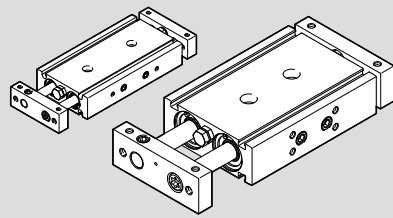


DGTZ-...-J

Twin cylinder



FESTO

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Operating instructions

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Translation of the original instructions

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1 Applicable Documents

All available documents for the product → www.festo.com/sp.

2 Safety

2.1 Safety instructions

- Only use the product in original status without unauthorised modifications.
- Have the product repaired by the Festo repair service only.
- Only use the product if it is in perfect technical condition.
- Observe labelling on the product.
- Take into consideration the ambient conditions at the location of use.
- Before working on the product, switch off the compressed air supply and lock it to prevent it from being switched on again.
- Observe tightening torques. Unless otherwise specified, the tolerance is $\pm 20\%$.

2.2 Intended use

The product is intended for the transport of loads.

2.3 Training of qualified personnel

Work on the product may only be carried out by qualified personnel who can evaluate the work and detect dangers. The qualified personnel have skills and experience in dealing with pneumatic (open-loop) control technology.

3 Additional information

- Contact the regional Festo contact if you have technical problems → www.festo.com.
- Accessories and spare parts → www.festo.com/catalogue.

4 Product overview

4.1 Function

- One cylinder chamber is always advanced. The piston rod moves outwards when one cylinder chamber is pressurised. The advanced piston rod is retracted by pressurising the other cylinder chamber. The other piston rod is advanced at the same time.
- The cylinder force is equal during advance and return.
- One or more limit switches can be mounted in the slots provided for sensing the position of the piston.

4.2 Design

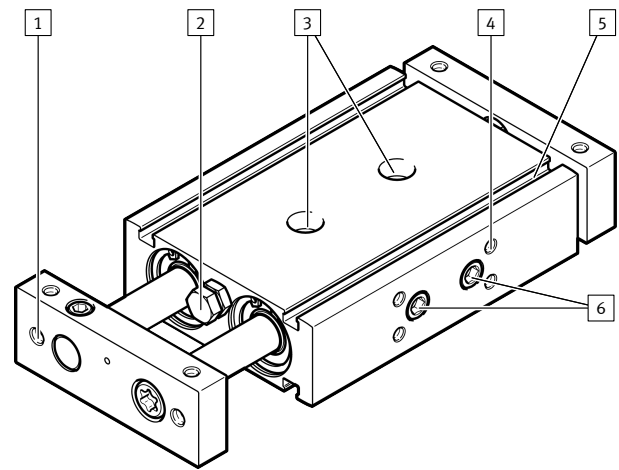


Fig. 1: Design

- | | |
|---|------------------------------------|
| 1 Female thread for mounting the payload | 4 Mounting thread |
| 2 Adjustable end stop | 5 Slot for proximity switch |
| 3 Mounting hole | 6 Supply ports |

5 Transport and storage

- Store the product in a cool, dry environment protected from UV and corrosion. Keep storage times short.

6 Installation

1. Handle the product carefully to prevent damage to the cylinder barrel and piston rod.
2. Observe the following points:
 - installation without distortion
 - Compliance with the permissible loads → www.festo.com/catalogue
3. Note the tightening torque at the mounting thread [4].

Size	6	10	16	20	25	32
Mounting thread [Nm]	1.2	1.2	3	3	5	5

7 Installation

7.1 Pneumatic installation

- Connect tubing to supply ports.

8 Commissioning

8.1 Preparation

- Pressurise the complete system slowly. A soft start valve is used for gradual start-up pressurisation → www.festo.com/catalogue.

With medium or large payloads or at high speeds:

- Use sufficiently dimensioned arrester fixtures. The product will tolerate the maximum velocities and payloads without external arrester fixtures → www.festo.com/catalogue

8.2 Procedure

NOTICE

Risk of collision due to payloads that project into the setup region of the product.

- Only turn adjusting screws while the product is stationary.

1. Mount one-way flow control valves on both sides.
2. Screw the one-way flow control valves all the way in on both sides, then loosen by one turn.
3. Pressurise the cylinder simultaneously at both sides.
 - ↳ The piston rod moves slightly to a point of balance.
4. Exhaust the cylinder on one side.
 - ↳ The piston rod moves to an end position.
5. Start test run.
6. If the piston rod strikes hard against the end positions or rebounds, adjust the speed with the one-way flow control valve.

9 Maintenance

9.1 Cleaning

NOTICE

- Do not use aggressive cleaning agents.
- Do not clean the guide elements. Regularly removing the lubricant from the surface of the piston rod reduces the service life.

- Clean the product with a soft cloth.
- Apart from cleaning the cylinder is maintenance-free owing to the lifetime lubrication.

10 Malfunctions

10.1 Fault clearance

Fault description	Cause	Remedy
Irregular movement of the piston rod (cylinder jolts).	Lack of lubricant.	Apply lubricant in accordance with wearing parts sheet → www.festo.com/spareparts .
	One-way flow control valves restrict the flow of supply air.	Restrict the exhaust air flow if possible (not the supply air).
	The piston rod is dirty.	– Clean the cylinder. – Provide covering (Relubricate after thorough cleaning).
	The supply air is insufficient (stick slip).	– Keep the tubing lines short and select suitable cross-sections. – Select the correct pressure. – Keep the pressure constant.
	The pressure is too low.	Connect volume upstream.
The piston does not move to the end position.	The cylinder barrel is damaged.	Replace the cylinder.
	The setting screw for end-position cushioning is completely closed.	Loosen the setting screw.
	Foreign matter in the cylinder.	Filter the compressed air.
	The cylinder travels to an external end stop.	Readjust the end stop.
False triggering during position sensing.	The temperatures too high or too low.	Comply with the permissible temperature range of the proximity switches.
	Error in the proximity switch	Operating instructions of the proximity switch → www.festo.com/sp .

Tab. 1: Fault clearance

11 Technical data

Size	6	10	16	
Pneumatic port	M5			
Mounting position	any			
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4] lubricated operation possible, in which case lubricated operation will always be required			
Operating pressure	[MPa]	0.2 ... 0.8	0.12 ... 0.8	
	[bar]	2 ... 8	1.2 ... 8	
	[psi]	29 ... 116	17.4 ... 116	
Ambient temperature	[°C]	–10 ... +80		
Theoretical force at 0.6 MPa (6 bar, 90 psi)				
Advancing	[N]	18.6	60	181
Retracting	[N]	18.6	60	181
Basic weight	[g]	112	201	370
Additional weight per 10 mm stroke	[g]	17	24.5	35

Tab. 2: Technical data, sizes 6...16

Size	20	25	32	
Pneumatic port	M5	G1/8	G1/8	
Mounting position	any			
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4] lubricated operation possible, in which case lubricated operation will always be required			
Operating pressure	[MPa]	0.12 ... 0.8		
	[bar]	1.2 ... 8		
	[psi]	17.4 ... 116		
Ambient temperature	[°C]	–10 ... +80		
Theoretical force at 0.6 MPa (6 bar, 90 psi)				
Advancing	[N]	283	454	724
Retracting	[N]	283	454	724
Basic weight	[g]	595	882	1628
Additional weight per 10 mm stroke	[g]	50	71	114

Tab. 3: Technical data, sizes 20...32