

- Gentle stopping thanks to integrated shock absorber
- Powerful thanks to high load capacity
- Versatile thanks to adjustable cushioning
- Reliable thanks to sturdy design

Stopper cylinders DFST

Key features

Key features at a glance

- Gentle stopping without impact vibration or noise
- Single-acting or double-acting
- Powerful shock absorber for high energy absorption
- Wide range of applications thanks to adjustable shock absorber
- Supply ports at side or underneath
- Adjustable active direction thanks to rotatable toggle lever actuator (90°, 180°, 270°)
- Position sensing via inductive proximity sensor SIEN on the toggle lever or via proximity sensor for T-slot SME-/SMT-8 via the piston
- Sturdy design for long service life
- Stable guide rod
- Seal for protection against dirt and moisture

The technology in detail

Cushioning adjustment

- Adaptable shock absorber depending on the load on the workpiece carrier
- Easy adjustment via knurled adjusting wheel **1**
- Shock absorber can be replaced in the fitted position



Optional: Toggle lever lock

- For locking the toggle lever **1**
- The toggle lever lock **2** can be ordered as a variant of the stopper cylinder or as an accessory
- Simple design
- Reliable function

Piston Ø 50:

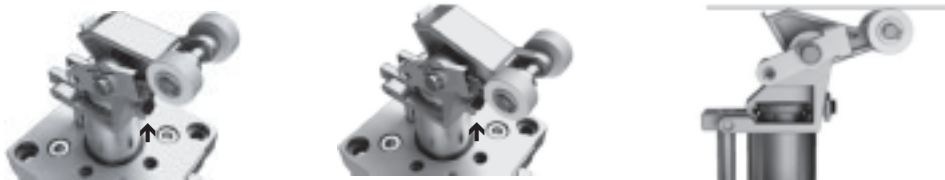


Piston Ø 63, 80:



Toggle lever deactivation

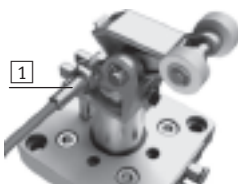
- For deactivation of the stop function
- Toggle lever deactivator can be ordered as an accessory
- Simple design



Position sensing

- Sensing of the toggle lever position (workpiece carrier in stop position) with inductive proximity sensor SIEN-M8 **1**
- Sensing of the piston position (cylinder retracted or advanced) with proximity sensor SME-/SMT-8 in the slot **2**

Sensing of the toggle lever position

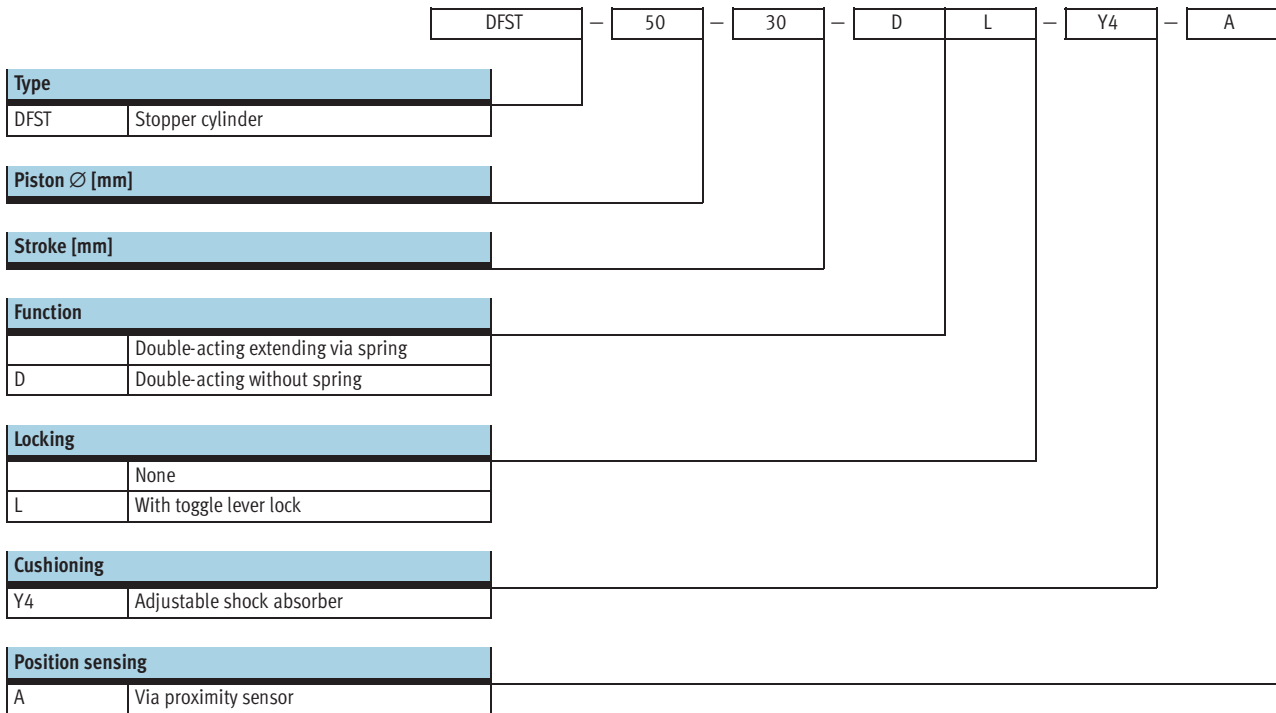


Sensing of the piston position



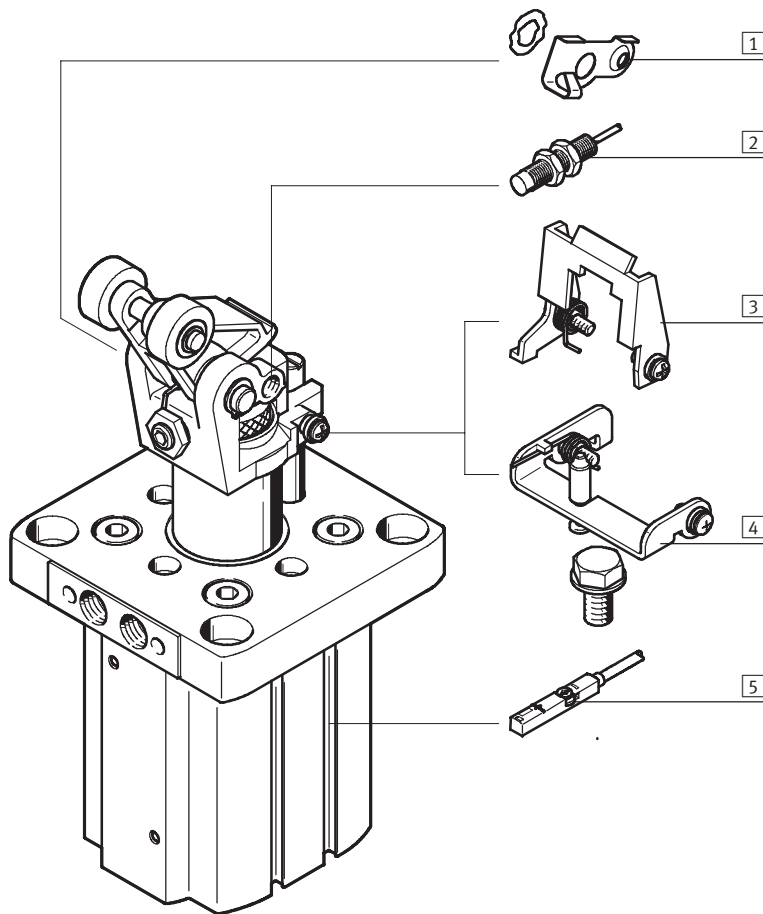
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Type codes



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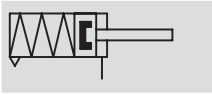
Peripherals overview




Variants and accessories		
Type	Brief description	→ Page
1 Toggle lever deactivator DADP-TF	For deactivation of the stop function. The workpiece carrier is able to pass the stopper cylinder without activating the cylinder	1 / 5.2-24
2 Proximity sensor, inductive SIEN-M8	For sensing of the toggle lever position	1 / 5.2-24
3 Toggle lever lock DADP-TL	<ul style="list-style-type: none"> For piston \varnothing 50 For locking the toggle lever in the retracted position. With pressurization, the workpiece carrier and the toggle lever are released simultaneously 	1 / 5.2-24
4 Toggle lever lock DADP-TL	<ul style="list-style-type: none"> For piston \varnothing 63, 80 For locking the toggle lever in the retracted position. With pressurization, the workpiece carrier and the toggle lever are released simultaneously 	1 / 5.2-24
5 Proximity sensor SME-/SMT-8	For sensing the piston position	1 / 5.2-24

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Technical data



-  - Diameter
50 ... 80 mm

-  - Stroke length
30 ... 40 mm



General technical data			
Piston \varnothing	50	63	80
Pneumatic connection	G $\frac{1}{8}$		
Stroke [mm]	30	40	
Design	Piston rod with toggle lever		
Mode of operation	Single-acting/double-acting		
	Pulling		
Protection against torsion/guide	Guide rod		
Type of mounting	Via through-holes		
Cushioning (of piston movement)	Flexible cushioning rings/plates at both ends		
Position sensing	Via proximity sensor		
Mounting position	Upright		
Product weight [g]	1,800	3,500	6,850

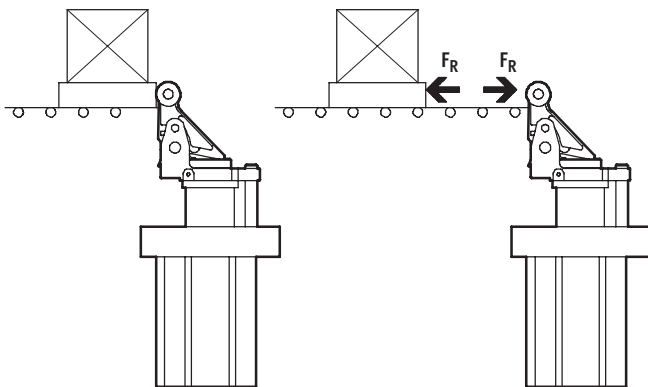
Operating and environmental conditions	
Operating medium	Filtered compressed air, lubricated or unlubricated
Operating pressure ¹⁾ [bar]	2 ... 10
Ambient temperature [°C]	5 ... 60
Corrosion resistance class CRC ²⁾	1

1) Min. operating pressure for piston \varnothing 50 with toggle lever lock is 3 bar

2) Corrosion resistance class 1 to Festo standard 940 070

Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Forces [N]			
Piston \varnothing	50	63	80
Resetting force F_R of the toggle lever	11	23	36



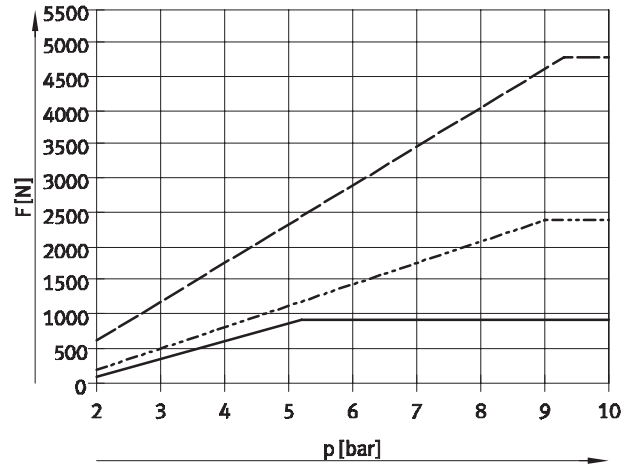
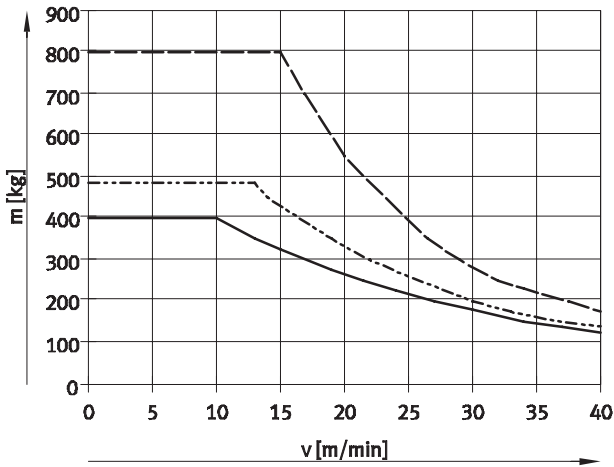
-  - Note

The resetting force F_R of the toggle lever and the friction factor μ determine the required minimum load for pressing the toggle lever into the retracted position.

Stopper cylinders DFST

Technical data

Permissible load m as a function of the conveyor speed v Permissible lateral force F as a function of the pressure p



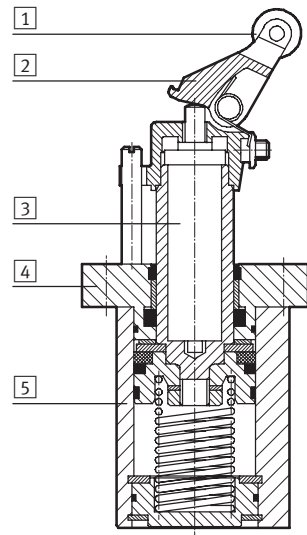
- Ø 50
- - - Ø 63
- · - · - Ø 80

- Ø 50
- - - Ø 63
- · - · - Ø 80

Note
 This graph applies to a friction factor $\mu = 0.1$ between the work-piece carrier and conveyor belt.

Materials

Sectional view



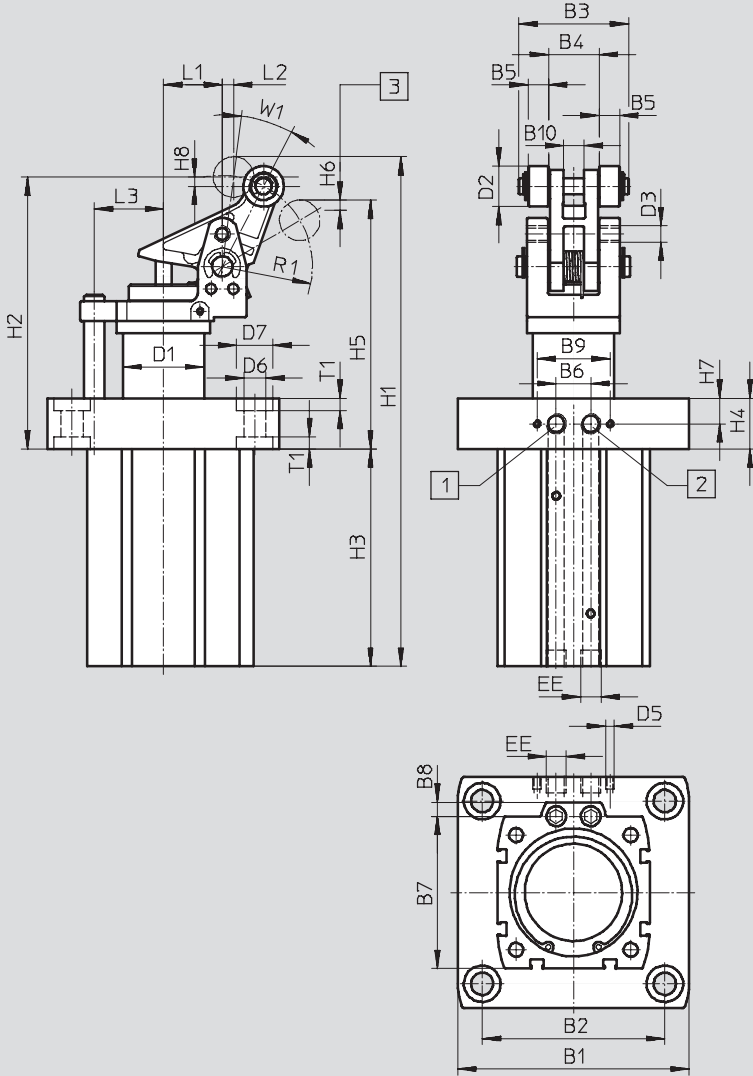
Stopper cylinder		
Piston Ø	50	63, 80
1	Rollers	Polyacetal
2	Toggle lever module	Nickel-plated cast steel
3	Piston rod	High-alloy stainless steel
4	Cover	Die-cast aluminium
5	Body	Wrought aluminium alloy
-	Seals	Nitrile rubber
-	Note on materials	Conforms to RoHS

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Technical data

Dimensions

Download CAD-Daten → www.festo.com/en/engineering



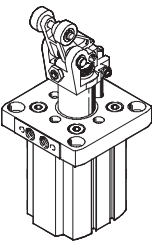
- 1 Supply port (retract)
- 2 Supply port (advance)
- 3 Maximum permissible underside depth of pallet

∅	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	D1	D2	D3	D5	D6
[mm]	□	□					□				∅	∅			∅
50	93	73	43	20	8		64			8.1	32	20	M8x1	M4	9
63	114	90	54	25	10	17	75	7	36	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	W1
[mm]	∅															
50	14	G1/8	219	118	91	17.5	107.5	5	8.75	5.5	14	5	26	36.3	5	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 DFST




Technical data


Ordering data						
	Piston \varnothing	Single-acting	Double-acting	With toggle lever lock	Part No.	Type
	50	■			543 729	DFST-50-30-Y4-A
		■		■	555 572	DFST-50-30-L-Y4-A
			■		543 730	DFST-50-30-D-Y4-A
			■	■	555 573	DFST-50-30-DL-Y4-A
	63	■			543 744	DFST-63-30-Y4-A
		■		■	555 574	DFST-63-30-L-Y4-A
			■		543 745	DFST-63-30-D-Y4-A
			■	■	555 575	DFST-63-30-DL-Y4-A
	80	■			543 747	DFST-80-40-Y4-A
		■		■	555 576	DFST-80-40-L-Y4-A
			■		543 748	DFST-80-40-D-Y4-A
			■	■	555 577	DFST-80-40-DL-Y4-A

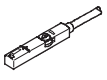

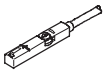
Stopper cylinders DFST

Accessories



Ordering data			
	For Ø	Part No.	Type
Toggle lever lock DADP-TL			
	50	543 751	DADP-TL-F3-50
	63	543 752	DADP-TL-F3-63
	80	543 753	DADP-TL-F3-80
Toggle lever deactivator DADP-TF			
	50	543 755	DADP-TF-F3-50
	63	543 756	DADP-TF-F3-63
	80	543 757	DADP-TF-F3-80

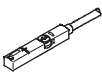


Ordering data – Proximity sensors, inductive				Technical data → www.festo.com	
	For Ø	Contact	Electrical connection	Part No.	Type
	50, 63, 80	N/O contact	Cable	150 386	SIEN-M8B-PS-K-L
			Plug	150 387	SIEN-M8B-PS-S-L
		N/C contact	Cable	150 390	SIEN-M8B-PO-K-L
			Plug	150 391	SIEN-M8B-PO-S-L



Ordering data – Proximity sensors for T-slot, magneto-resistive					Technical data → www.festo.com/catalogue/sm	
	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with cylinder profile	PNP	Cable, 3-wire	2.5	543 867	SMT-8M-PS-24V-K-2,5-OE
			Plug M8x1, 3-pin	0.3	543 866	SMT-8M-PS-24V-K-0,3-M8D
			Plug M12x1, 3-pin	0.3	543 869	SMT-8M-PS-24V-K-0,3-M12
		NPN	Cable, 3-wire	2.5	543 870	SMT-8M-NS-24V-K-2,5-OE
Plug M8x1, 3-pin	0.3		543 871	SMT-8M-NS-24V-K-0,3-M8D		
	Insertable in the slot lengthwise, flush with the cylinder profile	PNP	Cable, 3-wire	2.5	175 436	SMT-8-PS-K-LED-24-B
			Plug M8x1, 3-pin	0.3	175 484	SMT-8-PS-S-LED-24-B
N/C contact						
	Insertable in the slot from above, flush with cylinder profile	PNP	Cable, 3-wire	7.5	543 873	SMT-8M-PO-24V-K7,5-OE

Stopper cylinders DFST

Accessories

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Ordering data – Proximity sensors for T-slot, magnetic reed					Technical data → www.festo.com/catalogue/sm	
	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with cylinder profile	Contacting	Cable, 3-wire	2.5	543 862	SME-8M-DS-24V-K-2,5-OE
				5.0	543 863	SME-8M-DS-24V-K-5,0-OE
			Cable, 2-wire	2.5	543 872	SME-8M-ZS-24V-K-2,5-OE
			Plug M8x1, 3-pin	0.3	543 861	SME-8M-DS-24V-K-0,3-M8D
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	150 855	SME-8-K-LED-24
			Plug M8x1, 3-pin	0.3	150 857	SME-8-S-LED-24
N/C contact						
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	7.5	160 251	SME-8-0-K-LED-24

Ordering data – Connecting cables				Technical data → www.festo.com/catalogue/nebu	
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part No.	Type
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541 333	NEBU-M8G3-K-2.5-LE3
			5	541 334	NEBU-M8G3-K-5-LE3
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541 338	NEBU-M8W3-K-2.5-LE3
			5	541 341	NEBU-M8W3-K-5-LE3