	10.3+0.2/-0.3	44	5±0.1	16.5	2	3±0.1
16	79+0.4/-0.65	15	13	2.6	13+0.2/-0.4	54.1	6.5±0.2	20.2	2	4±0.1
25	90+0.4/-0.65	19.5	16.5	4	15.2+0.2/-0.4	64	7.5±0.2	23.5	3	4.5±0.1
32	115.8+0.4/-0.65	27	23	8	19.2+0.2/-0.4	83	9.5±0.2	30.5	4	6±0.1
40	143.8+0.4/-0.7	33	28	8	23.7+0.2/-0.4	102	12±0.2	36	5	7.5±0.1
63	177.4+0.2/-0.55	37.5	31.5	10.5	28.5+0.3/-0.5	121.5	14±0.2	45	6	9±0.2

Size	L11	L12	L14 max.	T3 +0.2	≈C 1	≈C 2	≈C 3	≈C 4	≈C 5	≈C 6
12	3	22.7	21.2	8	10	8	2.5	2.5	2.5	2.5
16	7.2	26.1	22	8	13	11	3	3	3	5
25	2.9	20.7	17	10	13	13	4	3	3	6
32	3.8	29.1	23	12	15	13	5	4	4	8
40	3.4	43.5	36.5	15	19	19	6	5	5	10
63	10	72.5	–	16	27	22	8	5	–	–

- || - Note: This product conforms to ISO 1179-1 and ISO 228-1.

Pneumatic drives

Semi-rotary drives > Semi-rotary drives with rotary vane >

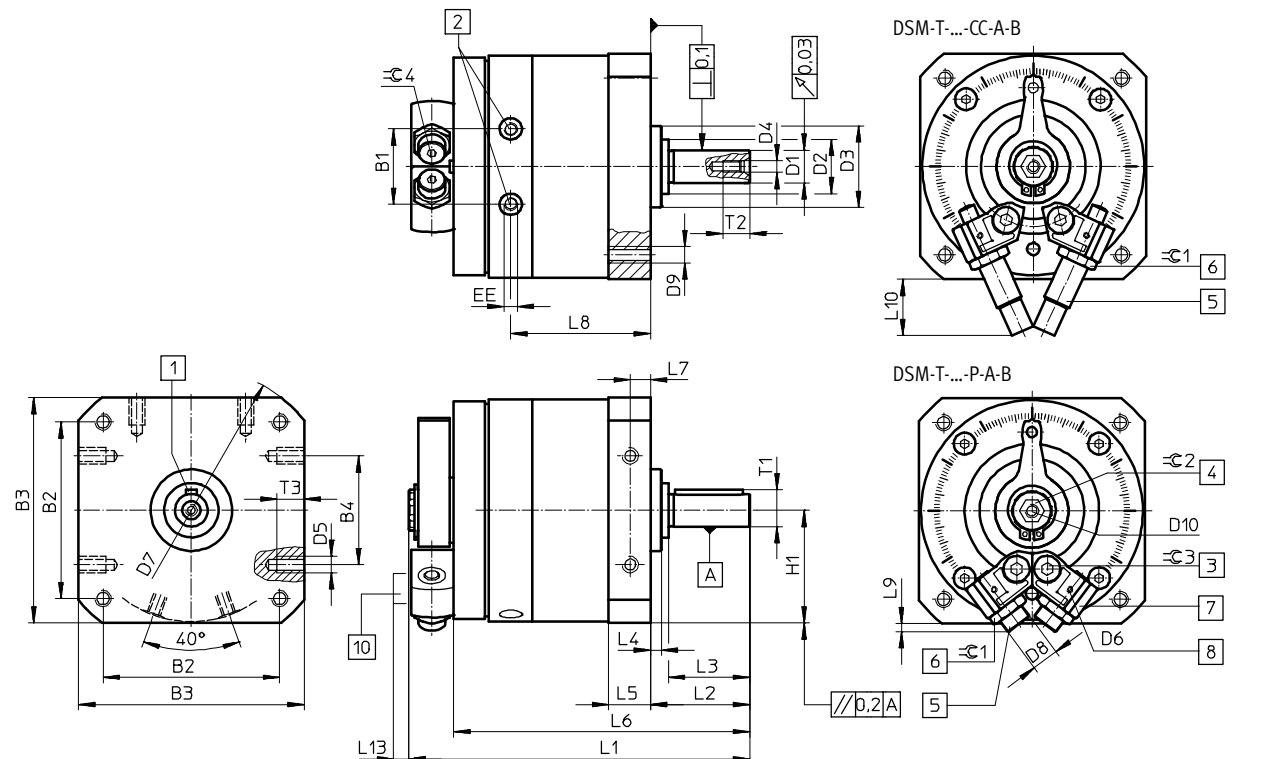
Swivel modules DSM-B

01

Dimensions – Size 12 ... 63-B

Download CAD data → www.festo.com

DSM-T- ... -B – With tandem rotary vanes and spigot shaft



- | | | | |
|--|---|---|---|
| 1 Woodruff key position at 0° | 4 Manual override (internal hex).
The position of the internal hex
is not defined | 5 End-position adjustment | 8 Mounting thread
for sensor bracket |
| 2 Supply ports | | 6 Lock nut for end-position
adjustment | 10 Sensor bracket |
| 3 Locking screw for clamping
the stop | | 7 Infinitely adjustable stops | |

Swivel modules DSM-B

Dimensions – Size 12 ... 63-B

Download CAD data → www.festo.com

01

Size	B1 ±0.5	B2	B3	B4	D1 Ø g7	D2 Ø	D3 Ø f8
12	19.8	48±0.3	59±0.3	30±0.2	8	15±0.2	24
16	23.5	57±0.3	70±0.3	40±0.2	10	18 _{-0.3}	28
25	28	65±0.3	83±0.3	40±0.2	12	20 _{-0.3}	30
32	35.5	85±0.3	105±0.3	60±0.3	16	27 _{-0.4}	42
40	43.8	105±0.3	130±0.5	80±0.3	20	36 _{-0.4}	52
63	50.3	125±0.5	152 ^{+0.2}	80±0.3	25	40±0.3	70

Size	D4	D5	D6	D7 Ø	D8	D9	D10
12	M3	M4	M2	78±0.3	M8x1	M4	M4
16	M3	M5	M2	91±0.3	M10x1	M5	M5
25	M4	M6	M2	106±0.3	M10x1	M6	M5
32	M5	M8	M2	135±0.3	M12x1	M8	M5
40	M6	M10	M2	168±0.5	M16x1	M10	M6
63	M10	M10	M3	200±0.5	M22x1.5	M12	M6

Pneumatic drives

Size	EE	H1 ±0.2	L1	L2 +0.6 -0.7	L3	L4 ±0.4	L5
12	M5	29.5	87.3±0.3	24.5	20±0.2	3	10.3 ^{+0.2/-0.3}
16	M5	35	106.6±1	28	23±0.2	2.6	13 ^{+0.2/-0.4}
25	M5	41.5	125.5±0.5	36.5	30±0.2	4	15.2 ^{+0.2/-0.4}
32	G1/8	52.5	164±0.5	51	40±0.2	8	19.2 ^{+0.2/-0.4}
40	G1/8	65	200.5±0.6	62	50±0.3	8	23.7 ^{+0.2/-0.4}
63	G1/4	76	254.4 ^{+0.4/-0.55}	75.5	60±0.3	10.5	28.5 ^{+0.3/-0.5}

Size	L6	L7	L8	L9	L10	L13	T1 max.
12	74.5±0.8	5±0.1	35.5	3	22.7	6.5	8.8
16	91±0.9	6.5±0.2	44.1	7.2	26.1	6.5	11.2
25	109±1	7.5±0.2	51.5	2.9	20.7	6.5	13.5
32	144±1.1	9.5±0.2	67.4	3.8	29.1	6.5	18
40	176±1.2	12±0.2	81	3.4	43.5	6.5	22.5
63	216.5±1.2	14±0.2	99	10	72.5	4.5	28

Size	T2 +2	T3 +0.2	≡ 1	≡ 2	≡ 3	≡ 4	Woodruff key to DIN 6885 ¹⁾
12	9	8	10	6	2.5	2.5	A2x2x16
16	9	8	13	8	3	3	A3x3x18
25	10	10	13	8	4	3	A4x4x25
32	12.5	12	15	10	5	4	A5x5x36
40	16	15	19	10	6	5	A6x6x45
63	22	16	27	10	8	5	A8x7x50

1) Included in the scope of delivery.

- ≡ - Note: This product conforms to ISO 1179-1 and ISO 228-1.

Semi-rotary drives > Semi-rotary drives with rotary vane >

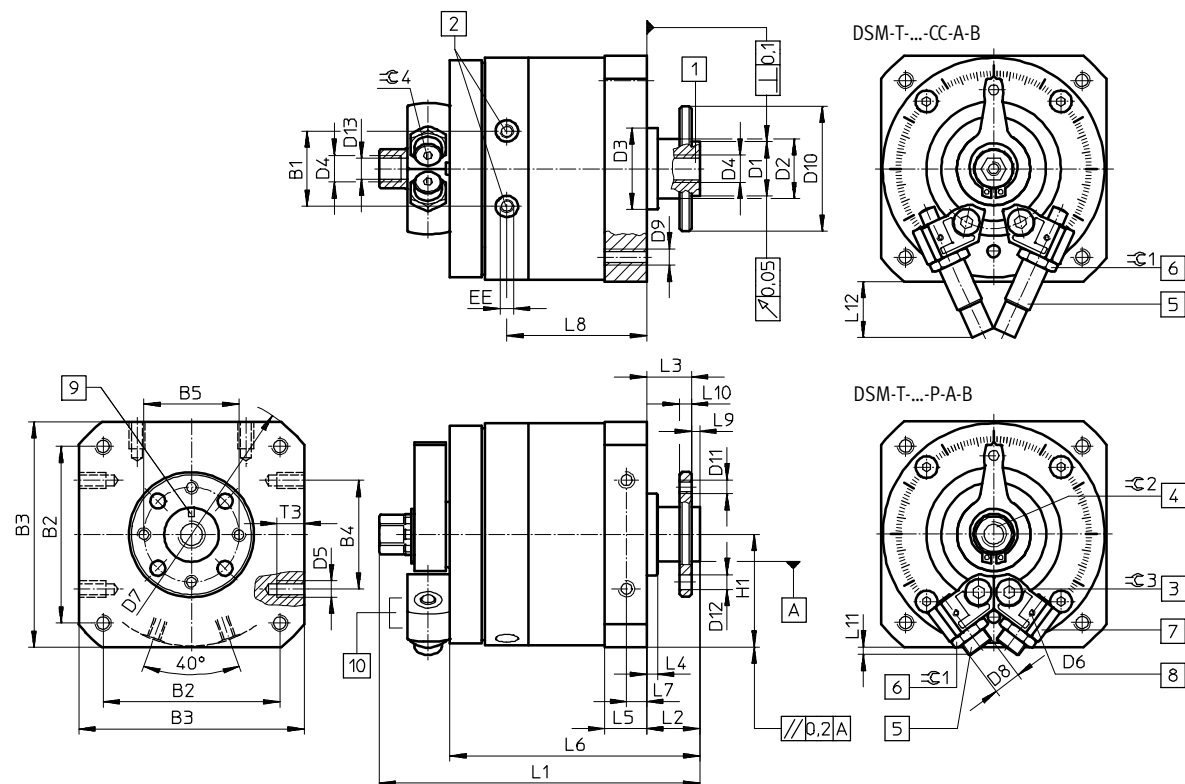
Swivel modules DSM-B

01

Dimensions – Size 12 ... 63-B

Download CAD data → www.festo.com

DSM-T- ... -B – With tandem rotary vanes and flanged shaft



- 1 Flanged shaft with through-hole
- 2 Supply ports
- 3 Locking screw for clamping the stop

- 4 Manual override (internal hex). The position of the internal hex is not defined

- 5 End-position adjustment
- 6 Lock nut for end-position adjustment
- 7 Infinitely adjustable stops

- 8 Mounting thread for sensor bracket
- 9 Position of marking corresponds to position of stop
- 10 Sensor bracket

Pneumatic drives

Swivel modules DSM-B

Dimensions – Size 12 ... 63-B

Download CAD data → www.festo.com

01

Size	B1 ±0.5	B2	B3	B4	B5	D1 Ø f8	D2 Ø	D3 Ø f8	D4
12	19.8	48±0.3	59±0.3	30±0.2	25	14	15±0.2	24	M5
16	23.5	57±0.3	70±0.3	40±0.2	28	16	18 _{-0.3}	28	M5
25	28	65±0.3	83±0.3	40±0.2	35	20	20 _{-0.3}	30	G $\frac{1}{8}$
32	35.5	85±0.3	105±0.3	60±0.3	45	28	27 _{-0.4}	42	G $\frac{1}{8}$
40	43.8	105±0.3	130±0.5	80±0.3	54	36	36 _{-0.4}	52	G $\frac{1}{4}$
63	50.3	125±0.5	152±0.2	80±0.3	64	38	40±0.3	70	G $\frac{1}{4}$

Size	D5	D6	D7 Ø	D8	D9	D10 Ø	D11	D12 H13	D13
12	M4	M2	78±0.3	M8x1	M4	33	M3	3.4	4.2
16	M5	M2	91±0.3	M10x1	M5	38	M4	4.5	4.2
25	M6	M2	106±0.3	M10x1	M6	46	M5	5.5	8.6
32	M8	M2	135±0.3	M12x1	M8	60	M6	6.5	8.6
40	M10	M2	168±0.5	M16x1	M10	70	M8	9	11.5
63	M10	M3	200±0.5	M22x1.5	M12	88	M8	12	11.5

Pneumatic drives

Size	EE	H1 ±0.2	L1	L2 +0.5 -0.85	L3 +0.5 -0.62	L4 ±0.4	L5	L6 ±1	L7
12	M5	29.5	86.3+0.4/-0.65	13	11	3	10.3+0.2/-0.3	63	5±0.1
16	M5	35	103+0.4/-0.65	15	13	2.6	13+0.2/-0.4	78	6.5±0.2
25	M5	41.5	118+0.4/-0.65	19.5	16.5	4	15.2+0.2/-0.4	92	7.5±0.2
32	G1/8	52.5	152.8+0.4/-0.65	27	23	8	19.2+0.2/-0.4	120	9.5±0.2
40	G1/8	65	188.8+0.4/-0.7	33	28	8	23.7+0.2/-0.4	147	12±0.2
63	G1/4	76	234.4+0.2/-0.55	37.5	31.5	10.5	28.5+0.3/-0.5	178.5	14±0.2

Size	L8	L9 -0.2	L10	L11	L12	T3 +0.2	≈ 1	≈ 2	≈ 3	≈ 4
12	35.5	2	3±0.1	3	22.7	8	10	8	2.5	2.5
16	44.1	2	4±0.1	7.2	26.1	8	13	11	3	3
25	51.5	3	4.5±0.1	2.9	20.7	10	13	13	4	3
32	67.4	4	6±0.1	3.8	29.1	12	15	13	5	4
40	81	5	7.5±0.1	3.4	43.5	15	19	19	6	5
63	99	6	9±0.2	10	72.5	16	27	22	8	5

- || - Note: This product conforms to ISO 1179-1 and ISO 228-1.



Increase productivity and save costs

- + Thanks to minimum cycle times with the right cushioning variant
- + With optionally integrated energy throughfeed
- + Thanks to downsizing due to the much higher bearing load capacity

Semi-rotary drives with rack and pinion ›

Semi-rotary drives with twin pistons

DRRD ★

Semi-rotary drives with rack and pinion >

Semi-rotary drives with twin pistons

DRRD



Overview, configuration and ordering

→ www.festo.com/catalogue/drrd



Additional information, support and user documentation

→ www.festo.com/sp/drrd



Quick ordering of basic designs

→ page 327



Selected types in accordance with the ATEX Directive
for explosive atmospheres

→ www.festo.com/catalogue/ex



Spare parts service



- + With twin pistons based on the rack and pinion principle
- + Swivel angle freely adjustable up to 180°
- + Very high accuracy in the end positions
- + Very high bearing load capacity
- + Very good axial run-out at the flanged shaft
- + Very high mass moments of inertia

Product range overview

Type/function	Version	Size	Max. nominal swivel angle [°]	Torque [Nm]	Product options										→ Page/ online
					FH	P	Y9	Y10	Y12	Y14	A	E1	R	SG	
DRRD															
Double-acting	Basic design	8, 10	200	0.2 ... 0.4	■	■	–	–	–	–	■	–	–	–	316
		12	200	0.8	■	■	■	–	■	–	■	–	–	–	
		16, 20	200	1.6 ... 2.4	■	■	■	–	■	■	■	■	■	■	320
		25	200	5.1	■	■	■	■	■	■	■	■	■	■	
		32	200	10.1	■	■	■	–	■	■	■	■	■	■	
		35, 40	200	15.8 ... 24.1	■	■	■	■	■	■	■	■	■	■	
		50	200	53	■	–	■	■	■	–	■	■	■	■	
		63	200	112	■	–	■	■	■	–	■	■	■	■	

Product options

FH Hollow flanged shaft

P2 Pneumatic energy throughfeed,
2 channelsP2E2 Pneumatic energy throughfeed,
2 ducts and electric, 2 signalsP4 Pneumatic energy throughfeed,
4 ductsP4E6 Pneumatic energy throughfeed,
4 ducts and electric, 6 signalsP8 Pneumatic energy throughfeed,
8 ductsP8E8 Pneumatic energy throughfeed,
8 ducts and electric, 8 signalsP Elastic cushioning rings/plates
at both endsY9 Linear shock absorber,
self-adjusting at both endsY10 Linear shock absorber,
self-adjusting at both ends,
hardY12 Linear shock absorber,
self-adjusting at both ends,
externalY14 Linear shock absorber,
self-adjusting at both ends,
soft

A Position sensing

EX4 EU certification (II 2GD)

PS1 Intermediate position

E1 End-position locking
at both ends

R Sensor mounting, external

SG Splash-proof

DN Without operating instructions

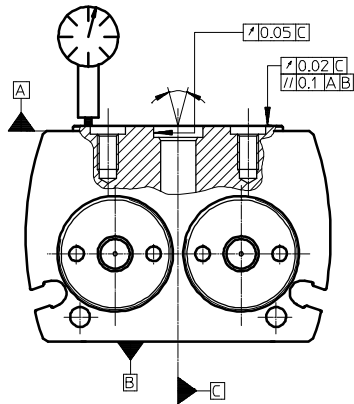
01

Data sheet – Size 8 ... 12



Technical data		Dimensions → Page 330		
Size		8	10	12
Pneumatic connection		M3	M3	M5
Type of mounting	Via through-hole			
	Via female thread			
Max. nominal swivel angle	[°]	180		
Cushioning with fixed stop				
DRRD-...-P		Elastic cushioning rings/plates at both ends		
DRRD-...-Y9		–		Linear shock absorber, self-adjusting at both ends
DRRD-...-Y12		–		Linear shock absorber, self-adjusting at both ends, external
Theoretical torque at 6 bar	[Nm]	0.2	0.4	0.8
Max. permissible mass moment of inertia				
DRRD-...-P	[kgcm ²]	15	20	80
DRRD-...-Y9	[kgcm ²]	–	–	300
DRRD-...-Y12	[kgcm ²]	–	–	300
Max. axial load (static)				
Tensile force	[N]	260	260	330
Pressure	[N]	700	1100	1400

Axial run-out in new condition ≤ 0.02 mm



Note

If, in the end positions, a torque which exceeds 50% of the theoretical torque acts against the direction of rotation, no exact end position is guaranteed. This can be avoided by using external shock absorbers (Y12) or a semi-rotary drive with double the torque.

Operating conditions			
Operating pressure			
DRRD-...-P	[bar]	3 ... 8	
DRRD-...-Y9/-Y12	[bar]	2 ... 10	
Ambient temperature	[°C]	–10 ... +60	
Storage temperature	[°C]	–20 ... +60	
Degree of protection based on EN 60529			
DRRD-...-SG		IP65	

Data sheet – Size 8 ... 12

01

Materials

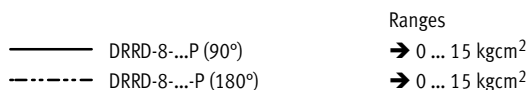
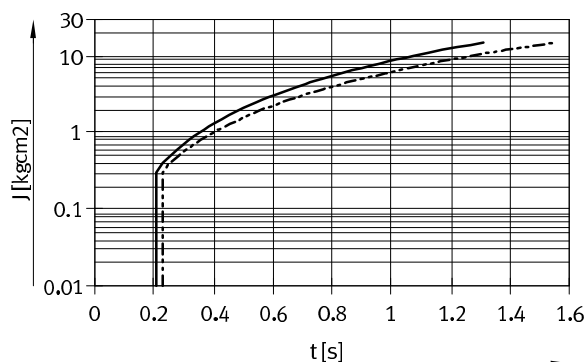
Drive shaft	High-alloy stainless steel
Housing	Smooth anodised wrought aluminium alloy
Piston	Copper base alloy
Seals	TPE-U (PU), NBR

Max. permissible mass moment of inertia J at the flanged shaft as a function of swivel time t

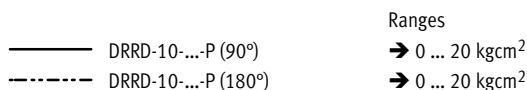
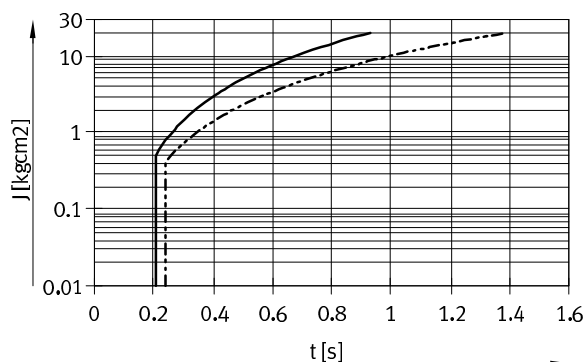
(at room temperature and operating pressure of 6 bar)

Cushioning P

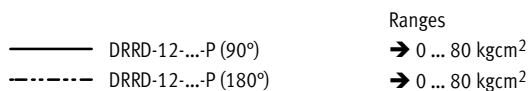
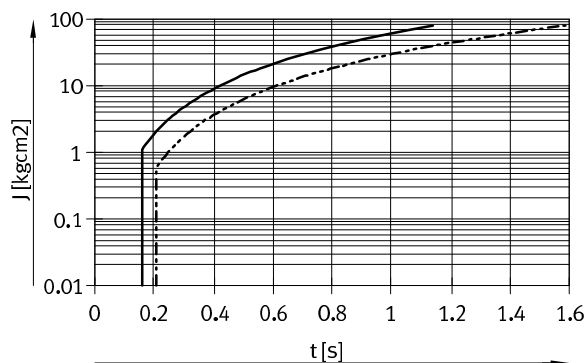
Size 8



Size 10

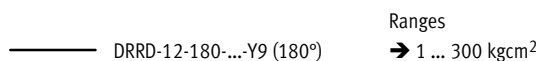
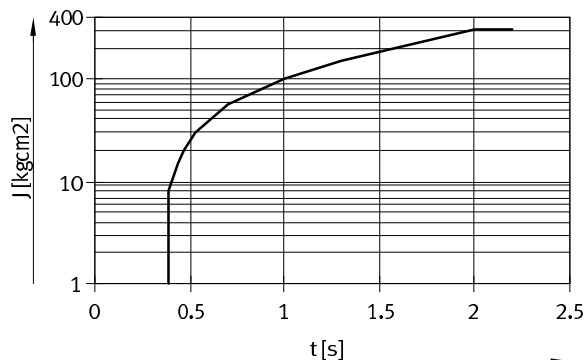


Size 12



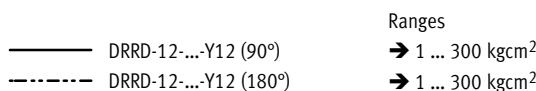
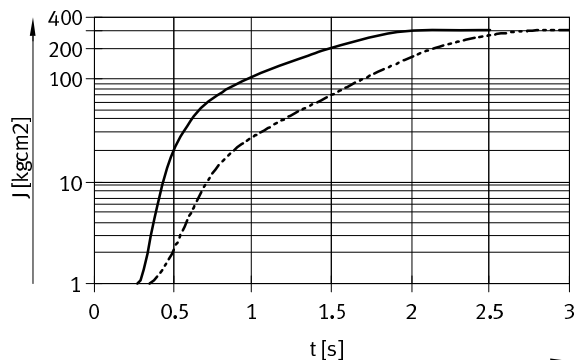
Cushioning Y9

Size 12



Cushioning Y12

Size 12



Pneumatic drives

Twin piston semi-rotary drives DRRD

01

Order code – Size 8 ... 12

Pneumatic drives

		DRRD	-		-	180	-	FH	-		A
Product type											
DRRD	Double-acting semi-rotary drive										
Size											
	Nominal swivel angle [°]										
8, 10, 12	180										
Output shaft											
FH	Flanged shaft, hollow										
Cushioning											
P	Elastic cushioning rings/plates at both ends										
Y9	Linear shock absorber, self-adjusting at both ends	1									
Y12	Linear shock absorber, self-adjusting at both ends, external	1									
Position sensing											
A	Via proximity sensor										

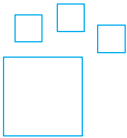
1 Not with size 8, 10

Order example:

DRRD-12-180-FH-Y9A

Semi-rotary drive DRRD - size 12 - swivel angle 180° - output shaft, hollow flanged shaft - linear shock absorber, at both ends, self-adjusting - position sensing via proximity sensor

Ordering – Product options



Configurable product

This product and all its options can be ordered using the configurator.

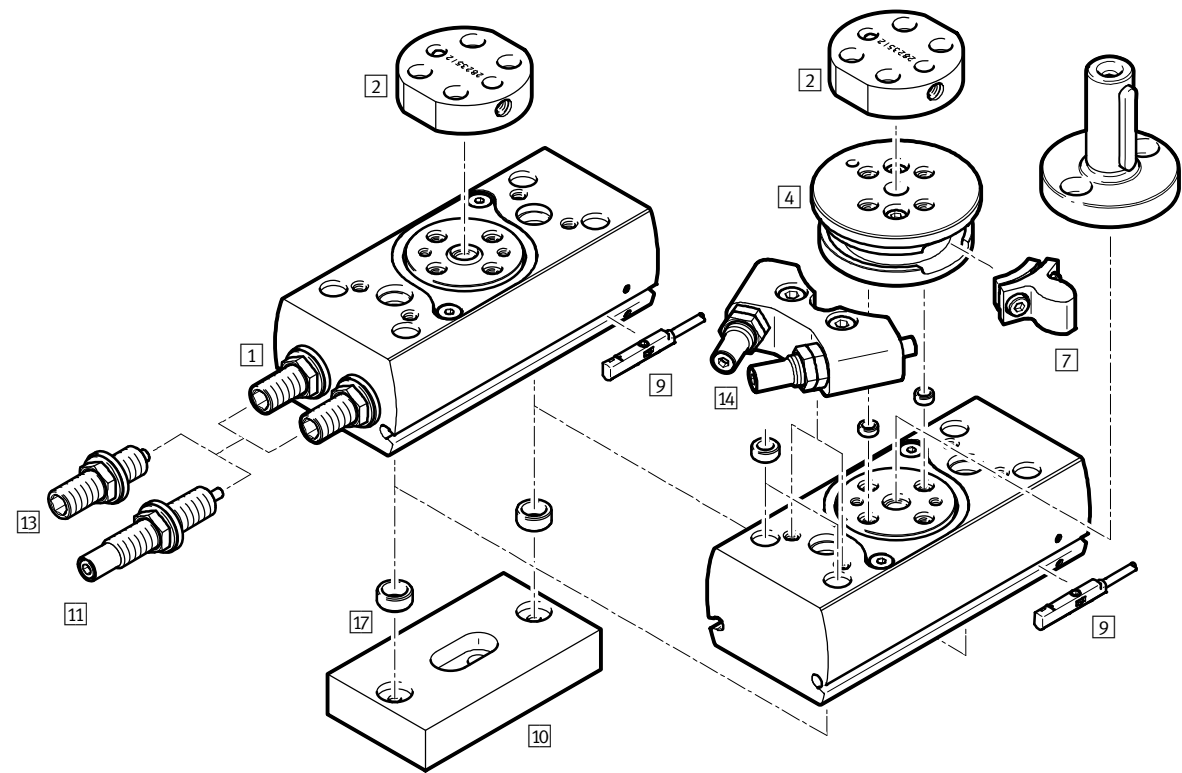
The configurator can be found under Products on the DVD or
→ www.festo.com/catalogue/...

Enter the type code in the search field.

Accessories – Size 8 ... 12

01

Pneumatic drives



	→ Page/ online
1 Semi-rotary drive DRRD	318
2 Adapter kit DHAA	drrd
4 Flange assembly	328
7 Stop element	328
9 Proximity sensor SMT/SME	329

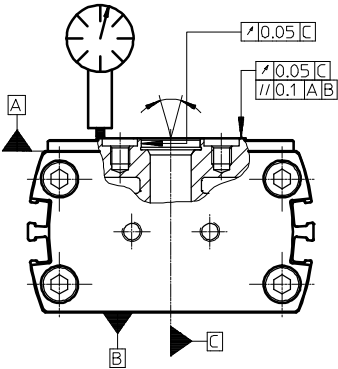
	→ Page/ online
10 Adapter kit DHAA	drrd
11 Shock absorber Y9	318
13 Shock absorber P	318
14 Shock absorber, external Y12	318
17 Centring sleeve ZBH	328

Data sheet – Size 16 ... 63

Operating conditions		
Operating pressure		
DRRD-...-P	[bar]	3 ... 8
DRRD-...-Y9/-Y10/-Y12/-Y14	[bar]	2 ... 10
DRRD-... E1	[bar]	5 ... 8
DADL-EL		
Ambient temperature	[°C]	–10 ... +60
Degree of protection based on EN 60529		
DRRD-...-SG		IP65

Materials	
Drive shaft	Tempered steel
End cap	Anodised wrought aluminium alloy
Housing	Smooth anodised wrought aluminium alloy
Piston	Stainless steel
Seals	TPE-U (PU), NBR

Axial run-out in new condition < 0.05 mm



Semi-rotary drives > Semi-rotary drives with rack and pinion >

Twin piston semi-rotary drives DRRD ★

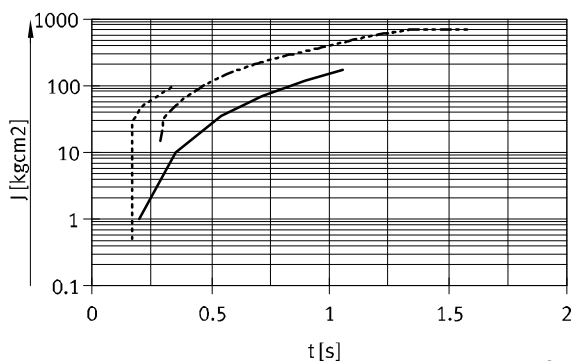
01

Data sheet – Size 16 ... 63

Max. permissible mass moment of inertia J at the flanged shaft as a function of swivel time t
(at room temperature and operating pressure of 6 bar)

Size 16 with cushioning P, Y9/Y14

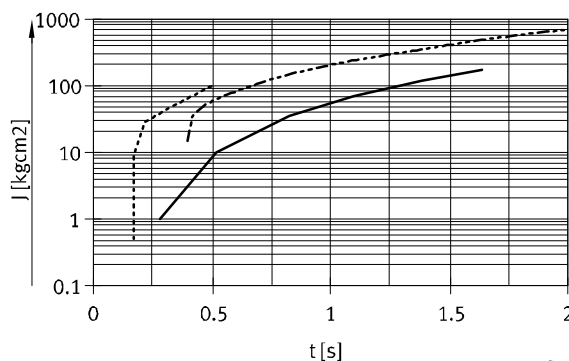
Swivel angle 90°



Ranges

- DRRD-16-...-P (90°) → 1 ... 175 kgcm²
- - - DRRD-16-...-Y9 (90°) → 15 ... 700 kgcm²
- · · DRRD-16-...-Y14 (90°) → 0.5 ... 100 kgcm²

Swivel angle 180°

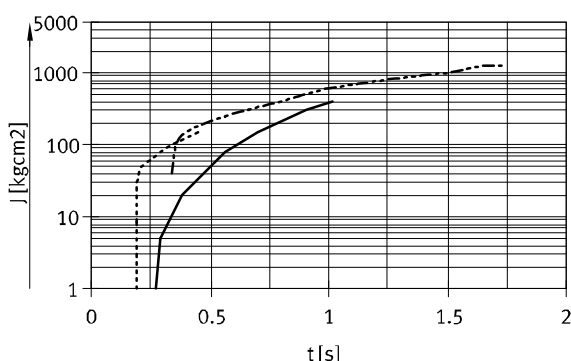


Ranges

- DRRD-16-...-P (180°) → 1 ... 175 kgcm²
- - - DRRD-16-...-Y9 (180°) → 15 ... 700 kgcm²
- · · DRRD-16-...-Y14 (180°) → 0.5 ... 100 kgcm²

Size 20 with cushioning P, Y9/Y14

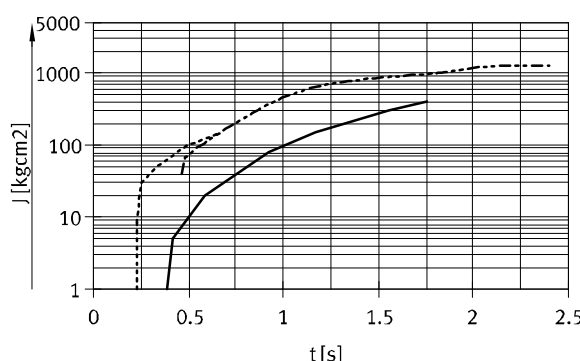
Swivel angle 90°



Ranges

- DRRD-20-...-P (90°) → 1 ... 400 kgcm²
- - - DRRD-20-...-Y9 (90°) → 40 ... 1250 kgcm²
- · · DRRD-20-...-Y14 (90°) → 1 ... 150 kgcm²

Swivel angle 180°

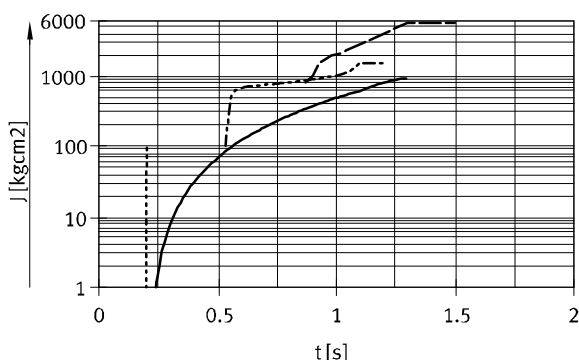


Ranges

- DRRD-20-...-P (180°) → 1 ... 400 kgcm²
- - - DRRD-20-...-Y9 (180°) → 40 ... 1250 kgcm²
- · · DRRD-20-...-Y14 (180°) → 1 ... 150 kgcm²

Size 25 with cushioning P, Y9/Y10/Y14

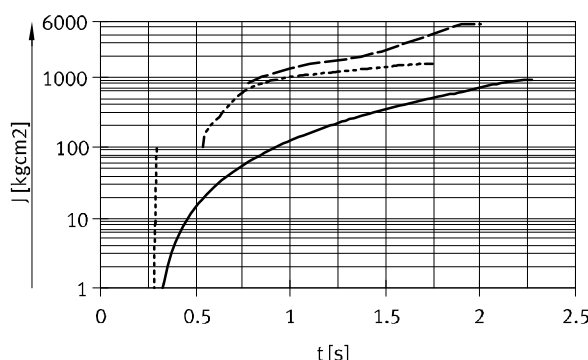
Swivel angle 90°



Ranges

- DRRD-25-...-P (90°) → 1 ... 900 kgcm²
- - - DRRD-25-...-Y9 (90°) → 100 ... 1500 kgcm²
- · - DRRD-25-...-Y10 (90°) → 800 ... 5500 kgcm²
- · · DRRD-25-...-Y14 (90°) → 1 ... 100 kgcm²

Swivel angle 180°



Ranges

- DRRD-25-...-P (180°) → 1 ... 900 kgcm²
- - - DRRD-25-...-Y9 (180°) → 100 ... 1500 kgcm²
- · - DRRD-25-...-Y10 (180°) → 800 ... 5500 kgcm²
- · · DRRD-25-...-Y14 (180°) → 1 ... 100 kgcm²

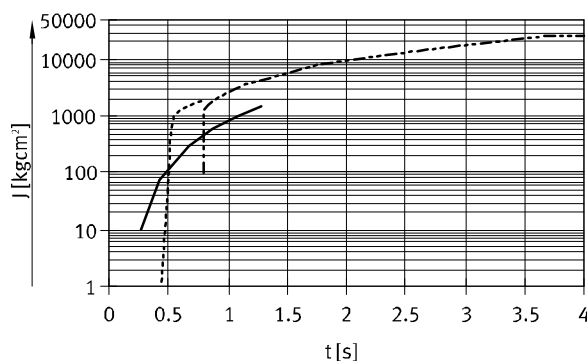
Data sheet – Size 16 ... 63

Max. permissible mass moment of inertia J at the flanged shaft as a function of swivel time t

(at room temperature and operating pressure of 6 bar)

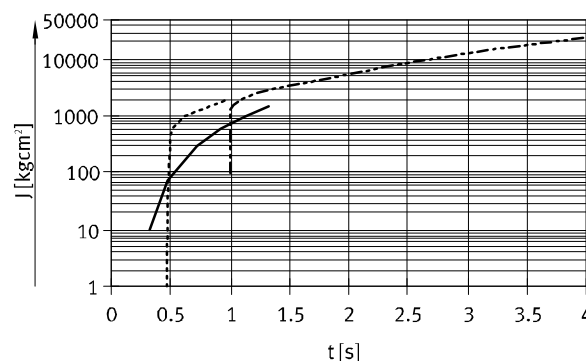
Size 32 with cushioning P, Y9/Y14

Swivel angle 90°



—	DRRD-32-...-P (90°)	→ 10 ... 1500 kgcm ²
- - -	DRRD-32-...-Y9 (90°)	→ 100 ... 26,000 kgcm ²
· · ·	DRRD-32-...-Y14 (90°)	→ 1 ... 2000 kgcm ²

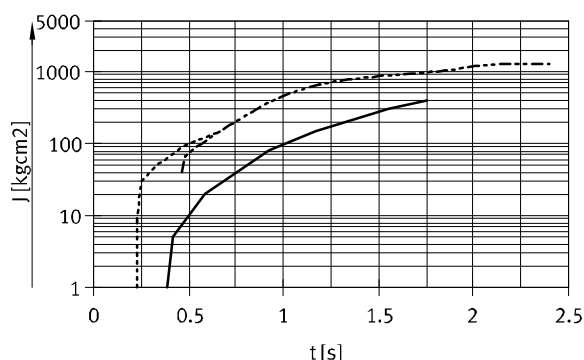
Swivel angle 180°



—	DRRD-32-...-P (180°)	→ 10 ... 1500 kgcm ²
- - -	DRRD-32-...-Y9 (180°)	→ 100 ... 26,000 kgcm ²
· · ·	DRRD-32-...-Y14 (180°)	→ 1 ... 2000 kgcm ²

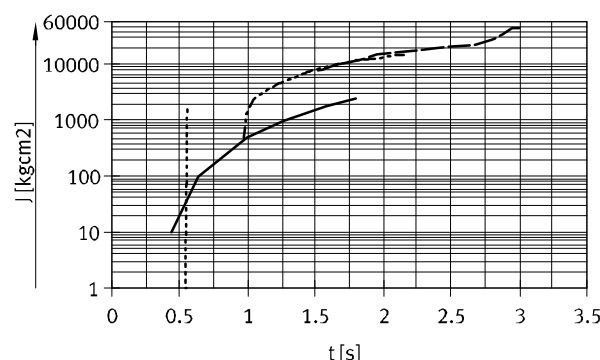
Size 35 with cushioning P, Y9/Y10/Y14

Swivel angle 90°



—	DRRD-35-...-P (90°)	→ 10 ... 2500 kgcm ²
- - -	DRRD-35-...-Y9 (90°)	→ 500 ... 15,000 kgcm ²
· · ·	DRRD-35-...-Y10 (90°)	→ 8000 ... 45,000 kgcm ²
· · ·	DRRD-35-...-Y14 (90°)	→ 1 ... 2000 kgcm ²

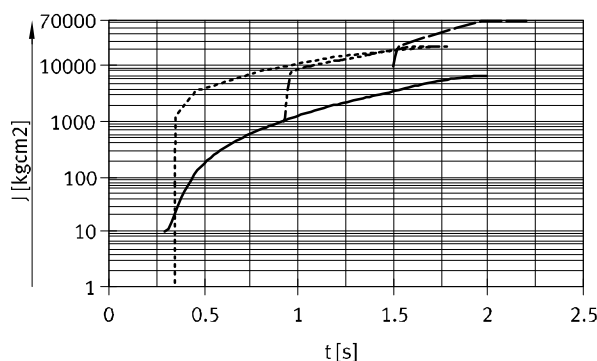
Swivel angle 180°



—	DRRD-35-...-P (180°)	→ 10 ... 2500 kgcm ²
- - -	DRRD-35-...-Y9 (180°)	→ 500 ... 15,000 kgcm ²
· · ·	DRRD-35-...-Y10 (180°)	→ 8000 ... 45,000 kgcm ²
· · ·	DRRD-35-...-Y14 (180°)	→ 1 ... 2000 kgcm ²

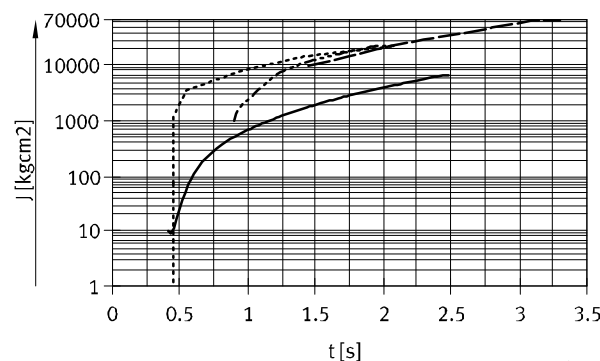
Size 40 with cushioning P, Y9/Y10/Y14

Swivel angle 90°



—	DRRD-40-...-P (90°)	→ 10 ... 6700 kgcm ²
- - -	DRRD-40-...-Y9 (90°)	→ 1000 ... 23,000 kgcm ²
· · ·	DRRD-40-...-Y10 (90°)	→ 10,000 ... 67,000 kgcm ²
· · ·	DRRD-40-...-Y14 (90°)	→ 1 ... 23,000 kgcm ²

Swivel angle 180°



—	DRRD-40-...-P (180°)	→ 10 ... 6700 kgcm ²
- - -	DRRD-40-...-Y9 (180°)	→ 1000 ... 23,000 kgcm ²
· · ·	DRRD-40-...-Y10 (180°)	→ 10,000 ... 67,000 kgcm ²
· · ·	DRRD-40-...-Y14 (180°)	→ 1 ... 23,000 kgcm ²

Twin piston semi-rotary drives DRRD ★

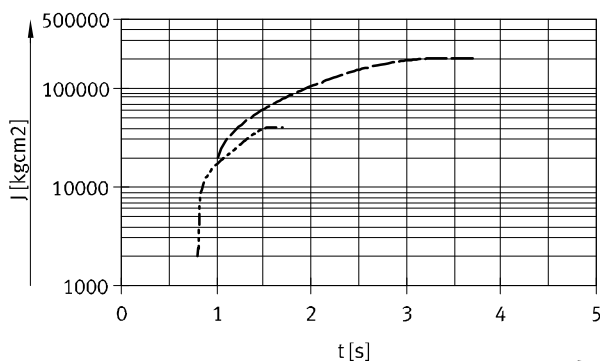
01

Data sheet – Size 16 ... 63

Max. permissible mass moment of inertia J at the flanged shaft as a function of swivel time t
(at room temperature and operating pressure of 6 bar)

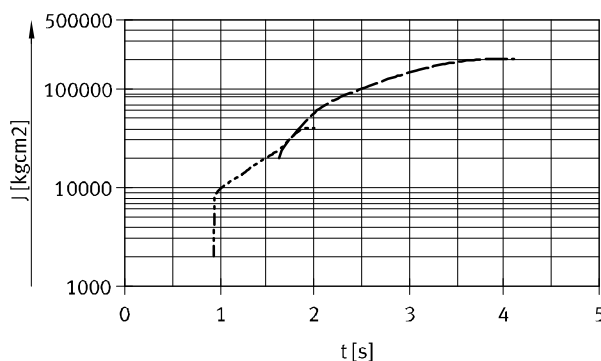
Size 50 with cushioning Y9/Y10

Swivel angle 90°



----- DRRD-50-...-Y9 (90°)	Ranges → 2000 ... 40,000 kgcm ²
———— DRRD-50-...-Y10 (90°)	→ 20,000 ... 200,000 kgcm ²

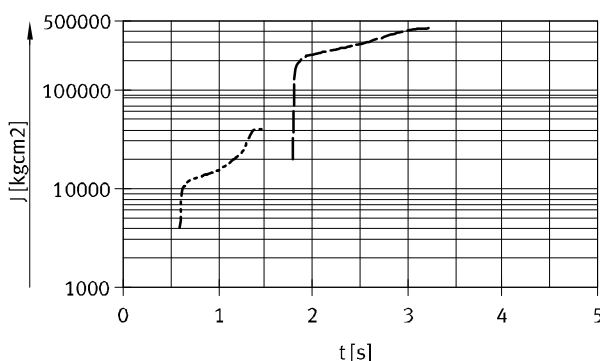
Swivel angle 180°



----- DRRD-50-...-Y9 (180°)	Ranges → 2000 ... 40,000 kgcm ²
———— DRRD-50-...-Y10 (180°)	→ 20,000 ... 200,000 kgcm ²

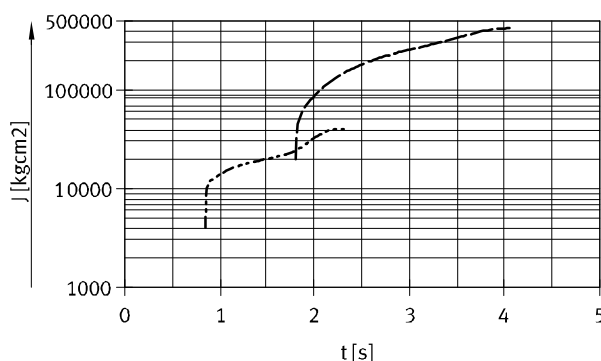
Size 63 with cushioning Y9/Y10

Swivel angle 90°



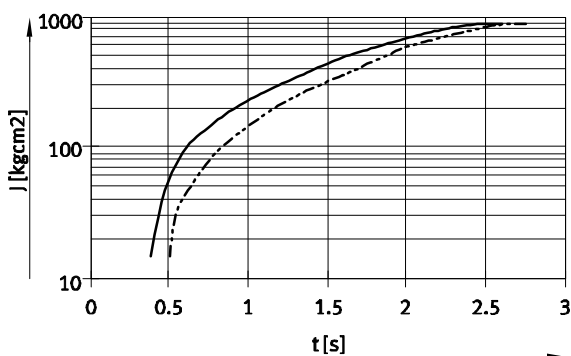
----- DRRD-63-...-Y9 (90°)	Ranges → 4000 ... 40,000 kgcm ²
———— DRRD-63-...-Y10 (90°)	→ 20,000 ... 420,000 kgcm ²

Swivel angle 180°



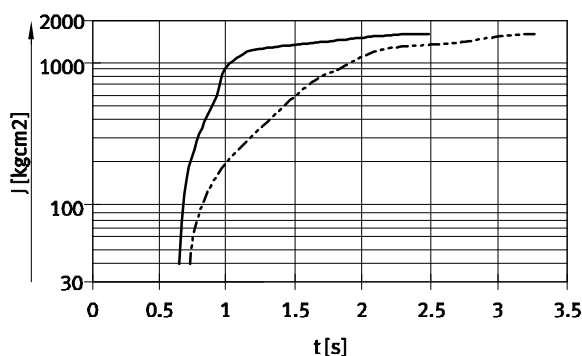
----- DRRD-63-...-Y9 (180°)	Ranges → 4000 ... 40,000 kgcm ²
———— DRRD-63-...-Y10 (180°)	→ 20,000 ... 420,000 kgcm ²

Size 16 with cushioning Y12



———— DRRD-16-...-Y12 (90°)	Ranges → 15 ... 900 kgcm ²
----- DRRD-16-...-Y12 (180°)	→ 15 ... 900 kgcm ²

Size 20 with cushioning Y12



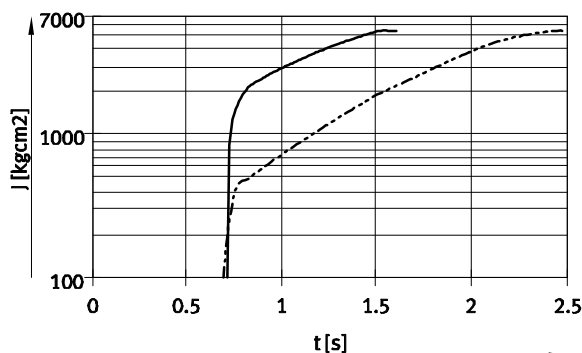
———— DRRD-20-...-Y12 (90°)	Ranges → 40 ... 1600 kgcm ²
----- DRRD-20-...-Y12 (180°)	→ 40 ... 1600 kgcm ²

Data sheet – Size 16 ... 63

Max. permissible mass moment of inertia J at the flanged shaft as a function of swivel time t

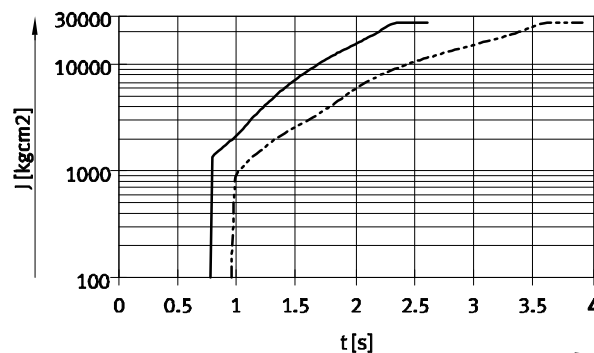
(at room temperature and operating pressure of 6 bar)

Size 25 with cushioning Y12



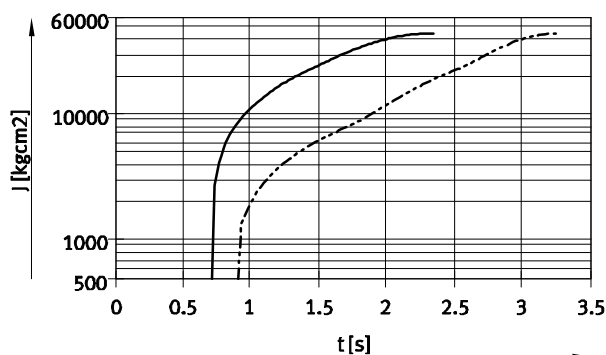
—	DRRD-25-...-Y12 (90°)	Ranges	→ 100 ... 5500 kgcm ²
- - -	DRRD-25-...-Y12 (180°)		→ 100 ... 5500 kgcm ²

Size 32 with cushioning Y12



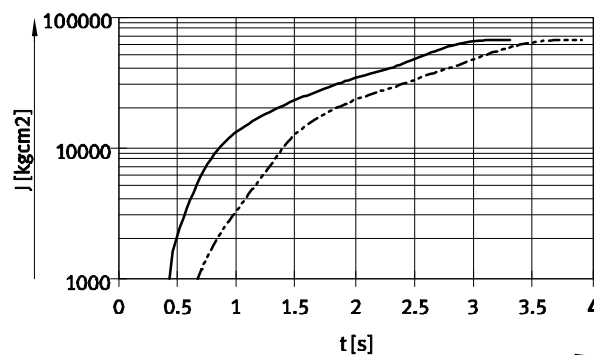
—	DRRD-32-...-Y12 (90°)	Ranges	→ 100 ... 26,000 kgcm ²
- - -	DRRD-32-...-Y12 (180°)		→ 100 ... 26,000 kgcm ²

Size 35 with cushioning Y12



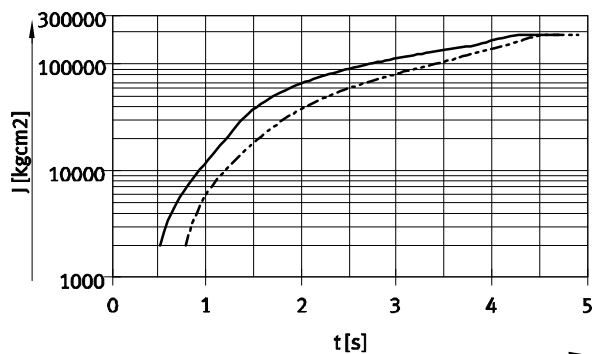
—	DRRD-35-...-Y12 (90°)	Ranges	→ 500 ... 45,000 kgcm ²
- - -	DRRD-35-...-Y12 (180°)		→ 500 ... 45,000 kgcm ²

Size 40 with cushioning Y12



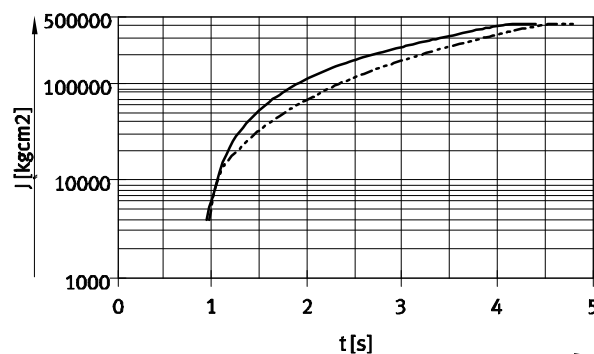
—	DRRD-40-...-Y12 (90°)	Ranges	→ 1000 ... 67,000 kgcm ²
- - -	DRRD-40-...-Y12 (180°)		→ 1000 ... 67,000 kgcm ²

Size 50 with cushioning Y12



—	DRRD-50-...-Y12 (90°)	Ranges	→ 2000 ... 200,000 kgcm ²
- - -	DRRD-50-...-Y12 (180°)		→ 2000 ... 200,000 kgcm ²

Size 63 with cushioning Y12



—	DRRD-63-...-Y12 (90°)	Ranges	→ 4000 ... 420,000 kgcm ²
- - -	DRRD-63-...-Y12 (180°)		→ 4000 ... 420,000 kgcm ²

Twin piston semi-rotary drives DRRD ★

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Order code – Size 16 ... 63

Pneumatic drives

Product type		DRRD	-		-	180	-	FH	-		A	-		-		-	
Double-acting																	
DRRD		Semi-rotary drive															
Size																	
Nominal swivel angle [°]																	
16, 20, 25, 32, 35, 40, 50, 63		180															
Output shaft																	
FH		Flanged shaft, hollow															
Cushioning																	
P	Elastic cushioning rings/plates at both ends	1															
Y9	Linear shock absorber, self-adjusting at both ends																
Y10	Linear shock absorber, self-adjusting at both ends, hard	2															
Y12	Linear shock absorber, self-adjusting at both ends, external	3															
Y14	Linear shock absorber, self-adjusting at both ends, internal, soft																
Position sensing																	
A	Via proximity sensor																
End-position locking																	
-	Without																
E1	At both ends	4															
Sensor mounting, external																	
-	Without																
R	Mounting rail for proximity sensor																
Version																	
-	Standard																
SG	Splash-proof design																

- 1 Not with size 50, 63
- 2 Not with size 16, 20, 32
- 3 Not with end-position locking E1 and splash-proof design SG
- 4 Not with sensor mounting R and splash-proof design SG

Order example:

DRRD-32-180-FH-Y9A-E1
Semi-rotary drive DRRD - size 32 - swivel angle 180° - output shaft, hollow flanged shaft - linear shock absorber, at both ends, self-adjusting - position sensing via proximity sensor - end-position locking at both ends - not splash-proof

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
→ www.festo.com/catalogue/...

Enter the type code in the search field.

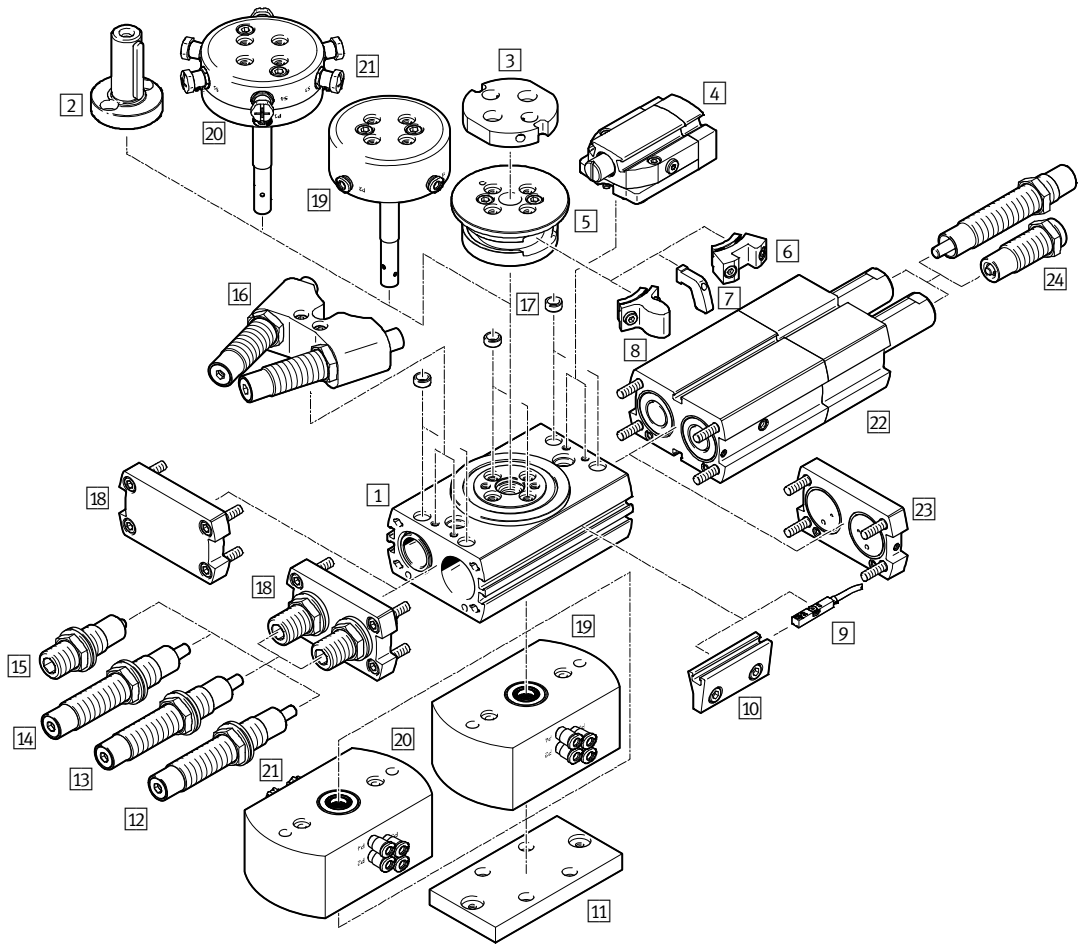
★ Quick ordering¹⁾ – Size 16 ... 63

P – Elastic cushioning rings/plates at both ends			
Piston Ø	Nominal swivel angle	Part no.	Type
16	180°	1577238	DRRD-16-180-FH-PA
20		1395606	DRRD-20-180-FH-PA
25		1359980	DRRD-25-180-FH-PA
32		1578512	DRRD-32-180-FH-PA
35		1526825	DRRD-35-180-FH-PA
40		1503269	DRRD-40-180-FH-PA

1) All products in this table are easy to select and quick to order.

Y9 – Linear shock absorber, self-adjusting at both ends			
Piston Ø	Nominal swivel angle	Part no.	Type
16	180°	1644389	DRRD-16-180-FH-Y9A
20		1427379	DRRD-20-180-FH-Y9A
25		1360248	DRRD-25-180-FH-Y9A
32		1578518	DRRD-32-180-FH-Y9A
35		1547102	DRRD-35-180-FH-Y9A
40		1526986	DRRD-40-180-FH-Y9A

Accessories – Size 16 ... 63



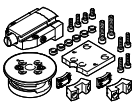
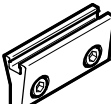
	→ Page/ online
1 Semi-rotary drive DRRD	326
2 Drive shaft DARF-Q11	328
3 Adapter kit DHAA	drrd
4 End-position locking E1 (clamping unit DADL-...-EL as an accessory)	328
5 Flange assembly	328
6 Clamping component (type: DADL-EC)	328
7 Switch lug DASI-Q11-...-SL	328
8 Stop element	–
9 Proximity sensor SMT-/SME-8	329
10 Sensor mounting R (sensing kit DASI-...-KT as an accessory)	328
11 Adapter kit DHAA	drrd
12 Shock absorber Y9	326
13 Shock absorber, hard Y10	326

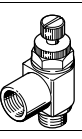
	→ Page/ online
14 Shock absorber, soft Y14	326
15 Shock absorber P	326
16 Shock absorber, external Y12	326
17 Centring sleeve ZBH	328
18 End cap	–
19 Pneumatic energy throughfeed	drrd
20 Pneumatic/electric energy throughfeed	drrd
21 Connecting cable NEBU	drrd
22 Intermediate position	drrd
23 Connection cap	drrd
24 Shock absorber	drrd
– Non-return valves GRLA	328

Twin piston semi-rotary drives DRRD ★

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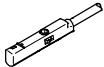
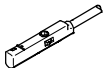
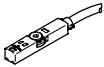
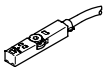
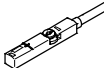
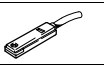
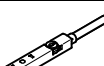
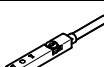
Accessories – Ordering data

	For size	Part no.	Type
2 Drive shaft DARF-Q11 Data sheets online: → drrd			
	12	4835942	DARF-Q11-12
	16	4835943	DARF-Q11-16
	20	4835941	DARF-Q11-20
	25	4835938	DARF-Q11-25
	32	4835940	DARF-Q11-32
	35	4835939	DARF-Q11-35/40
	40	4835939	DARF-Q11-35/40
4 Clamping unit DADL-EL Data sheets online: → drrd			
	16	1692770	DADL-EL-Q11-16
	20	1579786	DADL-EL-Q11-20
	25	1568183	DADL-EL-Q11-25
	32	1631139	DADL-EL-Q11-32
	35	1544900	DADL-EL-Q11-35/40
	40	1544900	DADL-EL-Q11-35/40
	50	1796637	DADL-EL-Q11-50
	63	1941568	DADL-EL-Q11-63
6 Clamping component DADL-EC Data sheets online: → drrd			
	16	1692496	DADL-EC-Q11-16
	20, 25	1435411	DADL-EC-Q11-20/25
	32	1631170	DADL-EC-Q11-32
	35, 40	1535091	DADL-EC-Q11-35/40
	50	1796626	DADL-EC-Q11-50
	63	1941355	DADL-EC-Q11-63
7 Switch lug DASI-...-SL Data sheets online: → drrd			
	16	1692969	DASI-Q11-16-A-SL
	20, 25	1568436	DASI-Q11-20/25-A-SL
	32	1631824	DASI-Q11-32-A-SL
	35, 40	1548155	DASI-Q11-35/40-A-SL
	50	1797021	DASI-Q11-50-A-SL
	63	1971550	DASI-Q11-63-A-SL
10 Sensor bracket DASI-...-SR¹⁾ Data sheets online: → drrd			
	16	1692983	DASI-Q11-16-A-SR
	20	1581420	DASI-Q11-20-A-SR
	25	1568451	DASI-Q11-25-A-SR
	32	1631997	DASI-Q11-32-A-SR
	35	1550870	DASI-Q11-35-A-SR
	40	1548054	DASI-Q11-40-A-SR
	50	1797071	DASI-Q11-50-A-SR
	63	1971563	DASI-Q11-63-A-SR
10 Sensing kit DASI-...-KT Data sheets online: → drrd			
	16	1693008	DASI-Q11-16-A-KT
	20	1580899	DASI-Q11-20-A-KT
	25	1568461	DASI-Q11-25-A-KT
	32	1632097	DASI-Q11-32-A-KT
	35	1551144	DASI-Q11-35-A-KT
	40	1550027	DASI-Q11-40-A-KT
	50	1797135	DASI-Q11-50-A-KT
	63	1946877	DASI-Q11-63-A-KT

	For size	Part no.	Type
16 Shock absorber DYSC Data sheets online: → drrd			
	12	548011	DYSC-5-5-Y1F
	16	548012	DYSC-7-5-Y1F
	20	548013	DYSC-8-8-Y1F
	25	548014	DYSC-12-12-Y1F
	32, 35, 40	553593	DYSC-16-18-Y1F
	50	2479149	DYSC-20-18-Y1F
	63	2480234	DYSC-25-25-Y1F
17 Centring sleeve²⁾ Data sheets online: → zbh			
For housing			
	8, 10	186717	ZBH-7
	12, 16, 20	150927	ZBH-9
	25	189653	ZBH-12
	32 ... 50	191409	ZBH-15
	63	8023856	ZBH-25
For flanged shaft			
	8, 10, 12	189652	ZBH-5
	16, 20	186717	ZBH-7
	25 ... 40	150927	ZBH-9
	50	189653	ZBH-12
	63	191409	ZBH-15
One-way flow control valve GRLA³⁾			
	16 ⁴⁾ , 20, 25	★ 197576	GRLA-M5-QS-3-RS-D
		★ 197577	GRLA-M5-QS-4-RS-D
	32, 35, 40	151169	GRLA-1/8-RS-B
	50	151175	GRLA-1/4-RS-B
	63	151178	GRLA-3/8-B

- 1) Packaging unit 2 pieces.
 2) Packaging unit 10 pieces.
 2 included in the scope of delivery of the semi-rotary drive or attachments.
 3) Packaging unit 1 piece.
 4) Strongly recommended for this size.

Accessories – Ordering data

	For size	Switching output, connection	Cable length [m]	Part no.	Type
9 Proximity sensor for C-slot, magneto-resistive – N/O contact Data sheets → Page 1222					
	8 ... 12	PNP, cable	2.5	★ 551373	SMT-10M-PS-24V-E-2,5-L-OE
		PNP, plug	0.3	★ 551375	SMT-10M-PS-24V-E-0,3-L-M8D
		PNP, plug	0.3	551376	SMT-10M-PS-24V-E-0,3-Q-M8D
		PNP, cable	2.5	547862	SMT-10G-PS-24V-E-2,5Q-OE
		PNP, plug	0.3	547863	SMT-10G-PS-24V-E-0,3Q-M8D
					
Magnetic reed – N/O contact Data sheets → Page 1218					
	8 ... 12	Contacting, cable	2.5	★ 551365	SME-10M-DS-24V-E-2,5-L-OE
		Contacting, plug	0.3	★ 551367	SME-10M-DS-24V-E-0,3-L-M8D
		Contacting, cable	2.5	★ 551369	SME-10M-ZS-24V-E-2,5-L-OE
9 Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets → Page 1206					
	16 ... 63	PNP, cable	2.5	★ 574335	SMT-8M-A-PS-24V-K-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-A-PS-24V-K-0,3-M8D
		PNP, plug	0.3	★ 574337	SMT-8M-A-PS-24V-K-0,3-M12
		NPN, cable	2.5	★ 574338	SMT-8M-A-NS-24V-K-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-A-NS-24V-K-0,3-M8D
Magneto-resistive – N/C contact Data sheets → Page 1206					
	16 ... 63	PNP, cable	7.5	★ 574340	SMT-8M-A-PO-24V-E-7,5-OE
Magnetic reed – N/O contact Data sheets → Page 1201					
	16 ... 63	Contacting, cable	2.5	★ 543862	SME-8M-DS-24V-K-2,5-OE
		Contacting, cable	5.0	★ 543863	SME-8M-DS-24V-K-5,0-OE
		Contacting, cable	2.5	★ 543872	SME-8M-ZS-24V-K-2,5-OE
		Contacting, plug	0.3	★ 543861	SME-8M-DS-24V-K-0,3-M8D
Data sheets → Page 1203					
	16 ... 63	Contacting, cable	2.5	150855	SME-8-K-LED-24
		Contacting, plug	0.3	150857	SME-8-S-LED-24
Proximity sensor for T-slot, inductive – N/O contact Data sheets → Page 1235					
	16 ... 63	PNP, cable	7.5	551386	SIES-8M-PS-24V-K-7,5-OE
		PNP, plug	0.3	551387	SIES-8M-PS-24V-K-0,3-M8D
		NPN, cable	7.5	551396	SIES-8M-NS-24V-K-7,5-OE
		NPN, plug	0.3	551397	SIES-8M-NS-24V-K-0,3-M8D
Inductive – N/C contact Data sheets → Page 1235					
	16 ... 63	PNP, cable	7.5	551391	SIES-8M-PO-24V-K-7,5-OE
		PNP, plug	0.3	551392	SIES-8M-PO-24V-K-0,3-M8D
		NPN, cable	7.5	551401	SIES-8M-NO-24V-K-7,5-OE
		NPN, plug	0.3	551402	SIES-8M-NO-24V-K-0,3-M8D

	For size	Connection	Cable length [m]	Part no.	Type
Connecting cable, straight socket					
	8 ... 63	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
Angled socket					
	8 ... 63	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3

Note

The inductive proximity sensors SIES can only be used in combination with the sensing kit DASI-...-KT.

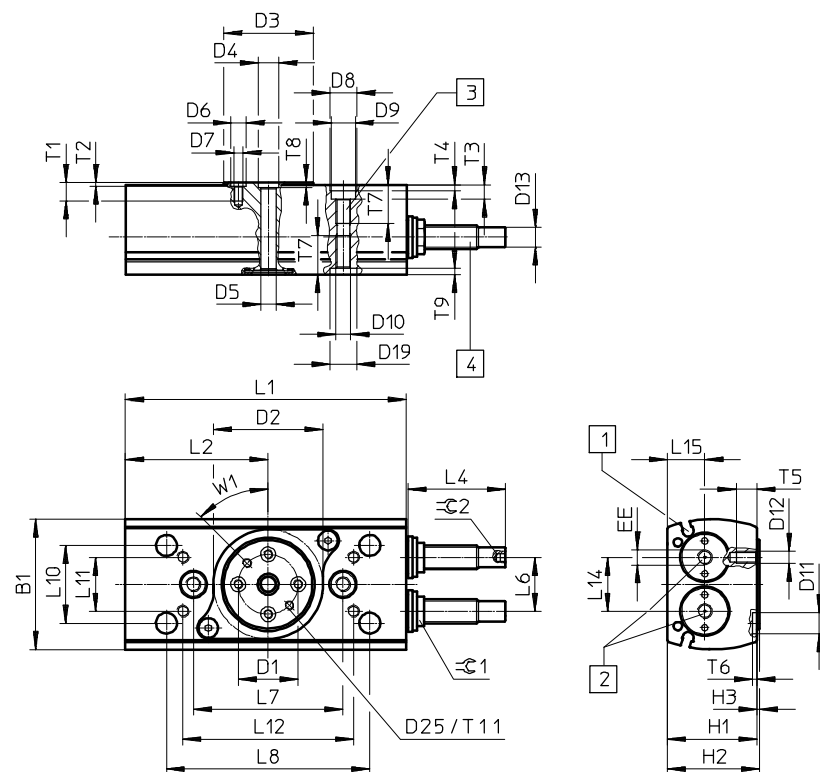
Semi-rotary drives > Semi-rotary drives with rack and pinion >

Twin piston semi-rotary drives DRRD

01

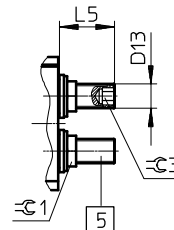
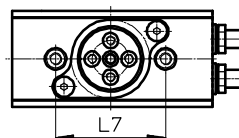
Dimensions – Size 8 ... 12

Download CAD data → www.festo.com



DRRD-8/10

DRRD-...-P



Note

Illustrated position of the flanged shaft corresponds to the mid-position (swivel angle 90°).
Dimension D25, T11 and W1 only for size 12.

- 1 Slot for proximity sensor
- 2 Supply ports
- 3 Mounting thread
- 4 Shock absorber (DRRD-...-Y9)
- 5 Cushioning components (DRRD-...-P)

Size	B1	D1 Ø	D2 Ø	D3 Ø	D4 Ø	D5 Ø	D6 Ø	D7	D8 Ø	D9 Ø	D10
	±0.25	±0.025	+0.1	Ø	H7	±0.1	H7		H7	Ø	
8	31.5	12	26	20.4	5	3	5	M3	7	6	M4
10	38	15	32	24	5	3	5	M3	7	6	M4
12	43.5	20	37	30	7	5	5	M3	9	8	M5

Size	D11 Ø	D12	D13	D19 Ø	D25	H1	H2	H3	L1	L2	L6
	H7			H7		+0.4	±0.2	+0.2/-0.6	±0.1	+0.1	
8	–	–	M6x0.5	7	–	24.5	25.25	0.75	65.6	32.2	13 _{-0.1}
10	–	–	M6x0.5	7	–	27.5	28.25	0.75	74	38.3	15.2 _{-0.1}
12	7	M4	M8x1	9	M3	30	30.75	0.75	93.9	47.7	18 ^{+0.1}

Size	L7	L8	L10	L11	L12	L14	L15	T1	T2	T3	T4
	±0.02	±0.2	±0.02	±0.15	±0.2		-0.1		+0.1		+0.4/-0.1
8	36	–	–	–	–	13	11.1	4.8	1.2	3.4	1.5
10	44	–	–	–	–	15.2	11.1	6.2	1.2	3.4	1.5
12	50	68	26	18	57	18	12.5	5.4	1.2	4.7	2.1

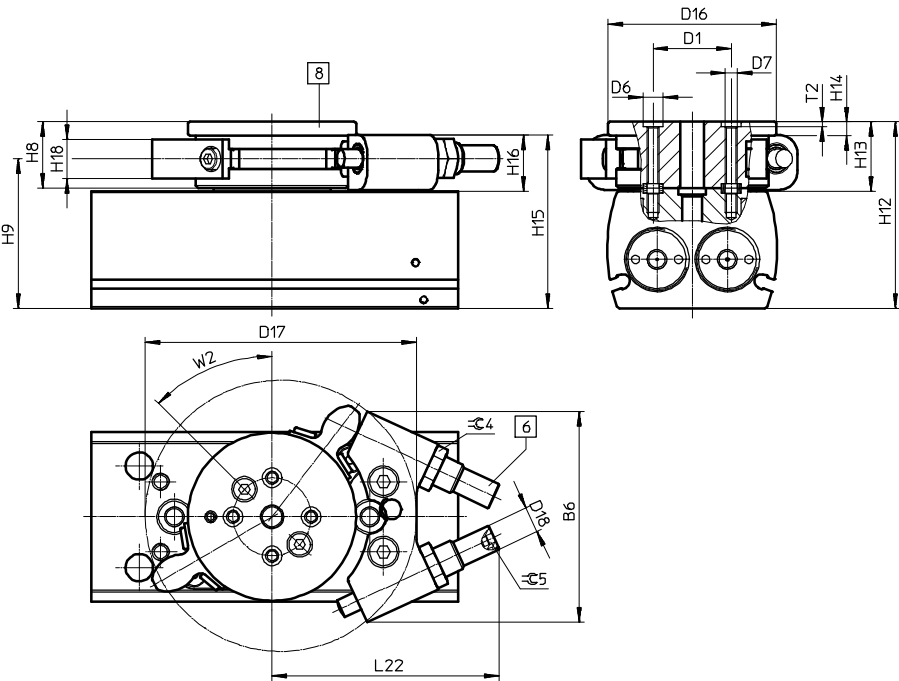
Size	T5	T6	T7	T8	T9	T11	EE	W1	≈ 1	≈ 2	≈ 3
		+0.4/-0.1		+0.1	+0.1						
8	–	–	10.5	1.2	1.6	–	M3	–	10	–	3
10	–	–	10	1.2	1.6	–	M3	–	10	–	3
12	7	1.6	13	1.6	2.1	5.5	M5	45°	10	2.5	5

Size	Dimension with 180° swivel angle		Swivel angle adjustment range		
	L4	L5	L4 min./max.	L5 min./max.	1 mm = ...°
8	–	11.1	–	-6.1/+0.8	16.4
10	–	12.6	–	-7.6/+1.2	13.64
12	28	17	-1.9/+1.9	-11/+1.8	9.6

Dimensions – Size 8 ... 12

Download CAD data www.festo.com

Y12 – With external shock absorber



- 6 Shock absorber
- 8 Flange assembly

Size	B6	D1 Ø	D6 Ø	D7	D16 Ø	D17	D18	H8	H9	H12
	±0.2	±0.025	H7					±0.1		
12	54	20	5	M3	43	69.4	M8x1	17	38.3	47.8

Size	H13	H14	H15	H16	H18	L22	T2	W2	∠ 4	∠ 5
						max.	+0.1			
12	17.8	3.5	44	14	10	58.2	1.2	45°	10	2.5

Twin piston semi-rotary drives DRRD ★

01

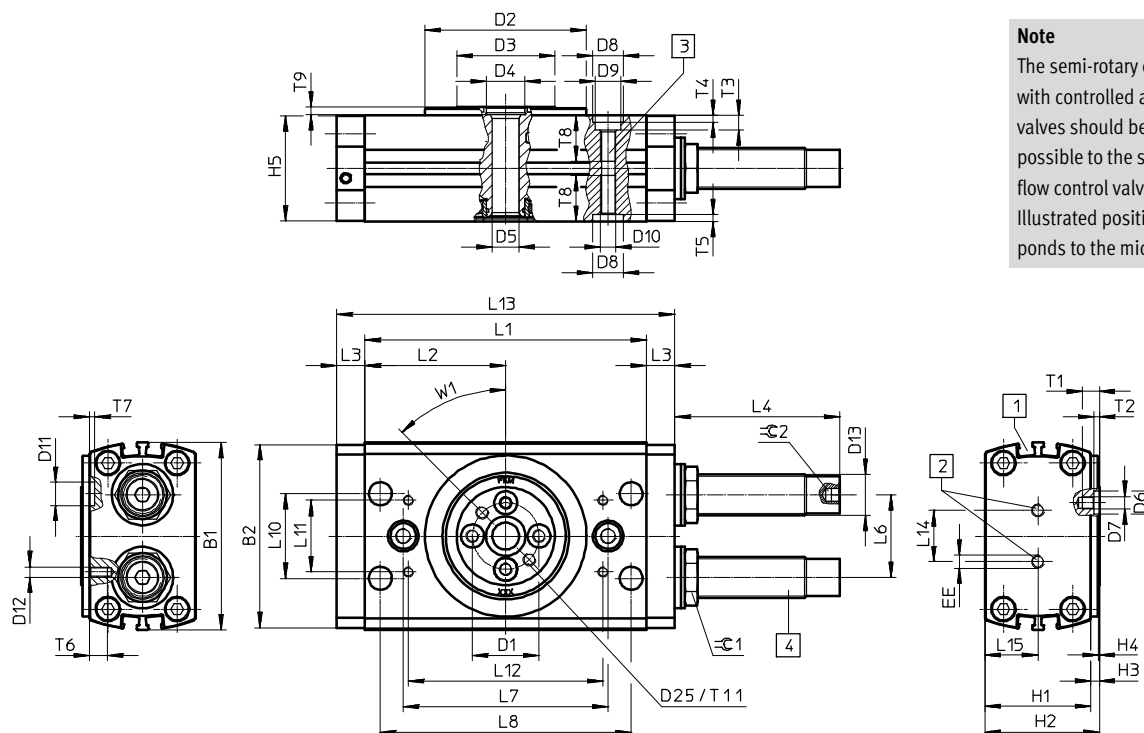
Dimensions – Size 16 ... 63

Download CAD data → www.festo.com

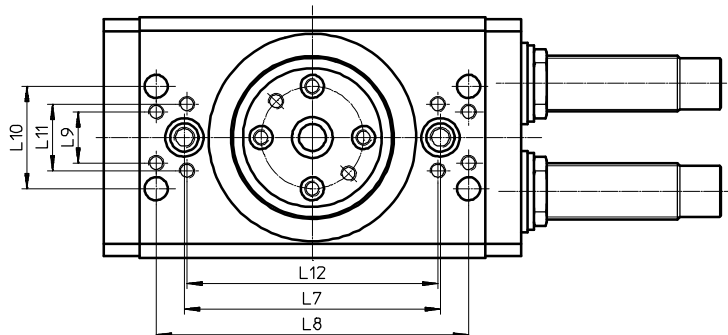
Note

The semi-rotary drive may only be operated with controlled air flow. The flow control valves should be connected as close as possible to the semi-rotary drive (e.g. one-way flow control valve GRLA-...).

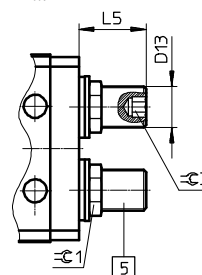
Illustrated position of the flanged shaft corresponds to the mid-position (swivel angle 90°).



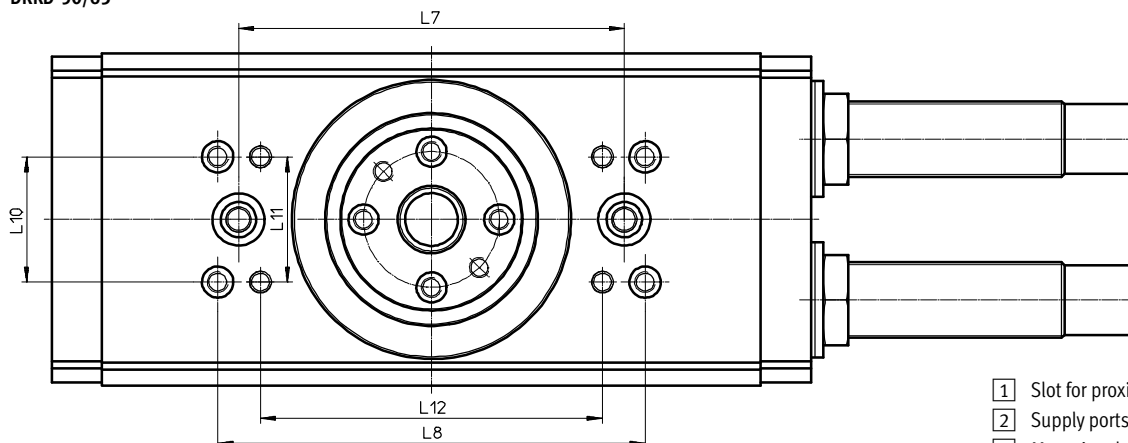
DRRD-32 ... 40



DRRD-...-P



DRRD-50/63



- 1 Slot for proximity sensor
- 2 Supply ports
- 3 Mounting thread
- 4 Shock absorber (DRRD-...-Y9/-Y10/Y14)
- 5 Cushioning components (DRRD-...-P)

Twin piston semi-rotary drives DRRD

Dimensions – Size 16 ... 63

Download CAD data → www.festo.com

01

Size	B1 ±0.25	B2	D1 ∅ ±0.025	D2 ∅ +0/-0.05	D3 ∅	D4 ∅ H7	D5 ∅ +0.15/-0.05	D6 ∅ H7	D7	D8 ∅ H7	D9 ∅	D10
16	58	56.2	21	50	32	12	8	7	M4	9	8	M5
20	65	63.4	24	56	34.9	12	8	7	M4	9	8	M5
25	73.2	71.5	26	63	38.3	15	10.5	9	M5	12	10	M6
32	94	92.6	40	81	54.2	15	10.5	9	M6	15	11	M8
35	106	104	45	91	59.9	25	10.5	9	M6	15	11	M8
40	113	111	45	91	59.9	25	21	9	M6	15	14	M10
50	132	129.9	54	110	73	25	21	12	M8	15	14	M10
63	159	157	63	135	82.8	25	21	15	M10	25	17	M12

Size	D11 ∅ H7	D12	D13	D25	H1 ±0.1	H2 +0.2/-0.1	H3 +0.3/-0.2	H4	H5	L1 ±0.1	L2	L3 ±0.1
16	7	M3	M10x1	M4	33	35.6	2.6	0.5	32.6	84	42	10.5
20	9	M4	M12x1	M5	36	39.6	3.6	0.5	35.6	86	43	11
25	9	M4	M16x1	M5	41.4	44.7	3.3	0.5	41	110	55	11
32	9	M6	M22x1.5	M6	50	55.5	5.5	1	49.6	135	67.5	14
35	9	M6	M26x1.5	M6	63	67	4	1	62.2	148	74	15
40	9	M6	M26x1.5	M6	68	72	4	1	67.2	199	99.5	15
50	15	M8	M30x1.5	M8	78	83	5	1	77.2	262	131	20
63	15	M10	M37x1.5	M10	100	107	7	2	99.2	335	167.5	25

Pneumatic drives

Size	L6	L7 ±0.02	L8 ±0.2	L9 ±0.15	L10 ±0.02	L11 ±0.15	L12 ±0.2	L13	L14	L15	T1	T2 +0.1
16	23.2	64	74	–	26	22	61	105	20	16.3	5.6	1.6
20	26	70	74	–	33	14	80	108	20	17.8	6	1.6
25	32.3	80	98	–	33	14	98	132	20	20.5	6.6	2.1
32	42.2	100	122	20	40	26	98	163	30	24.8	8	2.1
35	49.6	120	130	44	26	44	105	178	42	31.1	8	2.1
40	56	120	130	44	26	44	105	229	42	33.6	8	2.1
50	64	160	160	34	34	54	132	302	50	39	10.6	2.6
63	78	170	190	60	60	60	149	385	50	49.6	14	3.1

Size	T3	T4 +0.1	T5 +0.1	T6	T7 +0.1	T8	T9 +0.1	T11	EE	W1	≈ 1	≈ 2	≈ 3
16	4.7	2.1	2.1	6.3	1.6	15	2.6	5.6	M5	45°	13	3	5
20	4.7	2.1	2.1	6.3	2.1	15	2.6	5.6	M5	45°	15	4	6
25	5.7	2.6	2.6	7	2.1	18	3.1	5.5	M5	45°	19	5	8
32	6.5	3.1	3.1	7.8	2.1	23.1	3.1	8	G1/8	45°	27	5	10
35	6.5	3.1	3.1	8.5	2.1	22.6	3.5	8	G1/8	45°	32	6	10
40	8.6	3.1	3.1	9	2.1	32	3.5	8	G1/8	45°	32	6	10
50	8.6	3.1	3.1	10.5	3.1	30	3.5	10	G1/4	45°	36	8	–
63	11	3.5	3.5	14	3.1	40	3.5	14	G3/8	45°	46	8	–

Size	Dimension with 180° swivel angle		Swivel angle adjustment range		
	L4	L5	L4 min./max.	L5 min./max.	1 mm = ...°
16	37	17.6	–20/+1.5	–12/+1.4	8.7
20	41.8	18	–21.1/+1.5	–11/+1.4	9
25	63	24.3	–28.9/+1.9	–15/+1.8	6.6
32	78.3	29.5	–34.7/+2.4	–19/+2.3	5.6
35	97.5	40.9	–34.7/+2.4	–27/+2.3	5.6
40	98.2	41.6	–53/+3.2	–28/+3.1	3.6
50	126	–	–74.5/+4.4	–	2.6
63	120	–	–71.7/+7.1	–	1.9

Semi-rotary drives > Semi-rotary drives with rack and pinion >

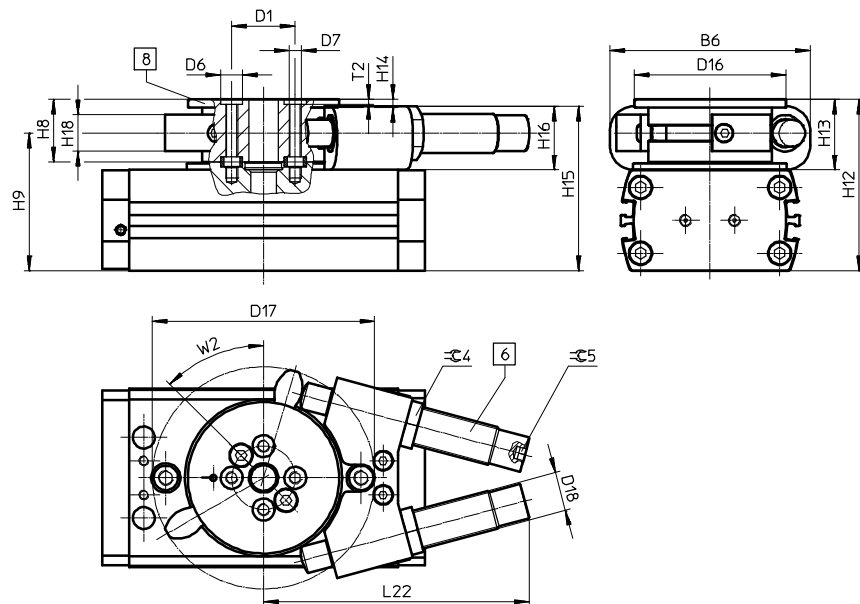
Twin piston semi-rotary drives DRRD ★

01

Dimensions – Size 16 ... 63

Download CAD data → www.festo.com

Y12 – With external shock absorber



- 6 Shock absorber
- 8 Flange assembly

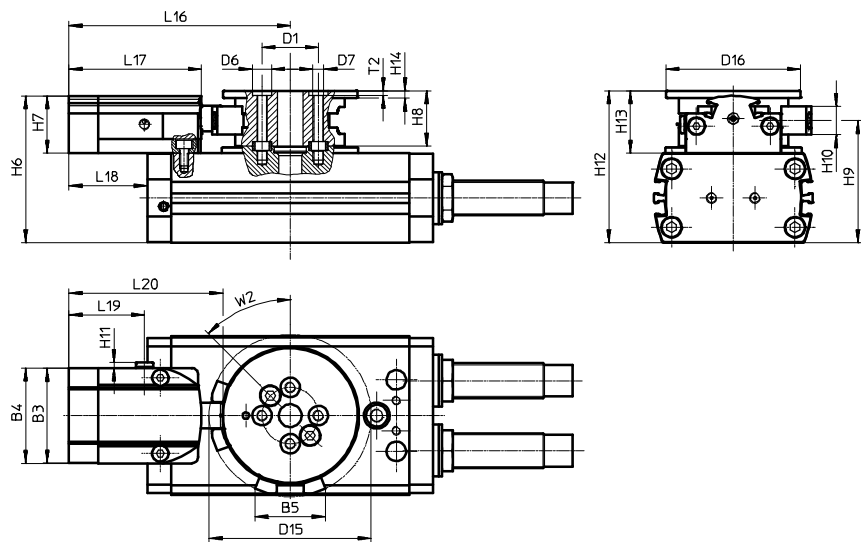
Size	B6 ±0.2	D1 Ø ±0.025	D6 Ø H7	D16 Ø	D17	D18	H8 ±0.1	H9	H12
16	58	21	7	49	69.4	M10x1	17	43.1	52.6
20	75	24	7	62	91	M12x1	25.6	51.2	65.2
25	82	26	9	62	91	M16x1	25.6	56.5	70.3
32	120	40	9	79	126.2	M22x1.5	31.5	68.5	87
35	133	45	9	89	146.7	M22x1.5	34	83	101
40	133	45	9	89	146.7	M22x1.5	34	88	106
50	152	54	12	110	165.2	M26x1.5	42	101.5	125
63	186	63	15	130	212.2	M30x1.5	52	129.5	159

Size	H13	H14	H15	H16	H18	L22 max.	T2 +0.1	W2	≈ 4	≈ 5
16	19.6	3.5	51	18	10	65.2	1.6	45°	13	3
20	29.2	3.5	59.5	23.5	15	85.3	1.6	45°	15	4
25	28.9	3.5	67.4	26	15	108.9	2.1	45°	19	5
32	37	4	85	35	22	149.7	2.1	45°	27	5
35	38	5	99	36	21	155.5	2.1	45°	27	5
40	38	5	104	36	21	155.5	2.1	45°	27	5
50	47	6	123	45	30	171.6	2.6	45°	32	6
63	59	6	155.5	55.5	36	228	3.1	45°	36	8

Dimensions – Size 16 ... 63

Download CAD data www.festo.com

Clamping unit



Note
The cylinder can be mounted on both sides.

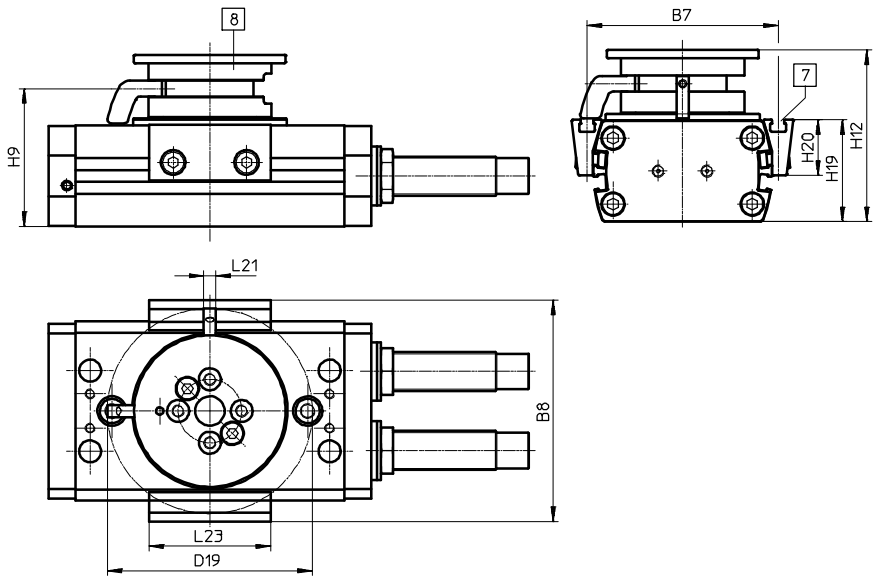
Size	B3	B4	B5	D1 Ø	D6 Ø	D7	D15 Ø	D16 Ø	H6	H7	H8	H9
	±0.2	±0.2		±0.025	H7					±0.15	±0.1	
16	37.6	38	26.9	21	7	M4	61.9	49	51	18	17	43.1
20	43.6	44	32.4	24	7	M4	74.9	62	62.5	26.5	25.6	51.2
25	43.6	44	32.4	26	9	M5	74.9	62	67.9	26.5	25.6	56.5
32	43.6	44	39.4	40	9	M6	95.4	79	79	26.7	31.5	68.5
35	57.6	58	50.2	45	9	M6	110.9	89	98	35	34	83
40	57.6	58	50.2	45	9	M6	110.9	89	103	35	34	88
50	71.4	72	59.6	54	12	M8	124.3	110	123	45	42	101.5
63	71.4	72	65.8	63	15	M10	148.5	130	149	49	52	129.5

Size	H10	H11	H12	H13	H14	L16	L17	L18	L19	L20	T2	W2
											+0.1	
16	9	2.5	52.6	19.6	3.5	83	50	30.5	34	58.3	1.6	45°
20	13	2.5	65.2	29.2	3.5	102.2	61.2	48.2	34.8	71.1	1.6	45°
25	13	2.5	70.3	28.9	3.5	102.2	61.2	36.2	34.8	71.1	2.1	45°
32	17	2.5	87	37	4	112.2	61.2	30.7	34.8	71.1	2.1	45°
35	14.8	2.5	101	38	5	132.5	70.6	43.5	42.6	85.4	2.1	45°
40	14.8	2.5	106	38	5	132.5	70.6	18	42.6	85.4	2.1	45°
50	19	4.6	125	47	6	151	81	0	46	98	2.6	45°
63	22	4.6	159	59	6	163	81	-29.5	46	99.5	3.1	45°

Dimensions – Size 16 ... 63

Download CAD data → www.festo.com

Sensing kit



- 7 Slot for proximity sensor
- 8 Flange assembly

Size	B7	B8	D19 ∅	H9	H12
16	64.4	76.1	70.9	43.1	52.6
20	74	85.7	84	51.2	65.2
25	78.2	90.7	84	56.5	70.3
32	100	113.5	107.5	68.5	87
35	116	132.9	125.2	83	101
40	118	135.8	125.2	88	106
50	136	155.3	146.6	101.5	125
63	163	185.3	173.9	129.5	159

Size	H19	H20 ±0.1	L21	L23
16	33.5	18.5	5	50
20	36.4	20.2	5	50
25	41.8	22.8	5	50
32	50.5	26.5	7	50
35	63.5	33.1	7	50
40	68.5	35.5	7	50
50	79.1	43	7	50
63	101	55	7	50



Increase productivity and safety

- + Thanks to minimum cycle times with the right cushioning variant
- + With optional clamping unit that prevents movement in the event of pressure failure

Drives with guides › Drives with slides ›

Mini slides

DGSL ★

Drives with guides > Drives with slides >

Mini slides

DGSL



Overview, configuration and ordering

→ www.festo.com/catalogue/dgsl



Additional information, support and user documentation

→ www.festo.com/sp/dgsl



Quick ordering of basic designs

→ page 342



- + High load capacity and positioning accuracy
- + Maximum movement precision thanks to ground-in ball bearing cage guide
- + Maximum flexibility thanks to eight sizes
- + Reliable in the event of pressure drop thanks to clamping unit and end-position locking
- + Versatile mounting options
- + Compact

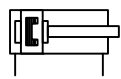
Product range overview

Type/function	Size	Stroke [mm]	Force [N]	Product options								
				C	E3	P	P1	Y3	E	Y11	N	A
DGSL												
Double-acting	4, 6, 8, 10, 12, 16, 20, 25	10 ... 200	17 ... 483	■	■	■	■	■	■	■	■	■

Product options

N	NPT thread	P	Elastic cushioning without metal end position, adjustable	Y3	Progressive shock absorber, at both ends	Y11	Progressive shock absorber with reducing sleeve, at both ends
C	Clamping unit	P1	Elastic cushioning with metal end position, adjustable	E	Elastic cushioning without metal end position, adjustable, short design	N	No cushioning
E3	Interlock					A	Position sensing

Data sheet



Note
Operation without cushioning components is not permitted.



Technical data							Dimensions → Page 346		
Size		4	6	8	10	12	16	20	25
Pneumatic connection		M3			M5			G1/8	
Stroke	[mm]	10, 20, 30	10, 20, 30, 40, 50	10, 20, 30, 40, 50, 80	10, 20, 30, 40, 50, 80, 100	10, 20, 30, 40, 50, 80, 100, 150		10, 20, 30, 40, 50, 80, 100, 150, 200	
Cushioning									
DGSL-...-PP		Elastic cushioning without metal end position, adjustable							
DGSL-...-E		Elastic cushioning without metal end position, adjustable, short design							
DGSL-...-P1		Elastic cushioning with metal end position, adjustable							
DGSL-...-Y3		–			Progressive shock absorber, at both ends				
DGSL-...-Y11		–			Progressive shock absorber with reducing sleeve, at both ends				
DGSL-...-N		No cushioning							
Theoretical force at 6 bar, advancing	[N]	17	30	47	68	121	188	295	483
Theoretical force at 6 bar, retracting	[N]	13	23	40	51	104	158	247	415

Mini slides DGSL ★

Data sheet

Technical data – Clamping unit							
Size	6	8	10	12	16	20	25
Clamping type with effective direction	At both ends						
	Clamping via spring force, air to release						
Static holding force [N]	80	80	180	180	350	350	600

Technical data – End-position locking							
Size	6	8	10	12	16	20	25
Clamping type with effective direction	At both ends						
	Clamping via spring force, air to unlock						
Static holding force [N]	60	60	160	160	250	380	640

Operating conditions									
Size		4	6	8	10	12	16	20	25
Mini slide									
Min. operating pressure	[bar]	2.5	1.5			1			
Max. operating pressure	[bar]	8							
Ambient temperature ¹⁾	[°C]	0 ... +60							
Clamping unit									
Min. release pressure	[bar]	3							
Max. operating pressure	[bar]	≤ 10							
End-position locking									
Operating pressure	[bar]	3 ... 8							

1) Note operating range of proximity sensors.

Materials	
Housing	Wrought aluminium alloy
End cap	Wrought aluminium alloy
Guide rail	Tempered steel
Piston rod	High-alloy stainless steel
Seals	HNBR

Order code

01

Pneumatic drives

DGSL

A

Type	
DGSL	Mini slide

Size	
	Stroke [mm]
4	10, 20, 30
6	10, 20, 30, 40, 50
8	10, 20, 30, 40, 50, 80
10	10, 20, 30, 40, 50, 80, 100
12	10, 20, 30, 40, 50, 80, 100, 150
16	10, 20, 30, 40, 50, 80, 100, 150
20	10, 20, 30, 40, 50, 80, 100, 150, 200
25	10, 20, 30, 40, 50, 80, 100, 150, 200

Clamping unit	
C	Attached 1

End-position locking	
E3	With piston rod in retracted position 1/2

Cushioning	
P	Elastic cushioning without metal end position, adjustable
P1	Elastic cushioning with metal end position, adjustable
Y3	Progressive shock absorber, at both ends 3
E	Elastic cushioning without metal end position, adjustable, short design
Y11	Progressive shock absorber with reducing sleeve, at both ends 4
N	No cushioning 3

Position sensing	
A	Via proximity sensor

- 1

Not with size 4.
- 2

Not with clamping unit C.
- 3

Not with size 4 and 6, minimum stroke 30 mm.
- 4

Not with size 4 ... 8, minimum stroke 30 mm.

Order example:
DGSL-12-100-C-Y3A
Mini slide DGSL - size 12 - stroke 100 mm - clamping unit attached - without end-position locking - progressive shock absorber at both ends - position sensing via proximity sensor

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
➔ www.festo.com/catalogue/...

Enter the type code in the search field.

Drives with guides > Drives with slides >

Mini slides DGSL ★

01

★ Quick ordering¹⁾

PA – Elastic cushioning without metal end position, adjustable

Part no.	Type
Piston Ø 8 mm	
543926	DGSL-8-10-PA
543927	DGSL-8-20-PA
543928	DGSL-8-30-PA
543929	DGSL-8-40-PA
543930	DGSL-8-50-PA
543931	DGSL-8-80-PA
Piston Ø 10 mm	
543942	DGSL-10-10-PA
543943	DGSL-10-20-PA
543944	DGSL-10-30-PA
543945	DGSL-10-40-PA
543946	DGSL-10-50-PA
543947	DGSL-10-80-PA
543948	DGSL-10-100-PA

Part no.	Type
Piston Ø 12 mm	
543961	DGSL-12-10-PA
543962	DGSL-12-20-PA
543963	DGSL-12-30-PA
543964	DGSL-12-40-PA
543965	DGSL-12-50-PA
543966	DGSL-12-80-PA
543967	DGSL-12-100-PA
543968	DGSL-12-150-PA
Piston Ø 16 mm	
543983	DGSL-16-10-PA
543984	DGSL-16-20-PA
543985	DGSL-16-30-PA
543986	DGSL-16-40-PA
543987	DGSL-16-50-PA
543988	DGSL-16-80-PA
543989	DGSL-16-100-PA
543990	DGSL-16-150-PA

Part no.	Type
Piston Ø 20 mm	
544005	DGSL-20-10-PA
544006	DGSL-20-20-PA
544007	DGSL-20-30-PA
544008	DGSL-20-40-PA
544009	DGSL-20-50-PA
544010	DGSL-20-80-PA
544011	DGSL-20-100-PA
544012	DGSL-20-150-PA
544013	DGSL-20-200-PA

1) All products in this table are easy to select and quick to order.

Y3A – Progressive shock absorber, at both ends

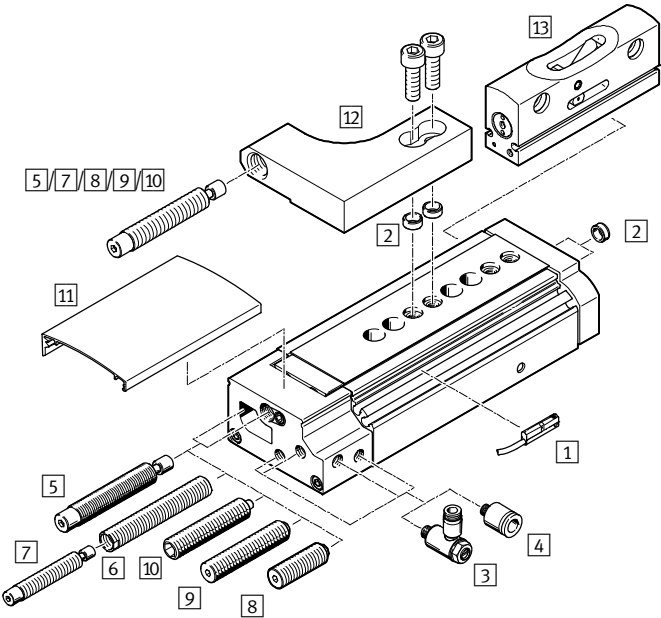
Part no.	Type
Piston Ø 8 mm	
543938	DGSL-8-30-Y3A
543939	DGSL-8-40-Y3A
543940	DGSL-8-50-Y3A
543941	DGSL-8-80-Y3A
Piston Ø 10 mm	
543956	DGSL-10-30-Y3A
543957	DGSL-10-40-Y3A
543958	DGSL-10-50-Y3A
543959	DGSL-10-80-Y3A
543960	DGSL-10-100-Y3A

Part no.	Type
Piston Ø 12 mm	
543977	DGSL-12-30-Y3A
543978	DGSL-12-40-Y3A
543979	DGSL-12-50-Y3A
543980	DGSL-12-80-Y3A
543981	DGSL-12-100-Y3A
543982	DGSL-12-150-Y3A
Piston Ø 16 mm	
543999	DGSL-16-30-Y3A
544000	DGSL-16-40-Y3A
544001	DGSL-16-50-Y3A
544002	DGSL-16-80-Y3A
544003	DGSL-16-100-Y3A
544004	DGSL-16-150-Y3A

Part no.	Type
Piston Ø 20 mm	
544023	DGSL-20-30-Y3A
544024	DGSL-20-40-Y3A
544025	DGSL-20-50-Y3A
544026	DGSL-20-80-Y3A
544027	DGSL-20-100-Y3A
544028	DGSL-20-150-Y3A
544029	DGSL-20-200-Y3A

1) All products in this table are easy to select and quick to order.

Accessories



Note
End stops must not be removed.

	→ Page/online
1 Proximity sensor SME-/SMT-10	344
2 Centring sleeve ZBH	344
3 One-way flow control valve GRLA	344
4 Push-in fitting QSM	1443
5 Cushioning Y3	344
6 Reducing sleeve DAYH	344
7 Shock absorber DYSW	344
8 Cushioning E	344
9 Cushioning P	344
10 Cushioning P1	344

	→ Page/online
11 Cover DADS	345
12 Shock absorber retainer DADP	dgsl
13 Intermediate position attachment DADM	dgsl
– Connector sleeve ZBV	345
– Connecting cable NEBU	345
– Drive/drive connections	dgsl
– Drive/gripper connections	dgsl

Shock absorber selection

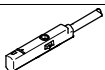
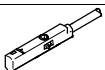
With the mini slide DGSL, shock absorbers can be replaced and the cushioning behaviour can thus be influenced (depending on the payload).
With smaller loads, the next smallest shock absorber DYSW can be installed with the help of the reducing sleeve DAYH.
This is done by removing the existing shock absorbers on the DGSL and replacing them with a smaller shock absorber as appropriate to the application.
With very small loads, the shock absorber DYEF can be installed.

Drives with guides > Drives with slides >

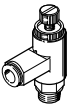
Mini slides DGSL ★

01

Accessories – Ordering data

	For size	Switching output, connection	Cable length [m]	Part no.	Type
1 Proximity sensor for C-slot, magneto-resistive – N/O contact Data sheets → Page 1222					
	4 ... 25	PNP, cable	2.5	★ 551373	SMT-10M-PS-24V-E-2,5-L-OE
		PNP, plug	0.3	★ 551375	SMT-10M-PS-24V-E-0,3-L-M8D
Magnetic reed – N/O contact Data sheets → Page 1218					
	6 ... 25	Contacting, cable	2.5	★ 551365	SME-10M-DS-24V-E-2,5-L-OE
		Contacting, plug	0.3	★ 551367	SME-10M-DS-24V-E-0,3-L-M8D
		Contacting, cable	2.5	★ 551369	SME-10M-ZS-24V-E-2,5-L-OE
2 Centring sleeve¹⁾					
	4, 6	4, 6	–	189652	ZBH-5
	8, 10, 12, 16	8, 10, 12, 16	–	186717	ZBH-7
	20, 25	20, 25	–	150927	ZBH-9

1) Packaging unit 10 pieces.

Function	For size	Connection		Part no.	Type
		Thread	O.D.		
3 One-way flow control valve with slotted head screw, metal²⁾ for exhaust air flow control Data sheets → Page 1033					
	4, 6, 8	M3	3	175041	GRLA-M3-QS-3 ³⁾
			–	175038	GRLA-M3
	10, 12, 16	M5	4	★ 193138	GRLA-M5-QS-4-D
	20, 25	G1/8	6	★ 193144	GRLA-1/8-QS-6-D
	20, 25	G1/8	6	★ 197581	GRLA-1/8-QS-6-RS-D
			8	★ 534337	GRLA-1/8-QS-8-RS-D

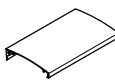
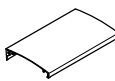
2) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

3) Only one GRLA-M3-QS-3 can be mounted on the front with size 4.

	For size	Part no.	Type
5/7 Shock absorber Y3			
	8	548070	DYSW-4-6-Y1F
	10	548071	DYSW-5-8-Y1F
	12	548072	DYSW-7-10-Y1F
	16	548073	DYSW-8-14-Y1F
	20	548074	DYSW-10-17-Y1F
	25	548075	DYSW-12-20-Y1F
6 Reducing sleeve DAYH			
	10	1165476	DAYH-4
	12	1165480	DAYH-5
	16	1165484	DAYH-7
	20	1165488	DAYH-8
	25	1165491	DAYH-10
8 Shock absorber P1			
	4	548370	DYEF-M4-Y1F
	6	548371	DYEF-M5-Y1F
	8	548372	DYEF-M6-Y1F
	10	548373	DYEF-M8-Y1F
	12	548374	DYEF-M10-Y1F
	16	548375	DYEF-M12-Y1F
	20	548376	DYEF-M14-Y1F
	25	548377	DYEF-M16-Y1F

	For size	Part no.	Type
9 Shock absorber P			
	4	1179810	DYEF-M4-Y1
	6	1179818	DYEF-M5-Y1
	8	1179831	DYEF-M6-Y1
	10	1179834	DYEF-M8-Y1
	12	1179837	DYEF-M10-Y1
	16	1179840	DYEF-M12-Y1
	20	1179863	DYEF-M14-Y1
	25	1179879	DYEF-M16-Y1
10 Shock absorber E			
	4	1152500	DYEF-S-M4-Y1
	6	1152507	DYEF-S-M5-Y1
	8	1152524	DYEF-S-M6-Y1
	10	1152536	DYEF-S-M8-Y1
	12	1152959	DYEF-S-M10-Y1
	16	1153004	DYEF-S-M12-Y1
	20	1153017	DYEF-S-M14-Y1
	25	1153023	DYEF-S-M16-Y1

Accessories – Ordering data

	For size	Length [mm]	Part no.	Type
11 Cover  Dimensions online: → dgs1				
	4	30	1086663	DADS-AB-G6-4-30
		500	1212468	DADS-AB-G6-4-500
	6	50	1066625	DADS-AB-G6-6-50
		500	1212476	DADS-AB-G6-6-500
	8	80	1087413	DADS-AB-G6-8-80
		500	1212478	DADS-AB-G6-8-500
	10	50	1162400	DADS-AB-G6-10-50
		100	1090689	DADS-AB-G6-10-100
		500	1212479	DADS-AB-G6-10-500
	12	50	1162406	DADS-AB-G6-12-50
		150	1090732	DADS-AB-G6-12-150
		500	1212480	DADS-AB-G6-12-500
	16	50	1162410	DADS-AB-G6-16-50
		150	1066591	DADS-AB-G6-16-150
		500	1212503	DADS-AB-G6-16-500
	20	50	1162412	DADS-AB-G6-20-50
		100	1162415	DADS-AB-G6-20-100
		200	1090823	DADS-AB-G6-20-200
		500	1212521	DADS-AB-G6-20-500
	25	50	1162417	DADS-AB-G6-25-50
		100	1162419	DADS-AB-G6-25-100
		200	1090895	DADS-AB-G6-25-200
		500	1212523	DADS-AB-G6-25-500

	For size	Connection	Cable length [m]	Part no.	Type
Connector sleeve ¹⁾					
	8, 10	8, 10	–	548802	ZBV-M4-7
	12, 16	12, 16	–	548803	ZBV-M5-7
	20, 25	20, 25	–	548804	ZBV-M6-9
Connecting cable, straight socket					
Data sheets → Page 1543					
	4 ... 25	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
Angled socket					
Data sheets → Page 1543					
	4 ... 25	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3

1) Packaging unit 3 pieces.

Drives with guides > Drives with slides >

Mini slides DGSL ★

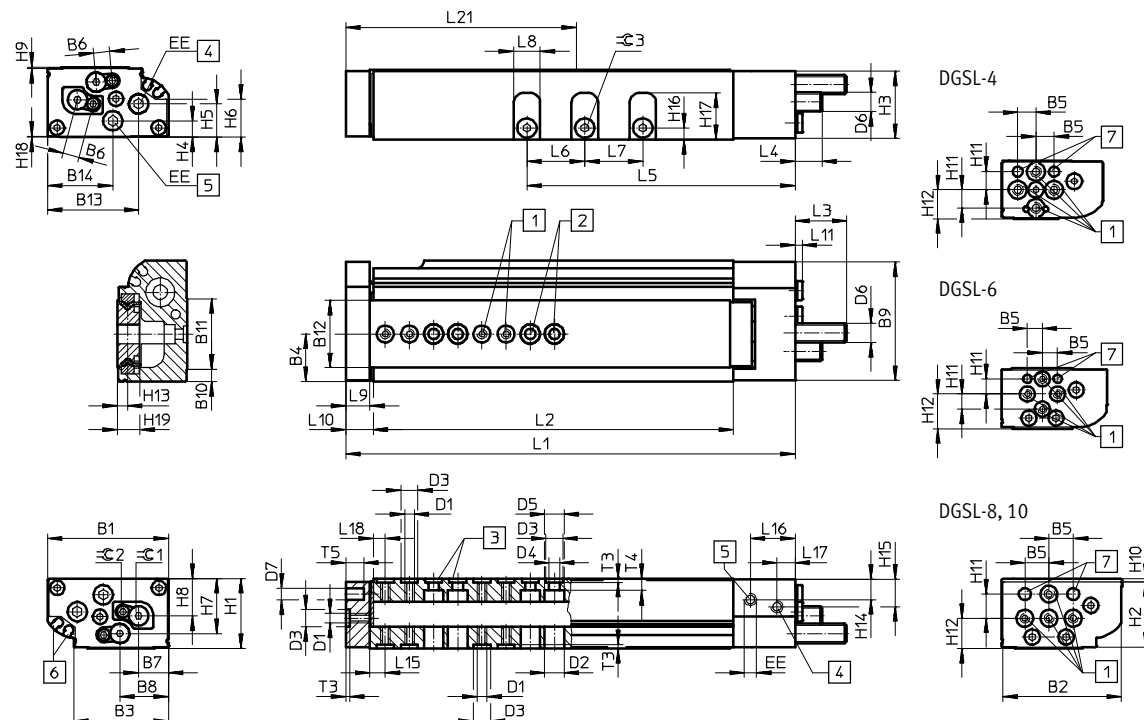
01

Dimensions

Size 4 ... 10

Download CAD data → www.festo.com

Pneumatic drives



- | | | | |
|--|---|--|--|
| 1 Mounting thread (centring sleeves included in the scope of delivery) | 4 Supply port, advancing | L10 Distance between outer edge of yoke plate and housing | L18 Distance between centre of centring hole and outer edge of housing |
| 2 Through-holes for mounting the drive | 5 Supply port, retracting | L15 Distance between centre of centring hole and outer edge of slide | |
| 3 Centring holes (centring sleeves included in the scope of delivery) | 6 Slots for proximity sensor SME/SMT-10 | | |
| | 7 Centring hole | | |

Size	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	D1
4	28	27.4	18.35	9.4	5	3.55	6.3	11.95	27.5	2	17.2	12.4	23.15	16.15	M3
6	35	34.5	26.3	13.5	5	5	8.2	13.55	34.5	3.5	19.9	20	28.1	18.9	M3
8	42	41.3	31.45	16.6	10	6	10.3	16.25	41.5	4.57	24	24.1	33	24.4	M4
10	50	49	39.2	19.65	10	6.8	12.35	20.1	49	5	29.2	28	37.7	27	M4

Size	D2 Ø	D3 Ø	D4 Ø	D5 Ø	D6	D7 Ø	EE	H1 ±0.08	H2	H3	H4	H5	H6	H7	H8
4	6.3	5 ^{H7}	3.3	6.2	M4x0.5	3 ^{H7}	M3	16	15.4	15.1	3.85	6.25	8.55	8.1	8.4
6	6.3	5 ^{H7}	3.3	6.2	M5x0.5	3 ^{H7}	M3	20	19	19.25	4.7	7.8	10.2	16.05	10.55
8	8.2	7 ^{H7}	4.3	8	M6x0.5	5 ^{H7}	M3	24	22.7	23	6.46	10.63	14.06	18.9	13.3
10	8.2	7 ^{H7}	4.3	8	M8x1	5 ^{H7}	M5	29	27.1	28	6.8	13.8	15.8	22.8	15.5

Size	H9	H10	H11	H12	H13	H14	H15	H16	H17	H18	H19	T3 +0.1	T4	T5	≈C 2 ¹⁾	≈C 3
4	0.65	0.3	5	8	2.7	5.35	5.85	3.1	10.6	0.25	5.28	1.3	2.25	4	1.3	2
6	0.45	0.5	5	11.5	3.38	6.5	7.2	3.7	13.1	0.3	6.68	1.3	3.7	6	1.5	2.5
8	0.64	0.9	10	8.7	3.28	7.8	10.5	4.1	16.8	0.36	6.7	1.6	3.8	7.5	2	2.5
10	0.6	1.4	10	12.5	4.2	8.76	11.76	4.8	19.25	0.41	9	1.6	5.35	7.5	2.5	3

1) With size 4, the scope of delivery of the drive includes an Allen key.

Dimensions

Download CAD data → www.festo.com

01

Dimensions

Size	Stroke	L1	L2	L5	L6	L7	L8	L9	L10	L11	L15 ±0.05	L16	L17	L18 ±0.05	L21
4	10	72.1	48	28.85	–	–	6.5	5.5	6.6	2.5	4	13.25	4.95	3	31
	20	81.2	57.1	37.95	10										36
	30	91.2	67.1	47.95	11										42
6	10	81.1	54	33.1	–	–	8	8	9.6	2.5	5.1	13.25	4.95	3.5	37
	20	91.1	64	43.1	14										42
	30	101.1	74	53.1											47
	40	111.1	84	63.1											52
	50	121.1	94	73.1											57
8	10	90.2	59.6	34.6	–	–	8	10	11.6	2.5	7	14.65	6.1	5.5	41
	20	100.2	69.6	44.6	10										46
	30	110.2	79.6	54.6	16										51
	40	120.2	89.6	64.6											56
	50	142.2	111.6	74.6											67
	80	172.2	141.6	104.6		16									82
10	10	103.1	66	41.3	–	–	11	10	11.6	2.5	6.4	18.5	7.5	5	43
	20	112.8	75.7	51											46
	30	122.8	85.7	61											51
	40	132.8	95.7	71											56
	50	142.8	105.7	81											61
	80	186.2	149.1	111	24										83
	100	206.2	169.1	131	24	24									96

Pneumatic drives

Size	Cushioning	L3 max.	L4 max.	1	
				For adjusting the cushioning stroke	For adjusting the end position
4	P	15.2	7.8	–	1.3
	E	5.7	0	–	1.3
	P1	14	6	1.3	2.5
6	P	17.6	8.1	–	1.5
	E	6.6	0	–	1.5
	P1	15.5	5.8	1.5	3
8	P	21.1	10.7	–	2
	E	6.6	0	–	2
	P1	19	9.1	2	4
	Y3	24.3	23.9	–	2
10	P	22.8	12.5	–	2.5
	E	8.8	0	–	2.5
	P1	20.5	10.2	2.5	5
	Y3	25.5	14.9	–	2.5
	Y11	30.4	19.9	–	2

Drives with guides > Drives with slides >

Mini slides DGSL ★

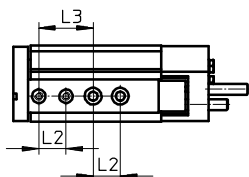
01

Dimensions

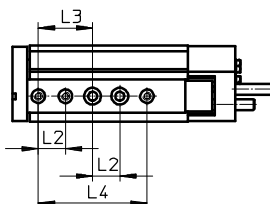
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Hole pattern for mounting threads and centring holes

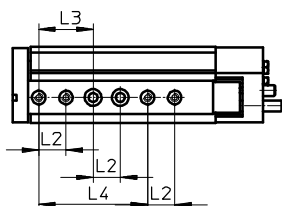
DGSL-4-10



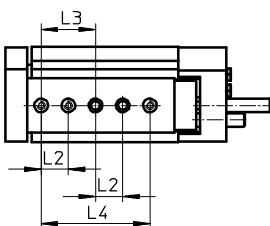
DGSL-4-20



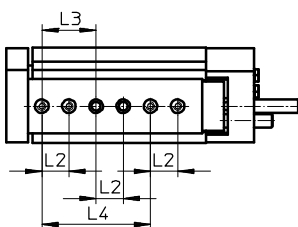
DGSL-4-30



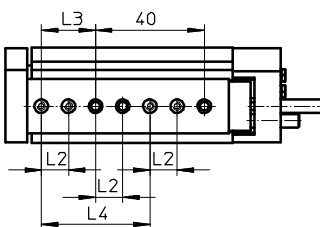
DGSL-6-10



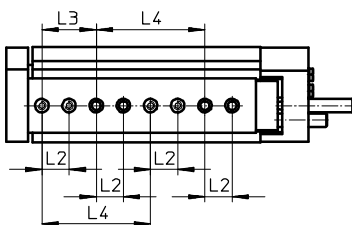
DGSL-6-20



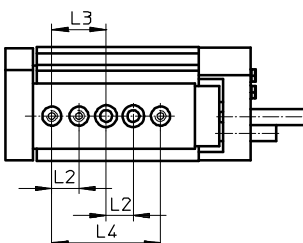
DGSL-6-30



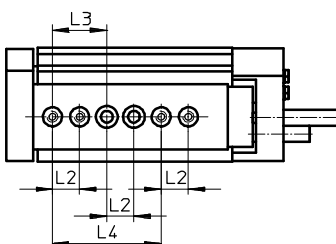
DGSL-6-40/50



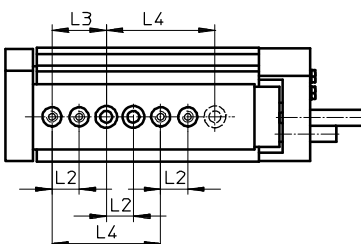
DGSL-8-10



DGSL-8-20



DGSL-8-30



Pneumatic drives

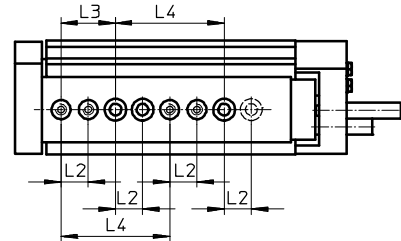
Dimensions

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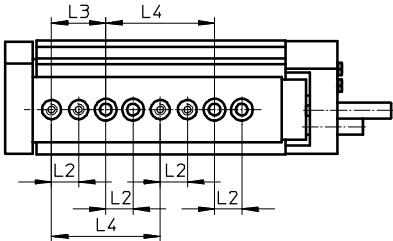
01

Hole pattern for mounting threads and centring holes

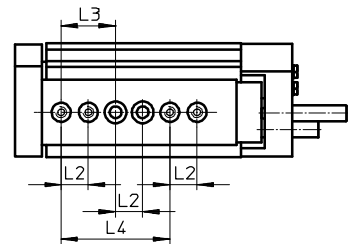
DGSL-8-40



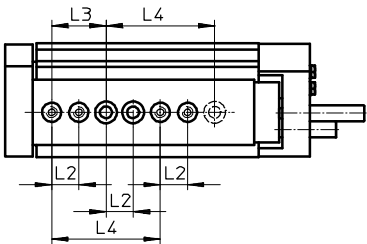
DGSL-8-50/80



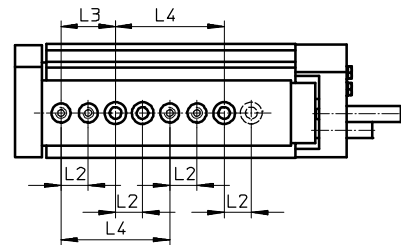
DGSL-10-10



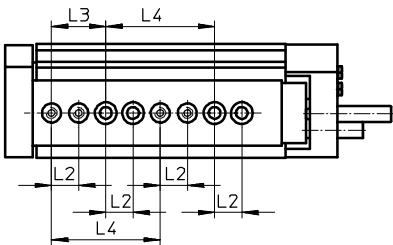
DGSL-10-20



DGSL-10-30

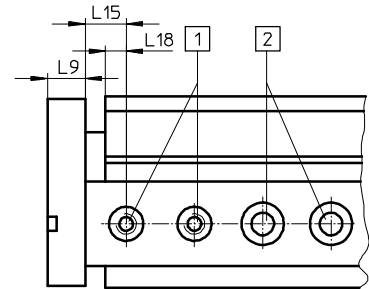


DGSL-10-40 ... 100



Distances from the yoke plate to the mounting threads and centring holes

DGSL-4 ... 10



- 1 Centring holes with thread
- 2 Through-holes for mounting the drive

Size	L2 ¹⁾	L3 ¹⁾	L4 ¹⁾	L9	L15 ±0.05	L18
4	10	20	40	5.5	4	3
6				8	5.1	3.5
8				10	7	5.5
10				10	6.4	5

1) Tolerance for centring hole ±0.02.
Tolerance for through-hole ±0.1.

Dimensions

Download CAD data → www.festo.com

01

Size	Stroke	L1	L2	L5	L6	L7	L8	L9	L10	L11	L15 ±0.05	L16	L17	L18 ±0.05	L21	
12	10	106.2	68.6	42.4	-	-	12	10	11.6	2.5	5.8	18.5	9	4.5	44	
	20	116.2	78.6	52.4											49	
	30	126.2	88.6	62.4											54	
	40	136.2	98.6	72.4											59	
	50	146.2	108.6	82.4											64	
	80	197.6	160	112.4	29										29	88
	100	217.6	180	132.4												98
	150	267.6	230	182.4												124
16	10	124.1	82.5	45	-	-	14	12	13.6	2.5	6.8	21	10	5.5		54
	20	134.6	93	54.6												59
	30	144.6	103	64.6												64
	40	154.6	113	74.6												69
	50	164.6	123	84.6												74
	80	194.6	153	114.6	35										89	
	100	243.6	202	134.6											113	
	150	293.6	252	184.6											138	

Pneumatic drives

Size	Cushioning	L3 max.	L4 max.	1	
				For adjusting the cushioning stroke	For adjusting the end position
12	P	28.1	14.9	-	3
	E	8.8	0	-	3
	P1	26	12.8	3	6
	Y3	36.9	23.7	-	3
	Y11	42.2	18.7	-	2.5
16	P	42.3	26.1	-	4
	E	8.8	0	-	4
	P1	40	23.8	4	8
	Y3	51.9	35.7	-	4
	Y11	55.4	38.9	-	3

Drives with guides > Drives with slides >

Mini slides DGSL ★

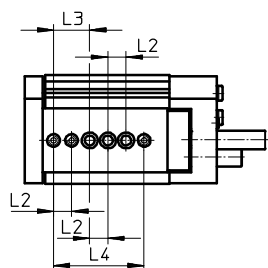
01

Dimensions

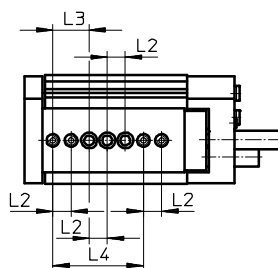
Download CAD data → www.festo.com

Hole pattern for mounting threads and centring holes

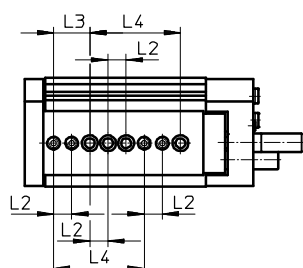
DGSL-12-10



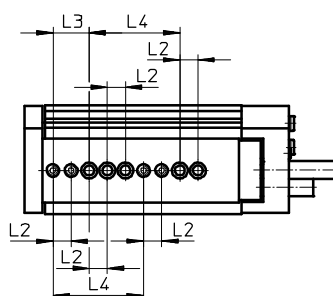
DGSL-12-20



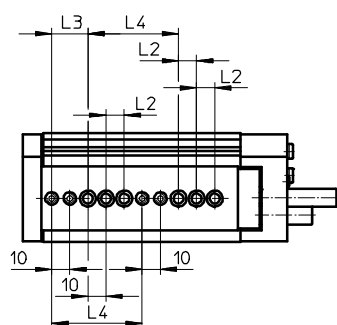
DGSL-12-30



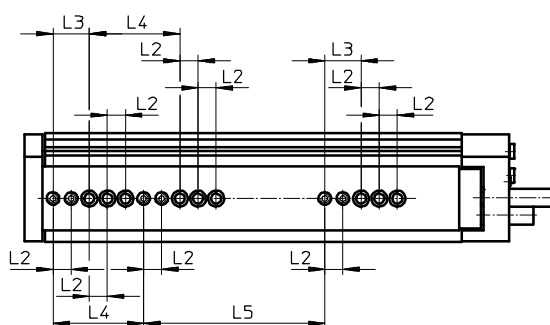
DGSL-12-40



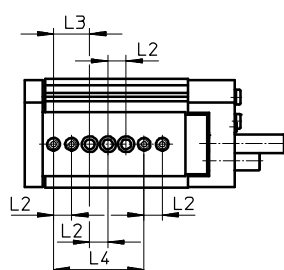
DGSL-12-50 ... 100



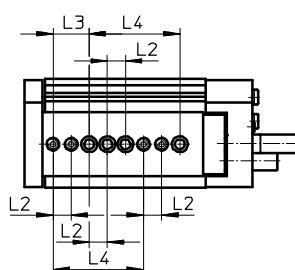
DGSL-12-150



DGSL-16-10



DGSL-16-20

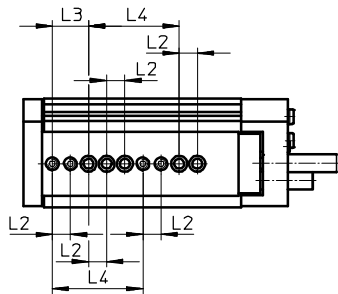


Pneumatic drives

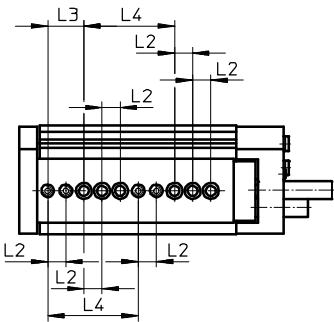
Dimensions

Hole pattern for mounting threads and centring holes

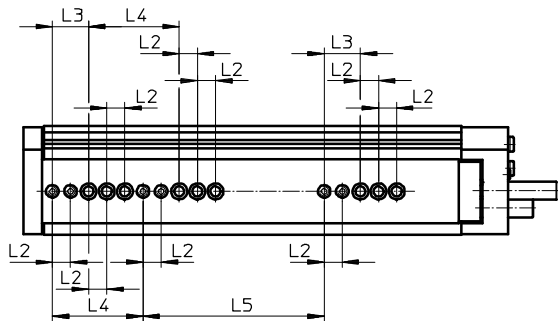
DGSL-16-30



DGSL-16-40 ... 100

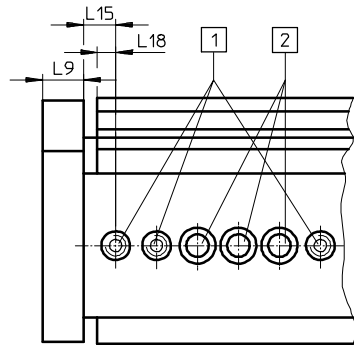


DGSL-16-150



Distances from the yoke plate to the mounting threads and centring holes

DGSL-12/16



- 1

Centring holes with thread
- 2

Through-holes for mounting the drive

Size	L2 ¹⁾	L3 ¹⁾	L4 ¹⁾	L5 ¹⁾ ±0.03	L9	L15 ±0.05	L18 ±0.05
12	10	20	50	100	10	5.8	4.5
16	10	20	50	100	12	6.8	5.5

1) Tolerance for centring hole ±0.02.
Tolerance for through-hole ±0.1.

Drives with guides > Drives with slides >

Mini slides DGSL ★

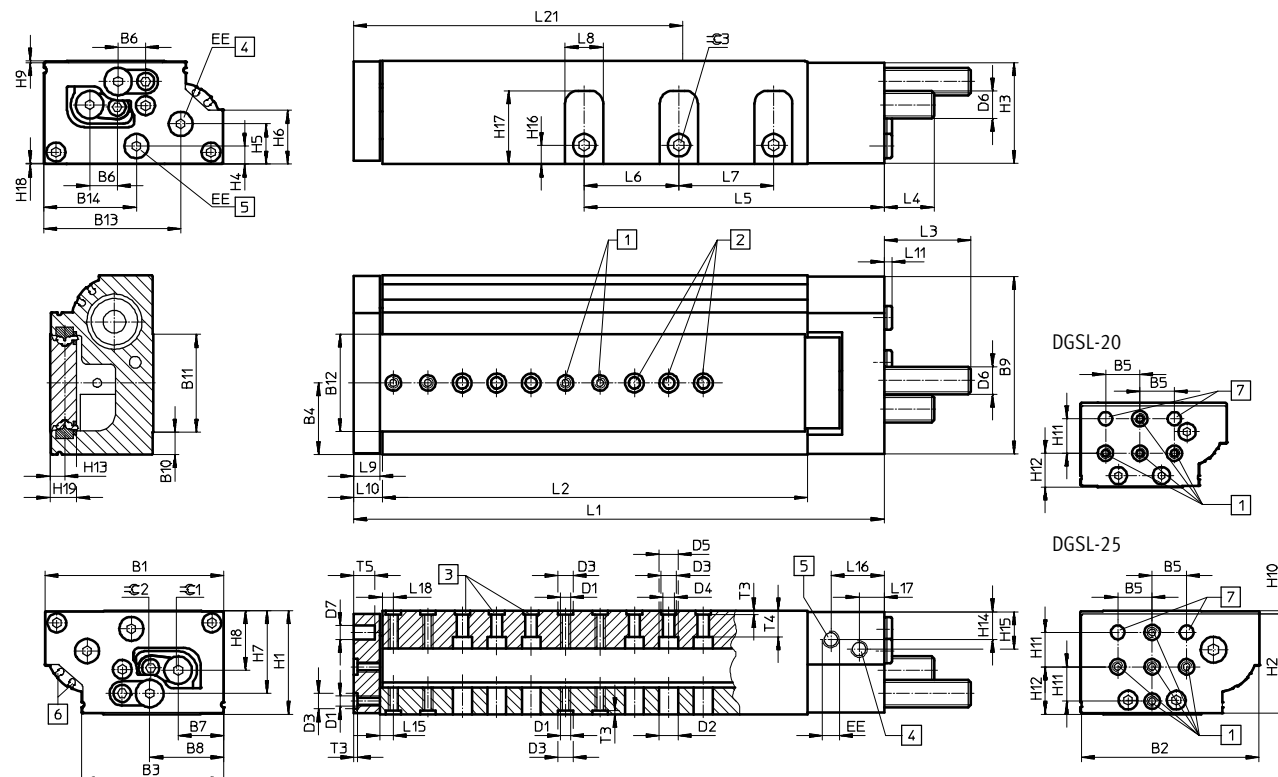
01

Dimensions

Size 20, 25

Download CAD data → www.festo.com

Pneumatic drives



- 1 Mounting thread (centring sleeves included in the scope of delivery)
- 2 Through-holes for mounting the drive
- 3 Centring holes (centring sleeves included in the scope of delivery)

- 4 Supply port, advancing
- 5 Supply port, retracting
- 6 Slots for proximity sensor SME/SMT-10
- 7 Centring hole

- L10 Distance between outer edge of yoke plate and housing
- L15 Distance between centre of centring hole and outer edge of slide

- L18 Distance between centre of centring hole and outer edge of housing

Size	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	D1
20	85	84	68.85	34.5	20	14.15	21.4	36.35	83.4	10	48.9	49.2	64.1	48.6	M6
25	104	103	82.6	41.6	20	16.2	26.4	43.05	103	13.25	56.5	56.7	79.35	53.65	M6

Size	D2 Ø	D3 Ø	D4 Ø	D5 Ø	D6	D7 Ø	EE	H1 ±0.08	H2	H3	H4	H5	H6	H7	H8
20	11.2	9 ^{H7}	6.6	11	M14x1	8 ^{H7}	G1/8	49	46.5	47.7	10.3	20.6	23.2	38.2	26.1
25	11.2	9 ^{H7}	6.6	11	M16x1	8 ^{H7}	G1/8	60	57.5	58.5	10.45	23.35	31.15	47.95	34.5

Size	H9	H10	H11	H12	H13	H14	H15	H16	H17	H18	H19	T3 +0.1	T4	T5	⌀ 2	⌀ 3
20	0.5	2	20	19.6	7.55	14.7	14.7	10	33.3	0.8	14.6	2.1	8.6	10	4	5
25	1	2	20	27.5	8.55	16.55	21.5	11	42.7	0.45	15.6	2.1	15	12	5	6

Dimensions

Download CAD data → www.festo.com

01

Size	Stroke	L1	L2	L5	L6	L7	L8	L9	L10	L11	L15 ±0.05	L16	L17	L18 ±0.05	L21	
20	10	141.2	84.6	59.1	-	-	17	14	15.6	4.6	7.8	30.5	12	6.5	56	
	20	151.2	94.6	69.1											61	
	30	161.2	104.6	79.1											66	
	40	171.2	114.6	89.1											71	
	50	183.2	126.6	99.1											76	
	80	211.2	154.6	129.1											91	
	100	270.2	213.6	149.1	44										44	121
	150	333.2	276.6	199.1												152
	200	383.2	326.6	252.1												177
25	10	157.1	96	63.7	-	-	22	15	16.6	4.6	8	32.3	14.5	6.5		64
	20	167.1	106	72.2												69
	30	177.1	116	82.2												74
	40	187.1	126	92.2												79
	50	197.1	136	102.2												84
	80	253.1	192	132.2												112
	100	286.1	225	152.2	55										129	
	150	338.1	277	202.2											154	
	200	388.1	327	254.2											179	

Pneumatic drives

Size	Cushioning	L3 max.	L4 max.	±0.1	
				For adjusting the cushioning stroke	For adjusting the end position
20	P	52.4	31.2	–	4
	E	8.8	0	–	4
	P1	50.1	28.9	4	8
	Y3	55.5	34.3	–	4
	Y11	67.4	45.9	–	4
25	P	51.9	30.5	–	5
	E	8.8	0	–	5
	P1	49.6	28.2	5	10
	Y3	65.2	43.8	–	5
	Y11	78.4	56.9	–	4

Mini slides DGSL ★

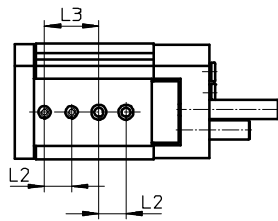
01

Dimensions

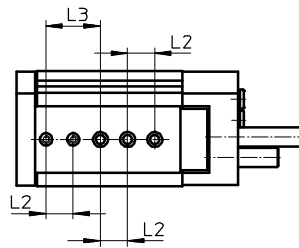
Download CAD data → www.festo.com

Hole pattern for mounting threads and centring holes

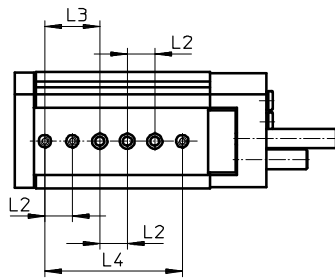
DGSL-20-10/20



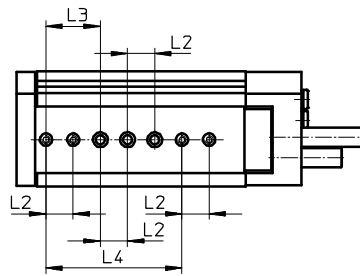
DGSL-20-30/40



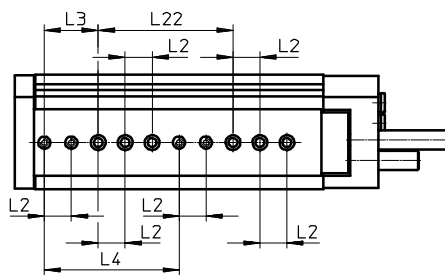
DGSL-20-50



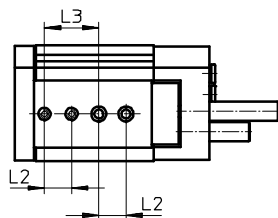
DGSL-20-80



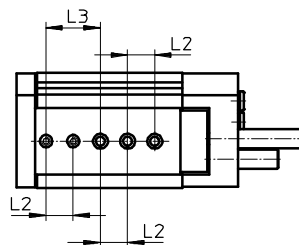
DGSL-20-100 ... 200



DGSL-25-10



DGSL-25-20

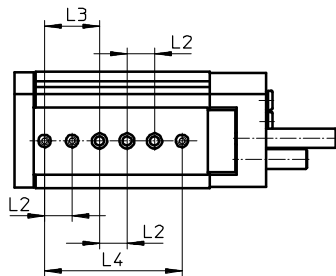


Dimensions

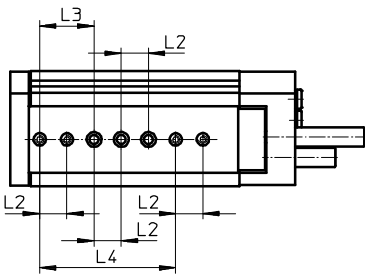
Download CAD data → www.festo.com

Hole pattern for mounting threads and centring holes

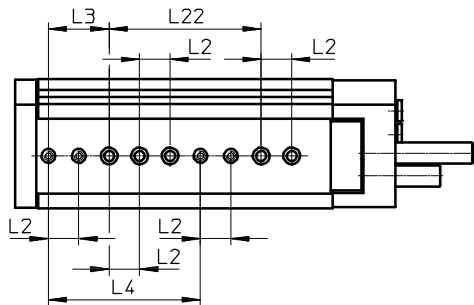
DGSL-25-30/40



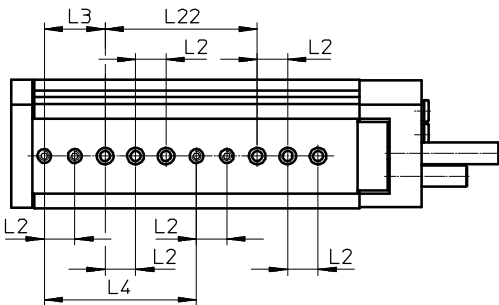
DGSL-25-50



DGSL-25-80

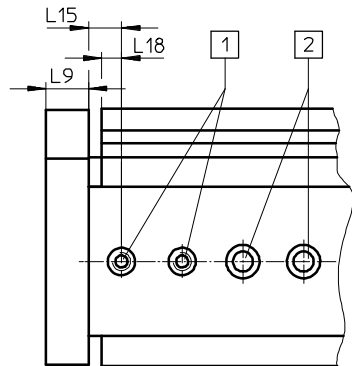


DGSL-25-100 ... 200



Distances from the yoke plate to the mounting threads and centring holes

DGSL-20, 25



- 1 Centring holes with thread
- 2 Through-holes for mounting the drive

Size	L2 ¹⁾	L3 ¹⁾	L4	L9	L15 ±0.05	L18 ±0.05	L22
20	20	40	100 ¹⁾	14	7.8	6.5	100±0.03
25	20	40	100±0.03	15	8	6.5	100 ¹⁾

1) Tolerance for centring hole ±0.02.
Tolerance for through-hole ±0.1.

Mini slides DGSL ★

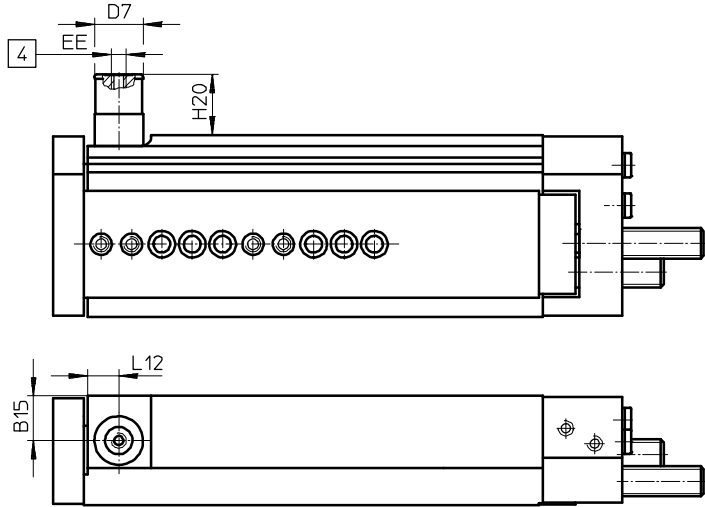
01

Dimensions

Download CAD data → www.festo.com

C – Clamping unit/E3 – End-position locking

4 Supply port



Size	B15	D7	EE	H20		L12
				DGSL-...		
				C	E3	
6	7.2	12	M5	10.7	21.2	7.3
8	9.9	12		10.5	21	7.3
10	11.2	16		11.8	21.2	10.5
12	14.8	16		10.5	19.9	10.3
16	14	20		27.5	30.5	13
20	17	20		21.3	24.3	14
25	22.55	20		17.75	20.65	14

Pneumatic drives

New New series



Increase productivity and save space

- + Thanks to short cycle times and high effective power with twin piston
- + With the shortest mini slide on the market
- + Thanks to high precision and robustness

Drives with guides › Drives with slides ›

Mini slides

DGST

Drives with guides > Drives with slides >

Mini slides

DGST



Overview, configuration and ordering

→ www.festo.com/catalogue/dgst



Additional information, support and user documentation

→ www.festo.com/sp/dgst



- + Shortest mini slide on the market
- + Very compact design
- + Powerful twin-piston drive
- + Very precise recirculating ball bearing guide
- + Yoke plate and slide manufactured from a single piece
- + Easy end position adjustment

NEW

Drives with guides > Drives with slides >

Mini slides DGST

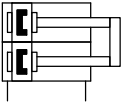
Product range overview

Type/function	Size	Stroke [mm]	Force [N]	Product options			
				E1	P	Y12	A
DGST							
Double-acting	6, 8, 10, 12, 16, 20, 25	10 ... 200	34 ... 589	■	■	■	■

Product options

E1	Elastic cushioning at both ends, without end-position adjustment	Y12	Self-adjusting shock absorber at both ends, with end-position adjustment
P	Elastic cushioning at both ends, non-adjustable, with end-position adjustment	A	Position sensing

Data sheet



Technical data							Dimensions → Page 366	
Size		6	8	10	12	16	20	25
Pneumatic connection		M3	M5					G1/8
Stroke	[mm]	10, 20, 30, 40, 50	10, 20, 30, 40, 50, 80	10, 20, 30, 40, 50, 80, 100	10, 20, 30, 40, 50, 80, 100	10, 20, 30, 40, 50, 80, 100, 125, 150	10, 20, 30, 40, 50, 80, 100, 125, 150, 200	
Cushioning								
DGST-...-E1		Elastic cushioning at both ends, without end-position adjustment						
DGST-...-P		Elastic cushioning at both ends, non-adjustable, with end-position adjustment						
DGST-...-Y12		Self-adjusting shock absorber at both ends, with end-position adjustment						
Theoretical force at 6 bar, advancing	[N]	34	60	94	136	241	377	589
Theoretical force at 6 bar, retracting	[N]	25	45	79	102	207	317	495

Operating conditions								
Size		6	8	10	12	16	20	25
Operating pressure	[bar]	1.5 ... 8		1 ... 8				
Ambient temperature ¹⁾	[°C]	-10 ... +60						

1) Note operating range of proximity sensors.

Materials	
Housing	Anodised wrought aluminium alloy
Slide	Anodised wrought aluminium alloy
Guide	High-alloy stainless steel, POM, TPE
Piston rod	High-alloy stainless steel
Seals	HNBR

Drives with guides > Drives with slides >

Mini slides DGST

NEW

Order code

Pneumatic drives

		DGST	-		-		-		A
Type									
DGST	Mini slide								
Size									
	Stroke [mm]								
6	10, 20, 30, 40, 50								
8	10, 20, 30, 40, 50, 80								
10	10, 20, 30, 40, 50, 80, 100								
12	10, 20, 30, 40, 50, 80, 100								
16	10, 20, 30, 40, 50, 80, 100, 125, 150								
20	10, 20, 30, 40, 50, 80, 100, 125, 150, 200								
25	10, 20, 30, 40, 50, 80, 100, 125, 150, 200								
Cushioning									
E1	Elastic cushioning at both ends, without end-position adjustment								
P	Elastic cushioning at both ends, non-adjustable, with end-position adjustment								
Position sensing									
A	Via proximity sensor								

Order example:

DGST-16-40-PA

Mini slide DGST - size 16 - stroke 40 mm - elastic cushioning at both ends, non-adjustable, with end-position adjustment - position sensing via proximity sensor

NEW

Drives with guides > Drives with slides >

Mini slides DGST

Order code

01

Pneumatic drives

DGST

Y12

A

Type	
DGST	Mini slide

Size	
	Stroke [mm]
6	30, 40, 50
8	30, 40, 50, 80
10	30, 40, 50, 80, 100
12	30, 40, 50, 80, 100
16	30, 40, 50, 80, 100, 125, 150
20	30, 40, 50, 80, 100, 125, 150, 200
25	30, 40, 50, 80, 100, 125, 150, 200

Cushioning	
Y12	Self-adjusting shock absorber at both ends, with end-position adjustment

Position sensing	
A	Via proximity sensor

Order example:
DGST-16-40-Y12A
Mini slide DGST - size 16 - stroke 40 mm - self-adjusting shock absorber at both ends, with end-position adjustment - position sensing via proximity sensor

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

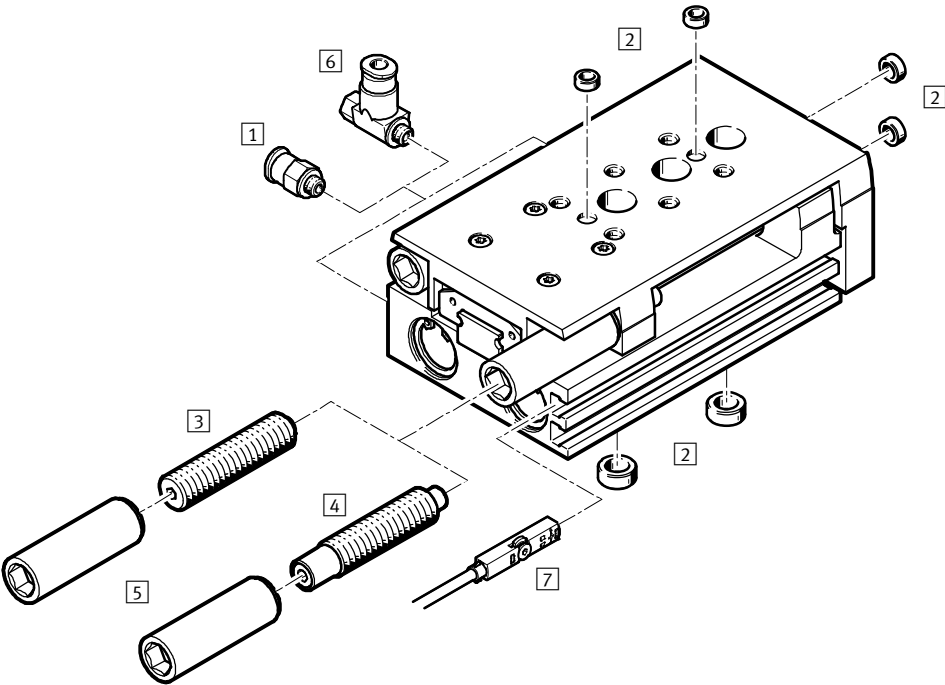
The configurator can be found under Products on the DVD or
➔ www.festo.com/catalogue/...

Enter the type code in the search field.

Mini slides DGST

NEW

Accessories



		→ Page/online
1	Push-in fitting QS	365
2	Centring sleeve ZBH	365
3	Cushioning P	365
4	Cushioning Y12	365
5	Threaded sleeve (included in the scope of delivery of cushioning P and Y12)	365
6	One-way flow control valve GRLA	365
7	Proximity sensor SMT-10/-8	365

NEW

Drives with guides > Drives with slides >

Mini slides DGST

Accessories – Ordering data

01

	For size	Part no.	Type
1 Push-in fitting¹⁾ Data sheets online: → qs			
	6	153303	QSM-M3-4
	8, 10, 12, 16	153304	QSM-M5-4
	20, 25	153307	QSM-1/8-6
2 Centring sleeve/centring pin¹⁾ Data sheets online: → zbh			
	6, 8, 10, 12, 16	189652	ZBH-5
	20, 25	189653	ZBH-12
	6	525273	ZBS-2
	8, 10	189652	ZBH-5
	12, 16	186717	ZBH-7
	20, 25	189653	ZBH-12
	6, 8	189652	ZBH-5
	10, 12	186717	ZBH-7
	16	150927	ZBH-9
	20, 25	189653	ZBH-12
2 Connector sleeve¹⁾ Data sheets online: → zbh			
	20	548806	ZBV-12-9

1) Packaging unit 10 pieces

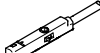
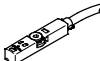
	For size	Part no.	Type
3 Cushioning variant for DGST-...-P²⁾ Data sheets online: → dyef			
	6	8073902	DYEF-G8-M4-Y1
	8	8073903	DYEF-G8-M5-Y1
	10	8073904	DYEF-G8-M6-Y1
	12	8073905	DYEF-G8-M8-Y1
	16	8073906	DYEF-G8-M10-Y1
	20	8073907	DYEF-G8-M12-Y1
	25	8073908	DYEF-G8-M14-Y1
4 Cushioning variant for DGST-...-Y12²⁾ Data sheets online: → dyss			
	6	8073911	DYSS-G8-2-4-Y1F
	8	8073912	DYSS-G8-3-4-Y1F
	10	8073913	DYSS-G8-4-4-Y1F
	12	8073914	DYSS-G8-5-5-Y1F
	16	8073915	DYSS-G8-7-5-Y1F
	20	8073916	DYSS-G8-8-8-Y1F
	25	8073917	DYSS-G8-10-10-Y1F

2) Scope of delivery: 1 cushioning element and 1 threaded sleeve

Pneumatic drives

Function	For size	Connection	Part no.	Type
		Thread	O.D.	
6 One-way flow control valve with slotted head screw, metal³⁾ for exhaust air flow control Data sheets → Page 1033				
	6	M3	3	175041 GRLA-M3-QS-3
	8, 10, 12, 16	M5	6	★ 193139 GRLA-M5-QS-6-D
	20, 25	G1/8	8	★ 193145 GRLA-1/8-QS-8-D

3) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

	For size	Switching output, connection	Cable length [m]	Part no.	Type
7 Proximity sensor for C-slot, magneto-resistive – N/O contact Data sheets → Page 1222					
	6 ... 12	PNP, cable	2.5	★ 551373	SMT-10M-PS-24V-E-2,5-L-OE
		PNP, plug	0.3	★ 551375	SMT-10M-PS-24V-E-0,3-L-M8D
Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets → Page 1206					
	16 ... 25	PNP, cable	2.5	★ 574335	SMT-8M-A-PS-24V-K-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-A-PS-24V-K-0,3-M8D
		NPN, cable	2.5	★ 574338	SMT-8M-A-NS-24V-K-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-A-NS-24V-K-0,3-M8D

	For size	Connection	Cable length [m]	Part no.	Type
Connecting cable, straight socket					Data sheets → Page 1543
	6 ... 25	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
Angled socket					Data sheets → Page 1543
	6 ... 25	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3

Mini slides DGST

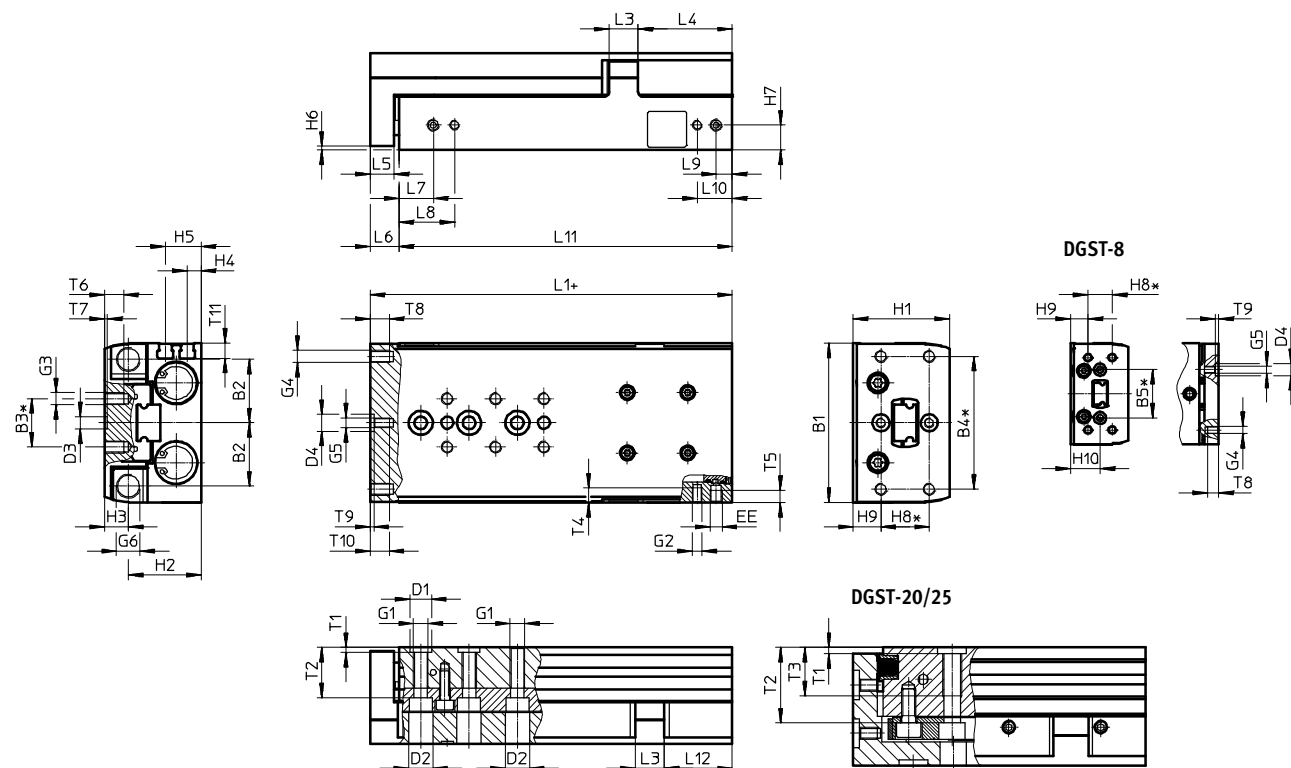
NEW

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01

Dimensions

Pneumatic drives



Actual stroke with variant DGST-...-E1 =
stroke + additional stroke without cushioning + cushioning stroke
(values → Page 367)

+ plus stroke length
* ±0.02 mm applies to the centring
±0.1 mm applies to the thread

Size	B1	B2	B3	B4	B5	D1	D2	D3	D4	EE	G1	G2	G3	G4
			±0.1	±0.1		Ø	Ø	Ø	Ø					
6	35	14.4	10	30	–	5	6	5	2 ^{H8}	M3	M4	M3	M3	M3
8	42	17	10	30	20	5	6	5	5 ^{H7}	M5	M4	M3	M3	M3
10	50	20.8	20	40	–	7	8	5	5 ^{H7}	M5	M5	M4	M4	M4
12	60	24.5	20	40	–	7	8	5	7 ^{H7}	M5	M5	M4	M4	M4
16	66	26.3	20	55	–	9	10	5	7 ^{H7}	M5	M6	M4	M5	M5
20	85	34.5	40	70	–	12	11	12	12 ^{H7}	G1/8	M8	M5	M5	M5
25	104	42	40	80	–	12	11	12	12 ^{H7}	G1/8	M8	M6	M6	M6

Size	G5	G6	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	L3	L4
6	–	M4x0.5	20	14.5	5.5	2.5	7	1.5	4.5	10	5	–	5	22
8	M3	M5x0.5	24	17.7	6.3	3.1	8.1	1.5	5.6	10	7.3	12.3	6	30.5
10	M3	M6x0.5	29	21	8	4	10	1.5	7	20	5	–	8	31
12	M4	M8x1	36	26.5	9.5	5.9	11.9	1.5	8.9	20	9.5	–	10	36
16	M4	M10x1	40	30	10	5.8	14.8	1.5	10.3	20	11.6	–	12	39
20	M5	M12x1	49	36.5	12.5	8.7	17.7	2.5	13.2	20	15.5	–	14.5	51
25	M6	M14x1	60	44.5	15.5	11	21	2.5	16	40	10	–	17.5	65

NEW

Drives with guides > Drives with slides >

Mini slides DGST

Dimensions

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Size	L5	L6	L7	L8 ¹⁾	L9	L10 ¹⁾	T1	T2	T3	T4	T5
									max.	max.	max.
6	6	8	8.5	15.4	5.8	12.7	1.3 ^{+0.1}	8.9	–	4	4
8	6	8	8.5	16.5	5.5	13.5	1.3 ^{+0.1}	11.5	–	5	4.5
10	8	10	8.9	17.9	6.6	15.6	1.6 ^{+0.1}	14.5	–	6.2	5
12	8	10	10.7	19.5	7	15.8	1.6 ^{+0.1}	19.8	–	7	5.5
16	10	12	14.2	23	6.7	15.5	2.1 ^{+0.1}	20.8	–	6	5
20	10	12.5	16.5	30.5	8	22	2.6 ^{+0.3}	31.2	20	8	8.5
25	12	14.5	16.5	31.5	10.5	25.5	2.6 ^{+0.3}	37.2	20	9.5	8

Size	T7	T8	T9	T10	T11	Additional stroke without cushioning with variant DGST-...-E1		Max. cushioning stroke in the end positions with variant DGST-...-E1	
						min.	max.	Advanced	Retracted
		max.		max.					
6	1.3 ^{+0.1}	4.5	–	–	4.6	0.65	1.3	0.25	0.9
8	1.3 ^{+0.1}	4.5	1.3 ^{+0.1}	–	5	0	0.7	0.5	1.6
10	1.3 ^{+0.1}	6.5	1.3 ^{+0.1}	6.5	5.9	0	0.7	0.6	1.6
12	1.3 ^{+0.1}	6.5	1.6 ^{+0.1}	8	7	0.4	1.1	0.5	1.1
16	1.3 ^{+0.1}	8	1.6 ^{+0.1}	8	6.3	0.65	1.4	0.6	0.65
20	2.6 ^{+0.3}	8	2.6 ^{+0.3}	10	9.1	0.4	1.1	0.5	1
25	2.6 ^{+0.3}	10	2.6 ^{+0.3}	13	8.8	0.5	1.2	0.5	1.2

- 1) Not present in sizes 6 and 8 with stroke 10 mm.
The dimension is 14.5 mm in size 16 with stroke 80 ... 150 mm.

Stroke [mm]	10	20	30	40	50	80	100	125	150	200
Size										
	L1									
6	48	58	68	78	95	–	–	–	–	–
8	51	61	71	81	95	126	–	–	–	–
10	66	68	78	88	98	136	156	–	–	–
12	66	76	86	96	106	136	169.5	–	–	–
16	73	80	87	97	112	150	170	210	235	–
20	97	97	97	107	121	166	204.5	244	279	343
25	102	102	108	118	128	168	207	246	281	345
	L11									
6	40	50	60	70	87	–	–	–	–	–
8	43	53	63	73	87	118	–	–	–	–
10	56	58	68	78	88	126	146	–	–	–
12	56	66	76	86	96	126	159.5	–	–	–
16	61	68	75	85	100	138	158	198	223	–
20	84.5	84.5	84.5	94.5	108.5	153.5	192	231.5	266.5	330.5
25	87.5	87.5	93.5	103.5	113.5	153.5	192.5	231.5	266.5	330.5
	L12									
6	16	16	16	16	22	–	–	–	–	–
8	15.7	15.7	15.7	15.7	19.7	20.7	–	–	–	–
10	24.6	16.6	16.6	16.6	16.6	24.6	24.6	–	–	–
12	20.6	20.6	20.6	20.6	20.6	20.6	34.1	–	–	–
16	21.2	18.2	15.2	15.2	20.2	28.2	28.2	39	39	–
20	39.5	29.5	19.5	19.5	23.5	38.5	51	51	51	51
25	36.5	26.5	22.5	22.5	22.5	32.5	51.5	65	65	65
	T6 (max.)									
6	4	4	4	4	4	–	–	–	–	–
8	5.5	5.5	5.5	5.5	5.5	5.5	–	–	–	–
10	4.5	4.5	4.5	4.5	4.5	7.5	7.5	–	–	–
12	5.2	5.2	5.2	5.2	5.2	8	8	–	–	–
16	7.2	7.2	7.2	7.2	7.2	8	8	8	8	–
20	8	8	8	8	8	8	8	8	8	8
25	11	11	11	11	11	11	11	11	11	11

01

Pneumatic drives

Mini slides DGST

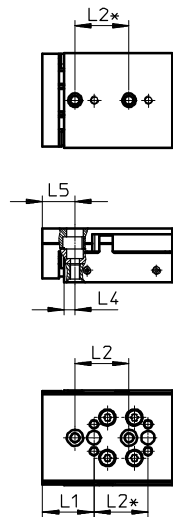
NEW

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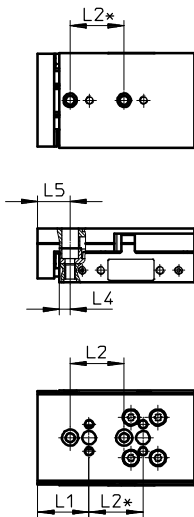
Dimensions

Hole pattern for mounting threads and centring holes

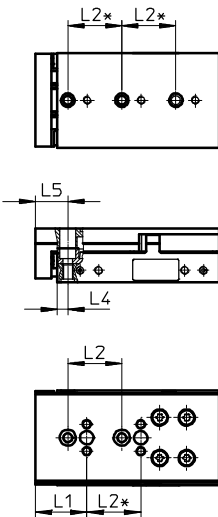
DGST-6-10



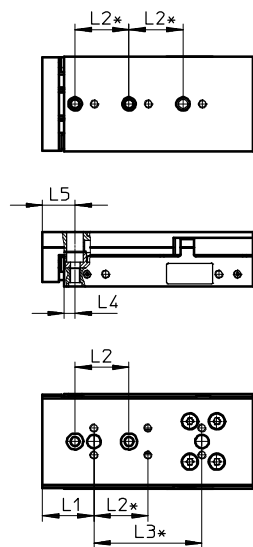
DGST-6-20



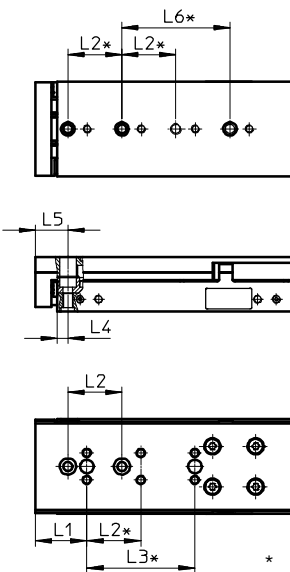
DGST-6-30



DGST-6-40



DGST-6-50



* ±0.02 mm applies to the centring
±0.1 mm applies to the thread

Size	Stroke [mm]	L1	L2	L3	L4	L5	L6
6	10	19	20	—	4	12	—
	20			—			—
	30			—			—
	40			40			—
	50			40			40

NEW

Drives with guides > Drives with slides >

Mini slides DGST

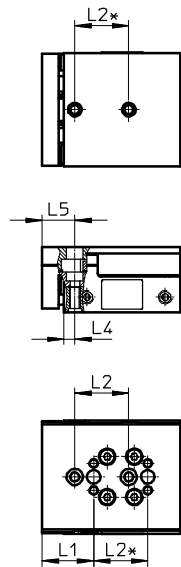
Dimensions

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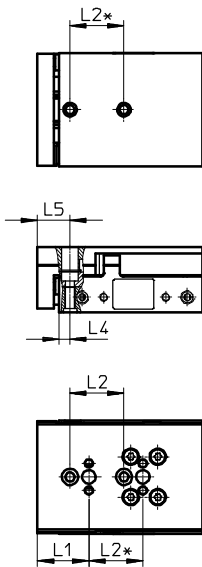
01

Hole pattern for mounting threads and centring holes

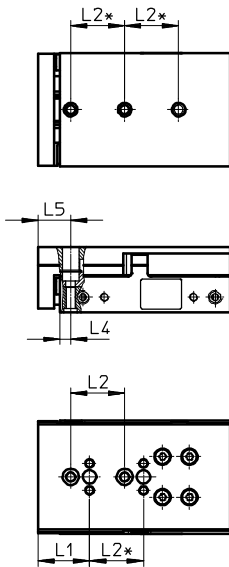
DGST-8-10



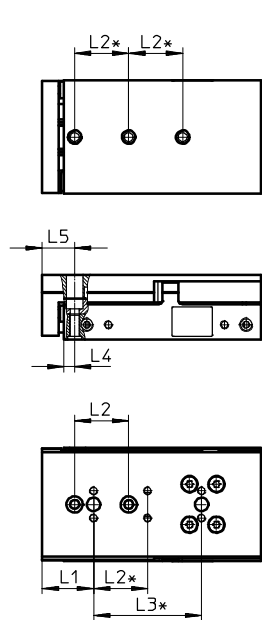
DGST-8-20



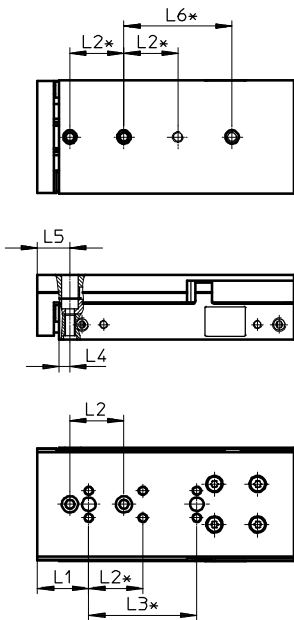
DGST-8-30



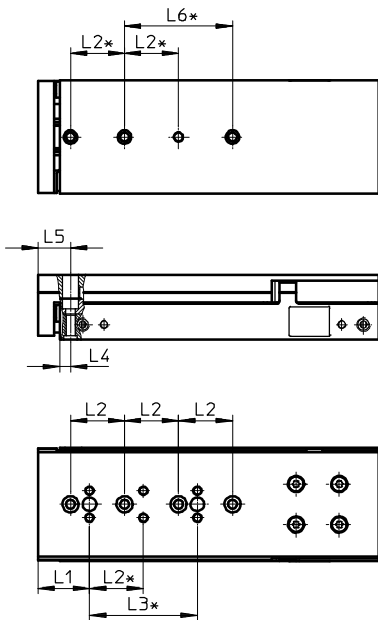
DGST-8-40



DGST-8-50



DGST-8-80



* ±0.02 mm applies to the centring
±0.1 mm applies to the thread

Size	Stroke [mm]	L1	L2	L3	L4	L5	L6
8	10	19	20	—	4	12	—
	20			—			—
	30			—			—
	40			40			—
	50			40			40
	80			40			40

Pneumatic drives

Mini slides DGST

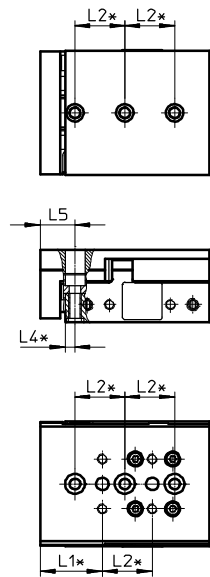
NEW

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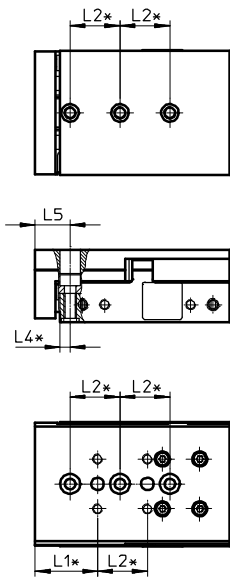
Dimensions

Hole pattern for mounting threads and centring holes

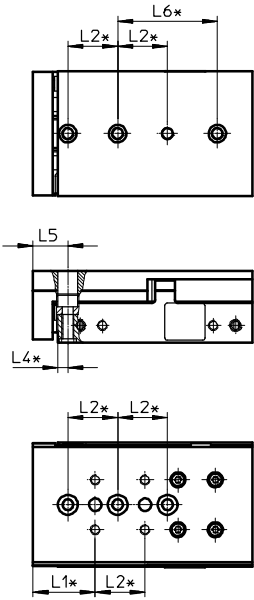
DGST-10-10/20



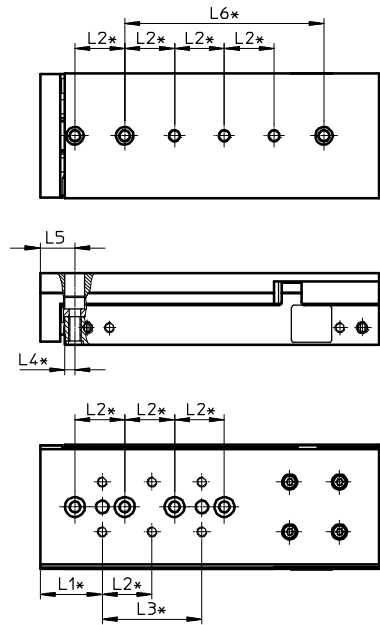
DGST-10-30



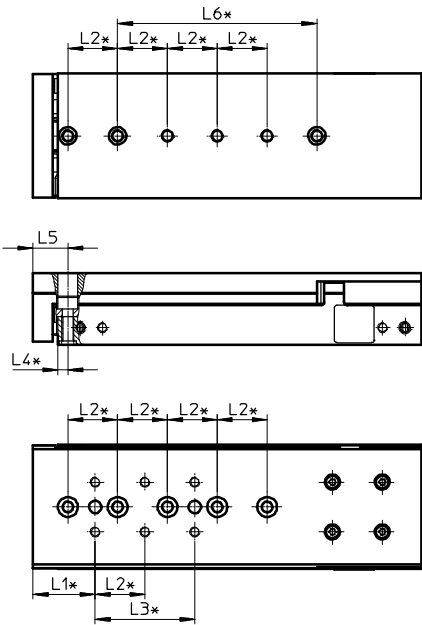
DGST-10-40/50



DGST-10-80



DGST-10-100



* ±0.02 mm applies to the centring
±0.1 mm applies to the thread

Size	Stroke [mm]	L1	L2	L3	L4	L5	L6
10	10, 20	25	20	—	4	14	—
	30			—			—
	40, 50			—			40
	80			40			80
	100			40			80

NEW

Drives with guides > Drives with slides >

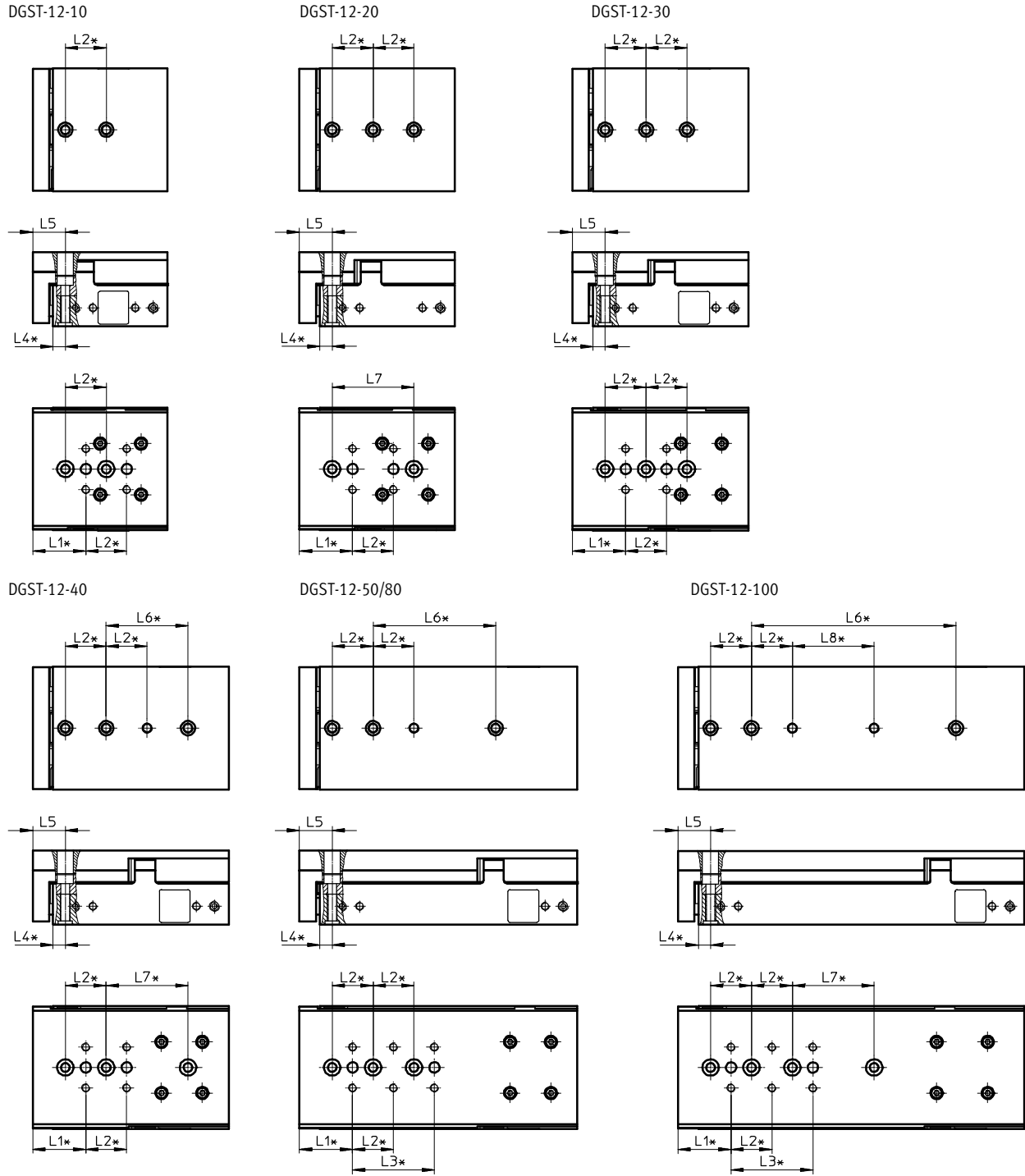
Mini slides DGST

Dimensions

Download CAD data → www.festo.com

01

Hole pattern for mounting threads and centring holes



* ±0.02 mm applies to the centring
±0.1 mm applies to the thread

Size	Stroke [mm]	L1	L2	L3	L4	L5	L6	L7	L8
12	10	26	20	–	6	16	–	–	–
	20			–			–	40	–
	30			–			–	–	–
	40			–			40	40	–
	50, 80			40			40, 60	–	–
	100			40			100	40	40

Pneumatic drives

Mini slides DGST

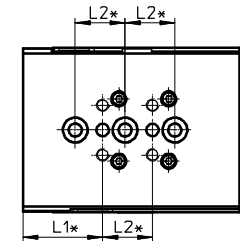
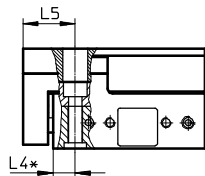
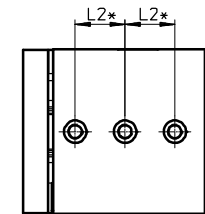
NEW

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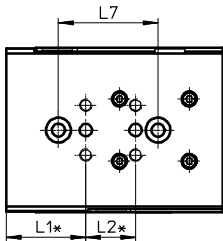
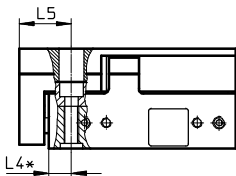
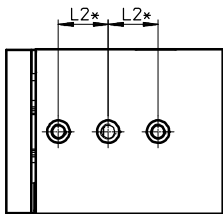
Dimensions

Hole pattern for mounting threads and centring holes

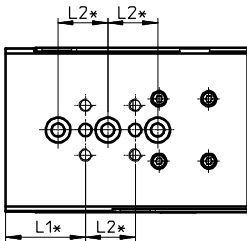
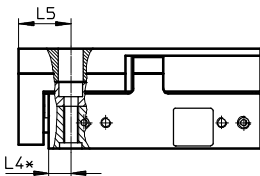
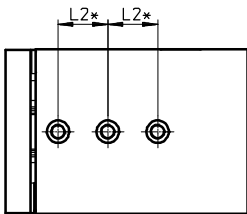
DGST-16-10



DGST-16-20/30



DGST-16-40



* ±0.02 mm applies to the centring
±0.1 mm applies to the thread

Size	Stroke [mm]	L1	L2	L4	L5	L7
16	10	32	20	9	21	–
	20					40
	30					40
	40					–

NEW

Drives with guides > Drives with slides >

Mini slides DGST

Dimensions

Download CAD data → www.festo.com

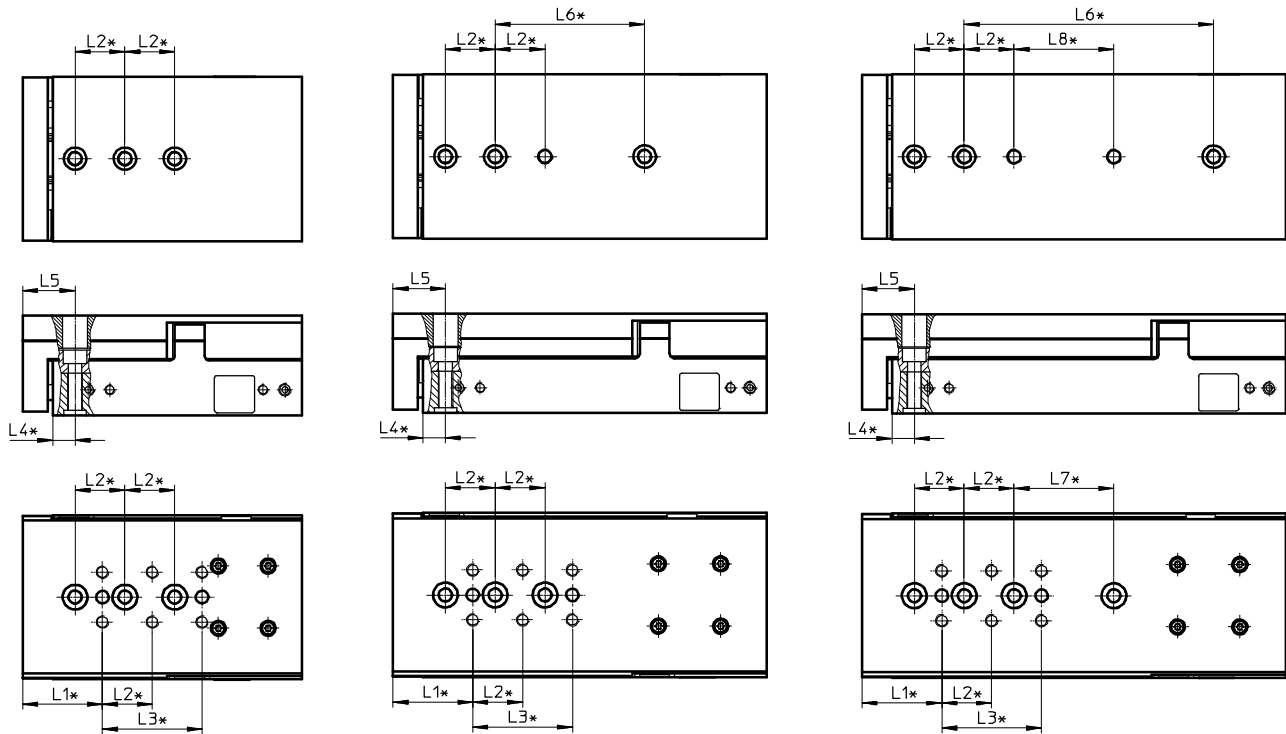
01

Hole pattern for mounting threads and centring holes

DGST-16-50

DGST-16-80

DGST-16-100



* ±0.02 mm applies to the centring
±0.1 mm applies to the thread

Size	Stroke [mm]	L1	L2	L3	L4	L5	L6	L7	L8
16	50	32	20	40	9	21	–	–	–
	80						60	–	–
	100						100	40	40

Pneumatic drives

Mini slides DGST

NEW

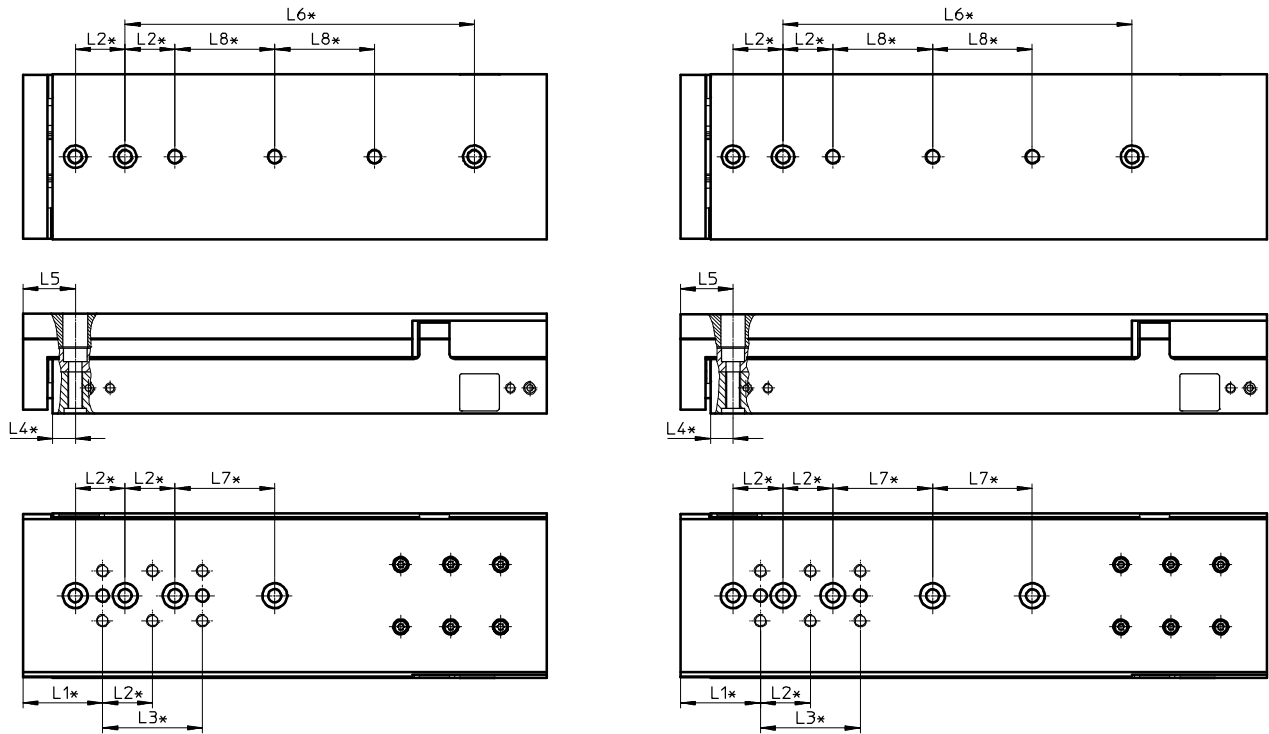
Download CAD data → www.festo.com

Dimensions

Hole pattern for mounting threads and centring holes

DGST-16-125

DGST-16-150



* ±0.02 mm applies to the centring
±0.1 mm applies to the thread

Size	Stroke [mm]	L1	L2	L3	L4	L5	L6	L7	L8
16	125	32	20	40	9	21	140	40	40
	150								

NEW

Drives with guides > Drives with slides >

Mini slides DGST

Dimensions

Download CAD data → www.festo.com

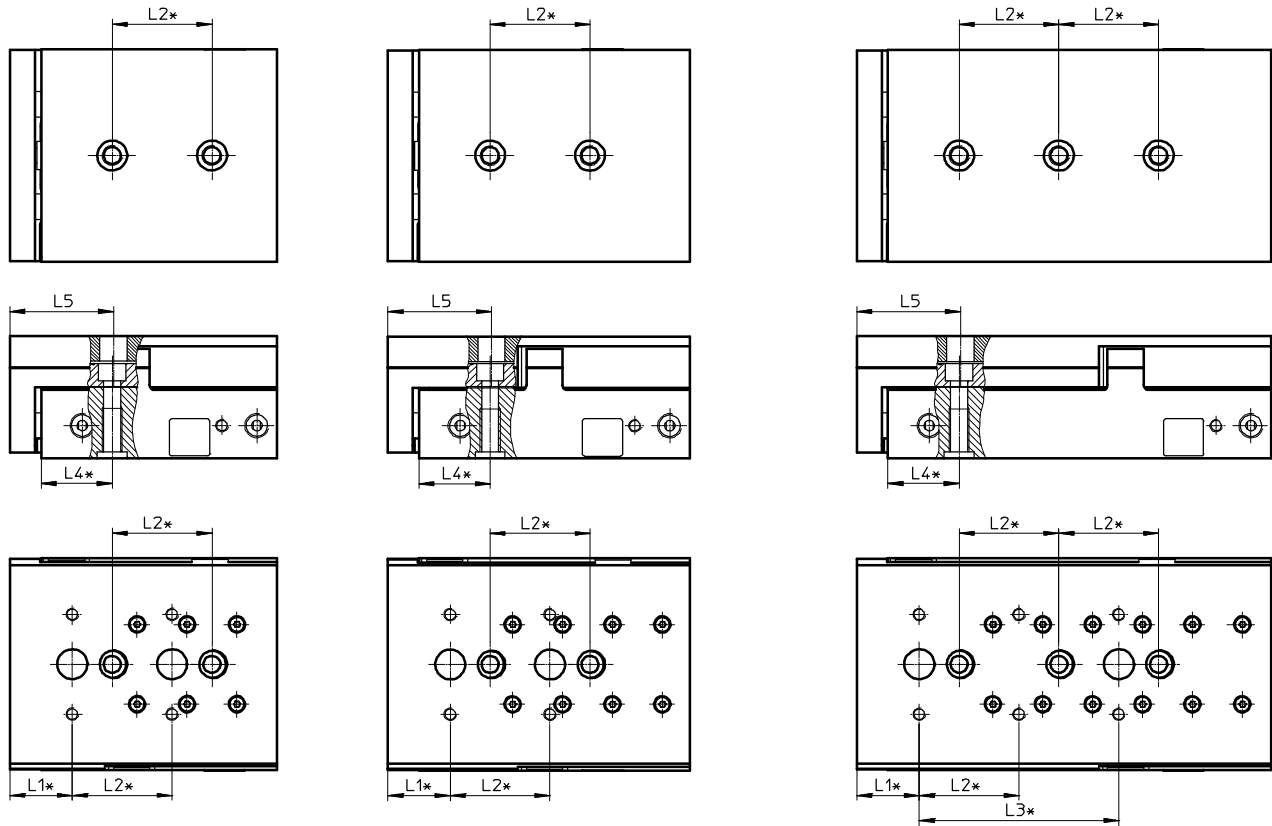
01

Hole pattern for mounting threads and centring holes

DGST-20-10/20/30/40

DGST-20-50

DGST-20-80



* ±0.02 mm applies to the centring
±0.1 mm applies to the thread

Size	Stroke [mm]	L1	L2	L3	L4	L5
20	10	25	40	–	28.5	41.5
	20			–		
	30			–		
	40			–		
	50			–		
	80			80		

Pneumatic drives

Mini slides DGST

NEW

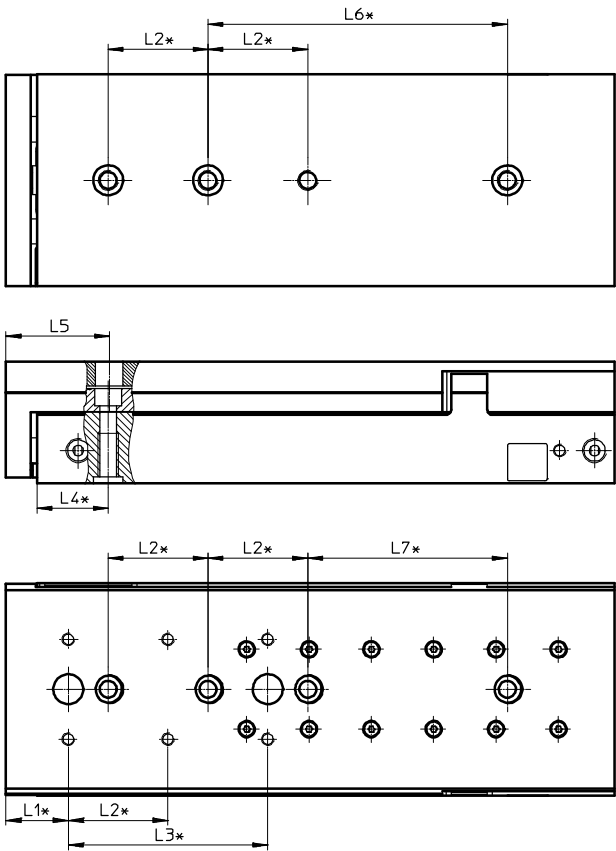
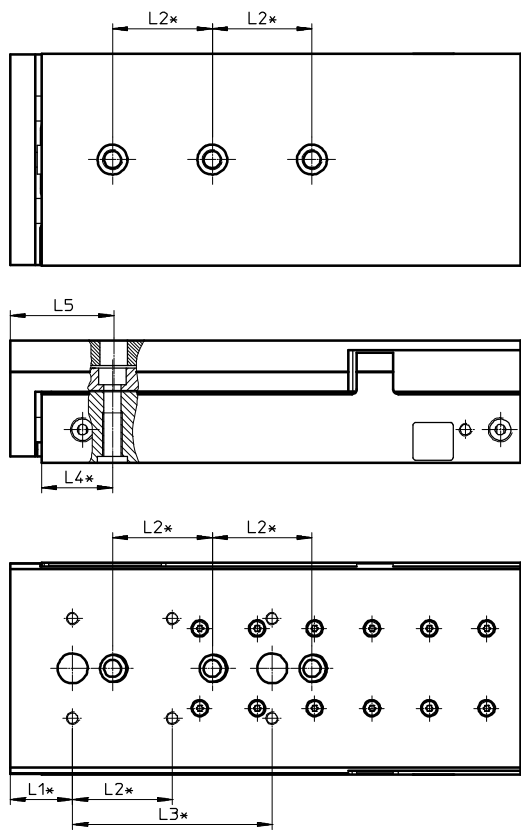
Download CAD data → www.festo.com

Dimensions

Hole pattern for mounting threads and centring holes

DGST-20-100

DGST-20-125



* ±0.02 mm applies to the centring
±0.1 mm applies to the thread

Size	Stroke [mm]	L1	L2	L3	L4	L5	L6	L7
20	100	25	40	80	28.5	41.5	–	80
	125						120	

NEW

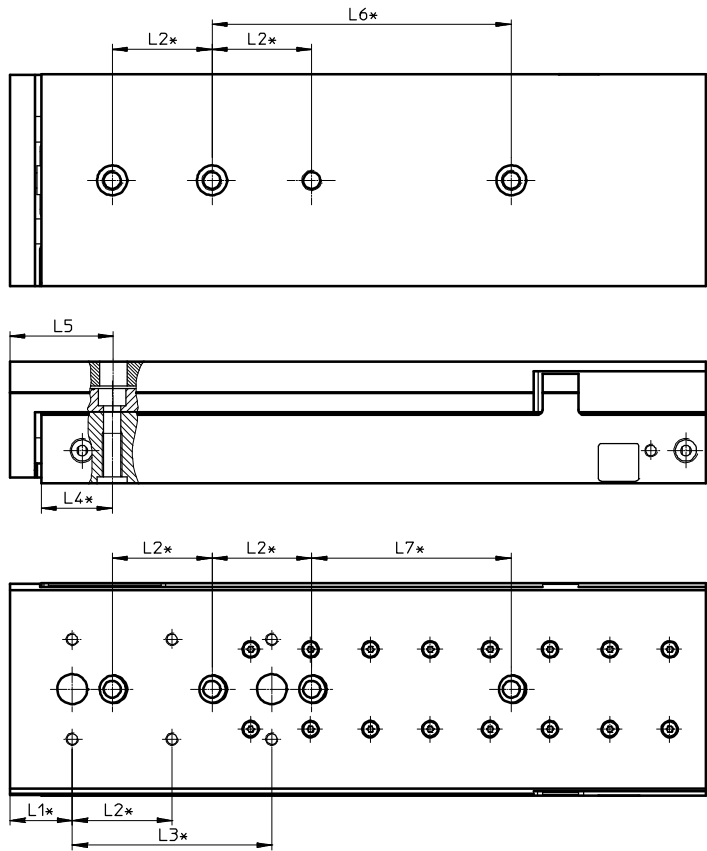
Drives with guides > Drives with slides >

Mini slides DGST

Dimensions

Hole pattern for mounting threads and centring holes

DGST-20-150



* ±0.02 mm applies to the centring
±0.1 mm applies to the thread

Size	Stroke [mm]	L1	L2	L3	L4	L5	L6	L7
20	150	25	40	80	28.5	41.5	120	80

Pneumatic drives

Mini slides DGST

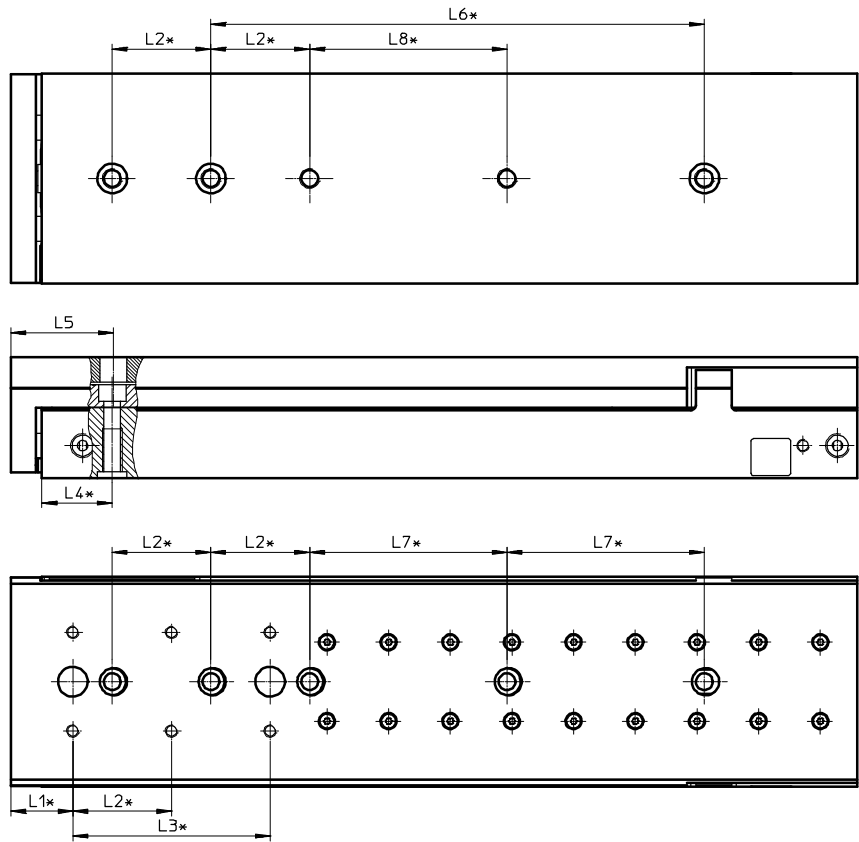
NEW

Download CAD data [→ www.festo.com](#)

Dimensions

Hole pattern for mounting threads and centring holes

DGST-20-200



* ±0.02 mm applies to the centring
±0.1 mm applies to the thread

Size	Stroke [mm]	L1	L2	L3	L4	L5	L6	L7	L8
20	200	25	40	80	28.5	41.5	200	80	80

NEW

Drives with guides > Drives with slides >

Mini slides DGST

Dimensions

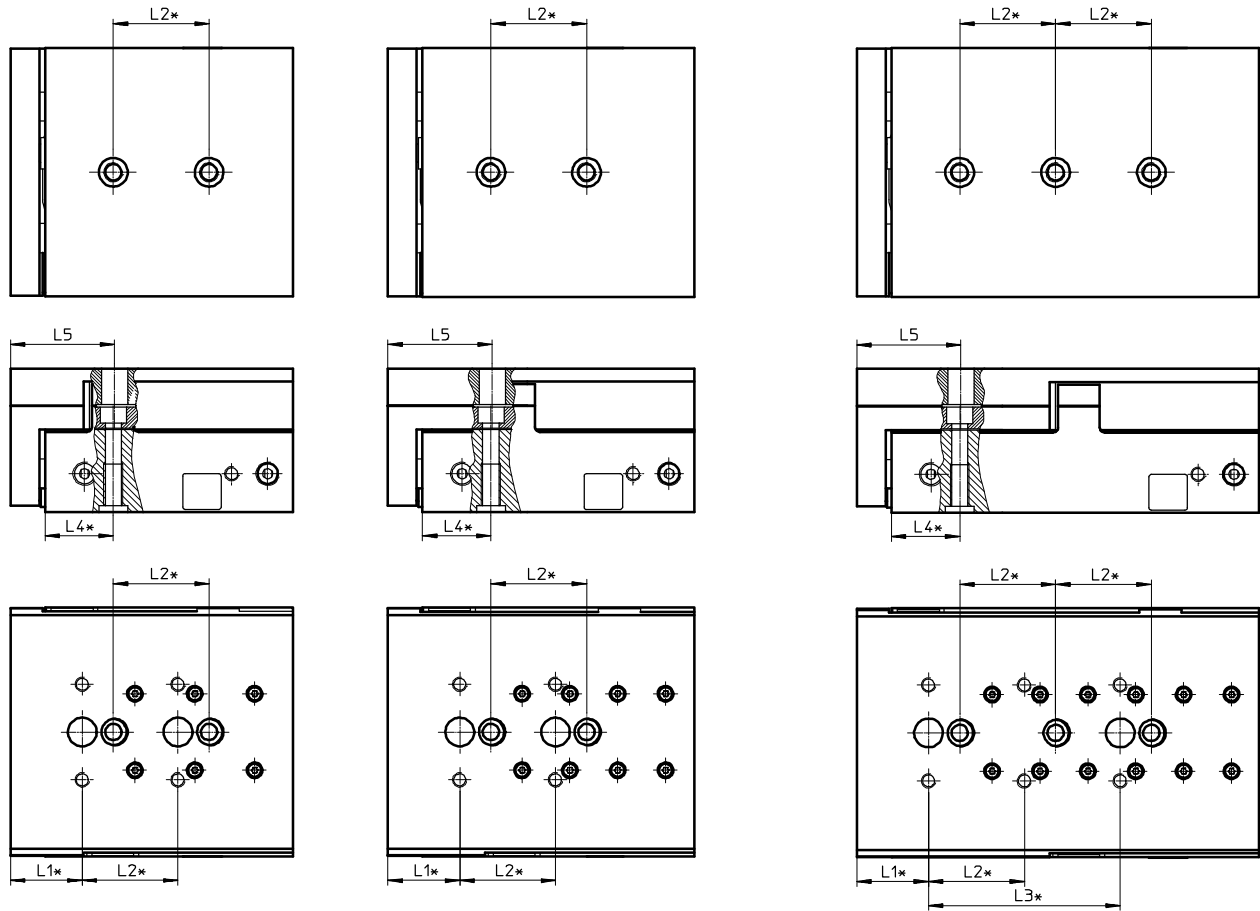
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Hole pattern for mounting threads and centring holes

DGST-25-10/20/30/40

DGST-25-50

DGST-25-80



* ±0.02 mm applies to the centring
±0.1 mm applies to the thread

Size	Stroke [mm]	L1	L2	L3	L4	L5
25	10	30	40	—	28.5	43.5
	20			—		
	30			—		
	40			—		
	50			—		
	80			80		

Mini slides DGST

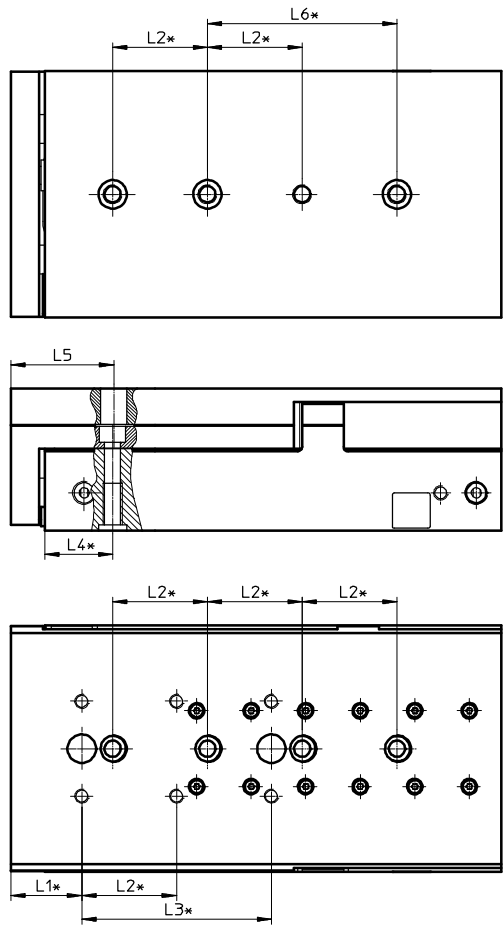
NEW

Download CAD data → www.festo.com

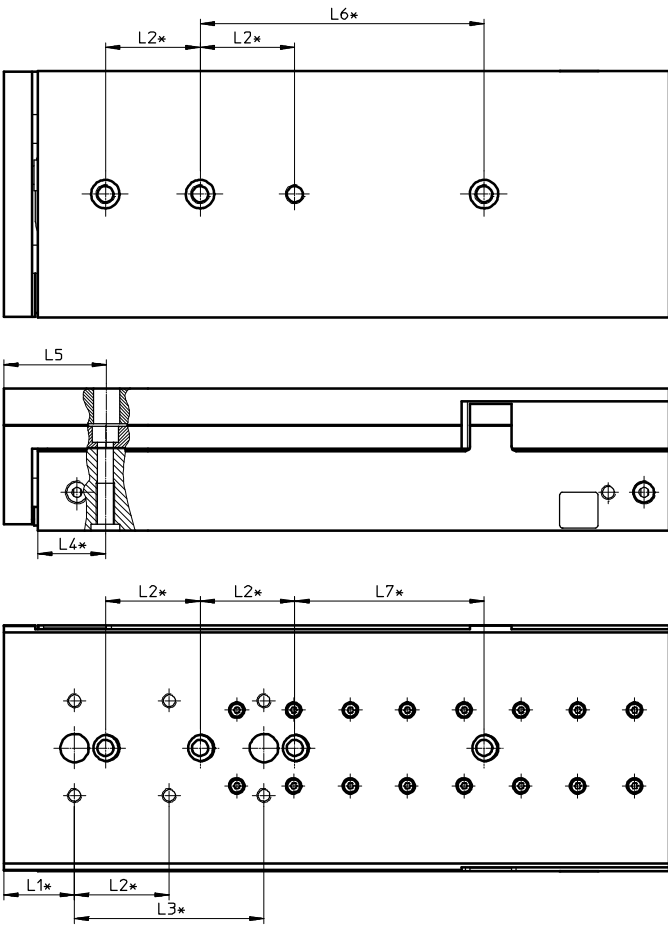
Dimensions

Hole pattern for mounting threads and centring holes

DGST-25-100



DGST-25-125



* ±0.02 mm applies to the centring
±0.1 mm applies to the thread

Size	Stroke [mm]	L1	L2	L3	L4	L5	L6	L7
25	100	30	40	80	28.5	43.5	80	80
	125						120	

NEW

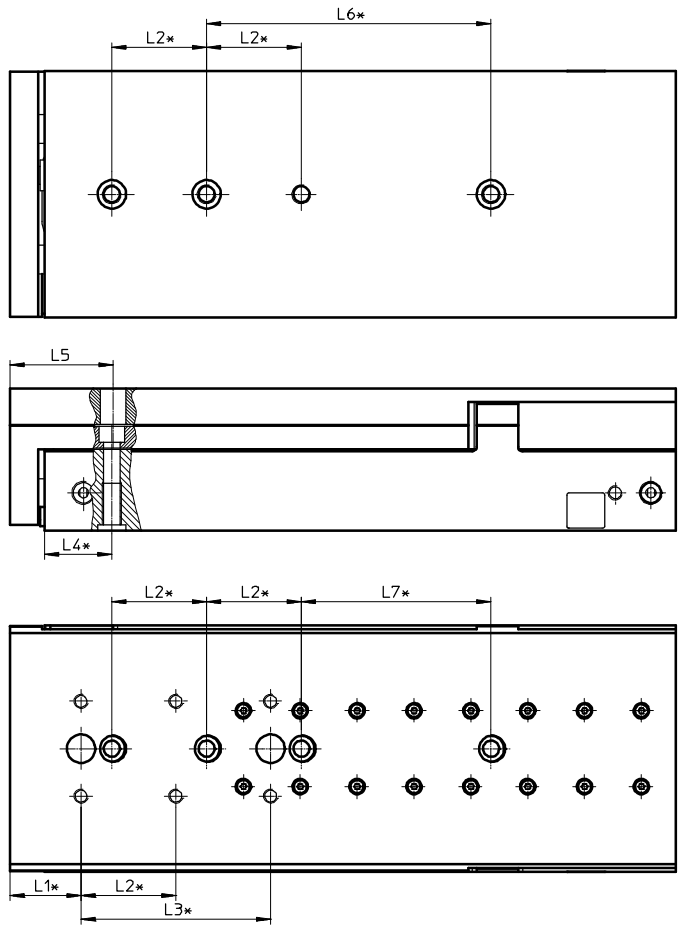
Drives with guides > Drives with slides >

Mini slides DGST

Dimensions

Hole pattern for mounting threads and centring holes

DGST-25-150



* ±0.02 mm applies to the centring
±0.1 mm applies to the thread

Size	Stroke [mm]	L1	L2	L3	L4	L5	L6	L7
25	150	30	40	80	28.5	43.5	120	80

Mini slides DGST

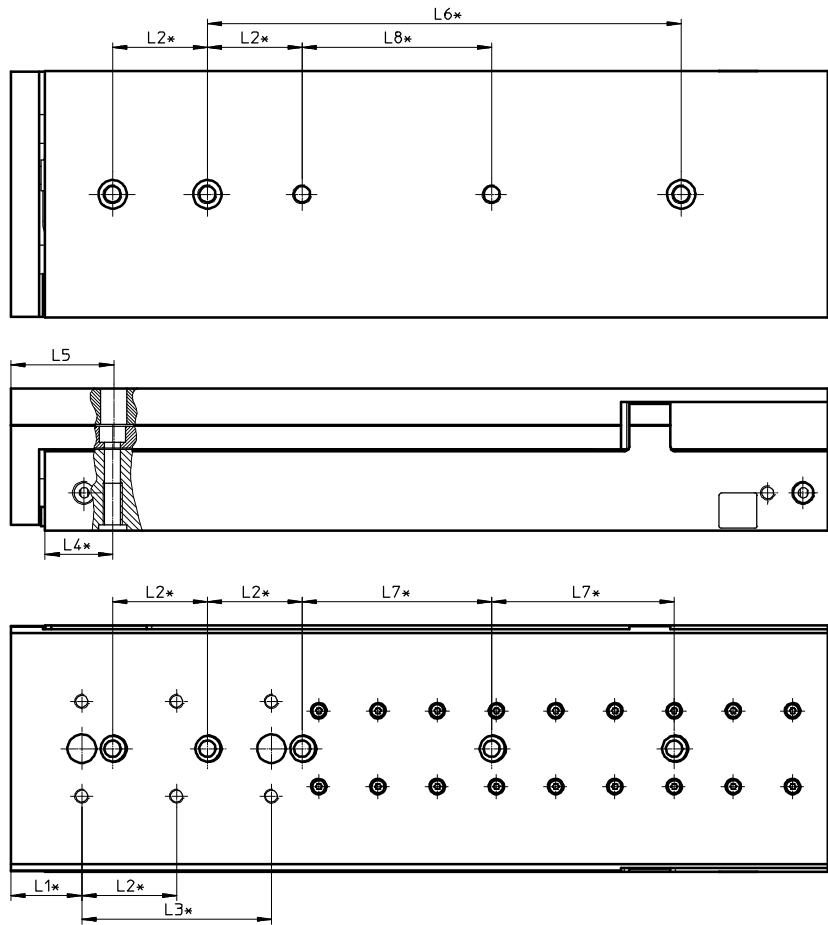
NEW

Download CAD data → www.festo.com

Dimensions

Hole pattern for mounting threads and centring holes

DGST-25-200



* ±0.02 mm applies to the centring
±0.1 mm applies to the thread

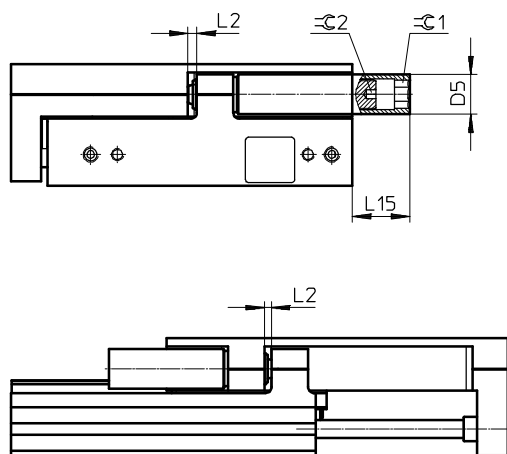
Size	Stroke [mm]	L1	L2	L3	L4	L5	L6	L7	L8
25	200	30	40	80	28.5	43.5	200	80	80

NEW

Drives with guides > Drives with slides >

Mini slides DGST**Dimensions**Download CAD data → www.festo.com

01

DGST-...-P: Setting dimension and projection in the end positions

Size	Stroke [mm]	D5 Ø	L2 Retracted		L2 Advanced		L15	≙ 1	≙ 3
			min.	max.	min.	max.			
6	10, 20, 30, 40	6	2.5	15	1.5	15	6	3	1.3
	50						0		
8	10, 20, 30, 40	7	3	18.5	2.3	18.5	14.8	4	1.5
	50						10.8		
	80						9.8		
10	10	8	3	19.5	2.4	19.5	6.4	5	2
	20, 30, 40, 50						13.9		
	80, 100						5.9		
12	10, 20, 30, 40, 50, 80	10	3	25	2.4	25	15.4	6	2.5
	100						1.9		
16	10	13	3	26	2.35	26	17.85	8	3
	20						20.85		
	30, 40						23.85		
	50						18.85		
	80, 100						10.85		
	125, 150						0		
20	10	15	3.5	36	2.25	36	11.5	10	4
	20						21.5		
	30, 40						31.5		
	50						27.5		
	80						12.5		
	100, 125, 150, 200						0		
25	10	18	3.5	50	2.5	50	28.5	10	4
	20						38.5		
	30, 40, 50						42.5		
	80						32.5		
	100						13.5		
	125, 150, 200						0		

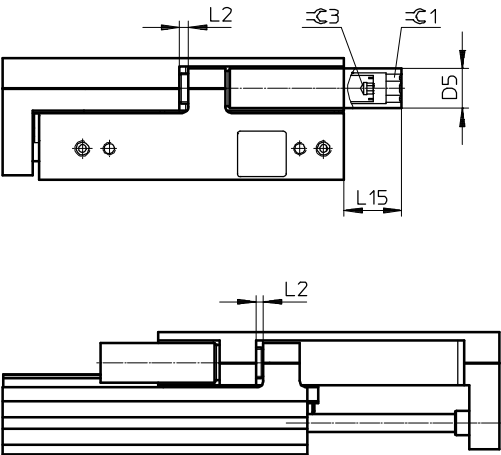
Mini slides DGST

NEW

Download CAD data → www.festo.com

Dimensions

DGST-...-Y12: Setting dimension and projection in the end positions



Size	Stroke [mm]	D5 Ø	L2 Retracted		L2 Advanced		L15	⌀ 1	⌀ 3
			min.	max.	min.	max.			
6	30, 40	6	2.5	13	1.5	13	6	3	_1)
	50						0		
8	30, 40	7	3	19.5	2.3	19.5	14.8	4	2
	50						10.8		
	80						9.8		
10	30, 40, 50	8	3	19	2.4	19	13.9	5	2
	80, 100						5.9		
12	30, 40, 50, 80	10	3	19.5	2.4	19.5	15.4	6	2.5
	100						1.9		
16	30, 40	13	3	19.5	2.35	19.5	23.85	8	3
	50						18.85		
	80, 100						10.85		
	125, 150						0		
20	30, 40	15	3.5	30.5	2.25	30.5	31.5	10	4
	50						27.5		
	80						12.5		
	100, 125, 150, 200						0		
25	30, 40, 50	18	3.5	35	2.5	35	42.5	10	4
	80						32.5		
	100						13.5		
	125, 150, 200						0		

1) There is a slot in the shock absorber for screwing it in.



Increase productivity and save space

- + Thanks to short cycle times and high effective power with twin piston
- + Thanks to high precision and a compact design
- + Thanks to versatile mounting options

Drives with guides > Drives with slides >

Mini slides

SLT

Drives with guides > Drives with slides >

Mini slides

SLT



Overview, configuration and ordering

→ www.festo.com/catalogue/slt



Additional information, support and user documentation

→ www.festo.com/sp/slt



Spare parts service



- + Powerful twin-piston drive
- + Precise ball bearing cage guide
- + Versatile mounting options
- + Easy adjustment of end positions

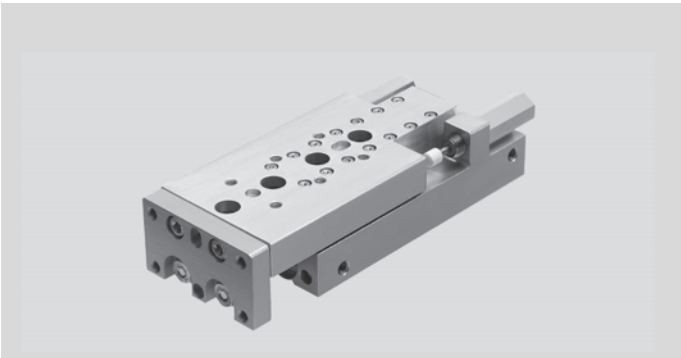
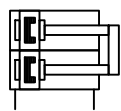
Product range overview

Type/function	Size	Stroke [mm]	Force [N]	Product options			
				A	P	CC	B
SLT							
Double-acting	6	10 ... 200	34 ... 590	■	■	–	–
	10, 16, 20, 25			■	■	■	■

Product options

A	Position sensing	CC	Linear, self-adjusting shock absorber
P	Elastic cushioning, non-adjustable	B	B series

Data sheet



Technical data				Dimensions ➔ Page 392		
Size		6	10	16	20	25
Pneumatic connection		M5			G1/8	
Stroke	[mm]	10, 20, 30, 40, 50	10, 20, 30, 40, 50, 80	10, 20, 30, 40, 50, 80, 100, 125, 150	10, 20, 30, 40, 50, 80, 100, 125, 150, 200	10, 20, 30, 40, 50, 80, 100, 125, 150, 200
Cushioning						
SLT....-P		Elastic cushioning, non-adjustable				
SLT....-CC		–	Linear, self-adjusting shock absorber			
Theoretical force at 6 bar, advancing	[N]	34	94	242	376	590
Theoretical force at 6 bar, retracting	[N]	25	79	218	317	495

Operating conditions						
Size		6	10	16	20	25
Operating pressure	[bar]	1.5 ... 10		1 ... 10		
Ambient temperature ¹⁾	[°C]	-20 ... +60				

1) Note operating range of proximity sensors.

Materials	
Housing	Wrought aluminium alloy
End cap	Wrought aluminium alloy
Guide rail	Tempered steel
Piston rod	High-alloy stainless steel
Seals	HNBR

Drives with guides > Drives with slides >

Mini slides SLT

01

Order code – With cushioning P: elastic cushioning

Pneumatic drives

		SLT	–		–		–	P	–	A
Type										
SLT	Mini slide									
Size										
	Stroke [mm]									
6	10, 20, 30, 40, 50									
10	10, 20, 30, 40, 50, 80									
16	10, 20, 30, 40, 50, 80, 100, 125, 150									
20	10, 20, 30, 40, 50, 80, 100, 125, 150, 200									
25	10, 20, 30, 40, 50, 80, 100, 125, 150, 200									
Cushioning										
P	Elastic cushioning, non-adjustable									
Position sensing										
A	Via proximity sensor									

Order code – With cushioning CC: self-adjusting shock absorber

01

Pneumatic drives

SLT

A

CC

B

Type	
SLT	Mini slide

Size	
	Stroke [mm]
10	30, 40, 50, 80
16	30, 40, 50, 80, 100, 125, 150
20	30, 40, 50, 80, 100, 125, 150, 200
25	30, 40, 50, 80, 100, 125, 150, 200

Position sensing	
A	Via proximity sensor

Cushioning	
CC	Linear, self-adjusting shock absorber

Version	
B	B series

Order example:
SLT-20-150-A-CC-B
Mini slide SLT - size 20 - stroke 150 mm - position sensing via proximity sensor - linear, self-adjusting shock absorber - B series

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

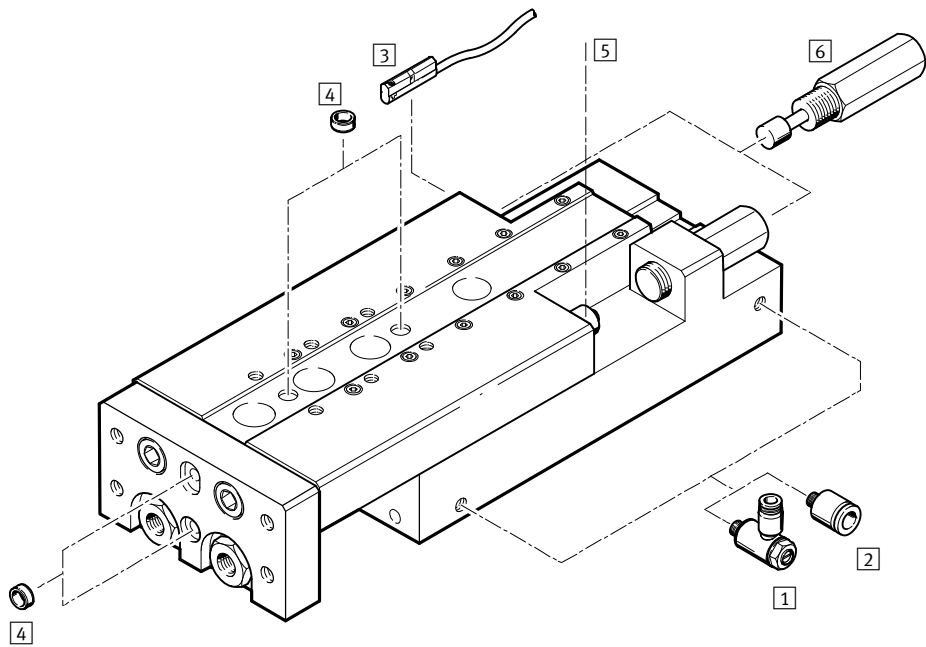
The configurator can be found under Products on the DVD or
➔ www.festo.com/catalogue/...

Enter the type code in the search field.

Mini slides SLT

Accessories

Pneumatic drives



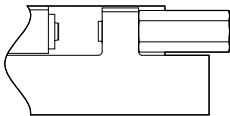
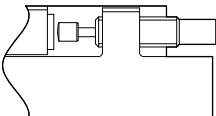
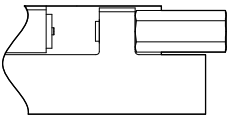
Note
End stops must not be removed.

	→ Page/online
1 One-way flow control valve GRLA	391
2 Push-in fitting QS	1443
3 Proximity sensor SME-/SMT-10	391
4 Centring pin ZBS/centring sleeve ZBH	391
5 Cushioning with stop PF	391

	→ Page/online
6 Cushioning with shock absorber YSRT	388
– Cushioning P	388
– Connecting cable NEBU	391
– Drive/drive connections	slt
– Drive/gripper connections	slt

Cushioning variants

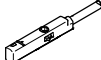
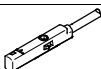
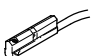
- 5 SLT-...-P-A
with cushioning PF
Precision metal stop for small loads at low speed. At an operating pressure > 3 bar, the stop ensures precise, metal-to-metal contact. The stop can be retrofitted.
- 6 SLT-...-CC-B
with cushioning YSRT
For large loads and high speed. Ensures precise, metal-to-metal contact after the cushioning.
- SLT-...-P-A
with cushioning P
Standard version with elastic cushioning components. Low-cost, no metal-to-metal contact.



Accessories – Ordering data

	Connection		Part no.	Type
	Thread	O.D.		
1 One-way flow control valve with slotted head screw, metal¹⁾ for exhaust air flow control Data sheets ➔ Page 1033				
	M5	3	★ 193137	GRLA-M5-QS-3-D
		4	★ 193138	GRLA-M5-QS-4-D
	G1/8	4	★ 193143	GRLA-1/8-QS-4-D
		6	★ 193144	GRLA-1/8-QS-6-D

1) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

	For size	Connection	Cable length [m]	Part no.	Type
3 Proximity sensor for C-slot, magneto-resistive – N/O contact Data sheets ➔ Page 1222					
	6 ... 25	PNP, cable	2.5	★ 551373	SMT-10M-PS-24V-E-2,5-L-OE
		PNP, plug	0.3	★ 551375	SMT-10M-PS-24V-E-0,3-L-M8D
		PNP, plug	0.3	551376	SMT-10M-PS-24V-E-0,3-Q-M8D
Magnetic reed – N/O contact Data sheets ➔ Page 1218					
	6 ... 25	Contacting, cable	2.5	★ 551365	SME-10M-DS-24V-E-2,5-L-OE
		Contacting, plug	0.3	★ 551367	SME-10M-DS-24V-E-0,3-L-M8D
		Contacting, cable	2.5	★ 551369	SME-10M-ZS-24V-E-2,5-L-OE
Data sheets ➔ Page 1220					
	6 ... 25	Contacting, cable	2.5	173210	SME-10-KL-LED-24
		Contacting, plug	0.3	173212	SME-10-SL-LED-24

	For size	Housing		Slide		Yoke	
		Part no.	Type	Part no.	Type	Part no.	Type
4 Centring pin/sleeve²⁾ Data sheets online: → zbh							
	6	189652	ZBH-5	189652	ZBH-5	525273	ZBS-2
	10	186717	ZBH-7	189652	ZBH-5	189652	ZBH-5
	16	150927	ZBH-9	189652	ZBH-5	186717	ZBH-7
	20	189653	ZBH-12	150927	ZBH-9	150927	ZBH-9
	25	189653	ZBH-12	189653	ZBH-12	189653	ZBH-12
5 Stop, metallic for SLT-...-P-A³⁾							
	6	539278	PF-6-SLT	—		—	
	10	539279	PF-10-SLT	—		—	
	16	539280	PF-16-SLT	—		—	
	20	539281	PF-20-SLT	—		—	
	25	539282	PF-25-SLT	—		—	

2) Packaging unit 10 pieces.

3) Packaging unit 2 pieces.

	For size	Connection	Cable length [m]	Part no.	Type
Connecting cable, straight socket					Data sheets → Page 1543
	6 ... 25	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
Angled socket					Data sheets → Page 1543
	6 ... 25	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3

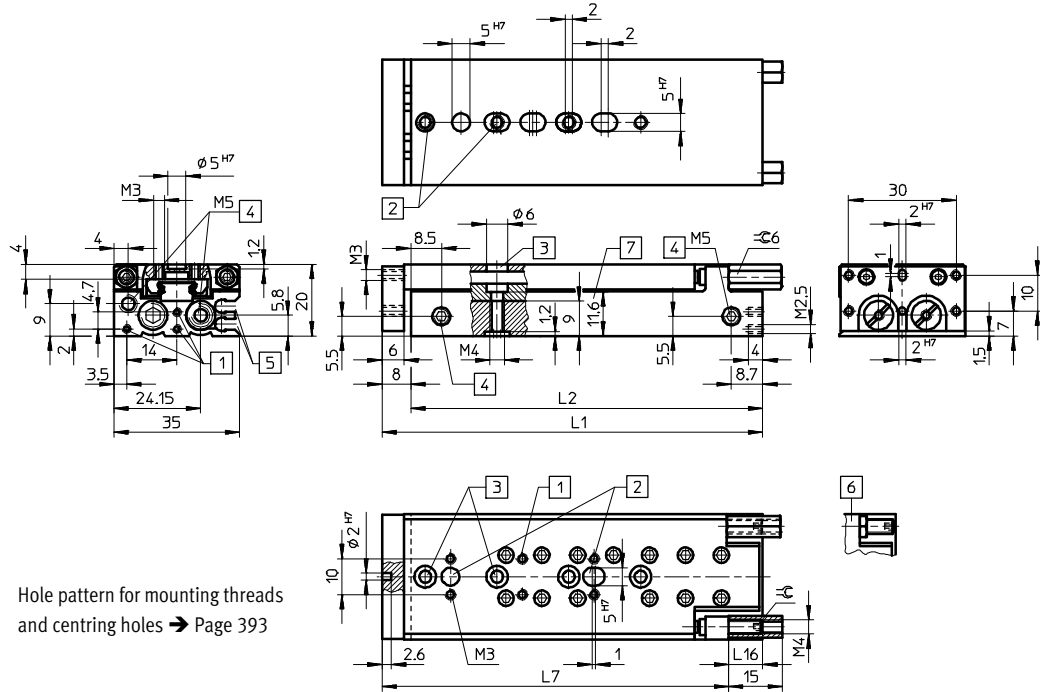
Drives with guides > Drives with slides >

Mini slides SLT

Dimensions

Download CAD data [→ www.festo.com](#)

Size 6



Hole pattern for mounting threads and centring holes → Page 393

- 1

Mounting thread
- 2

Centring holes (centring sleeves included in the scope of delivery)
- 3

Through-holes for mounting the drive
- 4

Supply ports
- 5

Slots for proximity sensor SME/SMT-10
- 6

Flat lock nuts are supplied loose
- 7

Through-hole length for mounting screws

Ø	Stroke	L1	L2	L7	L16	⌀
[mm]	[mm]				1)	1)
6	10	48	40	38	14	2
	20	58	50	48		
	30	68	60	58		
	40	85	77	75		
	50	106	98	96		

1) With elastic cushioning.

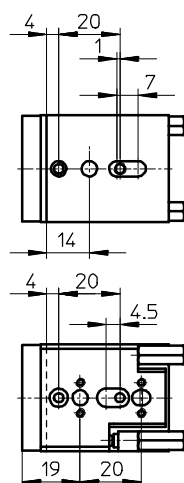
Dimensions

Download CAD data → www.festo.com

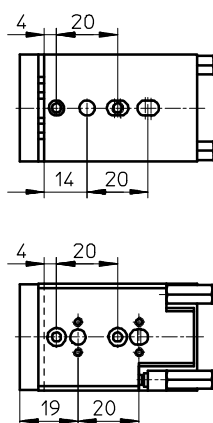
01

Hole pattern for mounting threads and centring holes

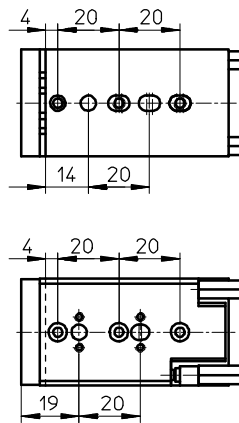
SLT-6-10



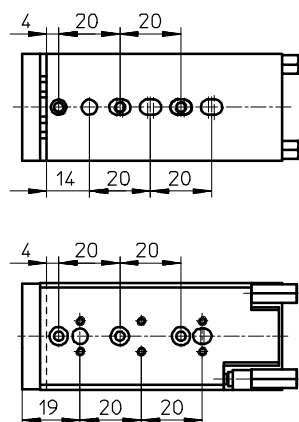
SLT-6-20



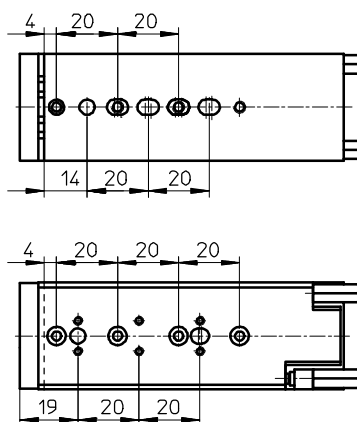
SLT-6-30



SLT-6-40



SLT-6-50



Mini slides SLT

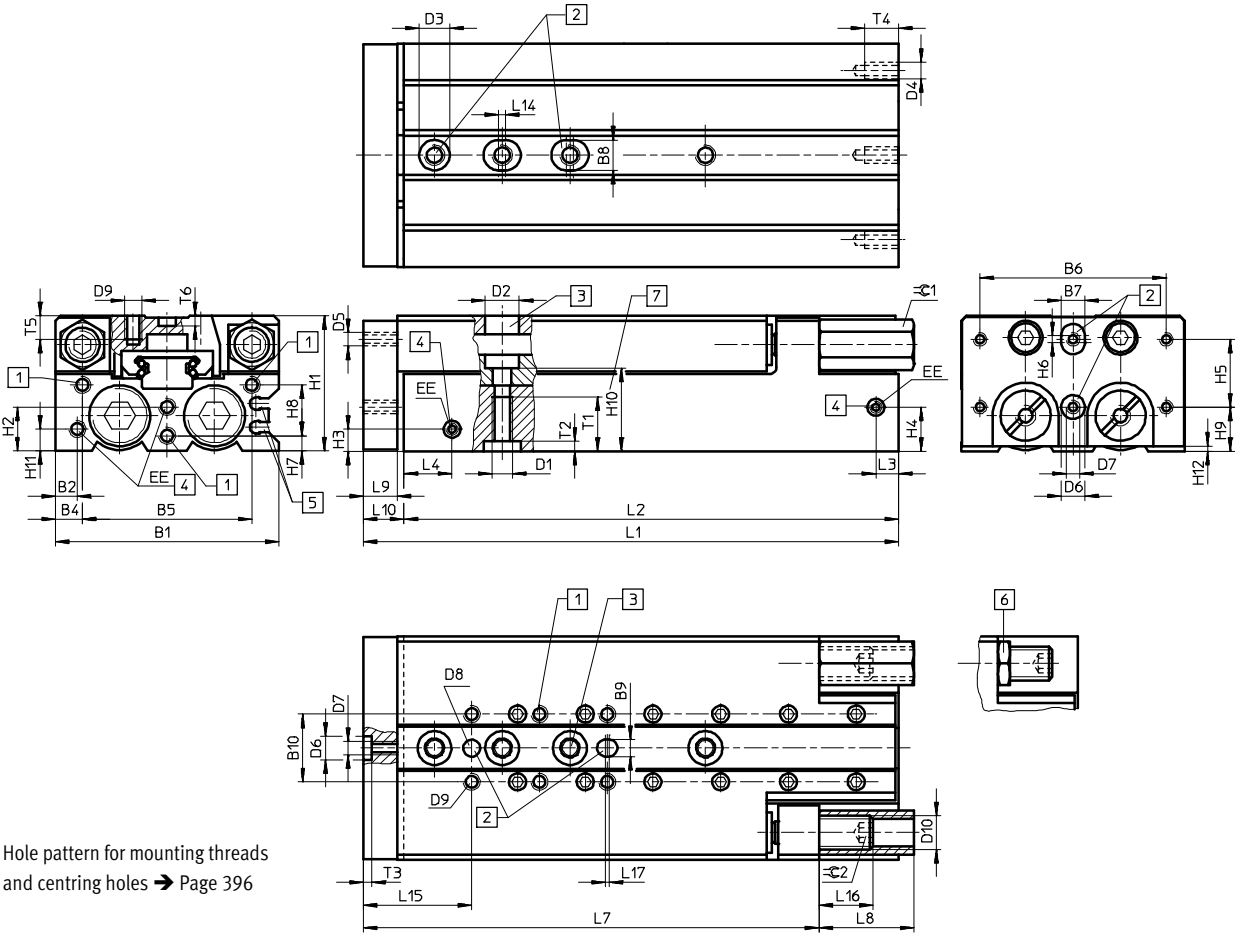
01

Dimensions

Download CAD data [→ www.festo.com](#)

Size 10 ... 25

Pneumatic drives



Hole pattern for mounting threads and centring holes → Page 396

- 1

Mounting thread
- 2

Centring holes (centring sleeves included in the scope of delivery)
- 3

Through-holes for mounting the drive
- 4

Supply ports
- 5

Slots for proximity sensor SME/SMT-10
- 6

Flat lock nuts are supplied loose
- 7

Through-hole length for mounting screws

∅	B1	B2	B4	B5	B6	B7	B8	B9	B10	D1	D2	D3	D4	D5	D6	D7
[mm]						H7	H7	H7		∅	∅	∅ H7			∅ H7	
10	50	5.5	10	30	40	5	7	5	20	M5	8	7	M3	M4	5	M3
16	66	6.5	8	50	55	7	9			M6	10	9	M5	M5	7	M4
20	85	7	15	55	70	9	12	9	40	M8	11	12			9	M5
25	104	8	12	80	80	12		12					M6	M6	12	M6

∅	D8	D9	D10	EE	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12
[mm]	∅ H7															
10	5	M4	M8x1	M5	30	9.4	5.5	11	20	2	4	10	5	15.15	5.5	1.5
16		M5	M10x1		40	13	6.5	13			4.5	15	13	20	6.5	
20	9		M12x1	G1/8	49	19.5	9	19.7			6	19	16	30.5	9	2.5
25	12	M6	M16x1		60	21	10	21	40		5	25	10	34.5	10	1.5

Mini slides SLT

Dimensions

Download CAD data → www.festo.com

01

Ø	Stroke	L1	L2	L3	L4	L7	L8	L9	L10	L14	L15
[mm]	[mm]									min.	
10	10	72	62	7	11.7	62.5	15	8	10	2	25
	20										
	30	82	72			72.5	25				
	40	92	82								
	50	112	102			92.5					
	80	162	152			140.5					
16	10	80	68	6.7	14.2	63.5	22	10	12	2	32
	20										
	30	87	75			70.5					
	40	97	85			80.5					
	50	112	100			90.5	28				
	80	158	146			134.5					
	100	199	187			176.5					
	125	257	245	233.5							
	150	282	270	258.5							
	20	10	97	85	10.7	15.2	74				
20											
30											
40		107	95	84			37				
50		122	110	92							
80		167	155	135							
100		203	191	171							
125		262	250	10.3	17.5	208	59				
150		302	290			249					
200		377	365			323					
25	10	108	94	10.7	18.7	88.5	25	12	14	2	30
	20										
	30										
	40	118	104			92.5	34				
	50	131	117			102.5					
	80	177	163			132.5					
	100	210	196			159.5	57				
	125	264	250	212.5							
	150	304	290	252.5							
	200	379	365	328.5							

Pneumatic drives

Ø	L16		L17	T1	T2	T3	T4	T5	T6	≈ 1	≈ 2	
[mm]	1)	2)	min.								1)	2)
10	20.7	8	1	12	1.5	1.3	7	8	1.2	10	2.5	4
16	23.5	16		16	2.1	1.6	10	7		13	3	5
20	34	17.5		20	2.6	2.1		10		15	4	6
25	49.5	18				2.6	12	11		19	5	8

1) With hydraulic shock absorbers.
2) With elastic cushioning.

Mini slides SLT

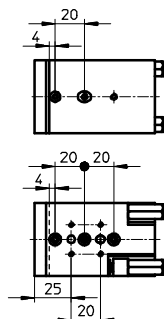
01

Dimensions

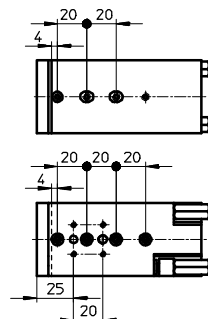
Download CAD data → www.festo.com

Hole pattern for mounting threads and centring holes

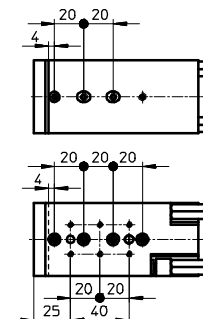
SLT-10-10 ... 30



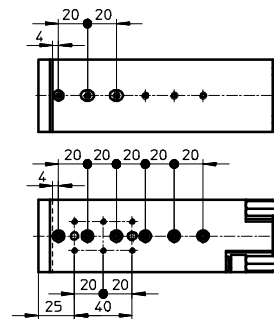
SLT-10-40



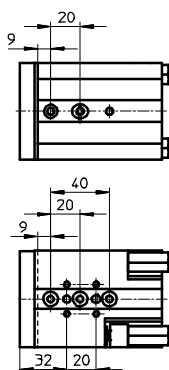
SLT-10-50



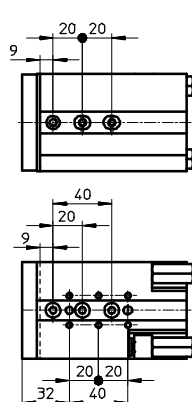
SLT-10-80



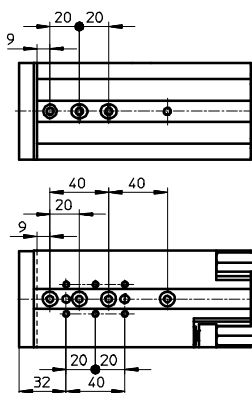
SLT-16-10 ... 40



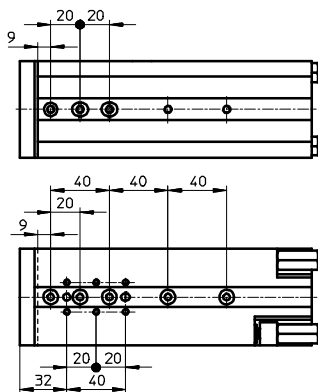
SLT-16-50



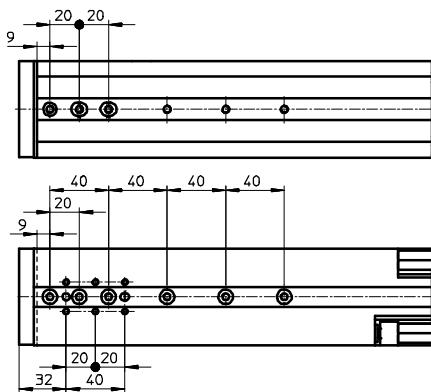
SLT-16-80



SLT-16-100



SLT-16-125/-150



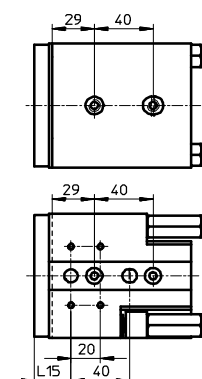
Dimensions

Download CAD data → www.festo.com

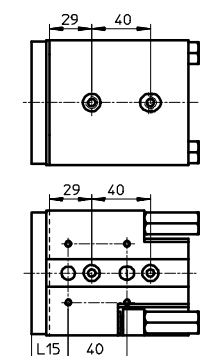
01

Hole pattern for mounting threads and centring holes

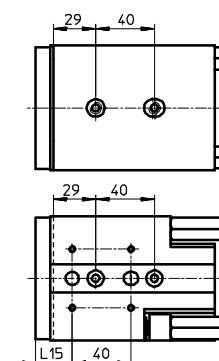
SLT-20-10 ... 40



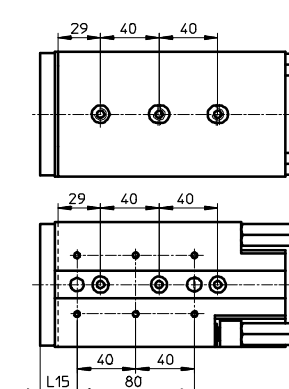
SLT-25-10 ... 40



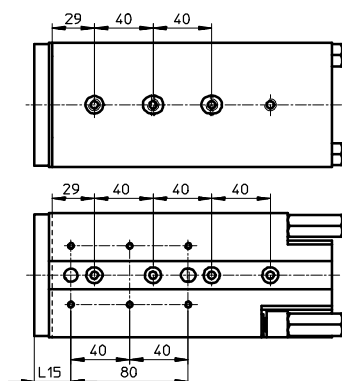
SLT-20/-25-50



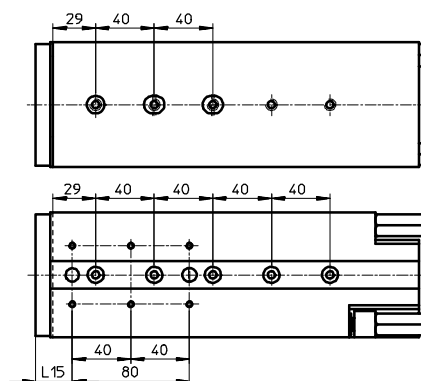
SLT-20/-25-80



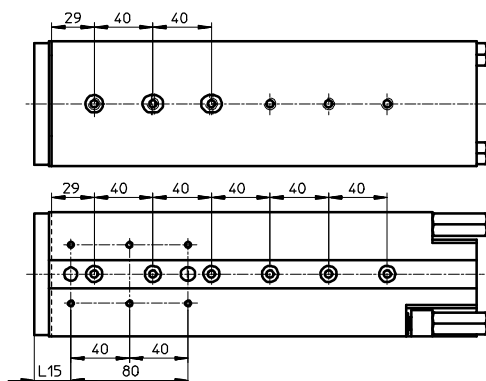
SLT-20/-25-100



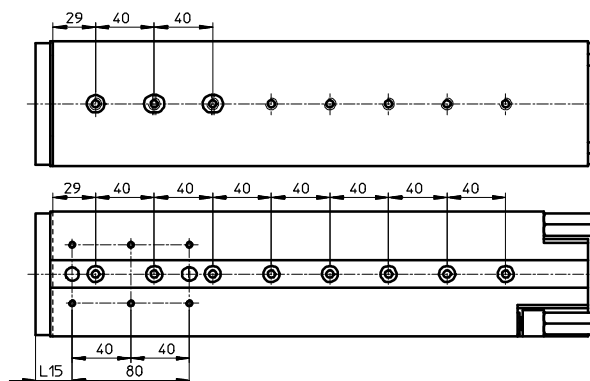
SLT-20/-25-125



SLT-20/-25-150



SLT-20/-25-200



Drives with guides › Drives with slides ›

01

Pneumatic drives



Increase productivity and save costs

- + With a heavy-duty guided drive with minimum cycle times
- + Thanks to high load capacity with integrated guides
- + Thanks to versatile mounting options

Drives with guides › Drives with guide rods ›
Guided drives

DFM ★

Drives with guides > Drives with guide rods >

Guided drives

DFM 



Overview, configuration and ordering

→ www.festo.com/catalogue/dfm



Additional information, support and user documentation

→ www.festo.com/sp/dfm



Quick ordering of basic designs

→ page 403



Selected types in accordance with the ATEX Directive
for explosive atmospheres

→ www.festo.com/catalogue/ex



Spare parts service



- + Drive and guide unit in a single housing
- + Sturdy and precise
- + Plain or recirculating ball bearing guide
- + High resistance to torques and lateral forces

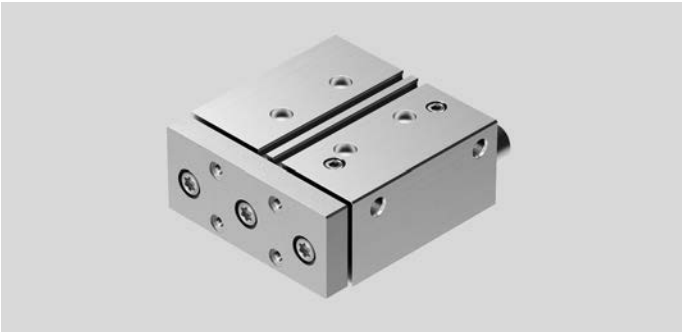
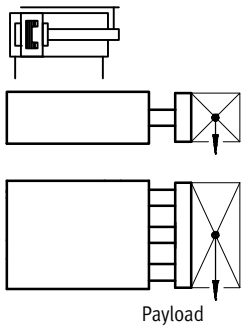
Product range overview

Type/function	Piston Ø [mm]	Stroke [mm]	Force [N]	Product options	
				P	A
Double-acting	DFM-...-GF – Plain-bearing guide				
	6, 10, 12, 16, 20, 25, 32, 40, 50, 63, 80, 100	5 ... 200	17 ... 4712	■	■
	DFM-...-KF – Recirculating ball bearing guide				
	12, 16, 20, 25, 32, 40, 50, 63, 80, 100	10 ... 200	68 ... 4712	■	■

Product options

- P Elastic cushioning rings/plates
 at both ends
- A Position sensing

Data sheet



Technical data						Dimensions → Page 407
Piston Ø	6	10	12	16	20	25
Pneumatic connection	M3	M3	M5	M5	M5	G1/8
Stroke [mm]	5 ... 20		10 ... 100		20 ... 100	
Cushioning	Elastic cushioning rings/plates at both ends					
Theoretical force at 6 bar, advancing [N]	17	47	68	121	188	295
Theoretical force at 6 bar, retracting [N]	13	40	51	90	141	247
Max. payload ¹⁾ [N]	0.6 ... 1.1	2.1 ... 3.7	19 ... 31	37 ... 82	42 ... 110	86 ... 123
Torque load ¹⁾ [Nm]	0.006 ... 0.011	0.034 ... 0.057	0.40 ... 0.88	1.14 ... 2.92	1.70 ... 4.64	2.90 ... 6.14
Protection against rotation	Guide rods with yoke, with plain-bearing or recirculating ball bearing guide					

Piston Ø	32	40	50	63	80	100
Pneumatic connection	G1/8	G1/8	G1/4	G1/4	G3/8	G3/8
Stroke [mm]	20 ... 200	25 ... 200				
Cushioning	Elastic cushioning rings/plates at both ends					
Theoretical force at 6 bar, advancing [N]	482	754	1178	1870	3016	4712
Theoretical force at 6 bar, retracting [N]	415	686	1057	1750	2827	4418
Max. payload ¹⁾ [N]	126 ... 188	127 ... 180	174 ... 257	174 ... 257	220 ... 352	332 ... 568
Torque load ¹⁾ [Nm]	5.00 ... 9.62	5.55 ... 10.25	9.60 ... 19.35	10.70 ... 21.98	17.10 ... 27.20	25.70 ... 53.40
Protection against rotation	Guide rods with yoke, with plain-bearing or recirculating ball bearing guide					

1) Dependent on stroke

Drives with guides > Drives with guide rods >

Guided drives DFM

01

Data sheet

Operating conditions													
Piston Ø	6	10	12	16	20	25	32	40	50	63	80	100	
Operating pressure [bar]	2 ... 8	1.5 ... 8	2 ... 10			1.5 ... 10			1 ... 10		0.5 ... 10		
Ambient temperature ¹⁾													
DFM-...-GF [°C]	-10 ... +60		-20 ... +80										
DFM-...-KF [°C]	-		-5 ... +60										

1) Note operating range of proximity sensors.

Materials		
Piston Ø	6, 10	12 ... 100
Piston rod	High-alloy stainless steel	
Housing	Anodised wrought aluminium alloy	
Guide rods		
DFM-...-GF	High-alloy stainless steel	
DFM-...-KF	Hard-chromium plated tempered steel	
Yoke plate	Aluminium	Tempered steel
Seals	NBR, HNBR	NBR

Order code

DFM

-

-

-

P

-

A

-

Type

DFM

Double-acting guided drive

Piston Ø [mm]

Stroke [mm]

Cushioning

P

Elastic cushioning rings/plates at both ends

Position sensing

A

For proximity sensor

Guidance

GF

Plain-bearing guide

KF

Recirculating ball bearing guide

1

1 Not with piston Ø 6, 10

Order example:

DFM-12-10-P-A-GF

Double-acting guided drive DFM - piston diameter 12 mm - stroke 10 mm - elastic cushioning rings/plates at both ends - position sensing via proximity sensor - plain-bearing guide

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
➔ www.festo.com/catalogue/...

Enter the type code in the search field.

★ Quick ordering¹⁾

GF – Plain-bearing guide

Part no.	Type
Piston Ø 12 mm	
170824	DFM-12-10-P-A-GF
170825	DFM-12-20-P-A-GF
170826	DFM-12-25-P-A-GF
170827	DFM-12-30-P-A-GF
170828	DFM-12-40-P-A-GF
170829	DFM-12-50-P-A-GF
170830	DFM-12-80-P-A-GF
170831	DFM-12-100-P-A-GF
Piston Ø 16 mm	
170832	DFM-16-10-P-A-GF
170833	DFM-16-20-P-A-GF
170834	DFM-16-25-P-A-GF
170835	DFM-16-30-P-A-GF
170836	DFM-16-40-P-A-GF
170837	DFM-16-50-P-A-GF
170838	DFM-16-80-P-A-GF
170839	DFM-16-100-P-A-GF
Piston Ø 20 mm	
170840	DFM-20-20-P-A-GF
170841	DFM-20-25-P-A-GF
170842	DFM-20-30-P-A-GF
170843	DFM-20-40-P-A-GF
170844	DFM-20-50-P-A-GF
170845	DFM-20-80-P-A-GF
170846	DFM-20-100-P-A-GF

Part no.	Type
Piston Ø 25 mm	
170847	DFM-25-20-P-A-GF
170848	DFM-25-25-P-A-GF
170849	DFM-25-30-P-A-GF
170850	DFM-25-40-P-A-GF
170851	DFM-25-50-P-A-GF
170852	DFM-25-80-P-A-GF
170853	DFM-25-100-P-A-GF
Piston Ø 32 mm	
170854	DFM-32-20-P-A-GF
170855	DFM-32-25-P-A-GF
170856	DFM-32-30-P-A-GF
170857	DFM-32-40-P-A-GF
170858	DFM-32-50-P-A-GF
170859	DFM-32-80-P-A-GF
170860	DFM-32-100-P-A-GF
170861	DFM-32-125-P-A-GF
170862	DFM-32-160-P-A-GF
170863	DFM-32-200-P-A-GF

Part no.	Type
Piston Ø 40 mm	
170864	DFM-40-25-P-A-GF
170865	DFM-40-50-P-A-GF
170866	DFM-40-80-P-A-GF
170867	DFM-40-100-P-A-GF
170868	DFM-40-125-P-A-GF
170869	DFM-40-160-P-A-GF
170870	DFM-40-200-P-A-GF
Piston Ø 50 mm	
170871	DFM-50-25-P-A-GF
170872	DFM-50-50-P-A-GF
170873	DFM-50-80-P-A-GF
170874	DFM-50-100-P-A-GF
170875	DFM-50-125-P-A-GF
170876	DFM-50-160-P-A-GF
170877	DFM-50-200-P-A-GF
Piston Ø 63 mm	
170878	DFM-63-25-P-A-GF
170879	DFM-63-50-P-A-GF
170880	DFM-63-80-P-A-GF
170881	DFM-63-100-P-A-GF
170882	DFM-63-125-P-A-GF
170883	DFM-63-160-P-A-GF
170884	DFM-63-200-P-A-GF

KF – Recirculating ball bearing guide

Part no.	Type
Piston Ø 12 mm	
170899	DFM-12-10-P-A-KF
170900	DFM-12-20-P-A-KF
170901	DFM-12-25-P-A-KF
170902	DFM-12-30-P-A-KF
170903	DFM-12-40-P-A-KF
170904	DFM-12-50-P-A-KF
170905	DFM-12-80-P-A-KF
170906	DFM-12-100-P-A-KF
Piston Ø 16 mm	
170907	DFM-16-10-P-A-KF
170908	DFM-16-20-P-A-KF
170909	DFM-16-25-P-A-KF
170910	DFM-16-30-P-A-KF
170911	DFM-16-40-P-A-KF
170912	DFM-16-50-P-A-KF
170913	DFM-16-80-P-A-KF
170914	DFM-16-100-P-A-KF
Piston Ø 20 mm	
170915	DFM-20-20-P-A-KF
170916	DFM-20-25-P-A-KF
170917	DFM-20-30-P-A-KF
170918	DFM-20-40-P-A-KF
170919	DFM-20-50-P-A-KF
170920	DFM-20-80-P-A-KF
170921	DFM-20-100-P-A-KF

Part no.	Type
Piston Ø 25 mm	
170922	DFM-25-20-P-A-KF
170923	DFM-25-25-P-A-KF
170924	DFM-25-30-P-A-KF
170925	DFM-25-40-P-A-KF
170926	DFM-25-50-P-A-KF
170927	DFM-25-80-P-A-KF
170928	DFM-25-100-P-A-KF
Piston Ø 32 mm	
170929	DFM-32-20-P-A-KF
170930	DFM-32-25-P-A-KF
170931	DFM-32-30-P-A-KF
170932	DFM-32-40-P-A-KF
170933	DFM-32-50-P-A-KF
170934	DFM-32-80-P-A-KF
170935	DFM-32-100-P-A-KF
170936	DFM-32-125-P-A-KF
170937	DFM-32-160-P-A-KF
170938	DFM-32-200-P-A-KF

Part no.	Type
Piston Ø 40 mm	
170939	DFM-40-25-P-A-KF
170940	DFM-40-50-P-A-KF
170941	DFM-40-80-P-A-KF
170942	DFM-40-100-P-A-KF
170943	DFM-40-125-P-A-KF
170944	DFM-40-160-P-A-KF
170945	DFM-40-200-P-A-KF
Piston Ø 50 mm	
170946	DFM-50-25-P-A-KF
170947	DFM-50-50-P-A-KF
170948	DFM-50-80-P-A-KF
170949	DFM-50-100-P-A-KF
170950	DFM-50-125-P-A-KF
170951	DFM-50-160-P-A-KF
170952	DFM-50-200-P-A-KF
Piston Ø 63 mm	
170953	DFM-63-25-P-A-KF
170954	DFM-63-50-P-A-KF
170955	DFM-63-80-P-A-KF
170956	DFM-63-100-P-A-KF
170957	DFM-63-125-P-A-KF
170958	DFM-63-160-P-A-KF
170959	DFM-63-200-P-A-KF

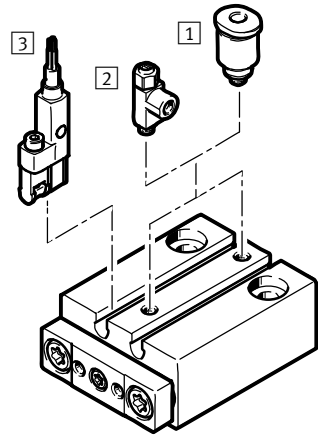
1) All products in this table are easy to select and quick to order.

Guided drives DFM ★

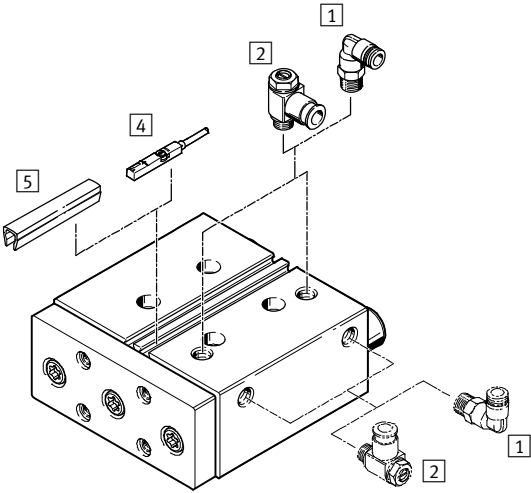
01 Accessories

Pneumatic drives

Piston Ø 6, 10



Piston Ø 12 ... 100

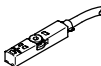
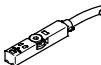
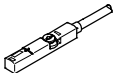


→ Page/online		
1	Push-in fitting QS	1443
2	One-way flow control valve GRLA	405
3	Proximity sensor SMT-10G	405
4	Proximity sensor SME-/SMT-8	405
5	Slot cover ABP-5-S	405
–	Centring sleeve ZBH	406
–	Connecting cable NEBU	406
–	Drive/drive connections	dfm

Accessories – Ordering data

Function	For Ø	Connection		Part no.	Type
		Thread	O.D.		
2 One-way flow control valve with slotted head screw, metal ¹⁾ for exhaust air flow control					
	12, 16, 20	M5	3	★ 193137	GRLA-M5-QS-3-D
	25	G1/8	3	★ 193142	GRLA-1/8-QS-3-D
	32	G1/8	4	★ 193143	GRLA-1/8-QS-4-D
	40	G1/8	6	★ 193144	GRLA-1/8-QS-6-D
	50, 63	G1/4	6	★ 193146	GRLA-1/4-QS-6-D
	80, 100	G3/8	8	★ 193145	GRLA-3/8-QS-8-D

1) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
3 Proximity sensor for C-slot, magneto-resistive – N/O contact					
Data sheets online: → smt					
	6, 10	PNP, cable	2.5	547862	SMT-10G-PS-24V-E-2,5Q-OE
		PNP, plug	0.3	547863	SMT-10G-PS-24V-E-0,3Q-M8D
		NPN, cable	2.5	8065030	SMT-10G-NS-24V-E-2,5Q-OE
		NPN, plug	0.3	8065029	SMT-10G-NS-24V-E-0,3Q-M8D
4 Proximity sensor for T-slot, magneto-resistive – N/O contact					
Data sheets → Page 1206					
	12 ... 100	PNP, cable	2.5	★ 574335	SMT-8M-A-PS-24V-E-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-A-PS-24V-E-0,3-M8D
		PNP, plug	0.3	★ 574337	SMT-8M-A-PS-24V-E-0,3-M12
		NPN, cable	2.5	★ 574338	SMT-8M-A-NS-24V-E-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-A-NS-24V-E-0,3-M8D
Magneto-resistive – N/C contact					
Data sheets → Page 1206					
	12 ... 100	PNP, cable	7.5	★ 574340	SMT-8M-A-PO-24V-E-7,5-OE
Magnetic reed – N/O contact					
Data sheets → Page 1201					
	12 ... 100	Contacting, cable	2.5	★ 543862	SME-8M-DS-24V-K-2,5-OE
		Contacting, cable	5.0	★ 543863	SME-8M-DS-24V-K-5,0-OE
		Contacting, cable	2.5	★ 543872	SME-8M-ZS-24V-K-2,5-OE
		Contacting, plug	0.3	★ 543861	SME-8M-DS-24V-K-0,3-M8D
Data sheets → Page 1203					
	12 ... 100	Contacting, cable	2.5	150855	SME-8-K-LED-24
		Contacting, plug	0.3	150857	SME-8-S-LED-24
Magnetic reed – N/C contact					
Data sheets → Page 1203					
	12 ... 100	Contacting, cable	7.5	160251	SME-8-O-K-LED-24
5 Slot cover ²⁾					
	12 ... 100	–	–	151680	ABP-5-S

2) Packaging unit 2x 0.5 m.

Drives with guides > Drives with guide rods >

Guided drives DFM ★

01

Accessories – Ordering data

	For Ø	For housing		For yoke plate	
		Part no.	Type	Part no.	Type
Centring sleeves ¹⁾		Data sheets online: → zbh			
	12	189652	ZBH-5	189652	ZBH-5
		150927	ZBH-9		
	16	189652	ZBH-5	189652	ZBH-5
		150927	ZBH-9		
	20	186717	ZBH-7	150927	ZBH-9
		150927	ZBH-9		
	25	186717	ZBH-7	150927	ZBH-9
		150927	ZBH-9		
	32	150927	ZBH-9	150927	ZBH-9
		189653	ZBH-12		
	40	150927	ZBH-9	150927	ZBH-9
		189653	ZBH-12		
	50	189653	ZBH-12	189653	ZBH-12
	63	189653	ZBH-12	189653	ZBH-12
	80	189653	ZBH-12	189653	ZBH-12
	100	191409	ZBH-15	191409	ZBH-15

1) 2 included in the scope of delivery in each case. Supplied in packs of 10 for repeat orders.

	For size	Connection	Cable length [m]	Part no.	Type
Connecting cable, straight socket				Data sheets → Page 1543	
	12 ... 100	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
		M12x1, 5-pin	2.5	★ 541363	NEBU-M12G5-K-2.5-LE3
			5.0	★ 541364	NEBU-M12G5-K-5-LE3
Angled socket				Data sheets → Page 1543	
	12 ... 100	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3
		M12x1, 5-pin	2.5	541367	NEBU-M12W5-K-2.5-LE3
			5.0	541370	NEBU-M12W5-K-5-LE3

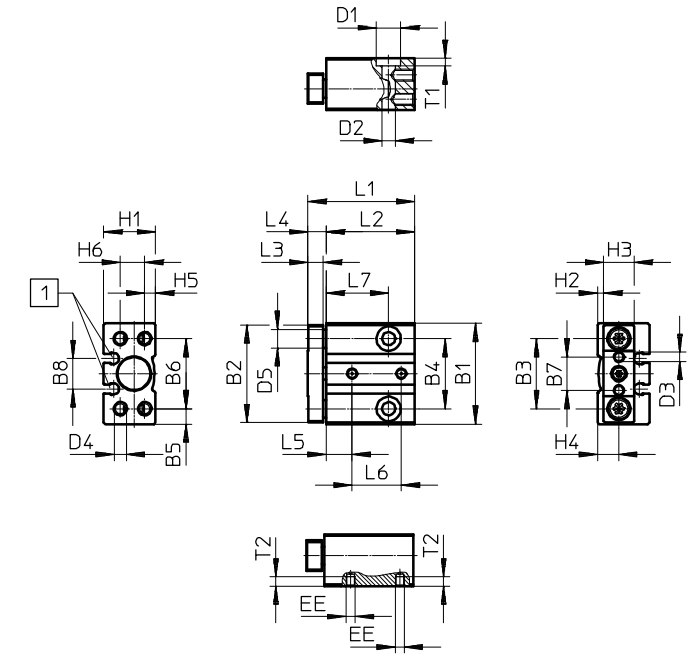
Dimensions

Ø 6, 10

Download CAD data www.festo.com

01

Pneumatic drives



1 Mounting slot for proximity sensor SMT-10G

Ø	B1	B2	B3	B4	B5	B6	B7	B8	D1 Ø	D2 Ø
[mm]										
6	29	28	20.5	20.5	4.3	20.5	9	9.7	6.2	3.3
10	33	32	23	23	5	23	11	10	8	4.3

Ø	D3	D4	D5 Ø h8	EE	H1	H2	H3	H4	H5	H6
[mm]										
6	M2.5	M3	5	M3	14.5	1.8	9	6.3	3	6
10	M3	M4	6	M3	17	2	10	7	3.5	8

Ø	Stroke	L1	L2	L3	L4	L5	L6	L7	T1	T2
[mm]	[mm]									
6	5	28	23.5	3.5	4.5	7	12	14	3	3
	10	33	28.5				17	19		
	15	38	33.5				22	24		
	20	43	38.5				27	29		
10	5	30	24	5	6	8.5	11.1	15.5	2.5	3
	10	35	29				16.1	20.5		
	15	40	34				21.1	25.5		
	20	45	39				26.1	30.5		

Dimensions

∅	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	D1	D2
[mm]																				∅
12	60	58	42.4	30	4.5	51	20.5	19	20	20	9.5	41	19.5	21	8.5	41	25	2.5	M5	8
16	67	65	45.9	33.5	4.5	58	22	23	23.5	20	10.5	46	21.3	24.4	–	–	28	4	M5	7.5

∅	D3	D4	D5	D6	D7		D8	D9	EE	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10
	∅		∅		∅		∅												
[mm]	H7		H7		GF	KF	H7												
12	9	M4	5	M4	10 _{h8}	8 _{h7}	5	M4	M5	28	26	24	14	4	20	14	4	20	10
16	9	M5	5	M5	12 _{h8}	10 _{h7}	5	–	M5	32	30	26.5	16	4	24	16	7.4	20	10

∅	Stroke	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10
[mm]	[mm]										
12	10	59	46	10	13	11.4	9.5	–	21	–	34
	20	69	56					–		–	
	25	74	61					–		20	
	30	79	66					–		20	
	40	95	76					6		20	
	50	105	86					6		40	
	80	135	116					6		40	
	100	155	136					6		40	
16	10	60	48	10	12	11.9	10.6	–	22	–	34
	20	70	58					–		–	
	25	75	63					–		20	
	30	80	68					–		20	
	40	107	78					17		20	
	50	117	88					17		40	
	80	147	118					17		40	
	100	167	138					17		40	

∅	Stroke	L11	L12	L13	T1	T2	T3	T4	T5	T6	T7
[mm]	[mm]										
12	10	–	11.4	5	9	9.4	2.1	8	1.2	1	8
	20	–									
	25	–									
	30	–									
	40	–									
	50	–									
	80	–									
	100	80									
16	10	–	11.9	–	9	4.6	2.1	10	1.2	1	–
	20	–									
	25	–									
	30	–									
	40	–									
	50	–									
	80	–									
	100	80									

Dimensions

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01

Ø	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	D1	D2 Ø	D3 Ø H7	D4
[mm]																		
20	83	81	53.6	41.5	6.5	70	26.5	30	26.5	30	12.5	58	26	31	M6	9	9	M5
25	95	93	70	47.5	15.5	64	30	35	27.5	40	13.5	68	29	37	M6	9	9	M6

Ø	D5 Ø H7	D6	D7 Ø		D8 Ø H7	EE	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10
[mm]			GF	KF												
20	9	M5	14 _{h8}	12 _{h7}	7	M5	36	34	29.5	17	4.5	27	18	7	20	10
25	9	M6	16 _{h8}	14 _{h7}	7	G1/8	44	42	34.8	19	4.5	35	22	12	20	10

Ø [mm]	Stroke [mm]	L1	L2	L3	L4	L5	L6	L7	L8	L9
20	20	75	61	12	14	14	10.5	–	26	–
	25	80	66					–		20
	30	85	71					–		20
	40	121	81					26		20
	50	131	91					26		40
	80	161	121					26		40
	100	181	141					26		40
25	20	93	65.6	12	14	17.5	9.5	13.4	26	–
	25	98	70.6					13.4		20
	30	103	75.6					13.4		20
	40	123	85.6					23.4		20
	50	133	95.6					23.4		40
	80	163	125.6					23.4		40
	100	183	145.6					23.4		40

Ø [mm]	Stroke [mm]	L10	L11	L12	T1	T2	T3	T4	T5	T6
20	20	40	–	14	12	5.7	2.1	10	2.1	1.6
	25		–							
	30		–							
	40		–							
	50		–							
	80		–							
	100		80							
25	20	40	–	15	14	5.7	2.1	12	2.1	1.6
	25		–							
	30		–							
	40		–							
	50		–							
	80		–							
	100		80							

Guided drives DFM ★

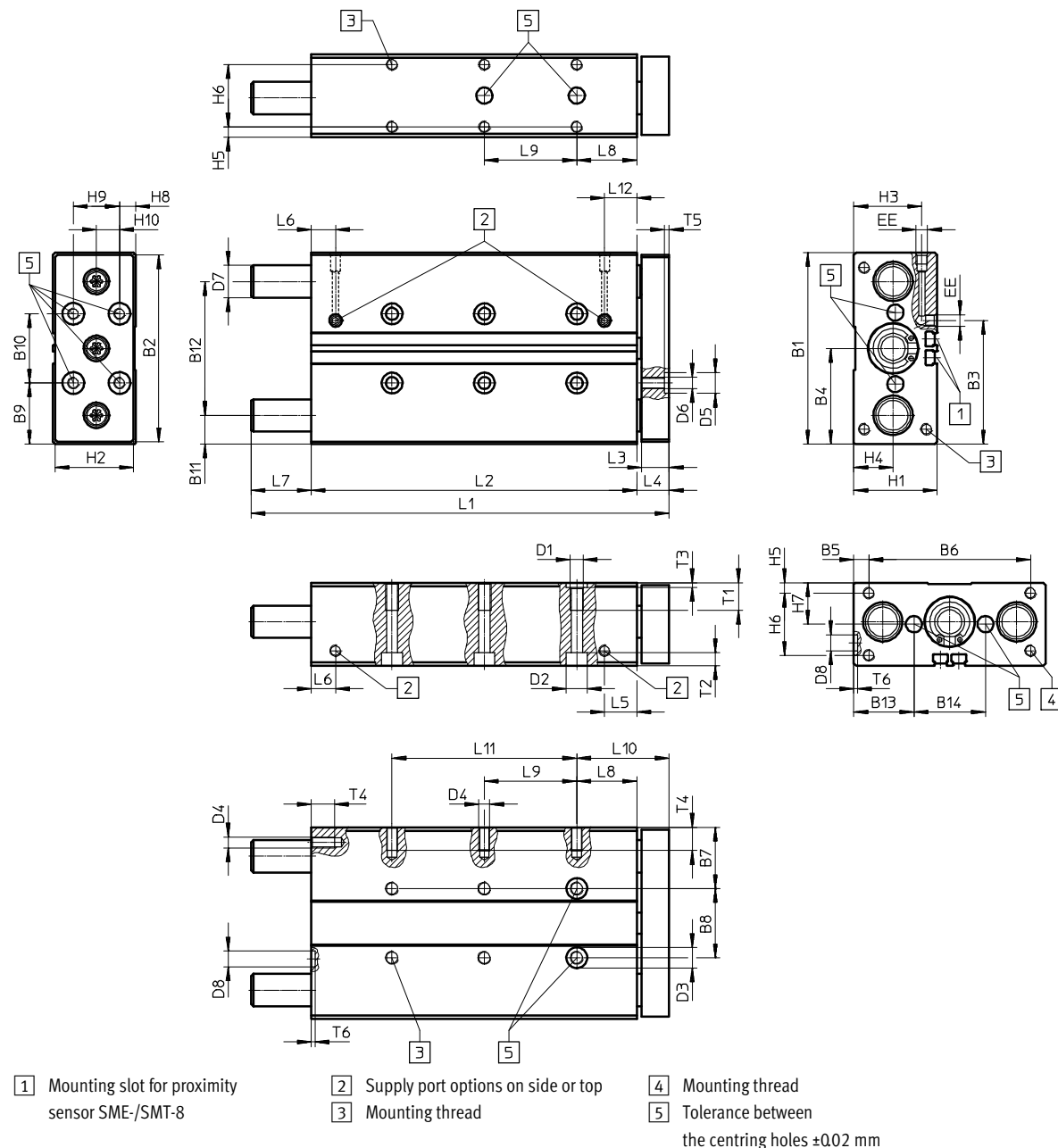
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01

Dimensions

Ø 32 ... 63

Pneumatic drives



Note

As the guide rods project beyond the housing when the unit is in its retracted end position (→ dimension L7), a recess must be provided in the mounting surface if the unit is to be mounted on the end face so that the guide rods can move freely.

Dimensions

Download CAD data → www.festo.com

01

∅	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	D1	D2 ∅	D3 ∅ H7
[mm]																	
32	110	108	81	55	20	70	33.5	43	35	40	16	78	32.5	45	M8	11	12
40	120	118	94	60	15	90	34.5	51	35	50	16	88	32.5	55	M8	11	12
50	148	146	116.5	74	19	110	42	64	44	60	19	110	40	68	M8	11	12
63	162	160	139	81	9	144	41	80	41	80	18.5	125	39.5	83	M10	15	12

∅	D4	D5 ∅ H7	D6	D7 ∅		D8 ∅ H7	EE	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10
[mm]				GF	KF	H7											
32	M6	9	M6	20 _{h8}	16 _{h7}	9	G1/8	49	47	38.5	22	6	37	24.5	8.5	30	15
40	M8	9	M6	20 _{h8}	16 _{h7}	9	G1/8	54	52	40.5	24	6	42	27	10	30	15
50	M8	12	M8	25 _{h8}	20 _{h7}	12	G1/4	64	62	50.5	29.5	7	50	32	12	40	20
63	M10	12	M8	25 _{h8}	20 _{h7}	12	G1/4	78	76	55	32	9	60	39	19	40	20

∅	Stroke [mm]	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	T1	T2	T3	T4	T5	T6
[mm]																			
32	20	101	68	14	16	17	12	17	29	–	45	–	17	15	6.8	2.6	12	2.1	2.1
	25	106	73					17		20		–							
	30	111	78					17		20		–							
	40	121	88					17		20		–							
	50	131	98					17		40		–							
	80	179	128					35		40		–							
	100	199	148					35		40		80							
	125	244	173					55		40		80							
	160	279	208					55		40		120							
	200	319	248					55		40		160							
40	25	106	76	14	16	17.8	13.1	14	29	20	45	–	17.8	15	6.8	2.6	16	2.1	2.1
	50	131	101					14		40		–							
	80	179	131					32		40		–							
	100	199	151					32		40		80							
	125	244	176					52		40		80							
	160	279	211					52		40		120							
	200	319	251					52		40		160							
50	25	118	77	16	18	17.8	14.2	23	32	20	50	–	17.8	15	6.8	2.6	16	2.6	2.6
	50	143	102					23		40		–							
	80	194	132					44		40		–							
	100	214	152					44		40		80							
	125	259	177					64		40		80							
	160	294	212					64		40		120							
	200	334	252					64		40		160							
63	25	118	83	16	18	18.5	14.8	17	32	20	50	–	18.5	20	9	2.6	20	2.6	2.6
	50	143	108					17		40		–							
	80	194	138					38		40		80							
	100	214	158					38		40		80							
	125	259	183					58		40		120							
	160	294	218					58		40		160							
	200	334	258					58		40		200							

Dimensions

Download CAD data [www.festo.com](#)

Ø	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	D1	D2	D3
[mm]																Ø	Ø
80	200	192	162.5	100	21.5	157	48.5	103	41	110	22.5	155	48.5	103	M10	15	12
100	240	232	201	120	21	198	54	132	56	120	26	188	57	126	M12	18	15

Ø	D4	D5	D6	D7		D8	EE	H1	H2	H3	H4	H6	H7	H8	H9	H10
[mm]		Ø H7		Ø		Ø H7										
				GF	KF											
80	M10	12	M10	30 _{h8}	25 _{h6}	12	G3/8	92	84	61	35	9	62	40	16	60
100	M12	15	M12	35 _{h8}	30 _{h6}	15	G3/8	112	104	66	39.5	10	68	44	16	80

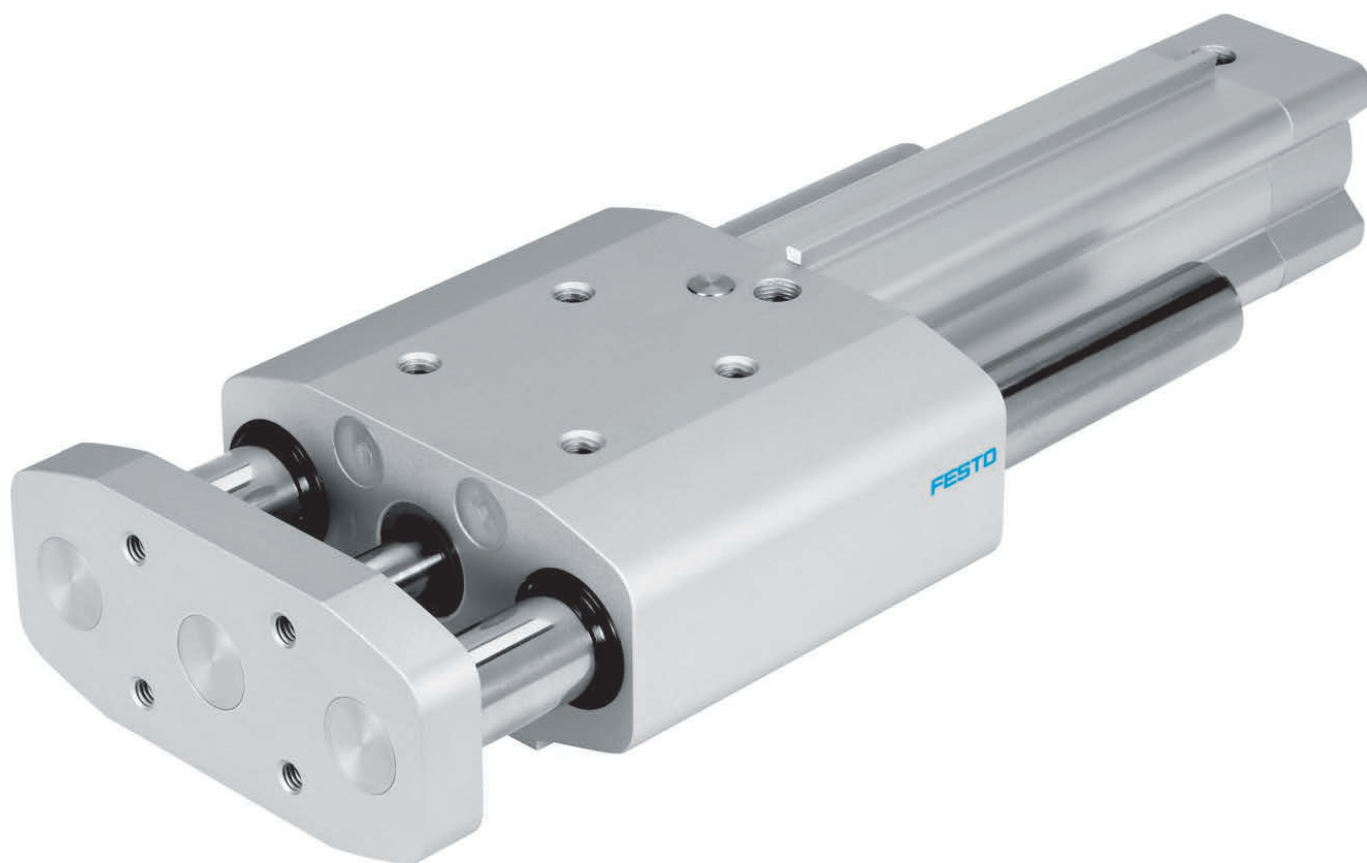
Ø	Stroke	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	T1	T2	T3	T4	T5	T6	≈C1	≈C2
[mm]	[mm]										±0.1										
80	25	137	93	20	23	23	16	21	41	20	64	–	23	20	9	2.6	20	2.6	2.6	27	30
	50	183	118					42		40		–									
	80	243	148					72		40		–									
	100	263	168					72		40		80									
	125	288	193					72		40		80									
	160	323	228					72		40		120									
	200	363	268					72		40		160									
100	25	150	109	20	23	29	20	18	13	40	36	–	29	25	11	3.1	24	3.1	3.1	32	30
	50	197	134					40		40		80									
	80	257	164					70		40		80									
	100	277	184					70		40		120									
	125	302	209					70		40		160									
	160	337	244					70		40		160									
	200	377	284					70		40		200									

Pneumatic drives

Drives with guides › Drives with guide rods ›

01

Pneumatic drives



Save time and money during maintenance and commissioning

- + Thanks to easy-to-clean clean design and corrosion-resistant surfaces
- + Thanks to high load capacity with integrated guides
- + With self-adjusting end-position cushioning PPS

Drives with guides › Drives with guide rods ›
Guided drive, clean design

DGRF-C

Drives with guides > Drives with guide rods >

Guided drive, clean design

DGRF-C



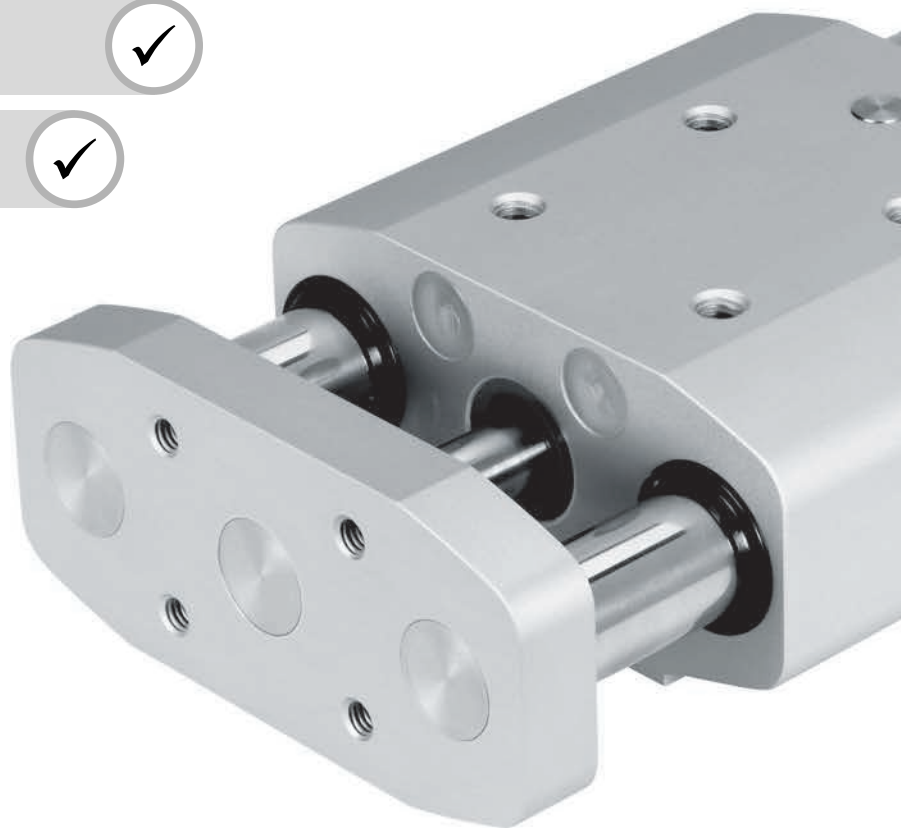
Overview, configuration and ordering

→ www.festo.com/catalogue/dgrf-c



Additional information, support and user documentation

→ www.festo.com/sp/dgrf-c



- + Easy-to-clean design
- + Plain-bearing guide
- + Cushioning at both ends
- + Self-adjusting pneumatic end-position cushioning PPS
- + Optional dry-running seal for long service life, even with frequent cleaning

Guided drives DGRF-C, Clean Design

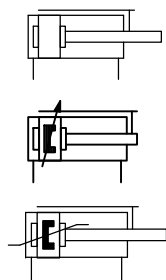
Product range overview

Type/function	Piston Ø [mm]	Stroke [mm]	Product options					
			P	PPV	PPS	A	R	A3
DGRF-C								
Double-acting	20, 25	10 ... 400	■	–	–	–	–	■
	32	10 ... 400	■	■	■	■	■	■
	40, 50, 63	10 ... 400	–	■	■	■	■	■

Product options

P	Elastic cushioning rings at both ends	PPV	Pneumatic cushioning, adjustable at both ends	PPS	Pneumatic cushioning, self-adjusting	A	Position sensing
						R	Mounting rail for proximity sensor
						A3	Suitable for unlubricated operation

Data sheet



Technical data				Dimensions ➔ Page 423		
Piston Ø	20	25	32	40	50	63
Pneumatic connection	M5	M5	G1/8	G1/4	G1/4	G3/8
Stroke [mm]	10 ... 400					
Cushioning						
DGRF- ... P	Elastic cushioning rings at both ends			–		
DGRF- ... PPV	–		Pneumatic cushioning, adjustable at both ends			
DGRF- ... PPS	–		Pneumatic cushioning, self-adjusting			
Cushioning length [mm]	–	–	20	20	22	22
Position sensing	–	–	Via proximity sensor			
Theoretical force at 6 bar, advancing [N]	189	295	483	754	1178	1870
Theoretical force at 6 bar, retracting [N]	141	247	415	633	990	1682
Torsional backlash ¹⁾ [°]	0.13	0.11	0.10	0.09	0.07	0.06

1) Retracted state, without load

Operating conditions						
Piston Ø	20	25	32	40	50	63
Operating pressure [bar]	2.5 ... 10		2 ... 12		1.5 ... 12	
Ambient temperature ²⁾ [°C]	-20 ... +80					

2) Note operating range of proximity sensors.

Materials	
Yoke plate	Anodised wrought aluminium alloy
Housing	Anodised wrought aluminium alloy
Piston rod	High-alloy stainless steel
End cap	
DGRF-...-20/-25/-32-P	Anodised wrought aluminium alloy
DGRF-...-32-PPV/-PPS	Coated die-cast aluminium
DGRF-...-40/-50/-63	Coated die-cast aluminium
Seals	
DGRF-...	TPE-U (PUR) media seal (modified for resistance to hydrolysis and cleaning)
DGRF-...-A3	PE

Guided drives DGRF-C, Clean Design

Order code

Pneumatic drives

DGRF - C - GF - - - - -

Type	
DGRF	Double-acting guided drive
Version	
C	Easy-to-clean design
Guide	
GF	Plain-bearing guide
Piston Ø [mm]	
Stroke [mm]	
20, 25, 32, 40, 50, 63	10 ... 400
Cushioning	
P	Elastic cushioning rings at both ends 1
PPV	Pneumatic cushioning, adjustable at both ends 2
PPS	Pneumatic cushioning, self-adjusting 2
Position sensing	
A	Via proximity sensor 2
Sensor mounting, external	
R	Mounting rail for proximity sensor 2
Wiper seal variant	
-	Standard
A3	Suitable for unlubricated operation

- 1 Not with piston Ø 40, 50, 63
- 2 Always included with piston Ø 32 ... 63

Order example:

DGRF-C-GF-32-100-PA-R
Double-acting guided drive DGRF - easy-to-clean design - plain-bearing guide - piston diameter 32 mm - stroke 100 mm - elastic cushioning rings at both ends - position sensing via proximity sensor - mounting rail for proximity sensor - standard wiper ring variant

Ordering – Product options

Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or

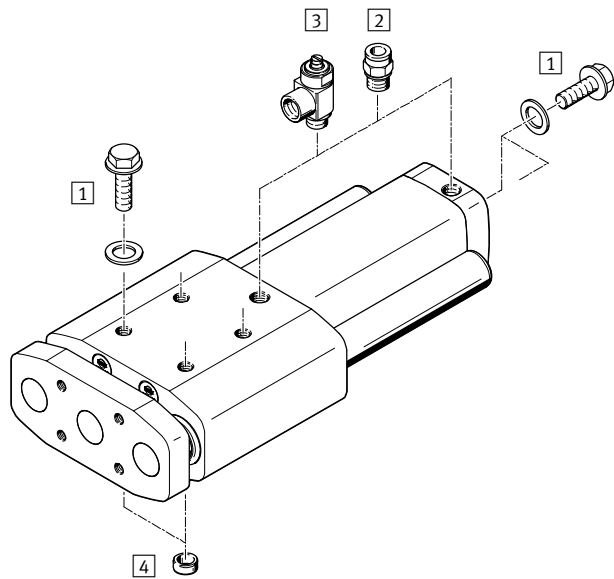
➔ [www.festo.com/catalogue/...](#)

Enter the type code in the search field.

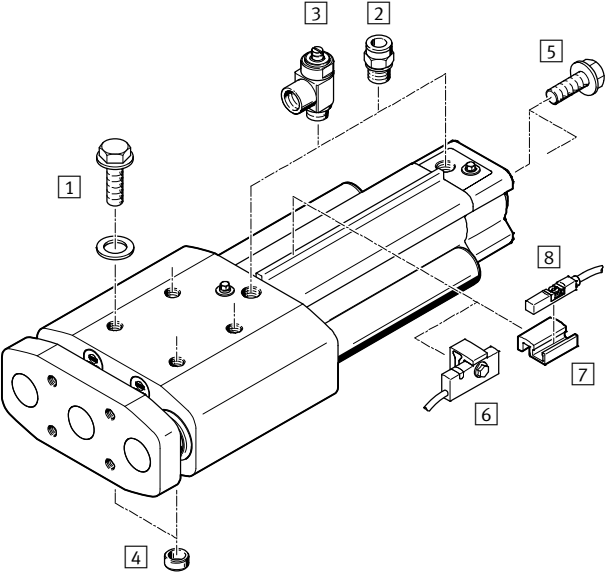
Guided drives DGRF-C, Clean Design

Accessories

Piston Ø 20, 25



Piston Ø 32, 40, 50, 63



	P	PPV	PPS	→ Page/online
1 Blanking screw DAMD for guide	■	■	■	421
2 Push-in fitting NPQH/CRQS/CRQSL/NPQP	■	■	■	npqh
3 One-way flow control valve CRGRLA/VFOH	■	■	■	422
4 Centring sleeve ZBH	■	■	■	422
5 Blanking screw DAMD for end cap	■	■	■	421
6 Proximity sensor SMT-C1	■	■	■	422
7 Mounting kit SMB-8-C	–	■ ¹⁾	■	422
8 Proximity sensor CRSMT-8M	–	■ ¹⁾	■	422

1) Possible when ordering cylinders from 02/2014 (series E2).

Accessories – Ordering data

	For Ø	Description	Part no.	Type
1 Blanking screw, corrosion resistant, for guide				
	20, 25	With cover plate	543715	DAMD-P-M6-12-R1
	32, 40, 50		543716	DAMD-P-M8-16-R1
	63		543717	DAMD-P-M10-16-R1
5 Blanking screw, corrosion resistant, for end cap				
	20, 25	With cover plate	543714	DAMD-P-M5-10-R1
	32 ²⁾		543715	DAMD-P-M6-12-R1
	32 ³⁾ , 40	Without cover plate	1355016	DAMD-PS-M6-12-R1
	50, 63		650121	DAMD-PS-M8-16-R1

1) Packaging unit 4 pieces.
2) For cylinder with P cushioning.
3) For cylinder with PPV/PPS cushioning.

Drives with guides > Drives with guide rods >

Guided drives DGRF-C, Clean Design

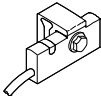
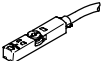
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Accessories – Ordering data

Connection		Material	Part no.	Type	
Thread	For push-in fitting				
3 One-way flow control valves			Data sheets online: → crgla		
	M5	CRQS/CRQSL/CRQST	Electropolished stainless steel casting	161403	CRGRLA-M5-B
	G1/8			161404	CRGRLA-1/8-B
	G1/4			161405	CRGRLA-1/4-B
	G3/8			161406	CRGRLA-3/8-B
	G1/8	Push-in connector is integrated	Nickel-plated brass	578797	VFOH-LE-A-G18-Q4
				578798	VFOH-LE-A-G18-Q6
				578799	VFOH-LE-A-G18-Q8
	G1/4			578800	VFOH-LE-A-G14-Q8
				578801	VFOH-LE-A-G14-Q10

	For Ø	Part no.	Type
4 Centring sleeves¹⁾		Data sheets online: → zbh	
	20, 25	150927	ZBH-9
	32, 40, 50, 63	189653	ZBH-12

1) Packaging unit 10 pieces

	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
Permissible with DGRF-...-P/-PPV/-PPS:					
6 Proximity sensor for T-slot, magneto-resistive – N/O contact				Data sheets online: → smt	
	32 ... 63	PNP, cable, 3-wire	5.0	571339	SMT-C1-PS-24V-K-5,0-OE
		PNP, M8x1, plug, 3-pin	0.3	571342	SMT-C1-PS-24V-K-0,3-M8D
		PNP, M12x1, plug, 3-pin	0.3	571341	SMT-C1-PS-24V-K-0,3-M12
Permissible with DGRF-...-PPV ¹⁾ /-PPS:					
8 Proximity sensor for T-slot, magneto-resistive – N/O contact				Data sheets online: → smt	
	32 ... 63	PNP, cable, 3-wire	5.0	574380	CRSMT-8M-PS-24V-K-5,0-OE
		PNP, cable, 3-wire	10.0	574381	CRSMT-8M-PS-24V-K-10,0-OE
		PNP, M8x1, plug, 3-pin	0.3	574383	CRSMT-8M-PS-24V-K-0,3-M8D
		PNP, M12x1, plug, 3-pin	0.3	574382	CRSMT-8M-PS-24V-K-0,3-M12
Connecting cable for SMT-C1-...					
Straight socket					
	32 ... 63	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
		M12x1, 5-pin	2.5	★ 541363	NEBU-M12G5-K-2.5-LE3
			5.0	★ 541364	NEBU-M12G5-K-5-LE3
Angled socket					
	32 ... 63	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3
		M12x1, 5-pin	2.5	541367	NEBU-M12W5-K-2.5-LE3
			5.0	541370	NEBU-M12W5-K-5-LE3

1) Possible when ordering cylinders from 02/2014 (series E2).

7 Mounting kit		Part no.	Type
	Description		
	For mounting the proximity sensor CRSMT-8M on the mounting rail	1806790	SMB-8-C

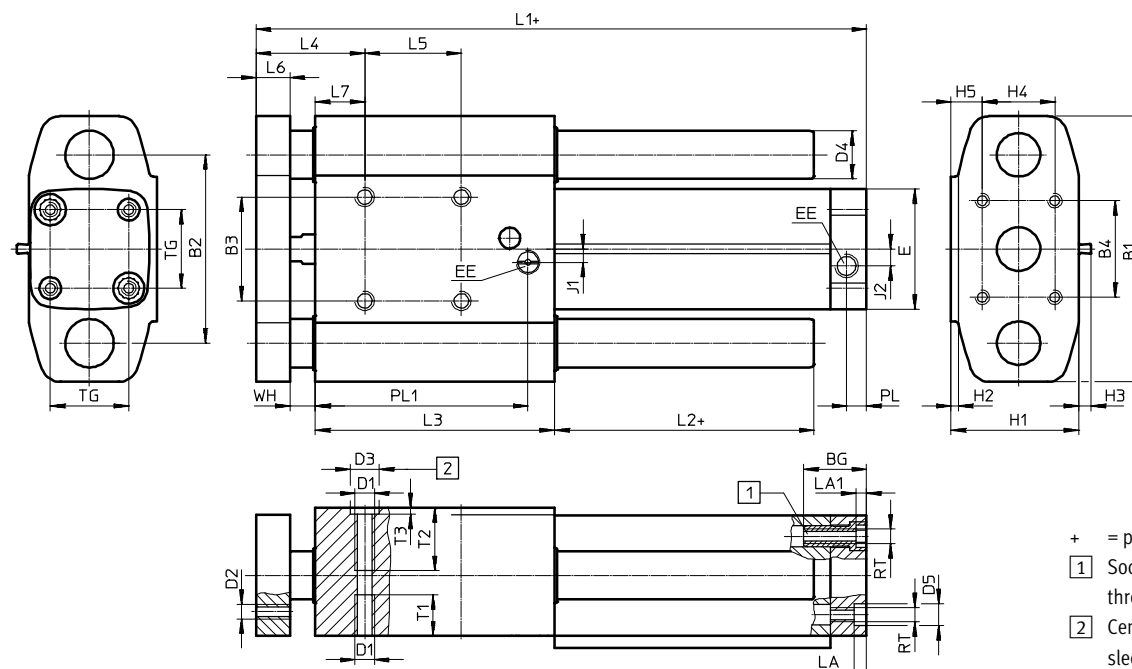
Guided drives DGRF-C, Clean Design

Dimensions

Download CAD data → www.festo.com

01

DGRF-...-P – Elastic cushioning rings at both ends



Ø	BG	B1	B2	B3 ²⁾	B4	D1	D2	D3 ³⁾	D4	D5	E	EE
[mm]								Ø H7	Ø	Ø F9		
20	19.5	83	58	30	30	M6	M5	9	16	9	37	M5
25	19.5	95	68	35	40	M6	M6	9	16	9	42	M5
32	26	110	78	43	40	M8	M6	12	20	9	50	G ¹ / ₈

Ø	H1	H2	H3 ¹⁾	H4	H5	J1	J2	L1	L2	L3	L4	L5
[mm]												
20	39	2	–	20	10.5	0	0	115 +1.4/–0.8	7	68	40 +1/–0.9	30
25	44	2	–	20	13	0	0	126 +1.4/–0.8	7	77	40 +1/–0.9	40
32	53	3	5	30	13	5.5	7	152.8 ±1.1	7.4	99	45 +0.9/–1	40

Ø	L6	L7	LA	LA1	PL	PL1	RT	T1	T2	T3	TG	WH
[mm]												
20	12	18	4.9	4.6	6	62	M5	13	20	2.1	22	10 +0.5/–0.7
25	12	18	4.9	4.6	6	71	M5	13	25	2.1	26	10 +0.5/–0.7
32	14	20.4	5.1	4.6	8.2	88	M6	17	26	2.6	32.5	10.7 +0.3/–0.9

1) Only in combination with sensor mounting rail (DGRF-32-...-R)

2) Tolerance between the centring holes ±0.02 mm

3) Two centring sleeves included in the scope of delivery

Drives with guides > Drives with guide rods >

Guided drives DGRF-C, Clean Design

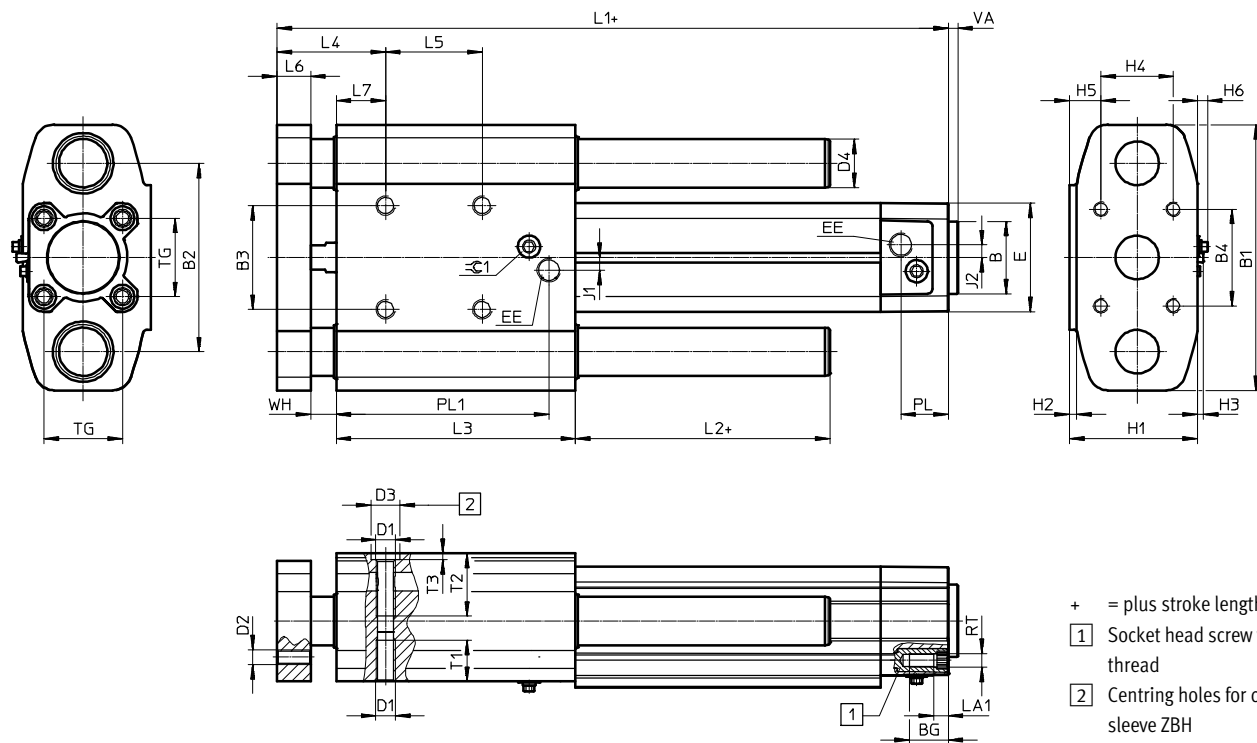
01

Dimensions

Download CAD data → www.festo.com

DGRF-...-PPV – Pneumatic cushioning, adjustable at both ends

DGRF-...-PPS – Pneumatic cushioning, self-adjusting at both ends



Ø	B	BG	B1	B2	B3 ²⁾	B4	D1	D2	D3 ³⁾	D4	E	EE	H1	H2
[mm]	Ø d11								Ø H7	Ø				
32	30	16	110	78	43	40	M8	M6	12	20	45	G1/8	53	3
40	35	16	120	88	51	50	M8	M6	12	20	54	G1/4	61	3
50	40	17	148	110	64	60	M8	M8	12	25	64	G1/4	73	3
63	45	17	162	125	80	80	M10	M8	12	25	75	G3/8	84	3

Ø	H3 ¹⁾	H4	H5	H6	J1	J2	L1	L2	L3	L4	L5
[mm]											
32	2.5	30	13	5.6	5.3	5.3	177.6 +1.9/-1.2	7.4	99	45 +1.5/-1.1	40
40	3	30	17	5.6	4	4	183.5 +1.9/-1.3	7.5	99	45 +1.5/-1.1	40
50	2	40	18	7.5	5.5	5.5	193.5 +1.7/-1.3	7.7	105	50 +1.3/-1.2	40
63	2	40	23.5	9.3	6.3	6.3	207.3 +1.7/-1.3	7.5	105	50 +1.3/-1.2	40

Ø	L6	L7	LA1	PL	PL1	RT	T1	T2	T3	TG	VA	WH	≈ 1
[mm]													
32	14	20.4	5.6	19.5	88	M6	17	26	2.6	32.5	4	10.6 +1/-0.9	4
40	14	20.5	5.6	22.5	83	M6	17	26	2.6	38	4	10.5 ±1/-1	4
50	16	22.7	6.1	22.5	89	M8	17	20	2.6	46.5	4	11.3 +0.8/-1	4
63	20	18.5	6.1	27.5	88	M8	17	24	2.6	56.5	4	11.5 +0.8/-1	4

1) Only in combination with sensor mounting rail (DGRF-...-R)

2) Tolerance between the centring holes ±0.02 mm

3) Two centring sleeves included in the scope of delivery



Robust and compact

- + Trunnion version
- + Workpiece carriers, pallets and packages weighing up to 90 kg can be safely stopped
- + Compact design
- + Sensor slots on 3 sides
- + Long service life thanks to very good cushioning characteristics and sturdy piston rod guide

Stopper cylinders ›

Stopper cylinders

DFSP

Stopper cylinders >

Stopper cylinders

DFSP



Overview, configuration and ordering

→ www.festo.com/catalogue/dfsp



Additional information, support and user documentation

→ www.festo.com/sp/dfsp



Spare parts service



- + Increase in productivity through improved performance and increased impact resistance
- + Internal thread in the piston rod permits the simple attachment of stopper attachments
- + Long service life thanks to robust design

Product range overview

Type/function	Piston Ø	Stroke	Perm. impact force	Product options							
	[mm]	[mm]	[N]	Q	D	P	S	F	R	P	A
DFSP											
Single-acting or double-acting	Trunnion										
	16, 20, 32, 40, 50	5 ... 30	880 ... 6280	■	■	■	■	■	■	■	■
	Trunnion with protection against rotation										
	16, 20, 32, 40, 50	5 ... 30	880 ... 6280	■	■	■	■	■	■	■	■
	Roller with protection against rotation										
	16, 20, 32, 40, 50	5 ... 30	710 ... 5000	■	■	■	■	■	■	■	■

Product options

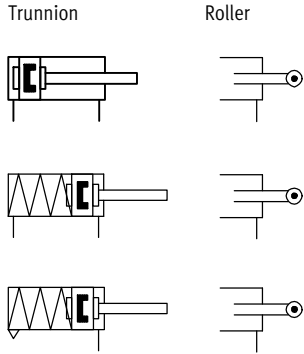
Q	With protection against rotation	D	Double-acting without spring	S	Standard (trunnion)	P	Elastic cushioning rings/plates at both ends
		P	Single-acting/pulling	F	Trunnion with female thread		
				R	With roller	A	Position sensing

Stopper cylinders >

Stopper cylinders DFSP

01

Data sheet



Technical data		Dimensions → Page 434				
Piston Ø		16	20	32	40	50
Pneumatic connection		M5		G1/8		
Stroke	[mm]	5 ... 15	5 ... 20	5 ... 25	5 ... 30	5 ... 30
Max. cycle rate	[Hz]	5				
Mode of operation		Double-acting without spring				
		Single-acting, pulling				
Cushioning		Elastic cushioning rings/plates at both ends				
Effective force at 6 bar, advancing						
DFSP...	[N]	107	171	438	683	1064
DFSP...-D	[N]	121	188	483	754	1178
Effective force at 6 bar, retracting						
DFSP...	[N]	74	121	294	459	696

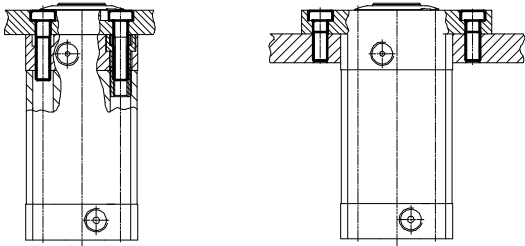
Operating conditions		16	20	32	40	50
Min. operating pressure						
Without spring	[bar]	1				
With spring	[bar]	2.8	1.6	1.2	1.2	1.2
At max. lateral force	[bar]	→ Page 430				
Max. operating pressure	[bar]	10				
Ambient temperature ¹⁾	[°C]	-10 ... +80				

1) Note operating range of proximity sensors.

Materials	
Piston rod	High-alloy stainless steel
Profile barrel	Smooth anodised wrought aluminium alloy
Spring	Spring steel
Cover	Anodised wrought aluminium alloy
Roller	Galvanised steel
Seals	TPE-U (PU)

Note
All technical data refer to the mounting options (→ right). The values may be much lower with the other mounting options.

Note the minimum screw-in depth
→ Page 434



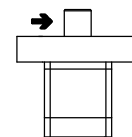
Data sheet

Permissible impact force on the advanced piston rod

The impact force refers to the maximum of a force curve plotted against time with unknown details during impact/braking of the moving mass. It acts perpendicular to the direction of motion of the piston rod.

Treating the elastic components as linear springs, it is possible to use the permissible impact force to calculate a permissible impact energy for use in selecting the right stopper. Switching of the stopper below this force is not permitted.

Depending on the type of mass to be stopped, it is a good idea to provide an elastic buffer to cushion the impact, reduce the noise and optimise the impact energy.



→ = direction of the impact force

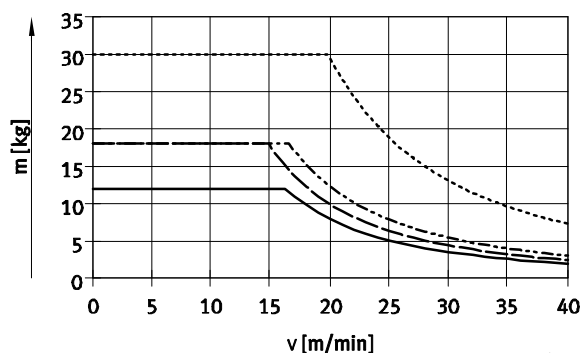
Piston Ø		16	20	32	40	50
DFSP-...	[N]	880	1370	3270	5540	6280
DFSP-Q-...	[N]	880	1100	3270	5540	6280
DFSP-Q-...-R	[N]	710	840	2670	4500	5000

Permissible mass m as a function of conveyor speed v

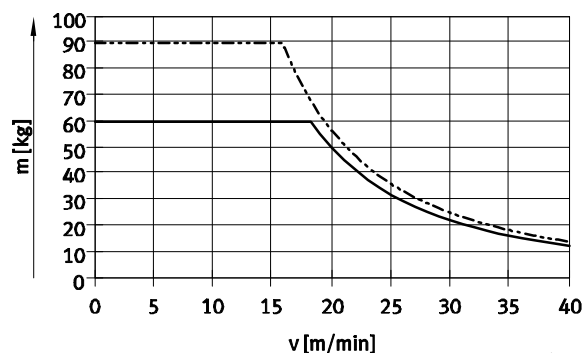
The values in the graphs assume an elastic buffer on the workpiece carrier with a deformation path of 1 mm.

A shorter deformation path reduces the impact force.

DFSP-.../DFSP-Q-... – With trunnion

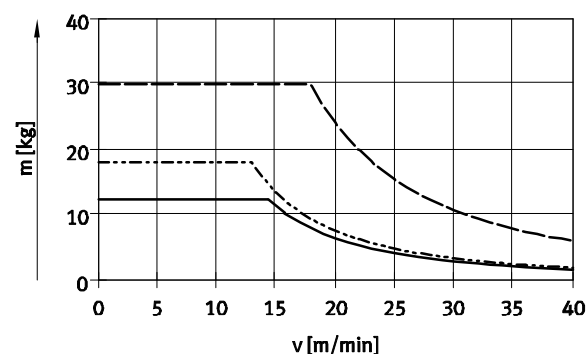


— DFSP-16/DFSP-Q-16
 - - - DFSP-20
 - - - DFSP-Q-20
 - - - DFSP-32/DFSP-Q-32

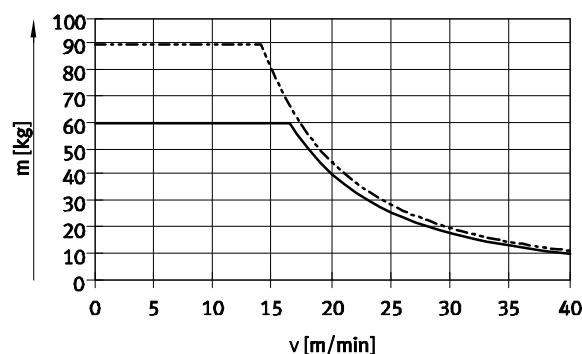


— DFSP-40/DFSP-Q-40
 - - - DFSP-50/DFSP-Q-50

DFSP-Q-...-R – With roller



— DFSP-Q-16-R
 - - - DFSP-Q-20-R
 - - - DFSP-Q-32-R



— DFSP-Q-40-R
 - - - DFSP-Q-50-R

Stopper cylinders >

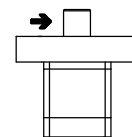
Stopper cylinders DFSP

Data sheet

Permissible lateral force F on the advanced piston rod during switching

The permissible lateral force during switching refers to the force still applied perpendicular to the direction of motion of the piston rod after the end of impact/braking, for example due to the continued operation of conveyors or the downward force of an inclined rolling surface. The force acts statically. Switching of the

stopper below this force is permitted. A minimum pressure must be applied in order to guarantee the cylinder function
 → Page 428



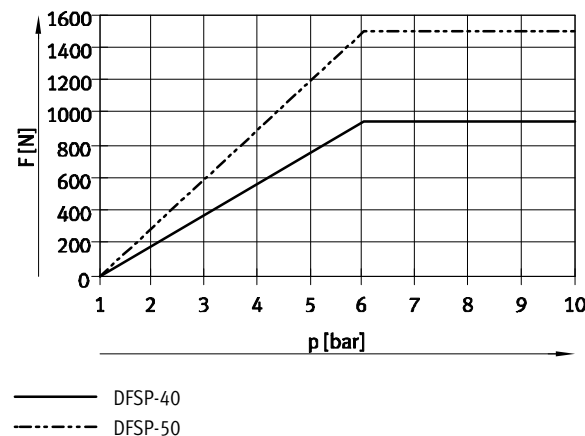
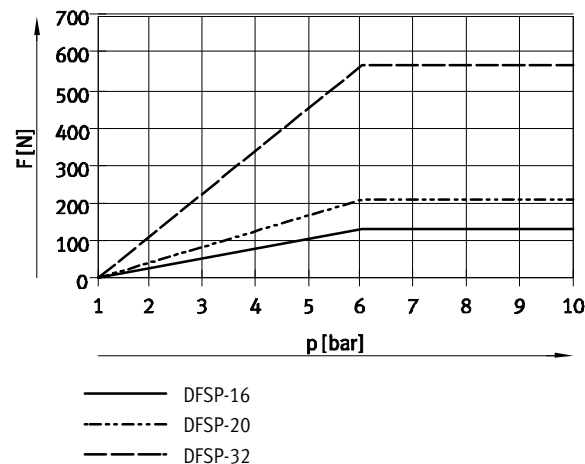
→ = direction of the impact force

Piston Ø		16	20	32	40	50
DFSP-...	[N]	130	210	570	950	1500
DFSP-Q-...	[N]	130	210	570	950	1500
DFSP-Q-...-R	[N]	100	160	420	750	1200

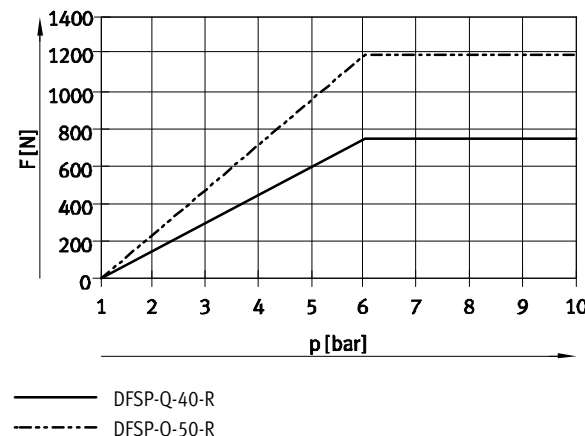
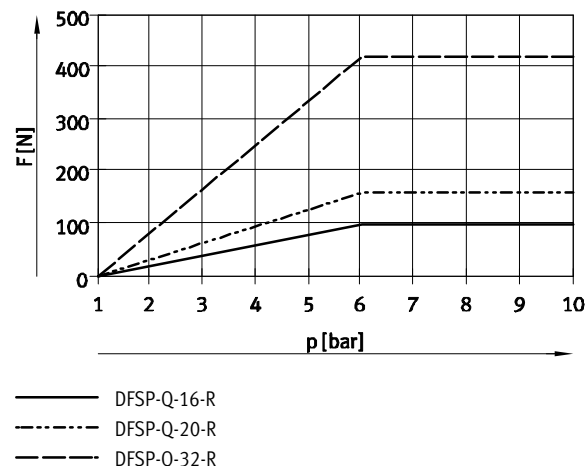
Permissible lateral force F during switching as a function of pressure p

Sufficient compressed air must be applied during pressurised switching to be able to overcome the bearing friction. The following graphs and the minimum operating pressure must be observed for compressed air below 6 bar.

DFSP-.../DFSP-Q-... – With trunnion



DFSP-Q-...-R – With roller



Order code

01

Pneumatic drives

		DFSP	-		-		-		-		-		-	P	A
Type															
DFSP	Stopper cylinder														
Protection against rotation															
Q	With protection against rotation														
Piston Ø															
	Stroke [mm]														
16	10, 15	5 ... 15													
20	10, 15, 20	5 ... 20													
32	15, 20, 25	5 ... 25													
40	20, 25, 30	5 ... 30													
50	20, 25, 30	5 ... 30													
Function															
-	Double-acting with spring, pulling														
D	Double-acting without spring														
P	Single-acting, pulling														
Piston rod design															
S	Standard (trunnion)														
F	Trunnion with female thread														
R	With roller 1														
Cushioning															
P	Elastic cushioning rings/plates at both ends														
Position sensing															
A	Via proximity sensor														

1 Only with stroke 10, 15, 20, 25, 30
Only with protection against rotation Q

Order example:
DFSP-32-25-DF-PA
Stopper cylinder DFSP - piston diameter 32 - stroke 25 mm - double-acting without spring - trunnion with female thread - elastic cushioning rings/plates at both ends - position sensing via proximity sensor

Ordering – Product options

☐

☐

☐

☐

Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
→ www.festo.com/catalogue/...

Enter the type code in the search field.

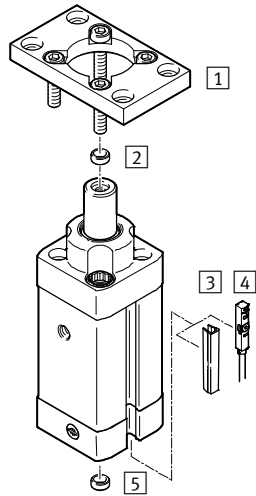
Stopper cylinders >

Stopper cylinders DFSP

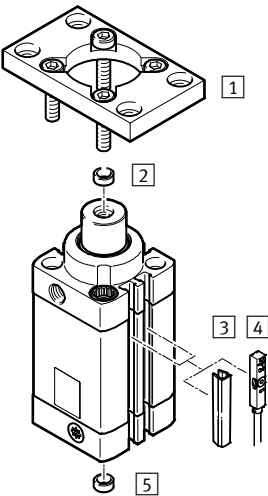
01

Accessories

DFSP-16/20



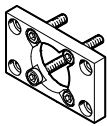
DFSP-32/40/50



	→ Page/online
1 Flange mounting DAMF-F7	433
2 Centring sleeve ZBH	433
3 Slot cover ABP	433

	→ Page/online
4 Proximity sensor SME/SMT-8	433
5 Centring sleeve ZBH	433

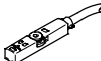
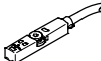
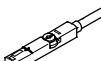
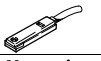
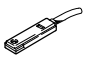
Accessories – Ordering data

	For Ø	Part no.	Type
1 Flange mounting Dimensions online: → dfsp			
	16	1405169	DAMF-F7-16
	20	1405193	DAMF-F7-20
	32	1405211	DAMF-F7-32
	40	1405218	DAMF-F7-40
	50	1405225	DAMF-F7-50

	For Ø	Description	Part no.	Type
2/5 Centring sleeve ¹⁾				
	16, 20	For precise mounting on the piston rod with female thread	189652	ZBH-5
	32		150927	ZBH-9
	40, 50		189653	ZBH-12
	16, 20, 32, 40	For precise mounting of the stopper cylinder on the end cap	150927	ZBH-9
	50		189653	ZBH-12
3 Slot cover ²⁾				
	16 ... 50		151680	ABP-5-S

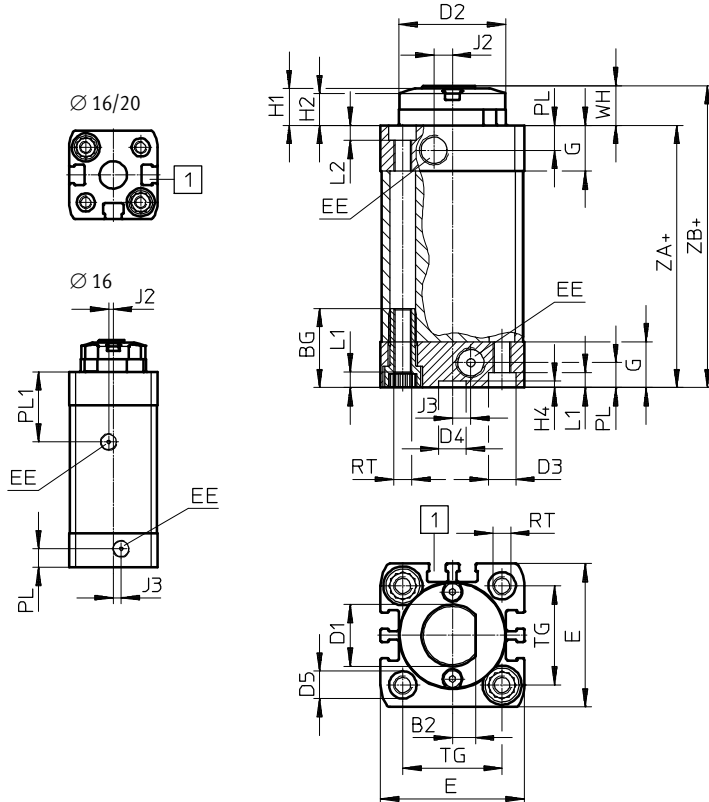
1) Packaging unit 10 pieces.

2) Packaging unit 2x 0.5 m.

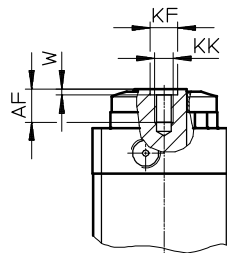
	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
4 Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets → Page 1206					
	16 ... 50	PNP, cable	2.5	★ 574335	SMT-8M-A-PS-24V-E-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-A-PS-24V-E-0,3-M8D
		PNP, plug	0.3	★ 574337	SMT-8M-A-PS-24V-E-0,3-M12
		NPN, cable	2.5	★ 574338	SMT-8M-A-NS-24V-E-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-A-NS-24V-E-0,3-M8D
Magneto-resistive – N/C contact Data sheets → Page 1206					
	16 ... 50	PNP, cable	7.5	★ 574340	SMT-8M-A-PO-24V-E-7,5-OE
Magnetic reed – N/O contact Data sheets → Page 1201					
	16 ... 50	Contacting, cable	2.5	★ 543862	SME-8M-DS-24V-K-2,5-OE
		Contacting, cable	5.0	★ 543863	SME-8M-DS-24V-K-5,0-OE
		Contacting, cable	2.5	★ 543872	SME-8M-ZS-24V-K-2,5-OE
		Contacting, plug	0.3	★ 543861	SME-8M-DS-24V-K-0,3-M8D
Magnetic reed – N/C contact Data sheets → Page 1203					
	16 ... 50	Contacting, cable	2.5	150855	SME-8-K-LED-24
		Contacting, plug	0.3	150857	SME-8-S-LED-24
Magnetic reed – N/C contact Data sheets → Page 1203					
	16 ... 50	Contacting, cable	7.5	160251	SME-8-O-K-LED-24
Connecting cable, straight socket Data sheets → Page 1543					
	16 ... 50	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
Angled socket Data sheets → Page 1543					
	16 ... 50	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3

Dimensions

DFSP-Q... – With trunnion and protection against rotation



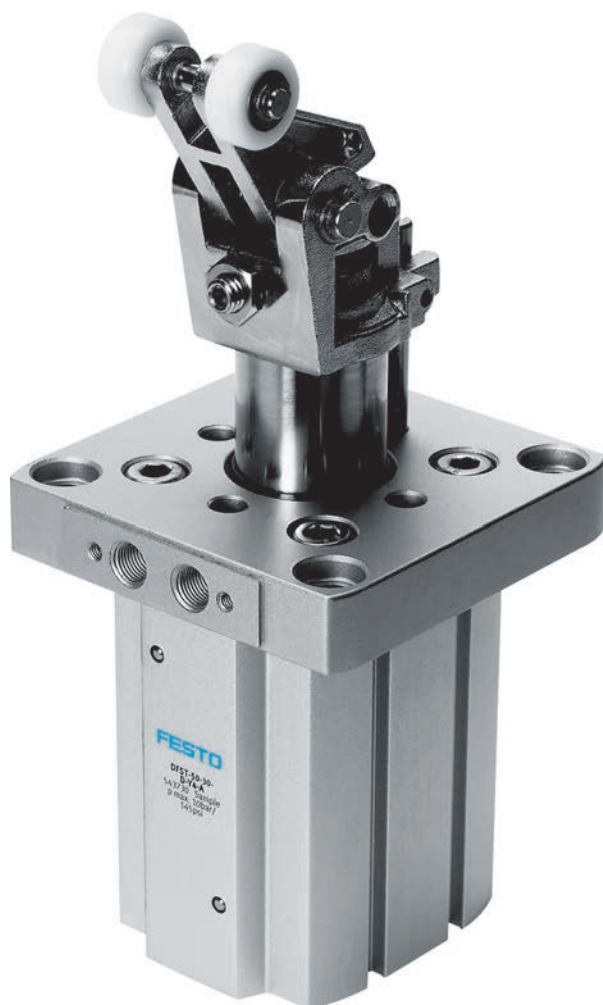
DFSP-Q...-F With female thread



+ = plus stroke length
Dimension G = Min. screw-in depth
1 Slot for proximity sensor

Ø	AF	B2	BG	D1	D2	D3	D4	D5	E	EE	G	H1	H2	H4
[mm]	min.	-Q15	min.	Ø	Ø f8	Ø F9	Ø H9	Ø F9	+Q3			±Q3	±Q3	+Q1
16	6	3.5	17	10	21.5	6	9	6	29	M5	11	9.5	8.4	2.1
20	6	4	19.5	12	25	9	9	7.5	35.5	M5	12	9.5	8.4	2.1
32	11	7.5	26	20	35	9	9	9	47	G1/8	15	12	10.5	2.1
40	14.5	9.5	26	25	43	9	9	9	54.5	G1/8	15	12.5	10.5	2.1
50	14.5	12	27	32	51	12	12	10.5	65.5	G1/8	15	14.5	12.5	2.6

Ø	J2	J3	KF	KK	L1	L2	PL	PL1	RT	TG	W	WH	ZA	ZB
[mm]			Ø H7		+Q2	+Q2	+Q2	±Q4		±Q2	+Q1	±Q7	±Q3	±Q7
16	1.5	2.6	5	M3	3.5	3	6	23	M4	18	1.2	10.5	49	59.5
20	4	2.6	5	M3	5	4	6	–	M5	22	1.2	10.5	53.5	64
32	6	6	9	M6	5	5	8.2	–	M6	32.5	2	13	61	74
40	8	8	12	M8	5	5	8.2	–	M6	38	2.5	13.5	66.5	80
50	10	8	12	M8	5	4.2	8.2	–	M8	46.5	2.5	15.5	65.5	81



Flexible and robust

- + Toggle lever design
- + Up to 800 kg impact load
- + Integrated, adjustable shock absorber for smooth and adapted stopping
- + For position sensing on the piston

Stopper cylinders ›

Stopper cylinders

DFST

Stopper cylinders >

Stopper cylinders

DFST



Overview, configuration and ordering

→ www.festo.com/catalogue/dfst

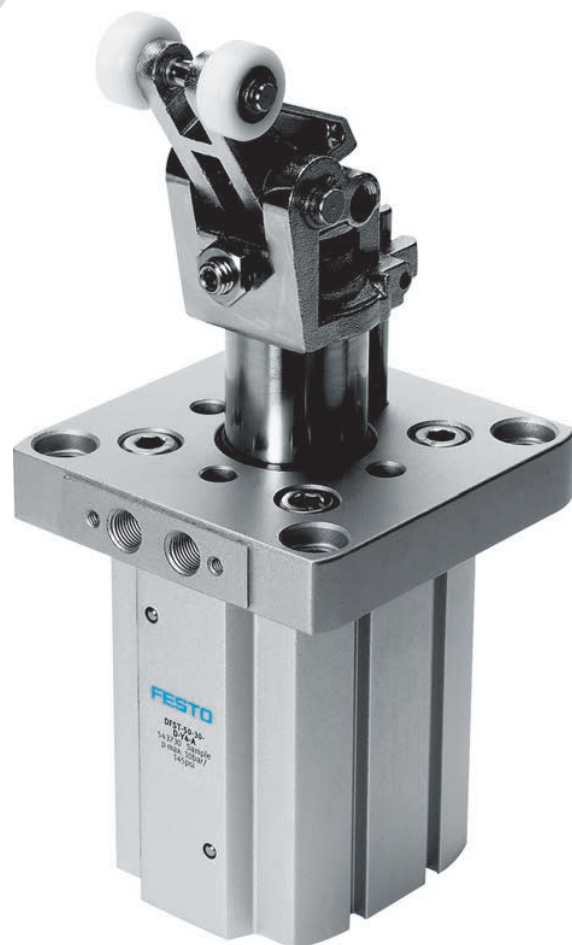


Additional information, support and user documentation

→ www.festo.com/sp/dfst



Spare parts service



- + Gentle stopping of workpieces without vibration and noise thanks to the cushioned toggle lever mechanism
- + Flexible thanks to adjustable operating direction via the swivelling toggle lever setup (90°, 180°, 270°)
- + Long service life thanks to robust design

Product range overview

Type/function	PistonØ	Stroke	Perm. impact force	Product options			
	[mm]	[mm]	[N]	D	L	Y4	A
DFST							
Single-acting or double-acting	50	30	3000	■	■	■	■
	63	30	5000	■	■	■	■
	80	40	6000	■	■	■	■

Product options

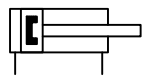
D Double-acting

L With lever locking mechanism

Y4 Adjustable shock absorber

A Position sensing

Data sheet



Technical data			Dimensions → Page 444	
PistonØ	50	63	80	
Pneumatic connection	G1/8			
Stroke	[mm]	30	40	
Mode of operation	Double-acting			
	Single-acting, pulling			
Cushioning	Adjustable shock absorber			

Operating conditions		
Operating pressure ¹⁾	2 ... 10	
Ambient temperature ²⁾	[°C]	+5 ... +60

1) Min. operating pressure for piston Ø 50 with lever locking mechanism is 3 bar.

2) Note operating range of proximity sensors.

Materials			
PistonØ	50	63	80
Piston rod	High-alloy stainless steel		
End cap	Die-cast aluminium	Wrought aluminium alloy	
Housing	Wrought aluminium alloy		
Seals	NBR		
Rollers	Polyacetal		
Top elements	Nickel-plated steel casting		

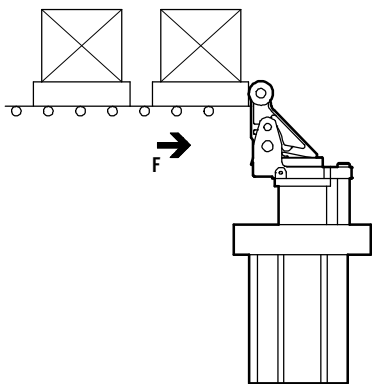
Stopper cylinders >

Stopper cylinders DFST

Data sheet

Permissible impact force F_{Impact} on the rollers of the toggle lever with advanced piston rod and pushed-through toggle lever

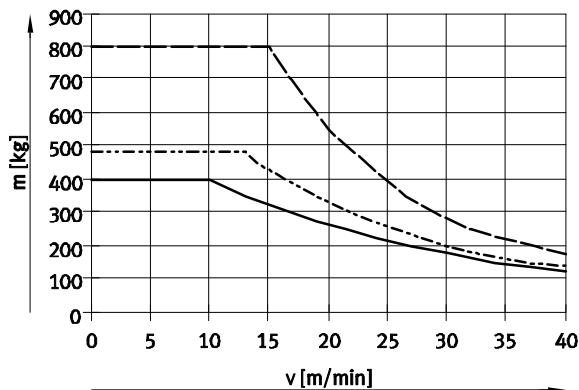
The permissible impact force refers to the force that may briefly act on the already pushed-through toggle lever without damaging the piston rod bearing and toggle lever mechanism.



Piston Ø		50	63	80
Impact force	[N]	3000	5000	6000

Permissible mass m as a function of conveyor speed v

A coefficient of friction of $\mu = 0.1$ has been taken into consideration in the values in the adjacent graph.



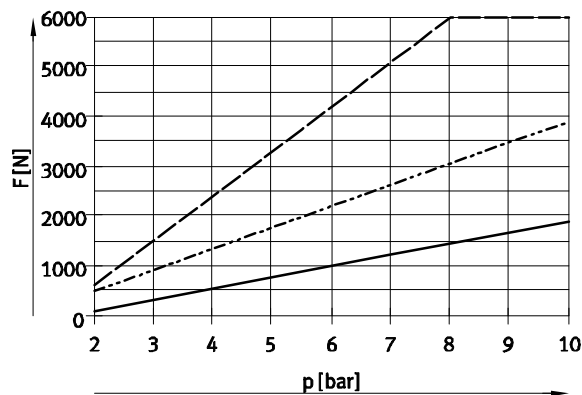
DFST-50

DFST-63

DFST-80

Permissible lateral force F_Q during switching as a function of pressure p

The applied load causes a lateral force on the piston rod. A certain minimum pressure must be applied in order to guarantee the cylinder function.



DFST-50

DFST-63

DFST-80

Order code

01

Pneumatic drives

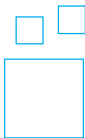
DFST		—		—		—		—	Y4	—	A
Type											
DFST		Stopper cylinder									
Piston Ø											
		Stroke [mm]									
50		30									
63		30									
80		40									
Function											
—		Single-acting, pulling									
D		Double-acting									
Locking mechanism											
		Without									
L		With lever locking mechanism									
Cushioning											
Y4		Adjustable shock absorber									
Position sensing											
A		Via proximity sensor									

Order example:

DFST-63-30-DL-Y4-A

Stopper cylinder DFST - piston Ø 63 - stroke 30 mm - double-acting - with lever locking mechanism - adjustable shock absorber - position sensing via proximity sensor

Ordering – Product options



Configurable product

This product and all its options can be ordered using the configurator.

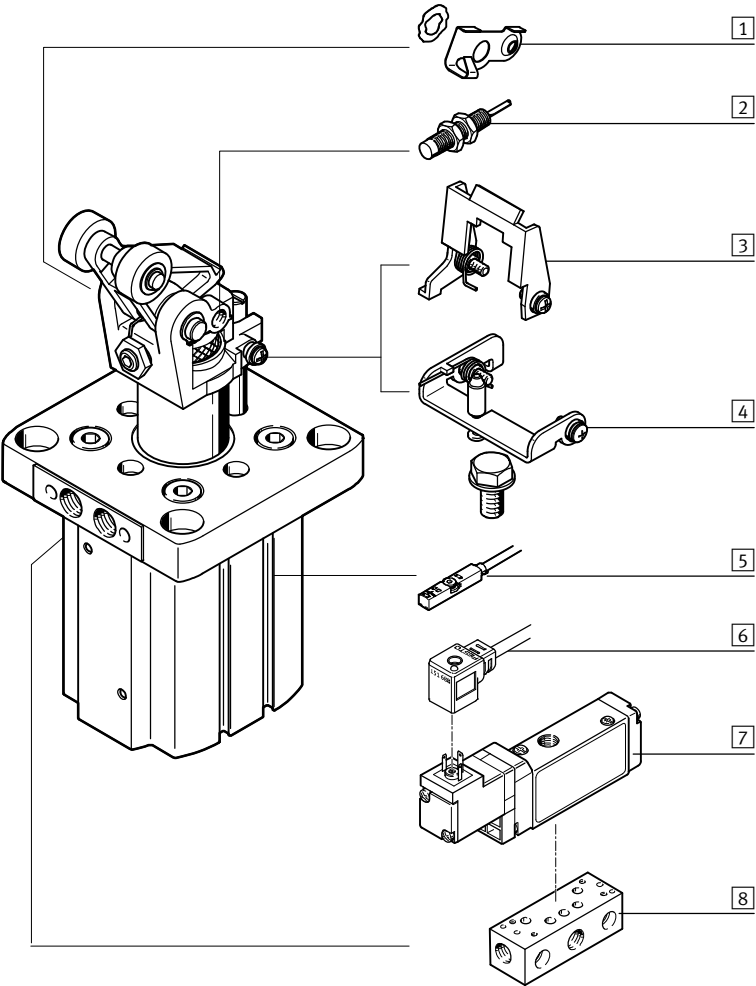
The configurator can be found under Products on the DVD or
→ www.festo.com/catalogue/... Enter the type code in the search field.

Stopper cylinders >

Stopper cylinders DFST

01 Accessories

Pneumatic drives



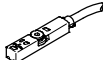
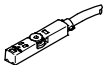
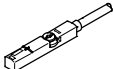
	→ Page/online
1 Toggle lever deactivator DADP-TF	442
2 Proximity sensor, inductive SIEN-M8	443
3 Lever locking mechanism for Ø 50 DADP-TL	442
4 Lever locking mechanism for Ø 63, 80 DADP-TL	442

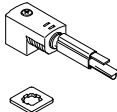
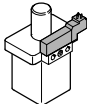
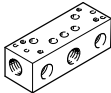
	→ Page/online
5 Proximity sensor SME/SMT-8	443
6 Plug socket with cable KMEB	443
7 Solenoid valve MEBH	443
8 Intermediate plate ZVA-2	443

Accessories – Ordering data

	For Ø	Part no.	Type	
1 Toggle lever deactivator				Dimensions online: → dfst
	50	543755	DADP-TF-F3-50	
	63	543756	DADP-TF-F3-63	
	80	543757	DADP-TF-F3-80	
3/ 4 Lever locking mechanism				Dimensions online: → dfst
	50	543751	DADP-TL-F3-50	
	63	543752	DADP-TL-F3-63	
	80	543753	DADP-TL-F3-80	

Accessories – Ordering data

	For Ø	Switching output, connection	Cable length [m]	Part no.	Type
2 Inductive proximity sensor – N/O contact, M8 Data sheets → Page 1230					
	50, 63, 80	Cable	2.5	★ 150386	SIEN-M8B-PS-K-L
		Plug	–	★ 150387	SIEN-M8B-PS-S-L
N/C contact, M8 Data sheets → Page 1230					
	50, 63, 80	Cable	2.5	150390	SIEN-M8B-PO-K-L
		Plug	–	150391	SIEN-M8B-PO-S-L
5 Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets → Page 1206					
	50, 63, 80	PNP, cable	2.5	★ 574335	SMT-8M-A-PS-24V-E-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-A-PS-24V-E-0,3-M8D
		PNP, plug	0.3	★ 574337	SMT-8M-A-PS-24V-E-0,3-M12
		NPN, cable	2.5	★ 574338	SMT-8M-A-NS-24V-E-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-A-NS-24V-E-0,3-M8D
Magneto-resistive – N/C contact Data sheets → Page 1206					
	50, 63, 80	PNP, cable	7.5	★ 574340	SMT-8M-A-PO-24V-E-7,5-OE
Magnetic reed – N/O contact Data sheets → Page 1201					
	50, 63, 80	Contacting, cable	2.5	★ 543862	SME-8M-DS-24V-K-2,5-OE
		Contacting, cable	5.0	★ 543863	SME-8M-DS-24V-K-5,0-OE
		Contacting, cable	2.5	★ 543872	SME-8M-ZS-24V-K-2,5-OE
		Contacting, plug	0.3	★ 543861	SME-8M-DS-24V-K-0,3-M8D
Data sheets → Page 1203					
	50, 63, 80	Contacting, cable	2.5	150855	SME-8-K-LED-24
		Contacting, plug	0.3	150857	SME-8-S-LED-24
Magnetic reed – N/C contact Data sheets → Page 1203					
	50, 63, 80	Contacting, cable	7.5	160251	SME-8-O-K-LED-24
Connecting cable, straight socket Data sheets → Page 1543					
	50, 63, 80	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
Angled socket Data sheets → Page 1543					
	50, 63, 80	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3

	For Ø	Description	Part no.	Type
6 Plug socket with cable				
	50, 63, 80		★ 151688	KMEB-1-24-2,5-LED
			151689	KMEB-1-24-5-LED
			193457	KMEB-1-24-10-LED
7 Solenoid valve				
	50, 63, 80	Single-acting	173125	MEH-3/2-5,0-B
			172999	MEBH-3/2-5,0-B
			173429	MOEH-3/2-5,0-B
			173002	MOEBH-3/2-5,0-B
	50, 63, 80	Double-acting	173128	MEH-5/2-5,0-B
173005			MEBH-5/2-5,0-B	
8 Intermediate plate				
	50, 63, 80		164897	ZVA-2

Stopper cylinders >

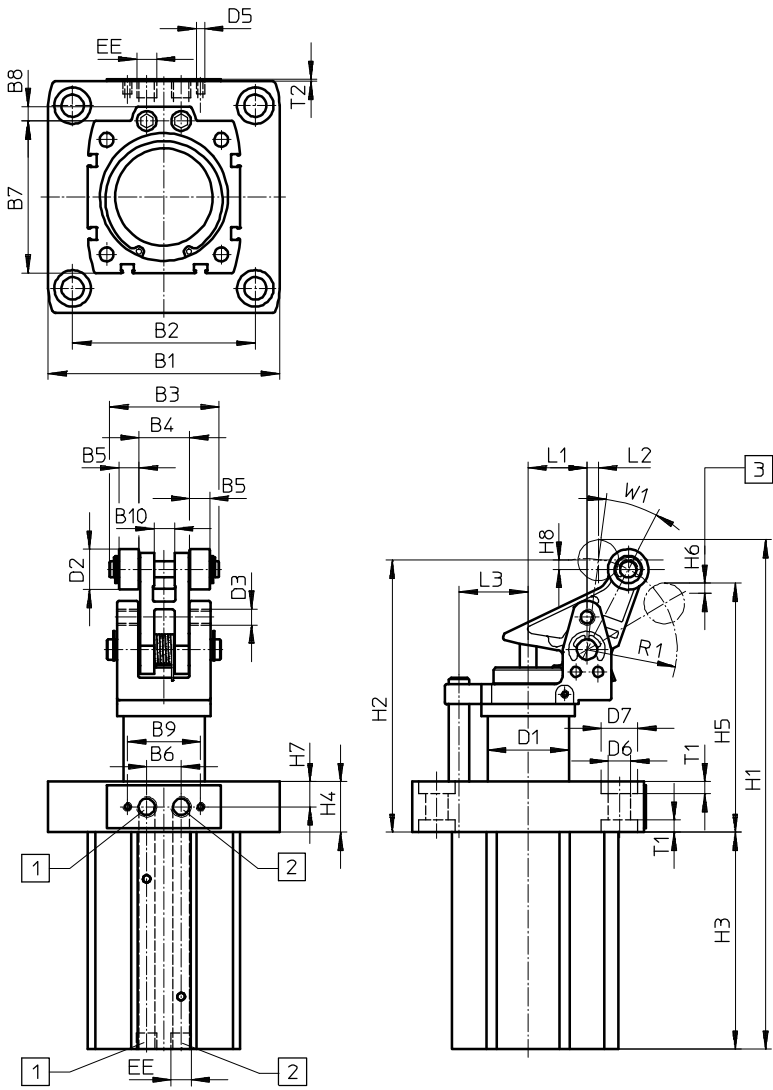
Stopper cylinders DFST

01

Dimensions

Download CAD data → www.festo.com

Pneumatic drives



- 1 Supply port (retracting)
- 2 Supply port (advancing)
- 3 Lowest permissible pallet underside

∅	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	D1	D2	D3	D5	D6
[mm]	□	□					□				∅	∅			∅
50	93	73	43	20	8	17	64	7	36	8.1	32	20	M8x1	M4	9
63	114	90	54	25	10		75			10.1	40	20			11
80	138	110	63	30	12		95			12.1	50	25			13

∅	D7	EE	H1	H2	H3	H4	H5	H6	H7	H8	L1	L2	L3	R1	T1	T2	W1
[mm]	∅																
50	14	G1/8	219	118	91	17.5	107.5	5	8.75	5.5	14	5	26	36.3	5	1	25
63	18		251	134	107	25	123	5	12.5	4.5	29	6	34	44.4	6	–	20
80	20		322.5	159	151	19	144	4.2	9.5	6.8	36	8	42	55.5	6	–	22

Stopper cylinders ›

2 Grippers

- + Mechanical grippers:
parallel grippers,
three-point grippers,
angle grippers,
swivel grippers
- + Feed separators: complete control units
for separating workpieces in the supply process
- + Accessories



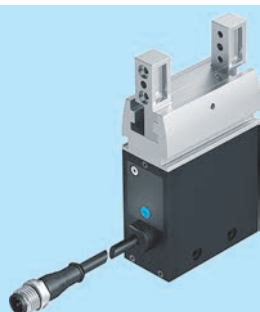


DHPS

Parallel grippers

- + Heavy-duty, precision T-slot guide for gripper jaws
- + High gripping force with compact size

→ page 453



EHPS

Electric parallel grippers

- + Gripping force adjustable at the gripper module
- + Long stroke for different workpieces

→ page 461



DHWS

Angle grippers

- + Improved gripper jaw guide (link guided movement)
- + Internal fixed flow control, does away with the need for external flow control in 90% of applications

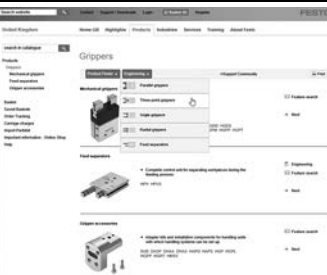
→ page 475

Contents

Product overview	448
Parallel grippers DHPS	453
Electric parallel grippers EHPS	461
NEW New series	
Three-point grippers DHDS	469
Angle grippers DHWS	475
Radial grippers DHRS	483

Product overview

Software tool

Grippers		A secure grip is a question of the right calculation. In this case, calculation of weight, direction of movement, distances, etc. The software tool immediately determines which type of gripper – parallel, three-point, angle or swivel gripper – and which size best matches your requirements.	This tool can be found • on the Internet at www.festo.com/catalogue by clicking on the blue "Engineering" button • or on the DVD under "Engineering Tools"
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Parallel grippers

	Parallel grippers DHPS		 NEW
Type			
Total gripping force at 6 bar, closing	25 ... 910 N	94 ... 3716 N	See product documentation on our website
Stroke per gripper jaw	2 ... 12.5 mm	3 ... 20 mm	10 ... 16 mm
Position sensing	Via Hall sensor, via proximity sensor	Via proximity sensor	Via proximity sensor and position sensor
Gripping force backup	During closing, during opening	During closing, during opening	
NEW			• New series
Description	• Heavy-duty, precision T-slot guide for gripper jaws • High gripping force with compact size • Max. repetition accuracy • Wide range of options for mounting on drives	• Ideal for very harsh environments • Precise gripping even at high torque load • Max. gripping force with optimum installation space/force ratio • 8 sizes with up to 40 mm total stroke • Repetition accuracy of 0 ... 0.05 mm	• Electric version of the pneumatically actuated parallel gripper DHPS • Ideal for use as a front-end actuator thanks to its low dead weight
→ Page/online	453	hgpd	461

Parallel grippers

	Electric parallel grippers HGPLE		
Type			
Total gripping force at 6 bar, closing	See product documentation on our website	106 ... 6300 N	158 ... 2742 N
Stroke per gripper jaw	30 ... 80 mm	1.5 ... 25 mm	20 ... 150 mm
Position sensing	Via integrated angular displacement encoder	Via proximity sensor	Via proximity sensor
Gripping force backup		During closing, during opening	
Description	• Electrically actuated gripper with long stroke • Free, speed-controlled selection of gripping positions • Long stroke allows use with workpieces of different sizes • Adjustable gripping force for highly sensitive and large, heavy workpieces • Very high torque resistance, very high accuracy • Short opening and closing times • Minimal installation costs	• Sturdy and powerful • With T-slot guide • Suitable for external and internal gripping • Gripper jaw guide protected by sealing air against dust • High-force variant available	• Space-saving, high forces and torques • Controlled, precise and centred gripping • Long stroke: long guide length for the gripper jaws • Suitable for external and internal gripping • Opening stroke can be adjusted to optimise time
→ Page/online	hgple	hgpt	hgpl

Product overview

Parallel grippers

			
Type	Parallel grippers HGPP	Parallel grippers HGP	Parallel grippers HGPM
Total gripping force at 6 bar, closing	80 ... 830 N	160 ... 340 N	16 ... 35 N
Stroke per gripper jaw	2 ... 12.5 mm	5 ... 7.5 mm	2 ... 3 mm
Position sensing	Via Hall sensor, via inductive sensors	Via proximity sensor	None
Gripping force backup	During closing, during opening		
Description	• High-precision gripper jaw guide • Suitable for external and internal gripping • Very flexible thanks to versatile attachment, mounting and application options	• Double-acting piston drive • High gripping force with compact size • Self-centring • Suitable for external and internal gripping • With protective dust cap for use in dusty environments (degree of protection IP54) • Max. repetition accuracy • Internal fixed flow control • Versatile thanks to externally adaptable gripper fingers • Wide range of options for mounting on drive units	• Micro gripper: compact, handy design • Versatile thanks to externally adaptable gripper fingers • Mounting options with clamping spigot, with flange mounting, with Z stroke compensation
→ Page/online	hgpp	hgp	hgpm

02

Grippers

Three-point grippers

			
Type	Three-point grippers DHDS	Three-point grippers HGDD	Three-point grippers HGDT
Total gripping force at 6 bar, closing	87 ... 750 N	336 ... 2745 N	207 ... 2592 N
Stroke per gripper jaw	2.5 ... 6 mm	4 ... 12 mm	1.5 ... 10 mm
Position sensing	Via Hall sensor, via proximity sensor	Via proximity sensor	Via proximity sensor
Gripping force backup	During closing	During closing, during opening	During closing, during opening
Description	• Heavy-duty, precision T-slot guide for gripper jaws • High gripping force with compact size • Max. repetition accuracy • Wide range of options for mounting on drives	• Precise gripping with centric movements despite high torque loads • Ideal for very harsh environments • 5 sizes with up to 12 mm stroke/jaw • Repetition accuracy of 0 ... 0.05 mm	• Synchronous movement of the gripper jaws • With T-slot guide • Suitable for external and internal gripping • Gripper jaw guide protected by sealing air against dust • High-force variant (F) available
→ Page/online	469	hgdd	hgdt

Product overview

Angle grippers

02



Angle grippers
DHWS



Angle grippers
HGWM

Type	Angle grippers DHWS	Angle grippers HGWM
Total gripping torque at 6 bar, closing	30 ... 1362 Ncm	22 ... 64 Ncm
Max. opening angle	40°	14 ... 18.5°
Position sensing	Via Hall sensor, via proximity sensor	None
Gripping force backup	During closing	
Description	- Improved gripper jaw guide - Link guided movement - Internal fixed flow control, does away with the need for external flow control in 90% of applications - Max. repetition accuracy - Wide range of options for mounting on drives	- Micro angle gripper: compact, handy design - Mounting options with clamping spigot, with flange mounting, with Z stroke compensation - Versatile thanks to externally adaptable gripper fingers
→ Page/online	475	hgwm

Radial grippers



Radial grippers
DHRS



Radial grippers
HGRT

Type	Radial grippers DHRS	Radial grippers HGRT
Total gripping torque at 6 bar, closing	15 ... 660 Ncm	158 ... 7754 Ncm
Max. opening angle	180°	180°
Position sensing	Via Hall sensor, via proximity sensor	Via proximity sensor, via inductive sensors
Description	- Lateral gripper jaw support for high torque loads - Self-centring - Gripper jaw centring options - Max. repetition accuracy	- Secure gripping thanks to precise, polished plain-bearing guides - Gripping force backup via compression springs holds the gripped workpiece securely in the event of pressure failure - Compression spring also boosts the gripping force for applications involving heavier loads - Optimum cycle times thanks to freely adjustable opening angle of up to max. 90° per gripper finger. This prevents possible collisions due to the gripper jaws opening too wide
→ Page/online	483	hgtr

Swivel/gripper units



Swivel/gripper units
HGDS

Type	Swivel/gripper units HGDS
Total gripping force at 6 bar, closing	74 ... 168 N
Stroke per gripper jaw	2.5 ... 7 mm
Swivel angle	210°
Position sensing, gripper	Via proximity sensor
Description	- Combination of parallel gripper and swivel module - Swivel angle infinitely adjustable - Precise end stop with elastic cushioning or integrated shock absorber
→ Page/online	hgds

Bellows grippers

Bellows grippers
DHEB

Type	Bellows grippers DHEB
Bellows stroke	3.5 ... 25 mm
Min. diameter to be gripped	8 ... 66 mm
Max. diameter to be gripped	11 ... 85 mm
Max. operating frequency, gripper	≤ 4 Hz
Description	• 11 sizes for gripping diameter from 8 to 85 mm • Direction of movement: bellows upwards or downwards • Different bellows materials: EPDM or silicone • Air connection on the side or from above • Optimised process sequence with increased quality: prevents the workpieces from being scratched • Additional reliability: optional sensing via proximity or position sensor • For sensitive internal gripping of fragile workpieces
→ Page/online	dheb

Software tool

Feed separator



This tool helps you to select the right separator of the type HPV from Festo for your application. Let yourself be guided by the program – enter the general parameters and you will receive at least one suggestion for the product best suited to your application.

This tool can be found

- on the Internet at www.festo.com/catalogue by clicking on the blue "Engineering" button
- or on the DVD under "Engineering Tools"

Feed separators

Feed separators
HPVS

Type	Feed separators HPVS	Feed separators HPV
Mode of operation	Double-acting	Double-acting
Piston diameter	10 mm, 14 mm, 22 mm	10 mm, 14 mm, 22 mm
Stroke	10 ... 60 mm	10 ... 60 mm
Theoretical force at 6 bar, advancing	45 ... 225 N	45 ... 225 N
Description	• Version with one plunger • With non-rotating piston rod • Proximity sensor SME/SMT-8 can be integrated in the housing	• Version with two plungers • With twin piston, non-rotating piston rod and locking mechanism • Cost-effective: replaces at least two drives in the feed process • Proximity sensor SME/SMT-8 can be integrated in the housing
→ Page/online	hpvs	hvp

Product overview

Accessories for grippers

02



Adaptive gripper fingers
DHAS

Type	
Description	• Self-adapting to different workpiece shapes • Adaptive gripper fingers for gentle and flexible gripping, using the Fin Ray Effect® modelled on a fish tail fin • Size 60, 80, 120 • For workpiece diameters from 6 to 120 mm
➔ Page/online	dhas

Grippers



Gain space and increase your productivity

- + With high gripping force and compact size
- + Thanks to the heavy-duty, precision T-slot guide for gripper jaws

Mechanical grippers › Parallel grippers ›
Parallel grippers

DHPS

Mechanical grippers > Parallel grippers >

Parallel grippers

DHPS



Overview, configuration and ordering

→ www.festo.com/catalogue/dhps



Additional information, support and user documentation

→ www.festo.com/sp/dhps



Spare parts service



- + Heavy-duty, precision T-slot guide for gripper jaws
- + High gripping force with compact size
- + Maximum repetition accuracy
- + Wide range of options for mounting on drives

Product range overview

Type/function	Size	Stroke per gripper jaw [mm]	Gripping force per gripper jaw [N]	Product options		
				A	NO	NC
DHPS						
Double-acting	6	2	13.5 ... 15	■	–	–
	10, 16, 20, 25, 35	3 ... 12.5	34.5 ... 483	■	■	■

Product options

A Position sensing NO Opening gripping force backup NC Closing gripping force backup

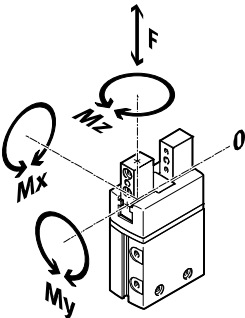
Data sheet



Technical data		Dimensions → Page 459					
Size		6	10	16	20	25	35
Pneumatic connection		M3			M5	G1/8	
Stroke per gripper jaw	[mm]	2	3	5	6.5	7.5	12.5
Gripping force per gripper jaw at 6 bar	Opening	[N]	15	39	105	162	249
	Closing	[N]	13.5	34.5	96	147	228
Total gripping force at 6 bar	Opening	[N]	30	80	210	320	500
	Closing	[N]	25	70	190	290	450
Repetition accuracy ¹⁾	[mm]	≤0.02					
Max. operating frequency	[Hz]	4			3		2

1) End-position drift under constant working conditions with 100 consecutive strokes in the direction of movement of the gripper jaws.

Forces and torques



Size		6	10	16	20	25	35
Max. permissible force F_z	[N]	10	60	150	250	350	450
Max. permissible torque M_x	[Nm]	0.5	3	8	14	30	50
Max. permissible torque M_y	[Nm]	0.5	3	8	14	30	50
Max. permissible torque M_z	[Nm]	0.5	3	8	14	30	50

Parallel grippers DHPS

Data sheet

Operating conditions		Without gripping force backup	With gripping force backup
Operating pressure	[bar]	2 ... 8	4 ... 8
Ambient temperature ¹⁾	[°C]	+5 ... +60	

1) Note operating range of proximity sensors.

Materials	
Housing	Hard anodised wrought aluminium alloy
Gripper jaw	High-alloy stainless steel
Cover cap	PA
Piston	POM
Piston rod	Tempered steel
Reversing lever	Hardened sintered steel
Seals	NBR

Order code

DHPS – – –

Type

DHPSParallel grippers

Size

6, 10, 16, 20, 25, 35

Position sensing

AFor proximity sensor

Gripping force backup

–None

NOOpening☐

NCClosing☐

☐ Not with size 6 mm

Order example:
DHPS-25-A-NC
Parallel gripper DHPS - size 25 - position sensing via proximity sensor - closing gripping force backup

Ordering – Product options

☐

☐

☐

☐

Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or [www.festo.com/catalogue/...](#)

Enter the type code in the search field.

456

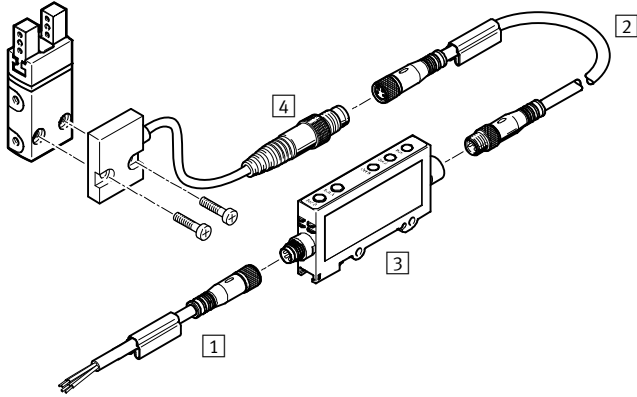
[www.festo.com/catalogue/...](#)

★ Generally ready for shipping ex works in 24 hours

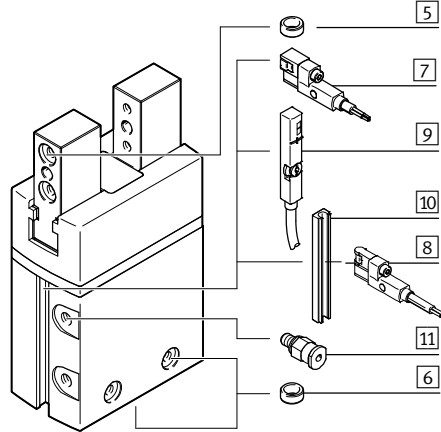
Subject to change – 2018/11

Accessories

DHPS-6



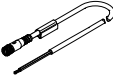
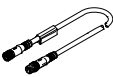
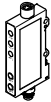
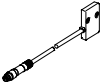
DHPS-10 ... 35



		→ Page/online
1	Connecting cable NEBU	457
2	Connecting cable NEBU	457
3	Signal converter SVE4	457
4	Position sensor SMH-S1	457
5	Centring sleeve ZBH	458
6	Centring sleeve ZBH	458
7	Proximity sensor SMT-8	458

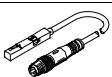
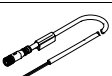
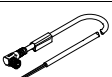
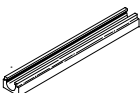
		→ Page/online
8	Proximity sensor SMT-10	458
9	Position transmitter SMAT-8M/SDAT	458
10	Bondable sensor rail HGP-SL	458
11	Push-in fitting QS	1443
–	Connecting cable NEBU	458
–	One-way flow control valve GRLA	458
–	Drive/gripper connections	dhps

Accessories – Ordering data

	For size	Switching output, connection	Cable length [m]	Part no.	Type
1 Connecting cable					
	Connection between signal converter and controller				
	6	M8x1, 4-pin	2.5	541342	NEBU-M8G4-K-2.5-LE4
			5.0	541343	NEBU-M8G4-K-5-LE4
2 Connecting cable					
	Connection between position sensor and signal converter				
	6	M8x1, 4-pin	2.5	554035	NEBU-M8G4-K-2.5-M8G4
3 Signal converter					
	6	PNP	–	544216	SVE4-HS-R-HM8-2P-M8
		NPN	–	544219	SVE4-HS-R-HM8-2N-M8
4 Position sensor					
	6	–	–	175710	SMH-S1-HGP06

Parallel grippers DHPS

Accessories – Ordering data

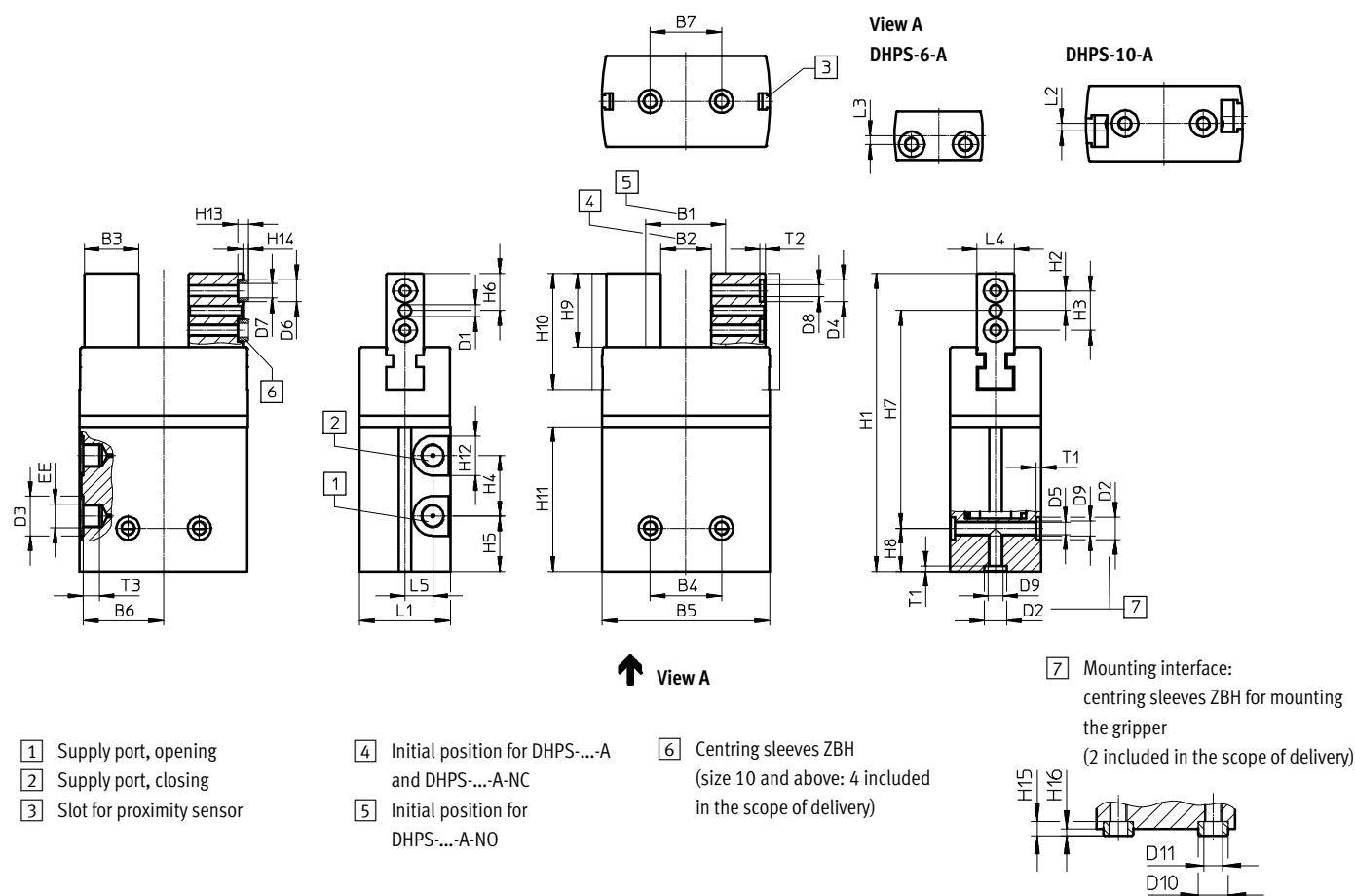
	For size	Switching output, connection	Cable length [m]	Part no.	Type
[5] Centring sleeve for centring on the gripper jaws ¹⁾²⁾ Data sheets online: zbh					
	10	–	–	189652	ZBH-5
	16, 20	–	–	186717	ZBH-7
	25, 35	–	–	150927	ZBH-9
[6] Centring sleeve for centring the gripper ¹⁾³⁾ Data sheets online: zbh					
	6, 10	–	–	189652	ZBH-5
	16, 20	–	–	186717	ZBH-7
	25	–	–	150927	ZBH-9
	35	–	–	189653	ZBH-12
[7] Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets online: smt					
	10 ... 35	PNP, cable	2.5	547859	SMT-8G-PS-24V-E-2,5Q-OE
		PNP, plug	0.3	547860	SMT-8G-PS-24V-E-0,3Q-M8D
		NPN, cable	2.5	8065028	SMT-8G-NS-24V-E-2,5Q-OE
		NPN, plug	0.3	8065027	SMT-8G-NS-24V-E-0,3Q-M8D
[8] Proximity sensor for C-slot, magneto-resistive – N/O contact Data sheets online: smt					
	10 ... 35	PNP, cable	2.5	547862	SMT-10G-PS-24V-E-2,5Q-OE
		PNP, plug	0.3	547863	SMT-10G-PS-24V-E-0,3Q-M8D
		NPN, cable	2.5	8065030	SMT-10G-NS-24V-E-2,5Q-OE
		NPN, plug	0.3	8065029	SMT-10G-NS-24V-E-0,3Q-M8D
Connecting cable, straight socket Data sheets → Page 1543					
	10 ... 35	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
Angled socket Data sheets → Page 1543					
	10 ... 35	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3
[9] Position transmitter for T-slot Data sheets online: smt					
	10 ... 35	0 ... 10 V, 4-pin	0.3	553744	SMAT-8M-U-E-0,3-M8D
	35	4 ... 20 mA, 4-pin	0.3	1531265	SDAT-MHS-M50-1L-SA-E-Q3-M8
Connecting cable, straight socket Data sheets → Page 1543					
	10 ... 35	M8x1, 4-pin	2.5	541342	NEBU-M8G4-K-2.5-LE4
			5.0	541343	NEBU-M8G4-K-5-LE4
Angled socket Data sheets → Page 1543					
	10 ... 35	M8x1, 4-pin	2.5	541344	NEBU-M8W4-K-2.5-LE4
			5.0	541345	NEBU-M8W4-K-5-LE4
[10] Bondable sensor rail					
	10	–	–	535582	HGP-SL-10-10
	16	–	–	535583	HGP-SL-10-16
	20	–	–	535584	HGP-SL-10-20
	25	–	–	535585	HGP-SL-10-25
	35	–	–	535586	HGP-SL-10-35

- 1) Packaging unit 10 pieces.
 2) 4 included in the scope of delivery of the gripper.
 3) 2 included in the scope of delivery of the gripper.

Function	For size	Connection	Part no.	Type
		Thread	O.D.	
One-way flow control valve for exhaust air flow control⁴⁾ with slotted head screw, metal Data sheets → Page 1031				
	6, 10, 16	M3	3	175041 GRLA-M3-QS-3
	20		4	★ 193138 GRLA-M5-QS-4-D
	25, 35	G1/8	6	★ 193144 GRLA-1/8-QS-6-D

- 4) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

Dimensions

Download CAD data → www.festo.com

Size	B1 ±0.5	B2 ±0.5	B3 -0.03	B4 ¹⁾	B5 ±0.1	B6	B7 ¹⁾	D1 Ø H8	D2 Ø H8	D3 Ø	D4 Ø H8	D5 Ø +0.1	D6 Ø h7	D7 Ø
6	10	6	5.5	11	18	8.65	11	1.5	5	7	—	2.5	—	—
10	21.8	15.8	7	16	32	15.4	16	2	5	7	5	2.5	5	3.2
16	27.8	17.8	13	25	47	22.65	25	3	7	7	7	3.3	7	5.3
20	30	17	17.5	25	55.6	26.65	25	4	7	10	7	3.3	7	5.3
25	35.4	20.4	22	29	68.2	32.65	29	4	9	16	9	5.1	9	6.4
35	56	31	27	33	88	42.25	33	5	12	16	9	6.4	9	6.4

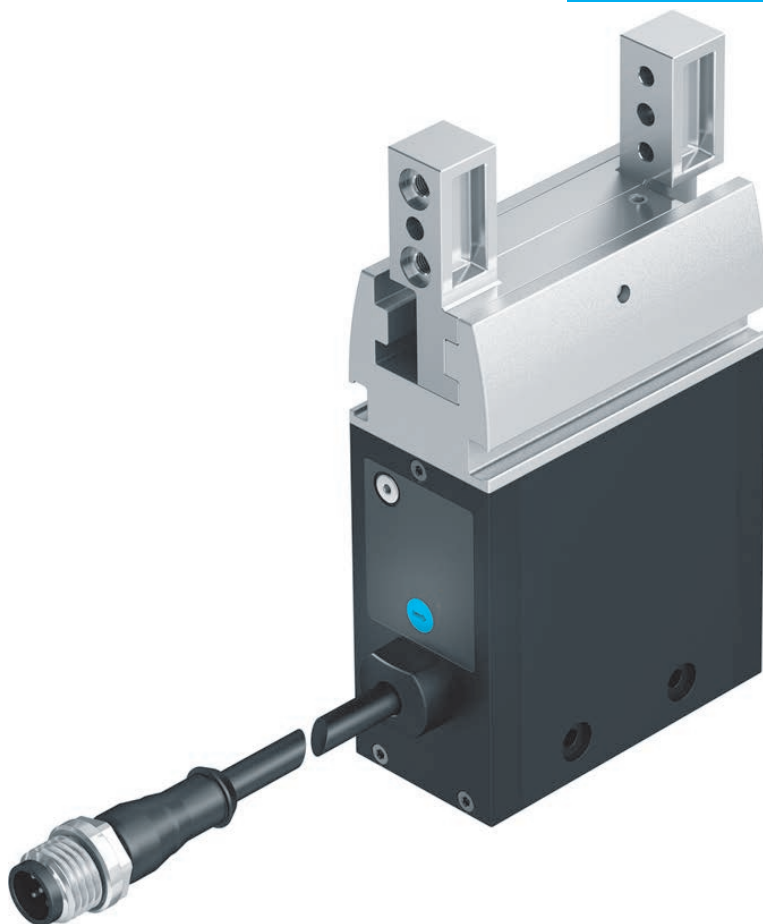
Size	D8	D9	D10 Ø h7	D11 Ø	EE	H1	H2	H3 ¹⁾	H4	H5	H6	H7 ±0.2	H8 ²⁾	H9
6	M2	M3	—	—	M3	45.5	2.9	5.8	15	4	5	33	7.5	9.55
10	M3	M3	5	3.2	M3	66	4	8	15.5	10.5	7.5	51	7.5	15.2
16	M4	M4	5	3.2	M3	80	5.5	11	18	11	10	62.5	7.5	20
20	M4	M4	7	5.3	M5	101	7	14	23	16	12.5	81	7.5	25
25	M5	M6	9	6.4	G1/8	121	8	16	24.5	22.5	15	88.5	17.5	30
35	M6	M8	12	10.3	G1/8	142	8.5	17	29	24	16	108.5	17.5	32

Size	H10	H11	H12	H13 -0.2	H14 -0.3	H15 -0.2	H16 -0.3	L1	L2	L3 ¹⁾	L4 -0.05	L5	T1 +0.1	T2 +0.1	T3 +0.5
6	15.8	25.3	7	—	—	—	—	10 ^{+0.1}	—	1.8	5	1.5	1.2	—	3.5
10	23	35	7	2.4	1.2	2.4	1.2	15.5 ^{+0.1}	1.5	—	7	5	1.2	1.2	5
16	32.5	38.1	7	3	1.4	3	1.4	22 ^{+0.1}	—	—	10	7	1.6	1.6	6
20	39.5	50	10	3	1.4	3	1.4	30±0.1	—	—	12	9	1.6	1.6	6
25	47	58.8	16	4	1.9	4	1.9	37±0.1	—	—	15	11.3	2.1	2.1	6.5
35	53	65.3	16	4	1.9	4	1.9	45 ^{+0.1}	—	—	20	13.5	2.6	2.1	6.5

1) Tolerance for centring hole ±0.02 mm; tolerance for thread ±0.1 mm

2) Tolerance for centring hole -0.05 mm; tolerance for thread ±0.1 mm

New New series



For standard travel

- + Adjustable gripping force
- + Actuation without controller using digital signals
- + Sturdy T-slot guide for gripper jaws for high torque resistance
- + Compact dimensions without interfering contours and protruding plugs

Mechanical grippers › Parallel grippers ›
Electric parallel grippers

EHPS

Mechanical grippers > Parallel grippers >

Electric parallel grippers

EHPS



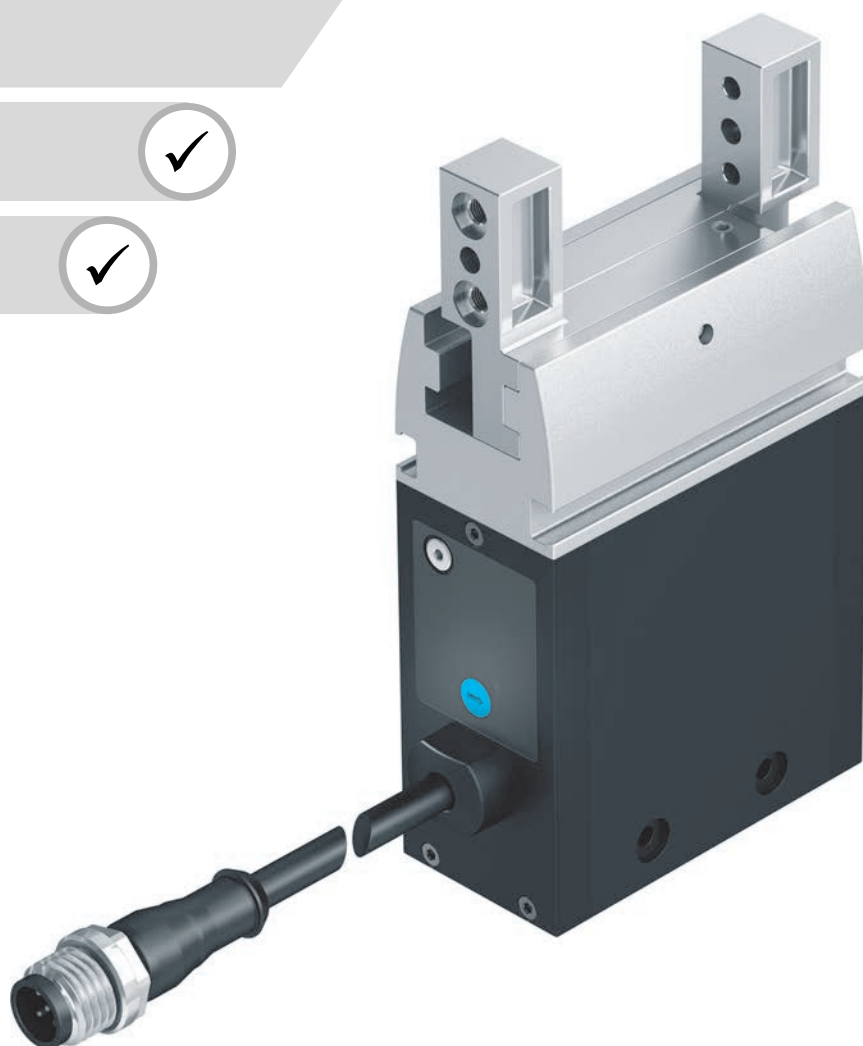
Overview, configuration and ordering

→ www.festo.com/catalogue/ehps



Additional information, support and user documentation

→ www.festo.com/sp/ehps



- + Size 16, 20, 25
- + Stroke per gripper jaw 10 ... 16 mm
- + Force at the gripper jaw 200 ... 450 N
- + For position sensing

NEW

Mechanical grippers > Parallel grippers

Parallel grippers EHPS, electrical

Product range overview

Type/version	Size	Stroke per gripper jaw [mm]	Gripping force per gripper jaw [mm]	Product options
				A
EHPS	16, 20, 25	10 ... 16	46 ... 462	■

Product options

A Position sensing

At a glance

Electrically driven

- Minimal installation effort – no valves, tubing or air preparation required
- Low noise pollution
- Electrical safety to DIN EN 61010-1:2010

Activation via digital I/O

- No external controller required
- Connection via terminal strip to terminal CPX or controller CECC

Gripping force adjustment and status indication

Gripping force adjustment:

The gripping force of the gripper can be adjusted using the rotary switch. The switch has four settings and therefore four force levels, with no intermediate levels.

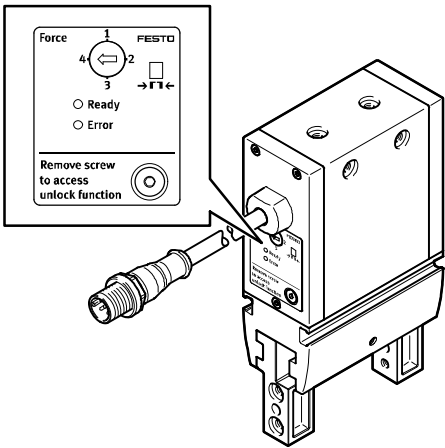
- Setting 1:
approx. 50% of the max. force
- Setting 2:
approx. 70% of the max. force
- Setting 3:
approx. 85% of the max. force
- Setting 4:
max. force

Adjustable gripping force (4 settings)

- Adaptation of the gripping force to sensitive workpieces
- Simple adjustment
- Very powerful

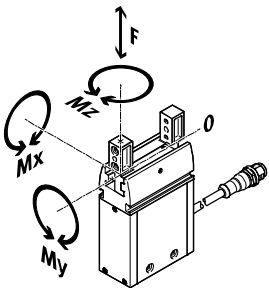
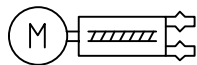
T-slot on the gripper head

- Direct position sensing of the gripper jaws possible
- Process reliability is guaranteed



Grippers

Data sheet



Technical data		Dimensions → Page 468		
Size		16	20	25
Number of gripper jaws		2		
Stroke per gripper jaw	[mm]	10	13	16
Repetition accuracy	[mm]	≤ 0.03	≤ 0.01	≤ 0.01
Max. mass per gripper finger	[g]	100	150	230
Max. cycle rate ¹⁾	[Hz]	2.2	1.7	1.3
Max. permissible force F_z	[N]	200	325	450
Max. permissible torque M_x	[Nm]	7	13	28
Max. permissible torque M_y	[Nm]	4.4	8	16
Max. permissible torque M_z	[Nm]	7	13	28

1) At a housing temperature of > 60 °C

Electrical data				
Size		16	20	25
Nominal operating voltage	[V DC]	24 ±10%		
Max. current consumption ¹⁾	[A]	1	2	2
Quiescent current	[mA]	30		

1) During the movement.

Operating conditions			
Ambient temperature ¹⁾	[°C]	+5 ... +60	
Degree of protection		IP40	

1) Note operating range of proximity sensors.

Materials			
Housing		Anodised aluminium	
Gripper jaw		High-alloy stainless steel	
O-ring		NBR	

NEW

Mechanical grippers > Parallel grippers

Parallel grippers EHPS, electrical

Data sheet

Total gripping force F_H as a function of lever arm x , mounting position, external/internal gripping and setting 1 ... 4

EHPS-16

External gripping, horizontal

Lever arm [mm]	F_H [N] at setting			
	1	2	3	4
25	98	116	132	154
45	68	84	92	106
65	54	62	70	78

Internal gripping, horizontal

Lever arm [mm]	F_H [N] at setting			
	1	2	3	4
25	72	96	108	130
45	58	72	84	96
65	46	56	62	74

External gripping, vertical

Lever arm [mm]	F_H [N] at setting			
	1	2	3	4
15	118	158	178	214
45	82	102	114	138
75	50	62	72	84

Internal gripping, vertical

Lever arm [mm]	F_H [N] at setting			
	1	2	3	4
15	110	134	152	178
45	90	108	122	138
75	66	74	84	94

EHPS-20

External gripping, horizontal

Lever arm [mm]	F_H [N] at setting			
	1	2	3	4
45	88	122	156	218
65	70	90	114	154
95	56	70	82	110

Internal gripping, horizontal

Lever arm [mm]	F_H [N] at setting			
	1	2	3	4
45	68	96	120	174
65	56	74	92	128
95	46	58	72	96

External gripping, vertical

Lever arm [mm]	F_H [N] at setting			
	1	2	3	4
15	132	182	226	306
55	94	120	150	194
95	64	80	98	124

Internal gripping, vertical

Lever arm [mm]	F_H [N] at setting			
	1	2	3	4
35	94	128	160	220
65	76	100	126	162
95	62	76	92	124

EHPS-25

External gripping, horizontal

Lever arm [mm]	F_H [N] at setting			
	1	2	3	4
50	148	204	260	312
80	98	140	176	204
110	70	96	118	140

Internal gripping, horizontal

Lever arm [mm]	F_H [N] at setting			
	1	2	3	4
50	138	192	250	312
80	106	146	178	222
110	80	106	128	156

External gripping, vertical

Lever arm [mm]	F_H [N] at setting			
	1	2	3	4
15	176	298	388	462
65	130	194	250	280
115	90	128	166	190

Internal gripping, vertical

Lever arm [mm]	F_H [N] at setting			
	1	2	3	4
45	152	242	326	406
75	132	200	266	314
115	114	162	198	228

Order code

EHPS

A

Type	
EHPS	Parallel grippers
Size	
16	
20	
25	
Position sensing	
A	For proximity sensor

Order example:
EHPS-20-A
Parallel gripper EHPS - size 20 - positioning sensing via proximity sensor

Ordering – Product options

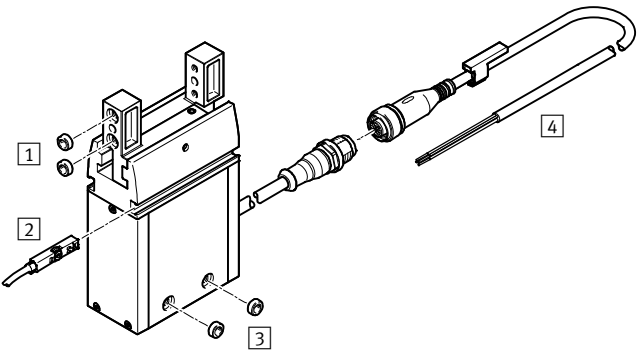
Configurable product

This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
→ www.festo.com/catalogue/...

Enter the type code in the search field.

Accessories

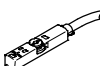
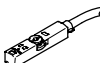
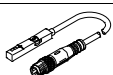
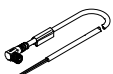
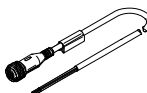
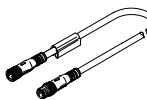
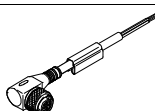
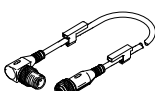


	→ Page/online
1 Centring sleeve ZBH	467
2 Proximity sensor SMT-8M-A, SMT-8G	467
Position transmitter SMAT-8M	467
3 Centring sleeve ZBH	467
4 Connecting cable NEBU	467
Adapter kit DHAA	ehps

NEW

Mechanical grippers > Parallel grippers
Parallel grippers EHPS, electrical

Accessories – Ordering data

	For size	Switching output, connection	Cable length [m]	Part no.	Type
1 3 Centring sleeve for centring on the gripper jaws^{1) 2)} Data sheets online: zbh					
	16, 20	–	–	186717	ZBH-7
	25	–	–	150927	ZBH-9
2 Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets → Page 1206					
	16 ... 20	PNP, cable	2.5	★ 574335	SMT-8M-A-PS-24V-E-2,5-OE
		PNP, plug	0.3	★ 574334	SMT-8M-A-PS-24V-E-0,3-M8D
		NPN, cable	2.5	★ 574338	SMT-8M-A-NS-24V-E-2,5-OE
		NPN, plug	0.3	★ 574339	SMT-8M-A-NS-24V-E-0,3-M8D
N/C contact Data sheets → Page 1206					
	16 ... 20	PNP, cable	7.5	★ 574340	SMT-8M-A-PO-24V-E-7,5-OE
Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets online: smt					
	16 ... 20	PNP, cable	2.5	547859	SMT-8G-PS-24V-E-2,5Q-OE
		PNP, plug	0.3	547860	SMT-8G-PS-24V-E-0,3Q-M8D
		NPN, cable	2.5	8065028	SMT-8G-NS-24V-E-2,5Q-OE
		NPN, plug	0.3	8065027	SMT-8G-NS-24V-E-0,3Q-M8D
Connecting cable, straight socket Data sheets → Page 1543					
	16 ... 20	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
Angled socket Data sheets → Page 1543					
	16 ... 20	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3
Position transmitter for T-slot Data sheets online: smat					
	16 ... 20	0 ... 10 V, 4-pin	0.3	553744	SMAT-8M-U-E-0,3-M8D
Connecting cable Data sheets → Page 1543					
	Connection between signal converter and controller				
	16 ... 20	M8x1, 4-pin	2.5	541342	NEBU-M8G4-K-2.5-LE4
			5.0	541343	NEBU-M8G4-K-5-LE4
Angled socket Data sheets → Page 1543					
	16 ... 20	M8x1, 4-pin	2.5	541344	NEBU-M8W4-K-2.5-LE4
			5.0	541345	NEBU-M8W4-K-5-LE4
4 Connecting cable for connector plug of the gripper, straight socket Data sheets → Page 1543					
	16 ... 20	M12x1, 5-pin	2.5	★ 550326	NEBU-M12G5-K-2.5-LE4
			5.0	★ 541328	NEBU-M12G5-K-5-LE4
	16 ... 20	M12x1, 5-pin	5.0	574321	NEBU-M12G5-E-5-Q8N-M12G5
			7.5	574322	NEBU-M12G5-E-7.5-Q8N-M12G5
Angled socket Data sheets → Page 1543					
	16 ... 20	M12x1, 5-pin	2.5	550325	NEBU-M12W5-K-2.5-LE4
			5.0	541329	NEBU-M12W5-K-5-LE4
	16 ... 20	M12x1, 5-pin	0.5	8003617	NEBU-M12G5-K-0.5-M12W5
			2	8003618	NEBU-M12G5-K-2-M12W5

- 1) Packaging unit 10 pieces
2) Included in the scope of delivery of the gripper: 4 centring sleeves for the gripper jaws and 2 for mounting the gripper

02

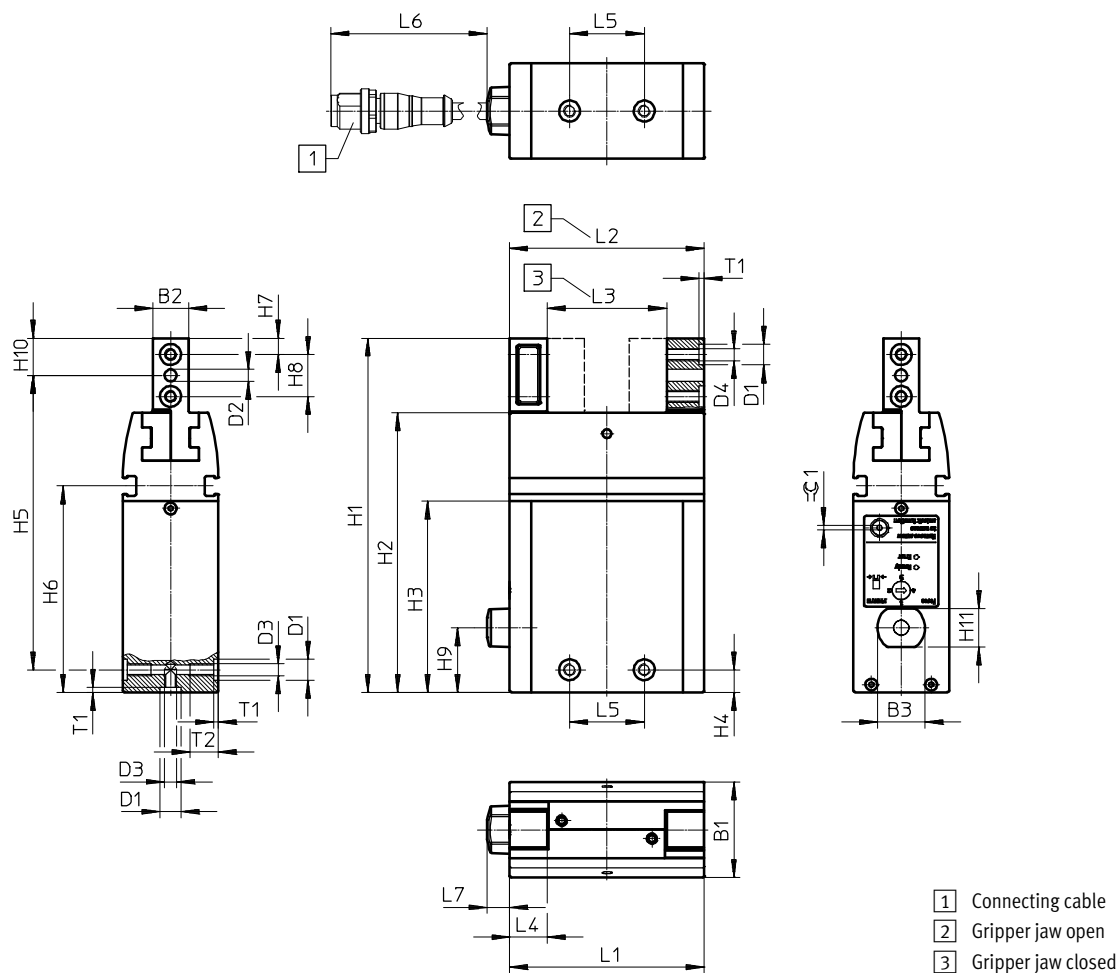
Grippers

Dimensions

Download CAD data → www.festo.com

02

Grippers



- 1 Connecting cable
- 2 Gripper jaw open
- 3 Gripper jaw closed

Size	B1	B2	B3	D1 Ø H8	D2 Ø H8	D3	D4	H1 ±0.1	H2
16	26 ±0.03	10 ±0.05	16	7	3	M4	M4	99.5	78
20	32	12	16	7	4	M4	M4	118.5	93.5
25	39	15	16	9	4	M6	M5	139.5	110

Size	H3	H4 ¹⁾	H5 ±0.2	H6	H7 ¹⁾	H8 ¹⁾	H9	H10	H11
16	55	7.5	82	59.8	4.5	11	14.5	10	13
20	64	7.5	98.5	69	5.5	14	21.6	12.5	32
25	75	12.5	112	80	7	16	28.6	15	39

Size	L1	L2	L3	L4	L5 ¹⁾	L6	L7	T1 +0.1	T2 min.	±0.1
16	53.8 ±0.3	53.8 +1	33.8 ±0.5	10.5 ±0.05	25	300	7.5	1.6	9.5	1.5
20	65	65	39	12.5	25	300	7.5	1.6	9.5	1.5
25	79.4	79.4	47.4	15	29	300	7.5	2.1	12	2

1) Tolerance for centring hole ±0.02 mm
Tolerance for thread ±0.1 mm



Gain space and increase your productivity

- + With high gripping force and compact size
- + Thanks to the heavy-duty, precision T-slot guide

Mechanical grippers › Three-point grippers ›
Three-point grippers

DHDS

Mechanical grippers > Three-point grippers >

Three-point grippers

DHDS



Overview, configuration and ordering

→ www.festo.com/catalogue/dhds



Additional information, support and user documentation

→ www.festo.com/sp/dhds



Spare parts service



- + Heavy-duty, precision T-slot guide for gripper jaws
- + High gripping force with compact size
- + Maximum repetition accuracy
- + Wide range of options for mounting on drives

Three-point grippers DHDS

Order code

02

Grippers

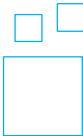
DHDS

A

Type	
DHDS	Three-point grippers
Size	
16, 32, 50	
Position sensing	
A	For proximity sensor
Gripping force backup	
-	None
NC	Closing

Order example:
DHDS-32-A-NC
Three-point gripper DHDS - size 32 - position sensing via proximity sensor - closing gripping force backup

Ordering – Product options

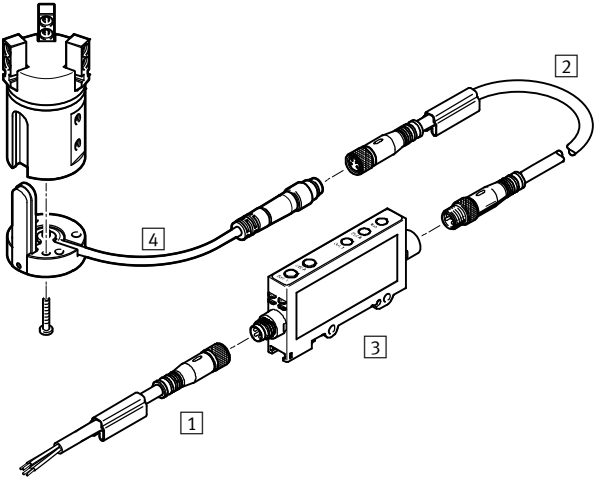


Configurable product
This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
Enter the type code in the search field.
→ www.festo.com/catalogue/...

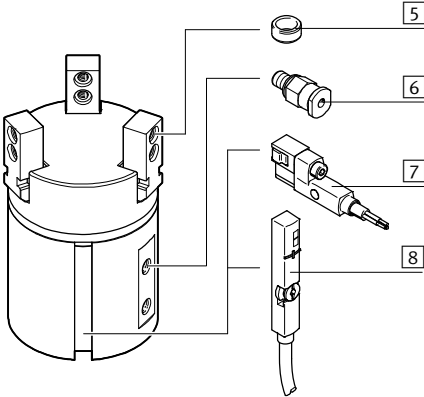
Accessories

DHDS-16



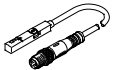
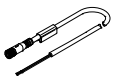
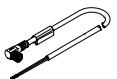
	→ Page/online
1 Connecting cable NEBU	473
2 Connecting cable NEBU	473
3 Signal converter SVE4	473
4 Position sensor SMH-S1	473
5 Centring sleeve ZBH	473
6 Push-in fitting QS	1443

DHDS-32, 50



	→ Page/online
7 Proximity sensor SMT-8	473
8 Position transmitter SMAT-8M	473
- Connecting cable NEBU	473
- One-way flow control valve GRLA	473
- Drive/gripper connections	dhds

Accessories – Ordering data

	For size	Switching output, connection	Cable length [m]	Part no.	Type
1 Connecting cable					
	Connection between signal converter and controller				
	16	M8x1, 4-pin	2.5	541342	NEBU-M8G4-K-2.5-LE4
			5.0	541343	NEBU-M8G4-K-5-LE4
2 Connecting cable					
	Connection between position sensor and signal converter				
	16	M8x1, 4-pin	2.5	554035	NEBU-M8G4-K-2.5-M8G4
3 Signal converter					
	16	PNP	–	544216	SVE4-HS-R-HM8-2P-M8
		NPN	–	544219	SVE4-HS-R-HM8-2N-M8
4 Position sensor					
	16	–	–	175713	SMH-S1-HGD16
5 Centring sleeve ¹⁾²⁾					
	16, 32	–	–	189652	ZBH-5
	50	–	–	186717	ZBH-7
7 Proximity sensor for T-slot, magneto-resistive – N/O contact					
	32, 50	PNP, cable	2.5	547859	SMT-8G-PS-24V-E-2,5Q-OE
		PNP, plug	0.3	547860	SMT-8G-PS-24V-E-0,3Q-M8D
		NPN, cable	2.5	8065028	SMT-8G-NS-24V-E-2,5Q-OE
		NPN, plug	0.3	8065027	SMT-8G-NS-24V-E-0,3Q-M8D
Connecting cable, straight socket					
	32, 50	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
Angled socket					
	32, 50	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3
8 Position transmitter for T-slot					
	32, 50	0 ... 10 V, 4-pin	0.3	553744	SMAT-8M-U-E-0,3-M8D
Connecting cable, straight socket					
	32, 50	M8x1, 4-pin	2.5	541342	NEBU-M8G4-K-2.5-LE4
			5.0	541343	NEBU-M8G4-K-5-LE4
Angled socket					
	32, 50	M8x1, 4-pin	2.5	541344	NEBU-M8W4-K-2.5-LE4
			5.0	541345	NEBU-M8W4-K-5-LE4

- 1) Packaging unit 10 pieces.
2) 6 included in the scope of delivery of the gripper.

Function	For size	Connection		Part no.	Type
		Thread	O.D.		
One-way flow control valve for exhaust air flow control³⁾ with slotted head screw, metal Data sheets → Page 1031					
	16	M3	3	175041	GRLA-M3-QS-3
	32	M5	4	★ 193138	GRLA-M5-QS-4-D
	50	G1/8	6	★ 193144	GRLA-1/8-QS-6-D

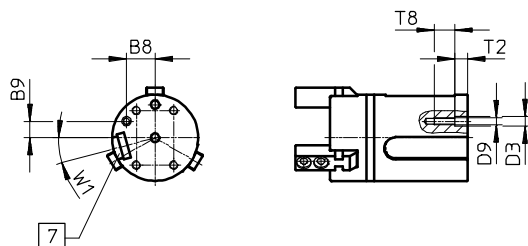
- 3) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

Three-point grippers DHDS

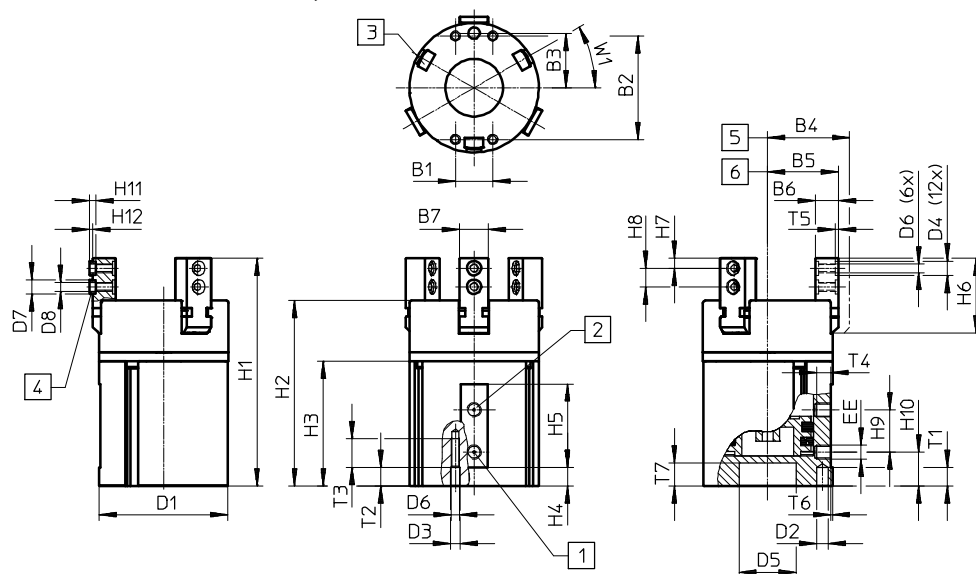
Dimensions

Download CAD data → www.festo.com

DHDS-16



DHDS-32, 50



- 1 Supply port, opening
- 2 Supply port, closing
- 3 Slot for proximity sensor
- 4 Centring sleeve ZBH
(6 included in the scope of delivery)
- 5 Gripper jaw open
- 6 Gripper jaw closed
- 7 Slot for position sensor

Size	B1	B2	B3	B4	B5	B6	B7	B8	B9
			±0.02	±0.5	±0.5	-0.02/-0.05	-0.02	-0.1	-0.1
16	13	19	11.5	20	17.5	7	6	9.96	5.75
32	13	36	19	28.5	24.6	8	10	–	–
50	25	54	30	43	37	12	14	–	–

Size	D1	D2	D3	D4	D5	D6	D7	D8	D9
	Ø	Ø H8	Ø H8	Ø H8	Ø +0.05/+0.02		Ø h7	Ø	
16	30	3	3.2	5	–	M3	5	3.2	M2.5
32	45	4	3.5	5	20	M3	5	3.2	–
50	70	5	6	7	30	M5	7	5.3	–

Size	EE	H1	H2	H3	H4	H5	H6	H7	H8 ¹⁾	H9
16	M3	60	47.9	32.6	4.5	24	21.5	3	6	12
32	M5	78	63.2	42.2	5.2	29	26	3.5	6.5	14.7
50	G1/8	107.5	86.5	56	6.7	40	37	5	10	22

Size	H10	T1	T2	T3	T4	T5	T6	T7	T8	W1
		min.	min.	+1	-0.5	+0.1	±0.2		±1	
16	11	4.5	4.5	8	4	1.2	1	–	7	15°
32	10.5	6.5	6.5	10	4	1.1	0.5	8	–	30°
50	16	7	7	18	6	1.6	1	9	–	30°

1) Tolerance for centring hole ±0.02 mm; tolerance for thread ±0.1 mm



Gain space and increase your productivity

- + With high gripping force and compact size
- + Thanks to the optimised and sturdy link guided movement of the gripper jaws

Mechanical grippers › Angle grippers ›
Angle grippers

DHWS

Mechanical grippers > Angle grippers >

Angle grippers

DHWS



Overview, configuration and ordering

→ www.festo.com/catalogue/dhws



Additional information, support and user documentation

→ www.festo.com/sp/dhws



Spare parts service



- + Improved gripper jaw guide
- + Link guided movement
- + Internal fixed flow control
- + Maximum repetition accuracy
- + Wide range of options for mounting on drives

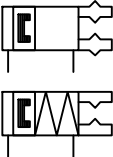
Product range overview

Type/function	Size	Opening angle [°]	Total gripping torque [Ncm]	Product options	
				A	NC
DHWS					
Double-acting	10	40	30 ... 43	■	–
	16, 25, 32, 40	40	114 ... 1497	■	■

Product options

A Position sensing NC Closing gripping force backup

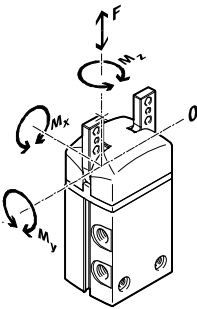
Data sheet



Technical data						Dimensions → Page 481	
Size			10	16	25	32	40
Pneumatic connection			M3		M5	G1/8	
Opening angle per gripper jaw			[°] 20				
Total gripping torque at 6 bar	Opening	[Ncm]	43	129	386	810	1497
	Closing	[Ncm]	30	114	356	746	1362
Repetition accuracy ¹⁾		[mm]	≤0.04				
Max. operating frequency		[Hz]	4		3		

1) End-position drift under constant working conditions with 100 consecutive strokes in the direction of movement of the gripper jaws.

Forces and torques



Size		10	16	25	32	40
Max. permissible force F_z	[N]	25	50	90	120	200
Max. permissible torque M_x	[Nm]	0.6	1.6	3.6	6	13
Max. permissible torque M_y	[Nm]	0.6	1.6	3.6	6	13
Max. permissible torque M_z	[Nm]	0.6	1.6	3.6	6	13

Mechanical grippers > Angle grippers >

Angle grippers DHWS

Data sheet

Operating conditions		Without gripping force backup	With gripping force backup
Operating pressure	[bar]	2 ... 8	4 ... 8
Ambient temperature ¹⁾	[°C]	+5 ... +60	

1) Note operating range of proximity sensors.

Materials	
Housing	Hard anodised wrought aluminium alloy
Gripper jaw	High-alloy stainless steel
Cover cap	PA
Piston	POM
Link	Tempered steel
Reversing lever	Hardened sintered steel
Seals	NBR

Order code

DHWS

A

Type

DHWSAngle gripper

Size

10, 16, 25, 32, 40

Position sensing

AFor proximity sensor

Gripping force backup

–None

NCClosing1

1 Not with size 10 mm

Order example:
DHWS-25-A-NC
Angle gripper DHWS - size 25 - position sensing via proximity sensor - closing gripping force backup

Ordering – Product options

Configurable product

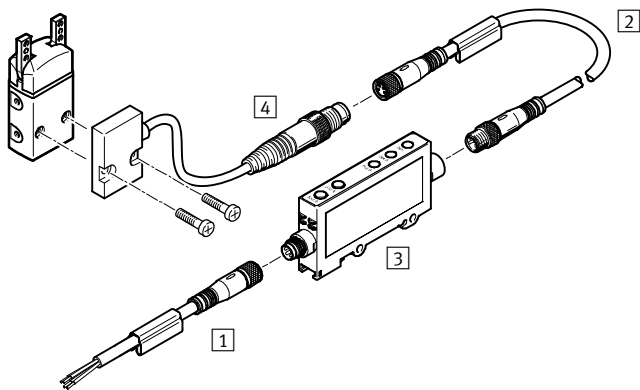
This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
➔ www.festo.com/catalogue/...

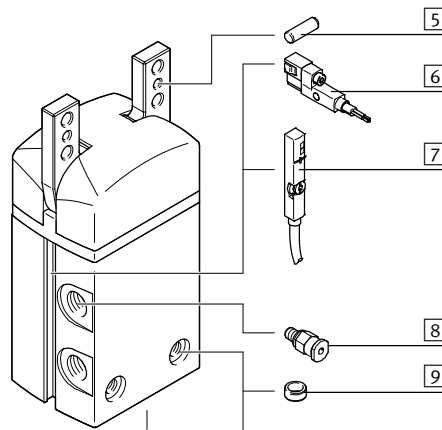
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Accessories

DHWS-10



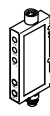
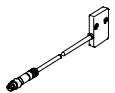
DHWS-16 ... 40



		→ Page/online
1	Connecting cable NEBU	479
2	Connecting cable NEBU	479
3	Signal converter SVE4	479
4	Position sensor SMH-S1	479
5	Centring pin	–
6	Proximity sensor SMT-8	480

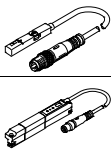
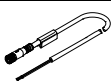
		→ Page/online
7	Position transmitter SMAT-8M	480
8	Push-in fitting QS	1443
9	Centring sleeve ZBH	480
–	Connecting cable NEBU	480
–	One-way flow control valve GRLA	480
–	Drive/gripper connections	dhws

Accessories – Ordering data

	For size	Switching output, connection	Cable length [m]	Part no.	Type
1 Connecting cable					
	Connection between signal converter and controller				
	10	M8x1, 4-pin	2.5	541342	NEBU-M8G4-K-2.5-LE4
			5.0	541343	NEBU-M8G4-K-5-LE4
2 Connecting cable					
	Connection between position sensor and signal converter				
	10	M8x1, 4-pin	2.5	554035	NEBU-M8G4-K-2.5-M8G4
3 Signal converter					
	Data sheets online: → sve4				
	10	PNP	–	544216	SVE4-HS-R-HM8-2P-M8
		NPN	–	544219	SVE4-HS-R-HM8-2N-M8
4 Position sensor					
	Data sheets online: → smh-s1				
	10	–	–	175711	SMH-S1-HGW10

Angle grippers DHWS

Accessories – Ordering data

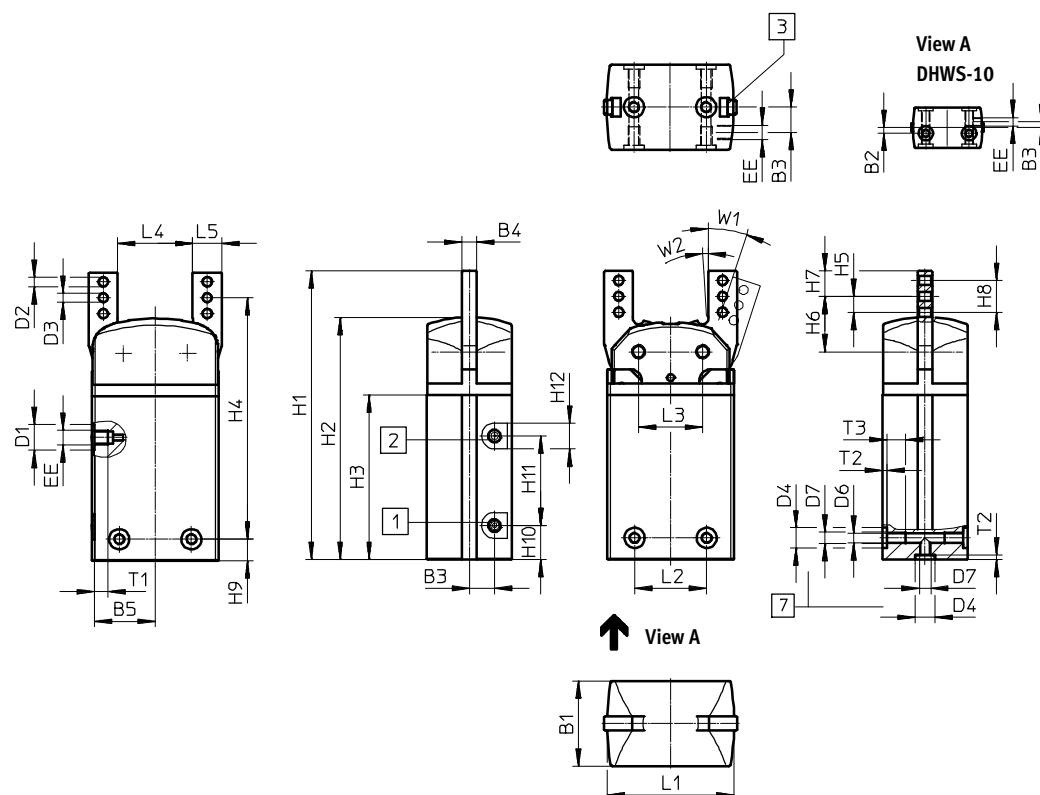
	For size	Switching output, connection	Cable length [m]	Part no.	Type
6 Proximity sensor for T-slot, magneto-resistive – N/O contact					
Data sheets online: → smt					
	16 ... 40	PNP, cable	2.5	547859	SMT-8G-PS-24V-E-2,5Q-OE
		PNP, plug	0.3	547860	SMT-8G-PS-24V-E-0,3Q-M8D
	10 ... 35	NPN, cable	2.5	8065028	SMT-8G-NS-24V-E-2,5Q-OE
		NPN, plug	0.3	8065027	SMT-8G-NS-24V-E-0,3Q-M8D
Connecting cable, straight socket					
Data sheets → Page 1543					
	16 ... 40	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
Angled socket					
Data sheets → Page 1543					
	16 ... 40	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3
7 Position transmitter for T-slot					
Data sheets online: → smat					
	16 ... 40	0 ... 10 V, 4-pin	0.3	553744	SMAT-8M-U-E-0,3-M8D
	32, 40	4 ... 20 mA, 4-pin	0.3	1531265	SDAT-MHS-M50-1L-SA-E-03-M8
Connecting cable, straight socket					
Data sheets → Page 1543					
	16 ... 40	M8x1, 4-pin	2.5	541342	NEBU-M8G4-K-2.5-LE4
			5.0	541343	NEBU-M8G4-K-5-LE4
Angled socket					
Data sheets → Page 1543					
	16 ... 40	M8x1, 4-pin	2.5	541344	NEBU-M8W4-K-2.5-LE4
			5.0	541345	NEBU-M8W4-K-5-LE4
9 Centring sleeve¹⁾²⁾					
Data sheets online: → zbh					
	10, 16	–	–	189652	ZBH-5
	25	–	–	186717	ZBH-7
	32	–	–	150927	ZBH-9
	40	–	–	189653	ZBH-12

- 1) Packaging unit 10 pieces.
- 2) 2 included in the scope of delivery of the gripper.

Function	For size	Connection Thread	O.D.	Part no.	Type
One-way flow control valve for exhaust air flow control³⁾ with slotted head screw, metal Data sheets → Page 1031					
	10, 16	M3	3	175041	GRLA-M3-QS-3
	25	M5	4	★ 193138	GRLA-M5-QS-4-D
	32, 40	G1/8	6	★ 193144	GRLA-1/8-QS-6-D

- 3) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

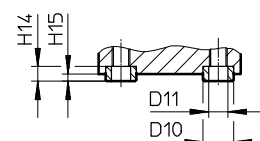
Dimensions

Download CAD data → www.festo.com

- 1 Supply port, opening
2 Supply port, closing

- 3 Slot for proximity sensor

- 7 Mounting interface:
centring sleeves ZBH
for mounting the gripper
(2 included in scope of delivery)



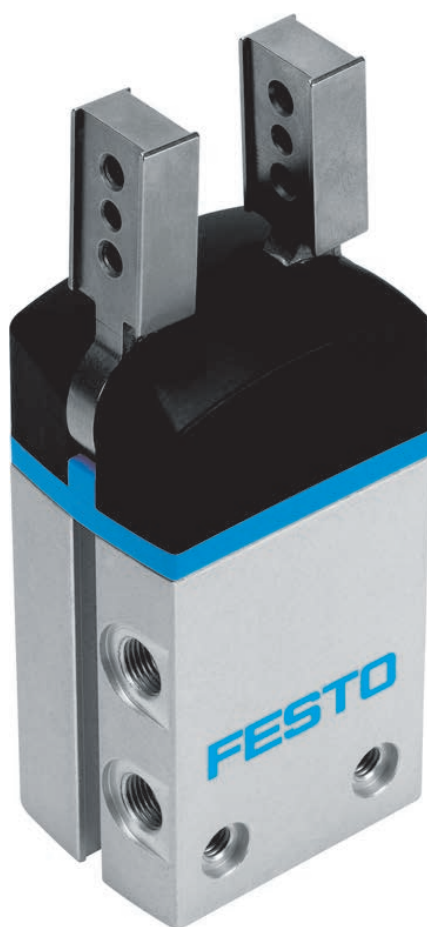
Size	B1 ±0.05	B2 ¹⁾	B3	B4 -0.03/ -0.05	B5	D1 ∅	D2 ∅ ±0.1	D3 ∅ H8	D4 ∅ H8/h7	D6 ∅ +0.1	D7	D10 ∅ h7	D11 ∅
10	14	2	2	3	11.6	7	2.2	2	5	2.4	M3	5	3.2
16	19	-	5.8	4	16	-	3.2	2.5	5	2.5	M3	5	3.2
25	29.5	-	8.75	5	21	9	3.2	3	7	3.3	M4	7	5.3
32	38	-	11	6	24	15	4.3	3	9	5.1	M6	9	6.4
40	49	-	11	8	28.4	15	5.3	4	12	6.4	M8	12	10.3

Size	EE	H1	H2	H3	H4 ±0.2	H5	H6 ±0.05	H7	H8	H9 ²⁾	H10	H11
10	M3	56.3	46	30.8	38.25	3.5	10.95	5.75	7	12.3	8.8	16
16	M3	81	67	45.5	66	4.5	15.5	7.5	9	7.5	12.25	23
25	M5	100	84	57	83.7	5.5	19.2	8.8	11	7.5	11.8	31
32	G1/8	116	96.2	65	100.5	6.5	22.5	11	13	11	20	25
40	G1/8	129	108.4	71.5	99.5	7	24.5	12	14	17.5	9	46

Size	H12	H14	H15	L1	L2 ¹⁾	L3	L4	L5 -0.02/ -0.05	T1 +0.5	T2 +0.1	T3 +1	W1 +3°/-1°	W2 ±1°
10	7	2.4	1.2	24	15	12.4	14	5.5	3.5	1.2	through	18	3
16	7	2.4	1.2	34	16	17	18	8	4.5	1.2	5.8	18	3
25	9	3	1.4	44	25	22.2	26	10	4.5	1.6	6.4	18	3
32	15	4	1.9	53	29	25.8	29	12	7.5	2.1	12.9	18	3
40	15	5	2.4	59	33	30	32	15	6	2.6	13.4	18	3

1) Tolerance for centring hole ±0.02 mm; tolerance for thread ±0.1 mm

2) Tolerance for centring hole -0.05 mm; tolerance for thread ±0.1 mm



Gain space and increase your productivity

- + With high gripping force and compact size
- + Thanks to heavy-duty and self-centring gripper jaws

Mechanical grippers › Radial grippers ›
Radial grippers

DHRS

Mechanical grippers > Radial grippers >

Radial grippers

DHRS



Overview, configuration and ordering

→ www.festo.com/catalogue/dhrs

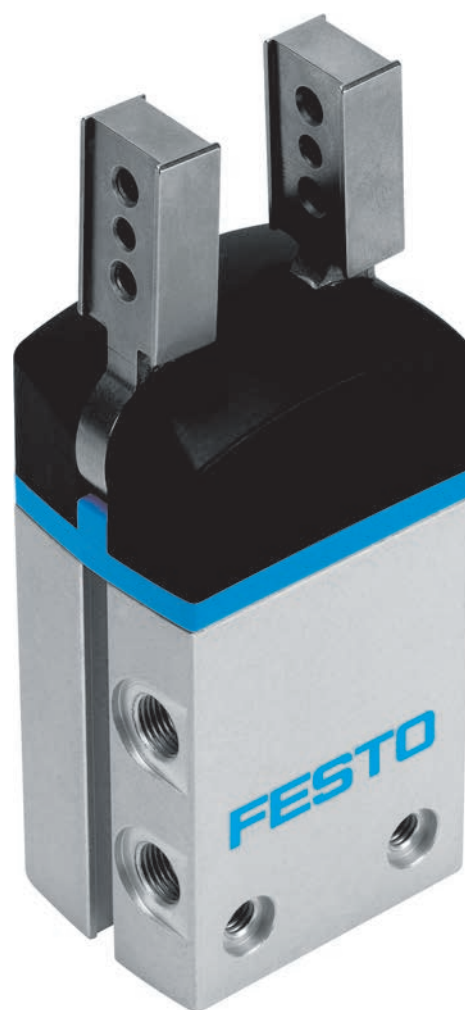


Additional information, support and user documentation

→ www.festo.com/sp/dhrs



Spare parts service



- + Lateral gripper jaw support for high torque loads
- + Self-centring
- + Gripper jaw centring options
- + Maximum repetition accuracy

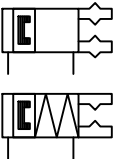
Product range overview

Type/function	Size	Opening angle [°]	Total gripping torque [Ncm]	Product overview	
				A	NC
DHRS					
Double-acting	10	180	15 ... 21	■	–
	16, 25, 32, 40	180	55 ... 725	■	■

Product overview

A Position sensing NC Closing gripping force backup

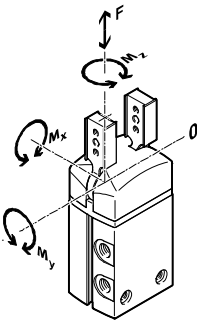
Data sheet



Technical data							Dimensions → Page 489	
Size			10	16	25	32	40	
Pneumatic connection			M3		M5	G1/8		
Max. opening angle			[°]		180			
Total gripping torque at 6 bar	Opening	[Ncm]	21	62	233	423	725	
	Closing	[Ncm]	15	55	215	390	660	
Repetition accuracy ¹⁾		[mm]	≤0.1					
Max. operating frequency		[Hz]	4			3	2	

1) End-position drift under constant working conditions with 100 consecutive strokes in the direction of movement of the gripper jaws.

Forces and torques



Size		10	16	25	32	40
Max. permissible force F_z	[N]	30	40	75	120	200
Max. permissible torque M_x	[Nm]	0.8	1.3	3.2	6.2	14
Max. permissible torque M_y	[Nm]	0.8	1.3	3.2	6.2	14
Max. permissible torque M_z	[Nm]	0.8	1.3	3.2	6.2	14

Radial grippers DHRS

Data sheet

Operating conditions		Without gripping force backup	With gripping force backup
Operating pressure	[bar]	2 ... 8	4 ... 8
Ambient temperature ¹⁾	[°C]	+5 ... +60	

1) Note operating range of proximity sensors.

Materials	
Housing	Hard anodised wrought aluminium alloy
Gripper jaw	High-alloy stainless steel
Cover cap	PA
Piston	POM
Link	Tempered steel
Seals	NBR

Order code

DHRS

A

Type
DHRS Radial gripper
Size
10, 16, 25, 32, 40
Position sensing
A For proximity sensor
Gripping force backup
– None
NC Closing 1

1

 Not with size 10 mm

Order example:
DHRS-25-A-NC
Radial gripper DHRS - size 25 - position sensing via proximity sensor - closing gripping force backup

Ordering – Product options

Configurable product

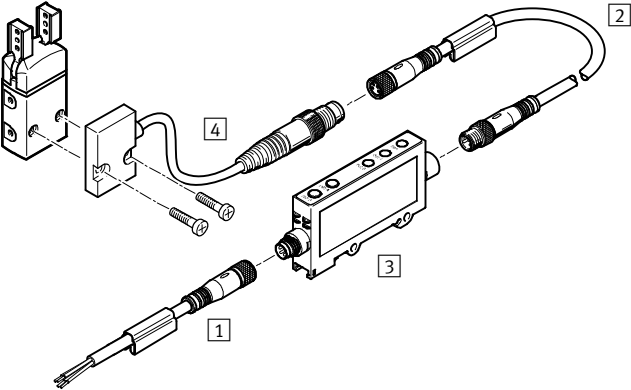
This product and all its options can be ordered using the configurator.

The configurator can be found under Products on the DVD or
➔ [www.festo.com/catalogue/...](#)

Enter the type code in the search field.

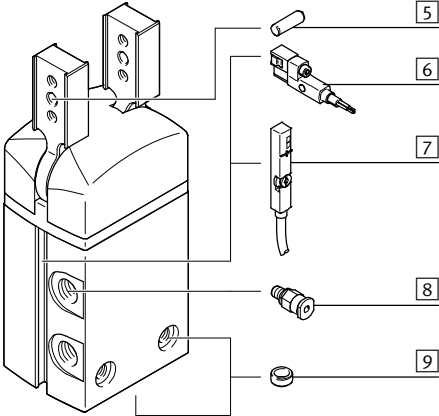
Accessories

DHRS-10



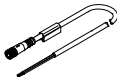
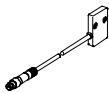
		→ Page/online
1	Connecting cable NEBU	487
2	Connecting cable NEBU	487
3	Signal converter SVE4	487
4	Position sensor SMH-S1	487
5	Centring pin	–
6	Proximity sensor SMT-8	488

DHRS-16 ... 40



		→ Page/online
7	Position transmitter SMAT-8M/SDAT	488
8	Push-in fitting QS	1443
9	Centring sleeve ZBH	488
–	Connecting cable NEBU	488
–	One-way flow control valve GRLA	488
–	Drive/gripper connections	dhRS

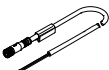
Accessories – Ordering data

	For size	Switching output, connection	Cable length [m]	Part no.	Type
1 Connecting cable					
	Connection between signal converter and controller				
	10	M8x1, 4-pin	2.5	541342	NEBU-M8G4-K-2.5-LE4
			5.0	541343	NEBU-M8G4-K-5-LE4
2 Connecting cable					
	Connection between position sensor and signal converter				
	10	M8x1, 4-pin	2.5	554035	NEBU-M8G4-K-2.5-M8G4
3 Signal converter					
	10	PNP	–	544216	SVE4-HS-R-HM8-2P-M8
		NPN	–	544219	SVE4-HS-R-HM8-2N-M8
4 Position sensor					
	10	–	–	175712	SMH-S1-HGR10

Mechanical grippers > Radial grippers >

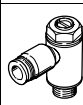
Radial grippers DHRS

Accessories – Ordering data

	For size	Switching output, connection	Cable length [m]	Part no.	Type
6 Proximity sensor for T-slot, magneto-resistive – N/O contact Data sheets online: ➔ smt					
	16 ... 40	PNP, cable	2.5	547859	SMT-8G-PS-24V-E-2,5Q-OE
		PNP, plug	0.3	547860	SMT-8G-PS-24V-E-0,3Q-M8D
		NPN, cable	2.5	8065028	SMT-8G-NS-24V-E-2,5Q-OE
		NPN, plug	0.3	8065027	SMT-8G-NS-24V-E-0,3Q-M8D
Connecting cable, straight socket Data sheets ➔ Page 1543					
	16 ... 40	M8x1, 3-pin	2.5	★ 541333	NEBU-M8G3-K-2.5-LE3
			5.0	★ 541334	NEBU-M8G3-K-5-LE3
Angled socket Data sheets ➔ Page 1543					
	16 ... 40	M8x1, 3-pin	2.5	★ 541338	NEBU-M8W3-K-2.5-LE3
			5.0	★ 541341	NEBU-M8W3-K-5-LE3
7 Position transmitter for T-slot Data sheets online: ➔ smat					
	16 ... 40	0 ... 10 V, 4-pin	0.3	553744	SMAT-8M-U-E-0,3-M8D
	32, 40	4 ... 20 mA, 4-pin	0.3	1531265	SDAT-MHS-M50-1L-SA-E-03-M8
Connecting cable, straight socket Data sheets ➔ Page 1543					
	16 ... 40	M8x1, 4-pin	2.5	541342	NEBU-M8G4-K-2.5-LE4
			5.0	541343	NEBU-M8G4-K-5-LE4
Angled socket Data sheets ➔ Page 1543					
	16 ... 40	M8x1, 4-pin	2.5	541344	NEBU-M8W4-K-2.5-LE4
			5.0	541345	NEBU-M8W4-K-5-LE4
9 Centring sleeve¹⁾²⁾ Data sheets online: ➔ zbh					
	10, 16	10, 16	–	189652	ZBH-5
	25	25	–	186717	ZBH-7
	32	32	–	150927	ZBH-9
	40	40	–	189653	ZBH-12

1) Packaging unit 10 pieces.

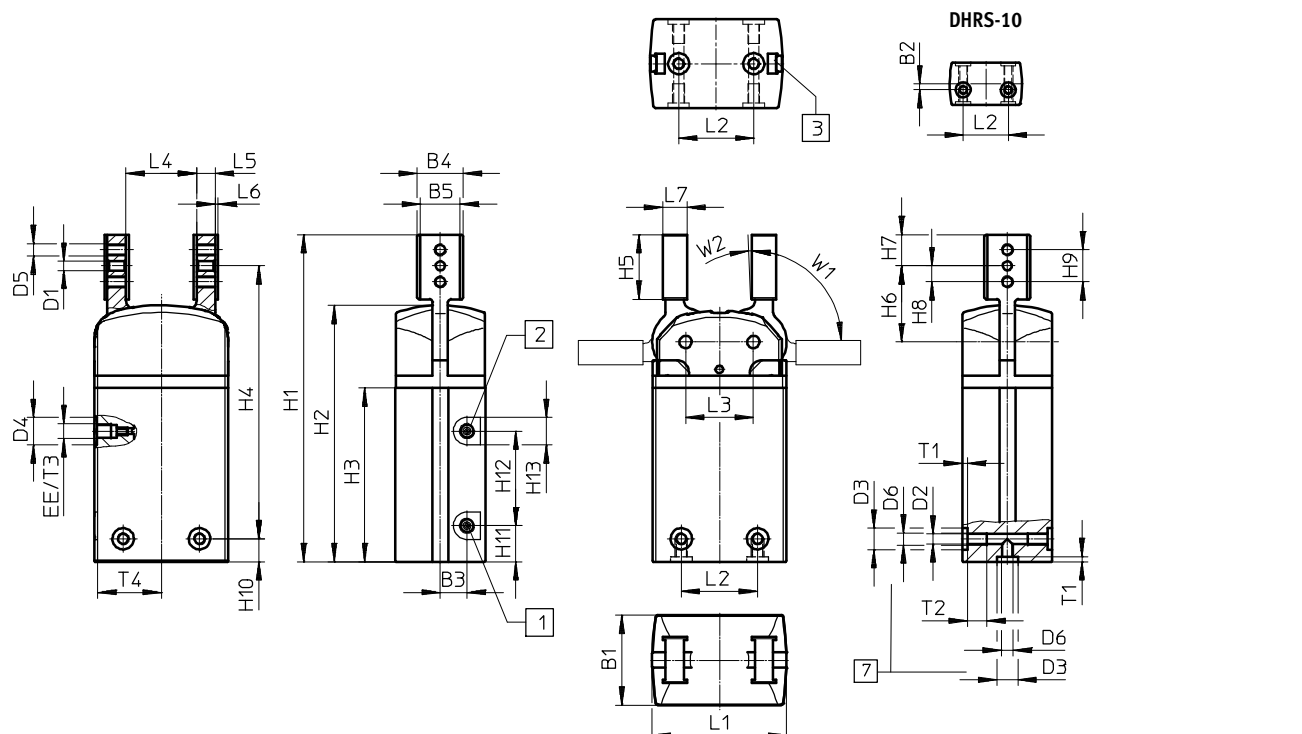
2) 2 included in the scope of delivery of the gripper.

Function	For size	Connection		Part no.	Type
		Thread	O.D.		
One-way flow control valve for exhaust air flow control³⁾ with slotted head screw, metal Data sheets → Page 1031					
	10, 16	M3	3	175041	GRLA-M3-QS-3
	25	M5	4	★ 193138	GRLA-M5-QS-4-D
	32, 40	G1/8	6	★ 193144	GRLA-1/8-QS-6-D

3) The recommended flow control valves are based on a tubing length to the valve of 1 m. For deviations of ±50%, flow control valves with a bigger or smaller flow rate must be selected to guarantee the optimum flow control function and cylinder speed.

Radial grippers DHRS

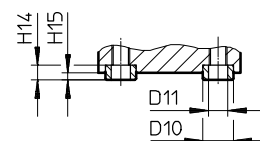
Dimensions

Download CAD data → www.festo.com

- 1 Supply port, opening
2 Supply port, closing

- 3 Slot for proximity sensor

- 7 Mounting interface:
centring sleeves ZBH
for mounting the gripper
(2 included in scope of delivery)



Size	B1 ±0.05	B2 ¹⁾	B3	B4	B5 +0.03/ +0.01	D1 Ø H8	D2 Ø +0.1	D3 Ø H8/h7	D4 Ø	D5	D6	D10 Ø h7	D11 Ø	EE
10	14	2	2	8.5	6.5	2	2.4	5	7	M2.5	M3	5	3.2	M3
16	19	–	5.8	14	10	2	2.5	5	–	M3	M3	5	3.2	M3
25	29.5	–	8.75	15	13	3	3.3	7	9	M4	M4	7	5.3	M5
32	38	–	11	16	14	4	5.1	9	15	M5	M6	9	6.4	G1/8
40	49	–	11	24	20	5	6.4	12	15	M6	M8	12	10.3	G1/8

Size	H1	H2	H3	H4 ±0.25	H5 ±0.2	H6 ±0.05	H7 –0.1	H8	H9	H10 ²⁾	H11	H12	H13	H14 –0.2
10	60.8	46	30.8	42.25	13.8	14.95	6.25	4	8	12.3	8.8	16	7	2.4
16	88.2	70.5	49	73.7	16.5	19.7	7	4	8	7.5	12.25	23	7	2.4
25	107.2	84	57	89.45	21.2	24.95	10.25	5.25	10.5	7.5	11.8	31	9	3
32	128.5	96.2	65	103.5	29.5	32	14	7	14	11	20	25	15	4
40	140	108.4	71.5	108.7	29.5	33.7	13.8	8	16	17.5	9	46	15	5

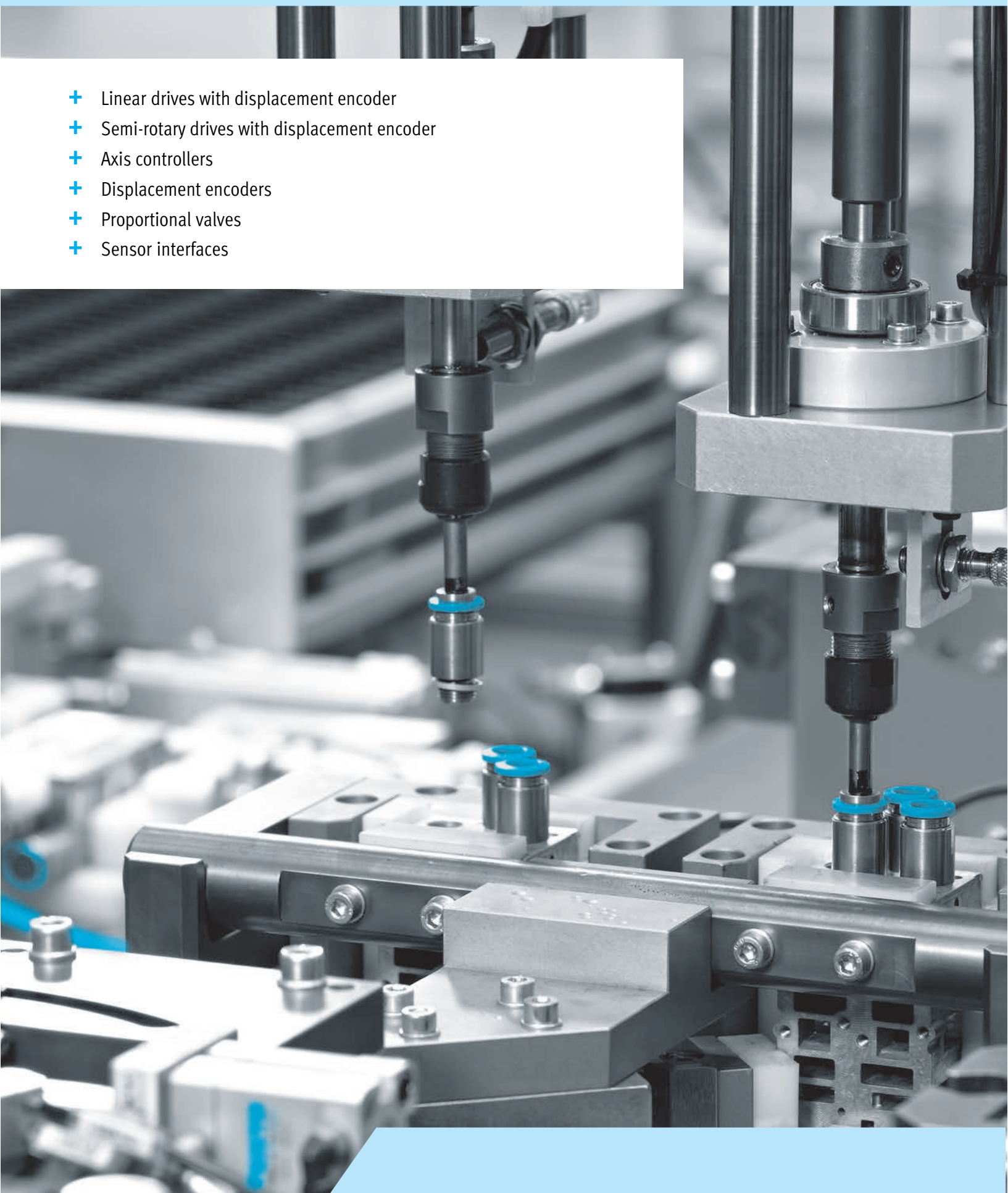
Size	H15 –0.3	L1 ±0.05	L2 ¹⁾	L3 ±0.02	L4	L5 ±0.05	L6	L7	T1 +0.1	T2 +1	T3 +0.5	T4	W1 ±2°	W2 +3°
10	1.2	24	15	12.4	12	4	0.5	5	1.2	through	3.5	11.6	90	2
16	1.2	33.4	16	17	21	4	1	6	1.2	5.8	4.5	16	90	2
25	1.4	44	25	22.2	23.2	6	1	8	1.6	6.4	4.5	21	90	2
32	1.9	51	29	25.8	24.8	8	1	10	2.1	12.9	6.5	24	90	2
40	2.4	59	33	30	29.6	10	1	12	2.6	13.4	6	28.4	90	2

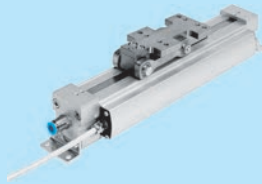
1) Tolerance for centring hole ±0.02 mm; tolerance for thread ±0.1 mm

2) Tolerance for centring hole –0.05 mm; tolerance for thread ±0.1 mm

3 Servo-pneumatic positioning systems

- + Linear drives with displacement encoder
- + Semi-rotary drives with displacement encoder
- + Axis controllers
- + Displacement encoders
- + Proportional valves
- + Sensor interfaces





DDLI
Linear drives
with displacement encoder

- + Based on linear drive DGC-K
- + With displacement encoder
for contactless measurement

→ page 492

Contents

Product overview 492

Product overview

Software tool

Soft Stop		Soft Stop virtually makes the impossible possible. Travel times are reduced by as much as 30% for pneumatic drives and vibration is also greatly reduced. The selection program performs all the necessary calculations.	This tool can be found • on the Internet at www.festo.com/catalogue by clicking on the blue "Engineering" button • or on the DVD under "Engineering Tools"
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Linear drives with displacement encoder

	 Linear drives with displacement encoder DFPI	 Linear drives with displacement encoder DFPI-NB3P	 Linear drives with displacement encoder DDLI
Type			
Piston diameter	100 mm, 125 mm, 160 mm, 200 mm, 250 mm, 320 mm	100 mm, 125 mm, 160 mm, 200 mm, 250 mm, 320 mm	25 mm, 32 mm, 40 mm, 63 mm
Theoretical force at 6 bar, advancing	4712 ... 48255 N	4712 ... 48255 N	295 ... 1870 N
Max. load, horizontal			30 ... 180 kg
Max. load, vertical			10 ... 60 kg
Stroke	40 ... 990 mm	40 ... 990 mm	100 ... 2000 mm
Description	• Mounting interfaces for process valves to DIN 3358 • Integrated air supply • Optionally with integrated displacement encoder or completely integrated positioner • IP65, IP67, IP69K, NEMA4 • ATEX certification	• Mounting interfaces to ISO 15552 • Sturdy tie rod design • Optionally with integrated displacement encoder or completely integrated positioner • IP65, IP67, IP69K, NEMA4 • ATEX certification	• Based on linear drive DGC-K • Without guide • With displacement encoder for contactless measurement • Suitable for positioning with axis controller CPX-CMAX • Suitable for end-position control with end-position controller CPX-CMPX, SPC11 • Can be used as a measuring cylinder • Supply ports on end face • IP67 degree of protection • For attachment to the customer's own guide • Supply ports on end face
→ Page/online	dfpi	dfpi	ddli

Linear drives with displacement encoder

			
Type	Standards-based cylinder with displacement encoder DDPC	Standards-based cylinder with displacement encoder DNCI	Linear drives with displacement encoder DGCi
Piston diameter	100 mm, 80 mm	32 mm, 40 mm, 50 mm, 63 mm	18 mm, 25 mm, 32 mm, 40 mm, 63 mm
Theoretical force at 6 bar, advancing	3016 ... 4712 N	415 ... 1870 N	153 ... 1870 N
Max. load, horizontal	300 ... 450 kg	45 ... 180 kg	1 ... 180 kg
Max. load, vertical	100 ... 150 kg	15 ... 60 kg	1 ... 60 kg
Stroke	10 ... 2000 mm	10 ... 2000 mm	100 ... 2000 mm
Description	- Standards-based cylinder to ISO 15552 - With displacement encoder for contactless measurement - Suitable for positioning with axis controller CPX-CMAX - Suitable for end-position control with end-position controller CPX-CMPX or SPC11 - Can be used as a measuring cylinder - Piston rod variants - Fixed cushioning - Optionally with recirculating ball bearing guide, clamping unit	- Standards-based cylinder to ISO 15552 - With integrated displacement encoder for relative analogue, contactless measuring - Suitable for servo-pneumatic applications with axis controller CPX-CMAX, end-position controller CPX-CMPX or SPC11 and measuring module CPX-CMIX - Piston rod with male thread - Piston rod variants - Optionally with recirculating ball bearing guide, clamping unit	- With guide - With displacement encoder for absolute and contactless measuring - Suitable for servo-pneumatic applications with axis controller CPX-CMAX, end-position controller CPX-CMPX or SPC11 and measuring module CPX-CMIX - Supply ports optionally on end face or front
→ Page/online	ddpc	dnci	dgc

03

Servo-pneumatic positioning systems

Swivel modules with displacement encoder

	
Type	Swivel modules with angular displacement encoder DSMI-B
Piston diameter	25 mm, 40 mm, 63 mm
Theoretical torque at 6 bar	5 ... 40 Nm
Max. mass moment of inertia, horizontal	0.03 ... 0.6 kgm ²
Max. mass moment of inertia, vertical	0.03 ... 0.6 kgm ²
Swivel angle	0 ... 272°
Description	- With rotary vane - Integrated rotary potentiometer - Suitable for servo-pneumatic applications with axis controller CPX-CMAX, end-position controller CPX-CMPX or SPC11 and measuring module CPX-CMIX - Compact design
→ Page/online	dsmi

Product overview

Axis controllers

			
Type	Axis controllers CPX-CMAX	End-position controller CPX-CMPX	End-position controller SPC11
No. of axis strings	1	1	1
Axes per string	1	1	1
Description	• Axis controller as CPX module, supports pneumatic drives with piston rod, rodless drives and semi-rotary drives • Force and position control • Use with all fieldbus/EtherNet and controllers CEC available on CPX • Easy commissioning thanks to auto identification function • Rapid commissioning and comprehensive diagnostics with the parameterisation software FCT	• Electronic end-position control for pneumatic drives • Soft Stop for smooth braking and quick acceleration • Use with all fieldbus/EtherNet available on CPX • Easy commissioning with Festo plug and work • Approx. 30% shorter travel times and 30% less air consumption than with comparable standard pneumatics • End positions with 2 additional, freely positionable intermediate positions	• Quickly and smoothly into the end position with two additional intermediate positions • Electronic end-position cushioning • Quick and easy commissioning: configure, teach, done • Supports pneumatic drives with piston rod, rodless drives and semi-rotary drives
→ Page/online	cpx-cmax	cpx-cmpx	spc11

Displacement encoders

			
Type	Displacement encoders MLO-POT-TLF	Displacement encoders MLO-POT-LWG	Displacement encoders MME-MTS-TLF
Stroke	225 ... 2000 mm	100 ... 750 mm	225 ... 2000 mm
Measuring principle of displacement encoder	Analogue	Analogue	Digital
Output signal	Analogue	Analogue	CAN protocol type SPC-AIF
Path resolution	0.01 mm	0.01 mm	< 0.01 mm
Description	• Conductive plastic potentiometer • Absolute measurement with high resolution • High travel speed and long service life • Plug-in connections	• Connecting rod potentiometer • Absolute measurement with high resolution • Long service life • IP65 degree of protection • Plug-in connections	• Measuring principle: magnetostrictive • Contactless with absolute measurement • High travel speed • System product for servo-pneumatic positioning technology and Soft Stop • IP65 degree of protection
→ Page/online	mlo	mlo	mme

Product overview

Proportional directional control valves

		
Type	Proportional directional control valves VPWP	Proportional directional control valves MPYE
Valve function	5/3-way proportional directional control valve, closed	5/3-way, closed
Pneumatic connection 1	G1/8, G1/4, G3/8	G1/8, G1/4, G3/8, M5
Operating pressure for positioning/Soft Stop	4 ... 8 bar	
Operating pressure	0 ... 10 bar	0 ... 10 bar
Standard nominal flow rate	350 ... 2000 l/min	100 ... 2000 l/min
Description	- Controlled piston spool valve - Digital actuation - Integrated pressure sensors for monitoring function and force control - With auto identification - Diagnostic function - Integrated digital output, e.g. for a clamping/brake unit - Suitable for servopneumatic applications with CPX-CMAX and CPX-CMPX	- Controlled piston spool valve - Analogue actuation - Setpoint input as analogue voltage signal (0 ... 10 V) - Suitable for servo-pneumatic applications with SPC11
→ Page/online	vpwp	mpye

Sensor interfaces

		
Type	Sensor interfaces CASM	Measured-value transducer DADE
Diagnostic function	Display via LED	Display via LED
Electrical connection	5-pin, 8-pin, socket, M12	8-pin, socket, M12
Displacement encoder		
Electrical connection	5-pin, M9, plug connector	
Control interface		
Control interface	CAN bus with Festo protocol, digital, without terminating resistor	
Description	- For actuating pneumatic positioning drives with the latest servopneumatic systems such as CPX-CMAX, CPX-CMPX and CPX-CMIX - Short cables for analogue signals, secure digitised bus transmission - Convenient plug and work concept with auto identification and comprehensive diagnostics - High protection class IP67	- For standards-based cylinders DNCI, DDPC - Converts sensor signals into voltage or current signals - Diagnostic display via LED - Mounting via through-holes
→ Page/online	casm	dade