Type codes and peripherals overview

Type codes

001	Series	
DFSP	Stopper cylinder, single- or double-acting	

002	Protection against rotation	
	None	
Q	With protection against rotation	

003	Piston diameter	
16	16	
20	20	
32	32	
40	40	
50	50	

004	Stroke	
10	10	
15	15	
20	20	
25	25	
30	30	
...	10 ... 30	

005	Function	
	Double-acting with spring	
D	Double-acting	
P	Single-acting with spring	

006	Piston rod design	
S	Standard	
F	With female thread	
R	With roller	

007	Cushioning	
P	Elastic cushioning rings/plates on both sides	

008	Position sensing	
A	For proximity sensor	

Peripherals overview
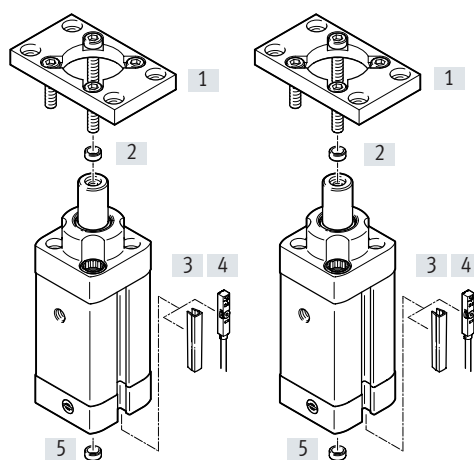
Accessories		Description	➔ Page/Internet
[1]	Flange mounting DAMF-F7	Mounting option via flange plate	20
[2]	Centring sleeve ZBH	For precise mounting on the piston rod with female thread	21
[3]	Slot cover ABP	For protection against contamination	21
[4]	Proximity switch SME/SMT-8	Can be integrated into profile slot	21
[5]	Centring sleeve ZBH	For the precise fitting of the stopper cylinder	21

Data sheet

- ⌀ - Diameter
  16 ... 50 mm

- | - Stroke length
  5 ... 30 mm

General technical data							
Piston ⌀		16	20	32	40	50
Pneumatic connection		M5	M5	G1/8	G1/8	G1/8
Stroke	[mm]	5 ... 15	5 ... 20	5 ... 25	5 ... 30	5 ... 30
Max. switching frequency	[Hz]	5				
Design		Piston				
		Piston rod				
		Piston rod with roller				
		Profile barrel				
		Non-rotating				
Mode of operation		Double-acting with spring, pulling				
		Double-acting without spring				
		Single-acting, pulling				
Cushioning		Elastic cushioning rings/plates at both ends				
Type of mounting		With through-hole				
		With female thread				
		Via accessories				
Position sensing		Via proximity switch				
Mounting position		Any				

- ⬙ - **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 12
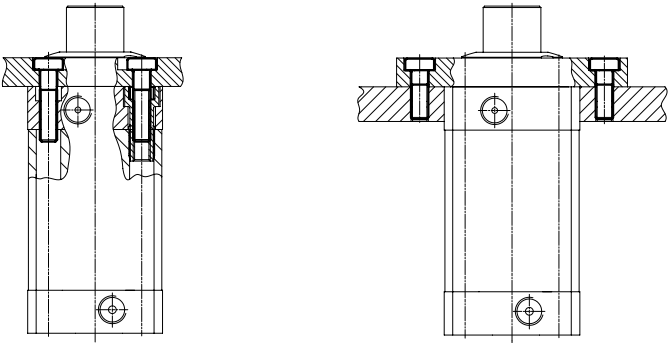
Data sheet

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.
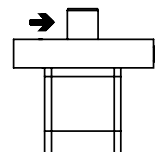
➜ = direction of impact force

| 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 load m as a function of conveyor speed v

A prerequisite for the values in the graphs is an elastic buffer on the workpiece carrier with a deformation path of 1 mm.
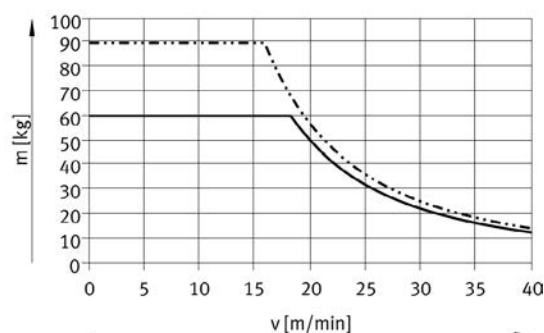
A shorter deformation path reduces the impact force.

Note

Selection aid ➜ page 22
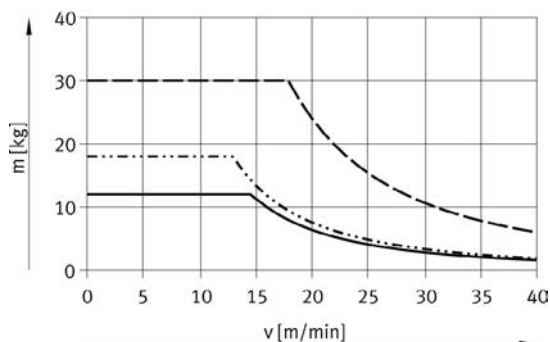
DFSP-... / DFSP-Q-... – with trunnion
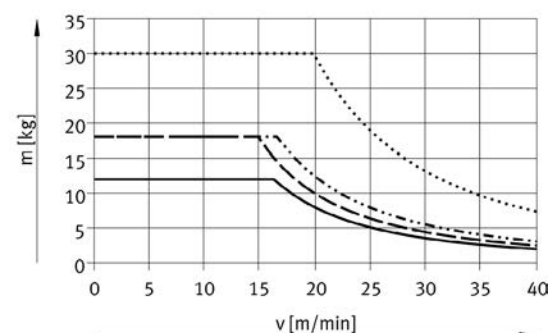
——— DFSP-16/DFSP-Q-16
–··–··– DFSP-20
– – – DFSP-Q-20
············ DFSP-32/DFSP-Q-32

——— 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