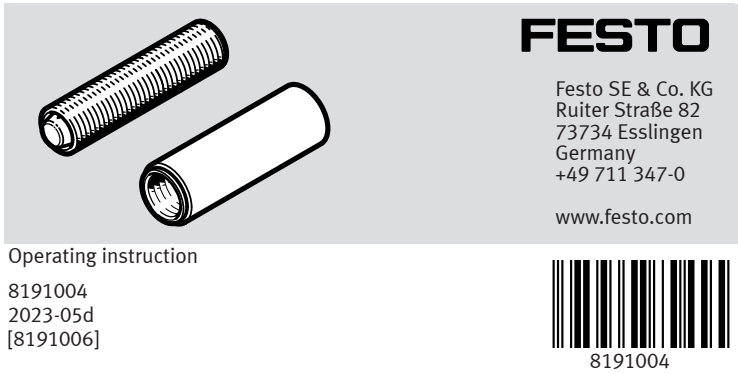


DYEF-G8

Shock absorber



Translation of the original instructions

© 2023 all rights reserved to Festo SE & Co. KG

1 Applicable documents

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

2 Safety

2.1 Safety instructions

- Only use the product in its original condition without unauthorised modifications.
- Observe the identifications on the product.
- Store the product in a cool, dry environment protected from UV and corrosion. Keep storage times short.
- Repair of the product is not permitted.
- Before working on the product, switch off the compressed air supply and lock it to prevent it from being switched on again.

2.2 Intended use

The shock absorber absorbs the impact energy and positions the slide end position on mini slides.

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 knowledge and experience in dealing with pneumatic drives and pneumatic axes.

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 Function

DYEF-G8-...-Y1

The shock absorber has an elastic, non-adjustable rubber buffer to absorb the cushioning energy.

DYEF-G8-...-Y1F

The shock absorber has an elastic, adjustable rubber buffer and a fixed stop on the housing to absorb the cushioning energy.

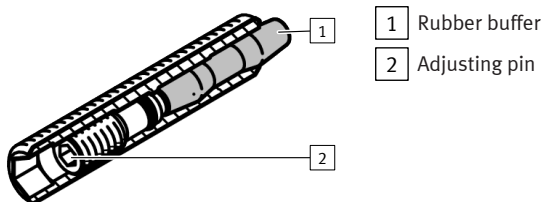


Fig. 1: DYEF-G8-...-Y1F function

5 Product design

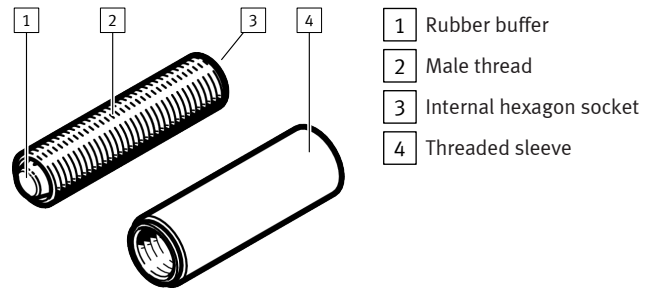


Fig. 2: Product design

6 Assembly

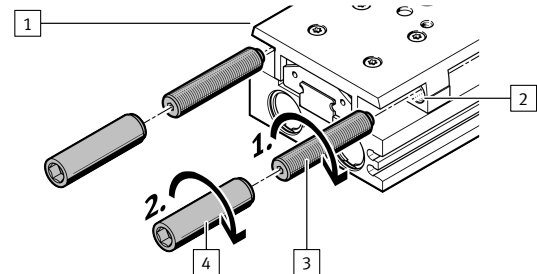


Fig. 3: Example of mounting on the mini slide DGST

For mini slides without pre-assembled shock absorbers:

1. Screw the shock absorbers into the thread on the housing [1] and into the thread on the slide [2].
2. Screw the threaded sleeves [4] onto the shock absorber [3].

7 Aligning payload

- Align the moving mass so it hits the buffer over a wide area and as vertically as possible.

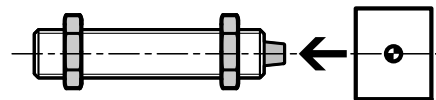


Fig. 4: Force direction and alignment

8 Commissioning

8.1 Adjusting cushioning

The cushioning and end position can be adjusted for the product variant DYEF-...-Y1F.

Requirement for the setting:

- The adjusting pin in the housing is fully screwed in. This sets the maximum cushioning and cushioning distance.

Reducing cushioning and cushioning distance

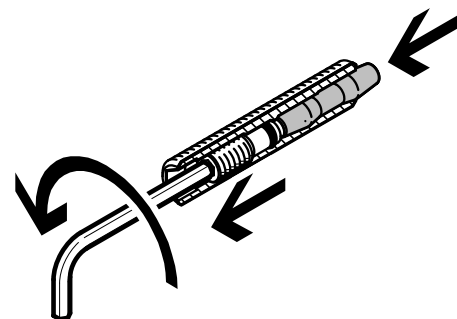


Fig. 5: Reduce cushioning DYEF-...-Y1F

- With force acting on the rubber buffer: Gradually unscrew the adjusting pin on the internal hexagon socket until the desired reduced cushioning and, if applicable, the end position of the mass at the fixed stop of the shock absorber is reached.

Increasing cushioning and cushioning distance

- Slowly screw in the adjusting pin on the internal hexagon.

8.2 Setting slide end positions

i

When setting the end positions, observe the permissible setting range
➔ www.festo.com/catalogue. Non-compliance can lead to the destruction of the product.

The permissible setting range is maintained in the factory setting of mini slides with pre-assembled shock absorbers.

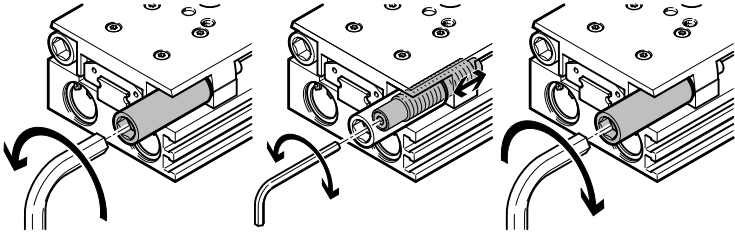


Fig. 6: Example of setting the slide end positions on the mini slide DGST

- 1. Loosen the threaded sleeves.
- 2. Position the slide first at the retracted and then at the advanced end position.
- 3. At the end position: screw in the shock absorbers to the end position. Turn the internal hexagon/slot **5** and do not exceed the maximum torque. Observe with the permissible setting range. If the minimum distance is not enough, the shock absorbers will not be completely effective and the product will impact internally.
- 4. At the end position: pressurise the slide as a counterhold to the shock absorber. Tighten the threaded sleeve. Observe the tightening torque and the tolerance ± 20%.

DYEF-G8(-S)-...-Y1(F)	-M4	-M5	-M6	-M8	-M10	-M12	-M14
Internal hexagon/slot on the shock absorber							
Max. torque [Nm]	0.1	0.5	0.6	1	3	5	10
Threaded sleeve							
Tightening torque [Nm]	0.4	0.64	0.8	1.6	2.4	4	6.4

NOTICE

The exact slide position must be checked during a test run with compressed air applied and, if necessary, corrected.

- 1. Reduce the velocity of the mini slide.
- 2. Observe with the maximum energy absorption ➔ 11 Technical data.

8.3 Executing test run

- 1. Start the test run at the drive with reduced velocity.
- 2. If necessary, readjust the position of the shock absorber.
- 3. Gradually increase the velocity of the drive to the operating value in steps.
 - ➔ If set correctly, the end position is reached without a hard stop.
 - With hard stop:
 - Increase the cushioning of the shock absorber if necessary.
 - Reduce the impact velocity if necessary.
 - Check the function and sizing of the shock absorber.

9 Maintenance

Maintenance interval	Maintenance work
Every 5 million load changes	Check the cushioning for soft stop.
	In case of hard stop: replace the shock absorber.

Tab. 1: Maintenance schedule

10 Fault clearance

Malfunction	Cause	Remedy
Hard stop in the end position	DYEF-...-Y1F: the cushioning set too low.	– Increase the cushioning.
	The shock absorber is over-loaded	– Reduce the impact velocity. – Check the sizing of the shock absorber.
	The rubber buffer is defective.	– Replace the shock absorber.

Tab. 2: Fault clearance

11 Technical data

DYEF-G8(-S)-...-Y1	-M4	-M5	-M6	-M8
Stroke/cushioning distance [mm]	0.9	1.5	1.5	1.3
Male thread	M4x0.5	M5x0.5	M6x0.5	M8x1
Mode of operation	Elastomer cushioning without metal fixed stop			
Cushioning	Not adjustable			
Mounting position	Any			
Max. mass [kg]	0.38	0.6	0.95	1.28
Max. impact velocity [m/s]	0.8			
Recommended drive force at max. cushioning [N]	17	30	47	68
Max. energy absorption per stroke				
DYEF-G8-...-Y1 [J]	0.018	0.05	0.08	0.12
DYEF-G8-S-...-Y1 [J]	0.015	0.05	0.08	0.12
Ambient temperature				
DYEF-G8-...-Y1 [°C]	-10 ... +60			
DYEF-G8-S-...-Y1 [°C]	0 ... +60			

Tab. 3: Technical data, DYEF-G8(-S)-M4 ... -M8-Y1

DYEF-G8(-S)-...-Y1	-M10	-M12	-M14
Stroke/cushioning distance [mm]	1.0	1.2	1.2
Male thread	M10x1	M12x1	M14x1
Mode of operation	Elastomer cushioning without metal fixed stop		
Cushioning	Not adjustable		
Mounting position	Any		
Max. mass [kg]	2.5	4	6
		At 3 ... 4 kg: If necessary, reduce the energy absorption per stroke.	
Max. energy absorption per stroke [J]	0.25	0.35	0.45
Max. impact velocity [m/s]	0.8		
Recommended drive force at max. cushioning [N]	121	188	294
Ambient temperature			
DYEF-G8-...-Y1 [°C]	-10 ... +60		
DYEF-G8-S-...-Y1 [°C]	0 ... +60		

Tab. 4: Technical data, DYEF-G8(-S)-M10 ... -M14-Y1

DYEF-G8-...-Y1F	-M4	-M5	-M6	-M8	-M10
Stroke/cushioning distance [mm]	1.7	2.8	3.1	3.4	3.7
Male thread	M4x0.5	M5x0.5	M6x0.5	M8x1	M10x1
Mode of operation	Elastomer cushioning with metal fixed stop				
Cushioning	Adjustable				
Mounting position	Any				
Max. mass [kg]	0.15	0.25	0.4	0.6	1.2
Max. energy absorption per stroke [J]	0.005	0.02	0.03	0.04	0.06
Max. impact velocity [m/s]	0.8				
Recommended drive force at max. cushioning [N]	17	30	47	68	121
Reset force at max. stroke ¹⁾ [N]	15	30	40	60	70
Ambient temperature [°C]	0 ... +60				

1) Corresponds to the force required for the retracted end position.

Tab. 5: Technical data, DYEF-G8-M4 ... -M10-Y1F