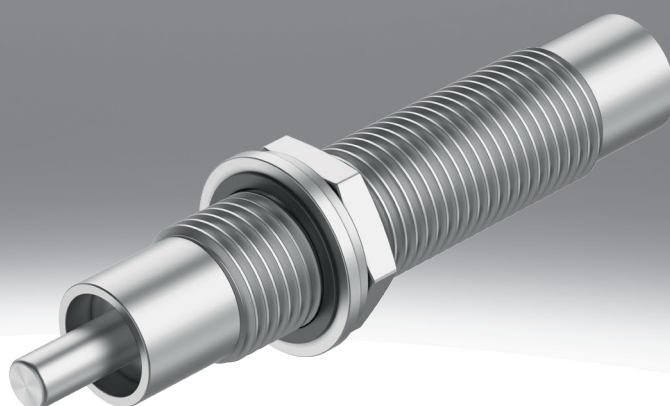


Shock absorber DYSD

FESTO



Characteristics

At a glance

[Further information → dys](#)

- Hydraulic shock absorber with path-controlled flow control function
- Rapidly increasing cushioning force curve
- Short cushioning stroke
- Suitable for rotary drives
- Maintenance-free
- Through mounting thread
- Without impact buffer
- Suitable for pressure chambers
- With additional return spring for compensation in the pressure chamber

Diagrams

[Further information → dys](#)

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

Allocation

[Q11] Version Q11

For semi-rotary drives DRRD

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	
DYSD	Shock absorber	

002	Allocation	
Q11	Version Q11	

003	Size	
5	5 mm	
7	7 mm	
8	8 mm	
12	12 mm	
16	16 mm	
20	20 mm	
25	25 mm	
32	32 mm	

004	Stroke [mm]	
5	5	
8	8	
12	12	
15	15	
16	16	
24	24	
25	25	

005	Geometric characteristics	
Y1	Internal hex	

006	Stop	
F	With fixed stop	

007	Energy absorption	
	Standard	
L	Large	
S	Light	

008	Cushioning characteristic	
Y9	Standard	
Y10	Hard	
Y14	Soft	

Datasheet

General technical data

Size	5	7	8	12	16	20	25	32
Stroke	5 mm		8 mm	12 mm	15 mm	16 mm	24 mm	25 mm
Mode of operation	Single-acting, Pushing							
Cushioning	Self-adjusting							
Cushioning length	5 mm		8 mm	12 mm	15 mm	16 mm	24 mm	25 mm
Type of mounting ¹⁾	Via lock nut							
Position detection	Without							
Max. impact speed	1 m/s							
Mounting position	optional							
Ambient temperature	0 ... 60°C							
Corrosion resistance class CRC ²⁾	2 - Moderate corrosion stress							

1) With sealing washer and washer for sealing the pressure chamber

2) More information www.festo.com/x/topic/crc

Reset time

Size	5	7	8	12	16	20	25	32
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	5	7	8	12	16	20	25	32
Min. insertion force	27 N	40 N	60 N	100 N	160 N	260 N	430 N	480 N
Max. stop force	200 N	300 N	500 N	1,000 N	2,000 N	3,000 N	4,000 N	6,000 N
Reset force	7 N	12 N	18 N	28 N	46 N	75 N	120 N	150 N

Energy sources for DYSD-...-Y9

Size	5	7	8	12	16	20	25	32
Max. energy consumption per stroke	2 J	3 J	6 J	10 J	40 J	70 J	140 J	220 J
Max. energy consumption per hour	8,000 J	12,000 J	18,000 J	36,000 J	64,000 J	92,000 J	150,000 J	180,000 J
Max. residual energy	0.01 J		0.02 J	0.05 J	0.16 J	0.32 J	0.8 J	2 J

Energy sources for DYSD-...-Y10

Size	12		20		25		32	
Max. energy consumption per stroke	12 J		90 J		180 J		270 J	
Max. energy consumption per hour	36,000 J		92,000 J		150,000 J		180,000 J	
Max. residual energy	0.05 J		0.32 J		0.8 J		2 J	

Energy sources for DYSD-...-Y14

Size	7	8	12	16	20
Max. energy consumption per stroke	4 J		8 J	30 J	50 J
Max. energy consumption per hour	12,000 J	18,000 J	36,000 J	64,000 J	92,000 J
Max. residual energy	0.01 J	0.02 J	0.05 J	0.16 J	0.32 J

Weight

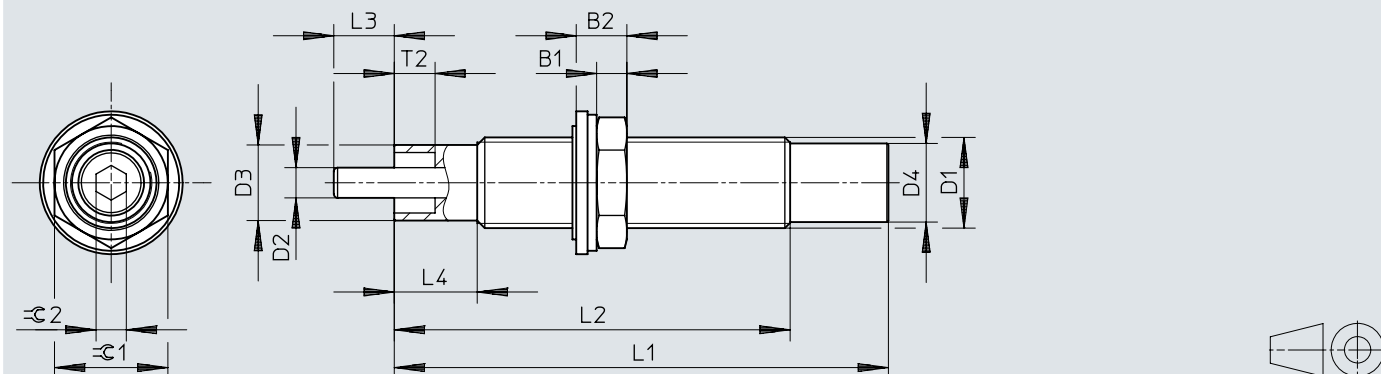
Size	5	7	8	12	16	20	25	32
Product weight	10 g	20 g	40 g	95 g	220 g	385 g	635 g	1,050 g

Datasheet

Materials								
Size	5	7	8	12	16	20	25	32
Material piston rod	High-alloy steel							
Material nut	Galvanised steel							
Material housing	High-alloy steel			Galvanised steel				
Material seals	NBR							
Note on materials	RoHS-compliant							
LABS (PWIS) conformity	VDMA24364-B2-L							

Dimensions

Dimensions – DYSD

Download CAD data → www.festo.com

	B1	B2	D1	D2 Ø	D3 Ø -0,1	D4 Ø	L1 +0,1	L2 +0,3/-0,2	L3	L4 ±0,2	T2	∅1	∅2
DYSD-Q11-5-5-Y1F-...	3	5,5	M8x1	2,5	–	6,7±0,05	43	34	5+0,32/-0,23	–	3	10	2,5
DYSD-Q11-7-5-Y1F-...	3,5	5,8	M10x1	3	–	8,6±0,05	49,1	38,1	5+0,32/-0,23	–	4,5	13	3
DYSD-Q11-8-8-Y1F-...	4	6,7	M12x1	4	10	10,4±0,1	65,4	52,4	8+0,35/-0,25	11	5,4	15	4
DYSD-Q11-12-12-Y1F-...	5	9	M16x1	6	14,2	14,5±0,1	89	76	12+0,35/-0,3	14	6,5	19	5
DYSD-Q11-16-15-Y1F-...	6	11	M22x1,5	8	19,4	19,6±0,1	111,8	94,8	15+0,45/-0,4	18	5	27	5
DYSD-Q11-20-16-Y1F-...	8	13,5	M26x1,5	10	23,6	23,8±0,1	137,5	116,5	15,5+0,45/-0,4	23	5	32	6
DYSD-Q11-25-24-Y1F-...	10	14,9	M30x1,5	12	27,5	27,8±0,1	174,5	146,5	24+0,5/-0,4	25	5	36	8
DYSD-Q11-32-25-Y1F-...	12	17,5	M37x1,5	15	34,4	34,8±0,1	177	149	25+0,5/-0,4	25	5	46	8

Ordering data

DYSD-...-Y9						
	Size	Stroke	Cushioning	Allocation ¹⁾	Part no.	Type
	5	5 mm	Self-adjusting	Version Q11	8161520	DYSD-Q11-5-5-Y1F-L-Y9
	7				8161521	DYSD-Q11-7-5-Y1F-L-Y9
	8	8 mm			8161523	DYSD-Q11-8-8-Y1F-L-Y9
	12	12 mm			8161525	DYSD-Q11-12-12-Y1F-L-Y9
	16	15 mm			8161528	DYSD-Q11-16-15-Y1F-L-Y9
	20	16 mm			8161530	DYSD-Q11-20-16-Y1F-L-Y9
	25	24 mm			8161533	DYSD-Q11-25-24-Y1F-L-Y9
	32	25 mm			8161535	DYSD-Q11-32-25-Y1F-L-Y9

1) Version Q11 = For semi-rotary drives DRRD

DYSD-...-Y10 – hard version						
	Size	Stroke	Cushioning	Allocation ¹⁾	Part no.	Type
	12	12 mm	Self-adjusting	Version Q11	8161526	DYSD-Q11-12-12-Y1F-L-Y10
	20	16 mm			8161531	DYSD-Q11-20-16-Y1F-L-Y10
	25	24 mm			8161534	DYSD-Q11-25-24-Y1F-L-Y10
	32	25 mm			8161536	DYSD-Q11-32-25-Y1F-L-Y10

1) Version Q11 = For semi-rotary drives DRRD

DYSD-...-Y14 – soft version						
	Size	Stroke	Cushioning	Allocation ¹⁾	Part no.	Type
	7	5 mm	Self-adjusting	Version Q11	8161522	DYSD-Q11-7-5-Y1F-S-Y14
	8	8 mm			8161524	DYSD-Q11-8-8-Y1F-S-Y14
	12	12 mm			8161527	DYSD-Q11-12-12-Y1F-S-Y14
	16	15 mm			8161529	DYSD-Q11-16-15-Y1F-S-Y14
	20	16 mm			8161532	DYSD-Q11-20-16-Y1F-S-Y14

1) Version Q11 = For semi-rotary drives DRRD