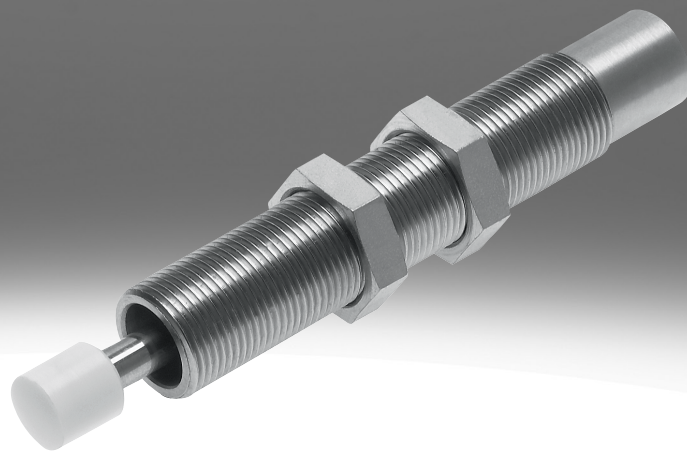


Shock absorber DYSW

FESTO



Characteristics

At a glance

[Further information → dysw](#)

- Hydraulic shock absorber with path-controlled flow control function
- Slowly increasing cushioning force curve
- Long cushioning stroke
- Suitable for low-vibration operation
- Short cycle times possible
- Maintenance-free
- Metal end position on the housing
- Continuous mounting thread with internal hex

Diagrams

[Further information → dysw](#)

The diagrams shown in this document are also available online. These can be used to display precise values.

Geometric characteristics

[Y1] Internal hex

The shock absorber can be adjusted using the hexagon socket

Stop

[F] With fixed stop

Metal end position on the shock absorber housing

Type code

001	Series
DYSW	Shock absorber

002	Size
4	4 mm
5	5 mm
7	7 mm
8	8 mm
10	10 mm
12	12 mm

003	Stroke [mm]
6	6
8	8
10	10
14	14
17	17
20	20

004	Geometric characteristics
Y1	Internal hex

005	Stop
F	With fixed stop

Datasheet

General technical data

Size	4	5	7	8	10	12
Stroke	6 mm	8 mm	10 mm	14 mm	17 mm	20 mm
Mode of operation	Single-acting, Pushing					
Cushioning	Self-adjusting, Soft characteristic curve					
Cushioning length	6 mm	8 mm	10 mm	14 mm	17 mm	20 mm
Type of mounting	Via lock nut					
Max. impact speed	2 m/s		3 m/s			
Mounting position	optional					
Ambient temperature	-10 ... 80°C					
Corrosion resistance class CRC ¹⁾	2 - Moderate corrosion stress					

1) More information www.festo.com/x/topic/kbk

Reset time

Size	4	5	7	8	10	12
Reset time at room temperature ¹⁾	0.2 s					0.3 s

1) At higher temperatures (+80 °C) the max. mass and the cushioning energy must be reduced by approx. 50%.

At low temperatures (-10 °C), the reset time may be up to 1 second.

Forces

Size	4	5	7	8	10	12
Min. insertion force ¹⁾	6.5 N	7.5 N	10 N	18 N	25 N	35 N
Max. stop force ²⁾	100 N	200 N	300 N	500 N	700 N	1,000 N
Reset force ³⁾	0.7 N	0.9 N	1.2 N	2.5 N	3.5 N	5 N

1) This is the minimum force that must be applied so that the shock absorber is pushed precisely into the retracted end position. This value is reduced accordingly with an extended external end position.

2) If the maximum stop force is exceeded, a fixed stop (e.g. YSRA) must be fitted 0.5 mm before the end of the stroke.

3) This is the maximum force that can act on the piston rod so that the shock absorber still extends completely (e.g. upstream bolt).

Energy

Size	4	5	7	8	10	12
Max. energy consumption per stroke	0.8 J	1.3 J	2.5 J	4 J	8 J	12 J
Max. energy consumption per hour	7,000 J	10,000 J	15,000 J	21,000 J	30,000 J	41,000 J
Max. residual energy	0.006 J	0.01 J		0.02 J	0.03 J	0.05 J

Mass range

Size	4	5	7	8	10	12
Mass range	1.2 kg	2 kg	5 kg	10 kg	20 kg	30 kg

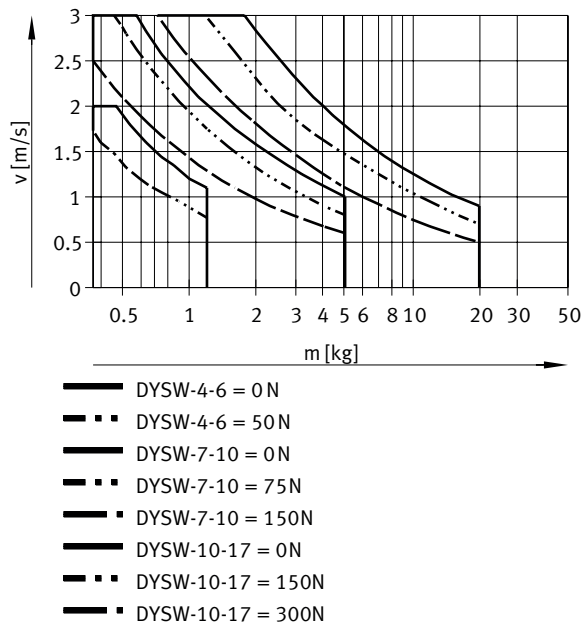
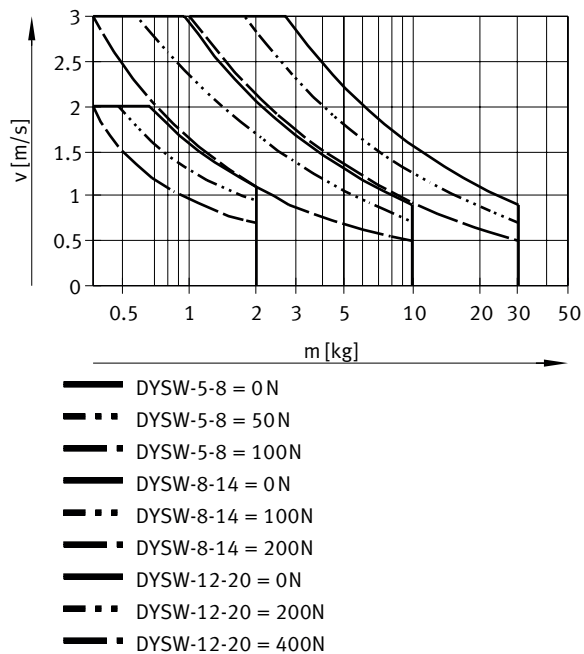
Weight

Size	4	5	7	8	10	12
Product weight	6 g	11 g	21 g	42 g	67 g	91 g

Materials

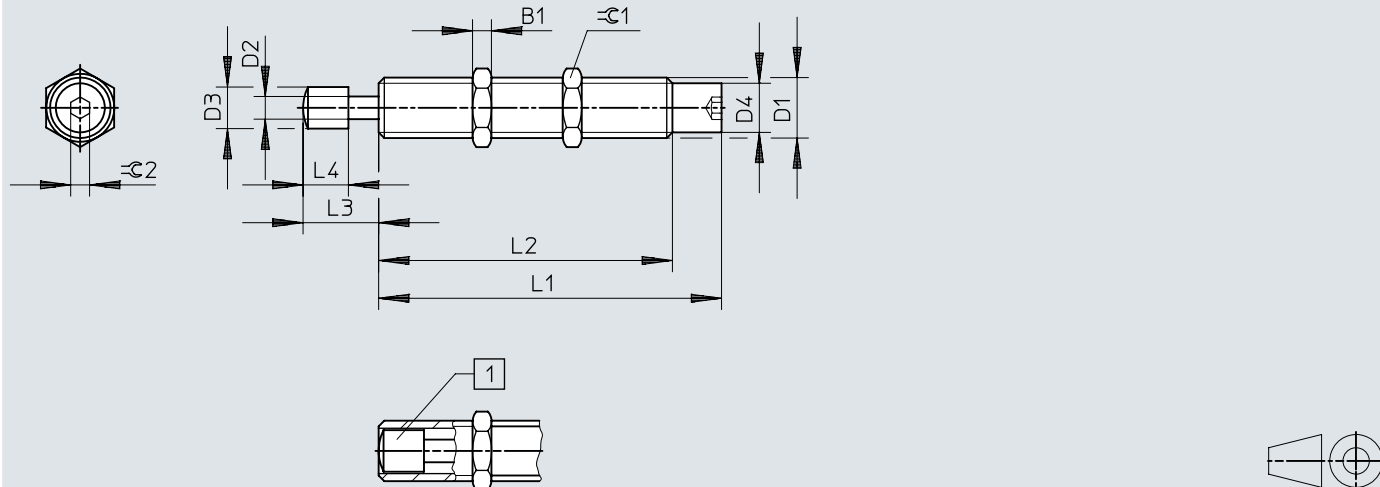
Size	4	5	7	8	10	12
Material piston rod	High-alloy steel					
Material housing	High-alloy steel				Galvanised steel	
Material seals	NBR					
Note on materials	RoHS-compliant					
LABS (PWIS) conformity	VDMA24364-B2-L					

Datasheet

Impact velocity v as a function of mass m – DYSW-4/7/10Impact velocity v as a function of mass m – DYSW-5/8/12

Dimensions

Dimensions – DYSW


Download CAD data → www.festo.com

[1] Shock absorber in end position

[2] To increase the service life: prevent dirt or liquids getting into the inner piston chamber via the piston rod (e.g. by using a cover).

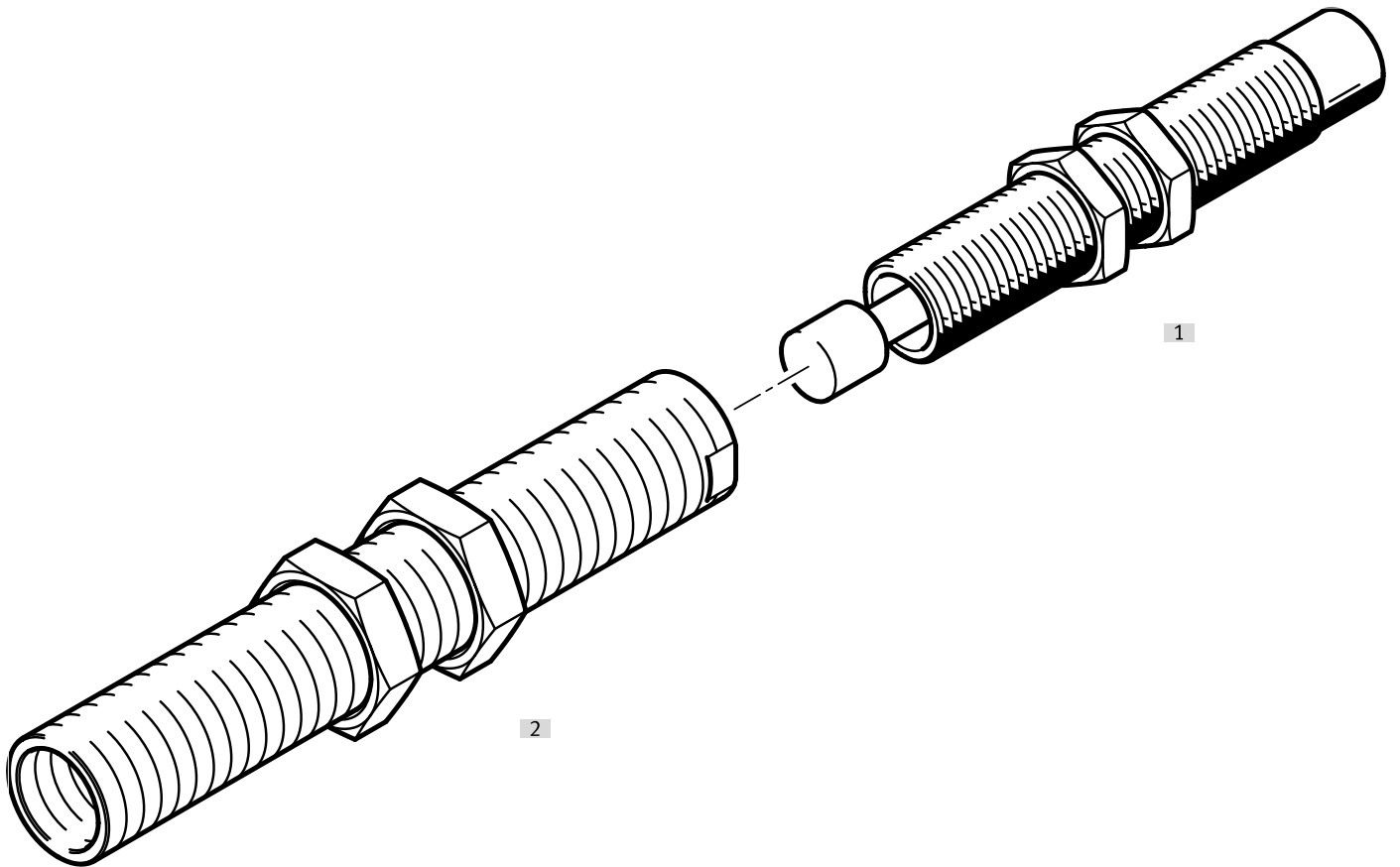
	B1	D1	D2 ∅	D3 ∅	D4 ∅	L1 +0,1	L2 +0,3 -0,2	L3	L4	≙C1	≙C2
DYSW-4-6-Y1F	2,5	M6x0,5	2	3,5±0,05	5,35±0,05	35,5	25,5	6+0,30/-0,24	4±0,05	8	2
DYSW-5-8-Y1F	3	M8x1	2,5	4,7±0,05	6,7±0,05	43,1	33,1	8+0,32/-0,28	5,5±0,1	10	2,5
DYSW-7-10-Y1F	3,5	M10x1	3	6±0,1	8,6±0,05	52,05	41,05	10+0,37/-0,28	7±0,2	13	3
DYSW-8-14-Y1F	4	M12x1	4	7±0,1	10,4±0,1	66,05	53,05	14+0,37/-0,28	8±0,2	15	4
DYSW-10-17-Y1F	5	M14x1	5	9±0,1	12,4±0,1	77,55	64,55	17+0,37/-0,28	10±0,2	17	4
DYSW-12-20-Y1F	5	M16x1	6	11±0,1	14,4±0,1	90,75	77,75	20+0,45/-0,30	12±0,2	19	5

Ordering data

Ordering data					
	Size	Stroke	Cushioning	Part no.	Type
	4	6 mm	Self-adjusting, Soft characteristic curve	548070	DYSW-4-6-Y1F
	5	8 mm		548071	DYSW-5-8-Y1F
	7	10 mm		548072	DYSW-7-10-Y1F
	8	14 mm		548073	DYSW-8-14-Y1F
	10	17 mm		548074	DYSW-10-17-Y1F
	12	20 mm		548075	DYSW-12-20-Y1F

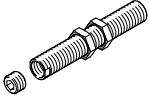
Peripherals

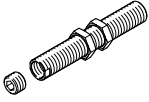
Peripherals overview DYSW

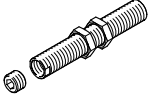


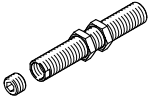
Accessories		→ Page/Internet
Type/order code	Description	
[1] Shock absorber DYSW	Hydraulic shock absorber with slowly increasing cushioning characteristic	dysw
[2] Reducing sleeve DAYH	In order to improve the cushioning characteristics with smaller loads, the installed shock absorber can be replaced by the next smaller shock absorber with the help of the reducing sleeve.	9

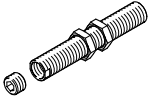
Accessories

Reducing sleeve DAYH					
	Type of mounting	Material stops	Product weight	Part no.	Type
	Via lock nut	High-alloy stainless steel	11.5 g	1165476	DAYH-4

Reducing sleeve DAYH for shock absorber YSR-4-4-C					
	Type of mounting	Material stops	Product weight	Part no.	Type
	Via lock nut	High-alloy stainless steel	22 g	1165480	DAYH-5

Reducing sleeve DAYH					
	Type of mounting	Material stops	Product weight	Part no.	Type
	Via lock nut	High-alloy stainless steel	31 g	1165484	DAYH-7

Reducing sleeve DAYH					
	Type of mounting	Material stops	Product weight	Part no.	Type
	Via lock nut	High-alloy stainless steel	48.5 g	1165488	DAYH-8

Reducing sleeve DAYH					
	Type of mounting	Material stops	Product weight	Part no.	Type
	Via lock nut	High-alloy stainless steel	64 g	1165491	DAYH-10