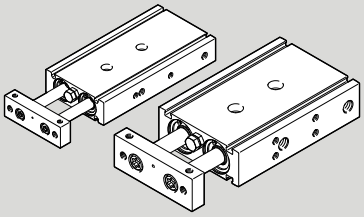
DGTZ
Twin cylinder



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Operating instructions

8152565
2021-02a
[8152567]

8152565

Translation of the original instructions

1 Applicable Documents

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

2 Safety

2.1 Safety Instructions

– Take into consideration the ambient conditions at the location of use.
– Only use the product in original status without unauthorised modifications.
– Observe labelling on the product.
– Store the product in a cool, dry, UV-protected and corrosion-protected environment. Ensure that storage times are kept to a minimum.
– Prior to mounting, installation and maintenance work: Switch off compressed air supply and secure it from being switched back on.
– Observe tightening torques. Unless otherwise specified, the tolerance is ± 20 %.

2.2 Intended use

The product is intended for the transport of loads.

2.3 Training of skilled personnel

Installation, commissioning, maintenance and disassembly should only be conducted by qualified personnel.

3 Further information

– Accessories ➔ www.festo.com/catalogue.
– Spare parts ➔ www.festo.com/spareparts.

4 Service

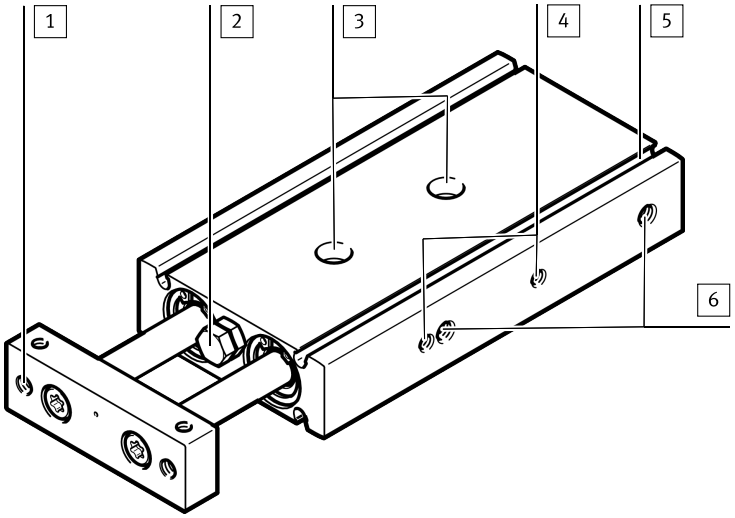
Contact your regional Festo contact person if you have technical questions ➔ www.festo.com.

5 Product overview

5.1 Function

The piston rod moves outwards when the cylinder chamber is pressurised. The advanced piston rod is retracted by pressurising the other cylinder chamber.
The cylinder force varies during advance and retraction.
The position of the piston can be detected by proximity sensors.

5.2 Design



1 Female thread for mounting the payload
2 Adjustable end stop
3 Through-hole for recumbent mounting
4 Mounting thread
5 Slot for sensor mounting
6 Compressed air connections on piston side/bottom

Fig. 1 Design

6 Mounting

1. Handle the cylinder so as to avoid any 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 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

Tab. 1 Tightening torques

7 Installation

7.1 Pneumatic Installation

- Connect tubing to supply ports.

8 Commissioning

8.1 Preparation

- Pressurise the 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 large 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 ends.
   ↳ 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.

The cylinder is furthermore 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).
	Piston rod is dirty.	– Clean the cylinder. – Provide covering (relubricate after thorough cleaning).
	Insufficient supply air (stick-slip)	– Keep the tubing lines short and select suitable cross-sections. – Select correct pressure. – Keep pressure constant.
	Pressure is too low.	Connect volume upstream.
Piston does not travel to end position.	Cylinder barrel is damaged.	Replace cylinder.
	Setting screw for end-position cushioning is completely closed.	Loosen setting screw.
	Foreign matter in the cylinder.	Filter the compressed air.
	Cylinder travels to an external end stop.	Readjust the end stop.
False triggering during position sensing.	Temperatures too high or too low.	Comply with permissible temperature range of the proximity sensors.
	Fault at proximity sensor	➔ Instruction manual for proximity sensor

Tab. 2 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	0.15 ... 0.8	0.1 ... 0.8
	[psi]	29 ... 116	22 ... 116	14,5 ... 116
	[bar]	2 ... 8	1.5 ... 8	1 ... 8
Ambient temperature	[°C]	–10 ... +80		
Theoretical force at 0.6 MPa / 90 psi / 6 bar advance	[N]	33	94	242
Theoretical force at 0.6 MPa / 90 psi / 6 bar return	[N]	18	60	181
Basic weight	[g]	65.5	115	236
Additional weight per pro 10 mm stroke	[g]	16.5	20	27

Tab. 3 Technical data, size 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]	0.1 ... 0.8		
	[psi]	14.5 ... 116		
	[bar]	1 ... 8		
Ambient temperature	[°C]	–10 ... +80		
Theoretical force at 0.6 MPa / 90 psi / 6 bar advance	[N]	376	590	966
Theoretical force at 0.6 MPa / 90 psi / 6 bar return	[N]	283	454	724
Basic weight	[g]	374	563	966
Additional weight per pro 10 mm stroke	[g]	37	53	83.5

Tab. 4 Technical data, size 20...32