

## Shock absorber DYSC

**FESTO**



## Characteristics

### At a glance

[Link](#)  [dysc](#)

- Hydraulic shock absorber with path-controlled flow control function
- Rapidly increasing cushioning force curve
- Short cushioning stroke
- Suitable for rotary drives
- Maintenance-free
- Metal end position on the housing
- Continuous mounting thread with internal hex

### Diagrams

[Link](#)  [dysc](#)

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
DYSC	Shock absorber

002	Size
4	4 mm
5	5 mm
7	7 mm
8	8 mm
12	12 mm
16	16 mm
20	20 mm
25	25 mm

003	Stroke [mm]
4	4
5	5
8	8
12	12
18	18
25	25

004	Geometric characteristics
Y1	Internal hex

005	Stop
F	With fixed stop

## Datasheet

## General technical data

Size	4	5	7	8	12	16	20	25
Stroke	4 mm	5 mm		8 mm	12 mm	18 mm		25 mm
Mode of operation	Pushing, Single-acting							
Cushioning	Self-adjusting							
Cushioning length	4 mm	5 mm		8 mm	12 mm	18 mm	16 mm	25 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 <sup>1)</sup>	2 - Moderate corrosion stress							

1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

## Reset time

Size	4	5	7	8	12	16	20	25
Reset time at room temperature <sup>1)</sup>	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	12	16	20	25
Min. insertion force <sup>1)</sup>	6.5 N	7.5 N	10 N	18 N	35 N	60 N	100 N	140 N
Max. stop force <sup>2)</sup>	100 N	200 N	300 N	500 N	1,000 N	2,000 N	3,000 N	4,000 N
Reset force <sup>3)</sup>	0.7 N	0.9 N	1.2 N	2.5 N	5 N	6 N	10 N	14 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 in the case of an external upstream end position.

2) If the max. 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	12	16	20	25
Max. energy consumption per stroke	0.6 J	1 J	2 J	3 J	10 J	25 J	38 J	100 J
Max. energy consumption per hour	5,600 J	8,000 J	12,000 J	18,000 J	36,000 J	50,000 J	80,000 J	140,000 J
Max. residual energy	0.006 J	0.01 J		0.02 J	0.05 J	0.16 J	0.32 J	0.8 J

## Load range

Size	4	5	7	8	12	16	20	25
Load range	1.2 kg	1.5 kg	5 kg	15 kg	45 kg	70 kg	100 kg	160 kg

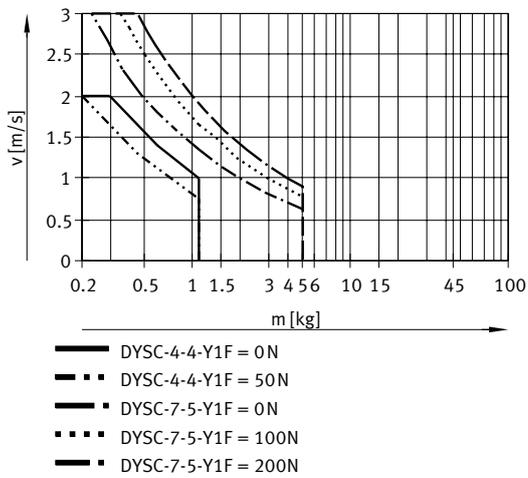
## Weight

Size	4	5	7	8	12	16	20	25
Product weight	5 g	9 g	17 g	36 g	81 g	210 g	370 g	575 g

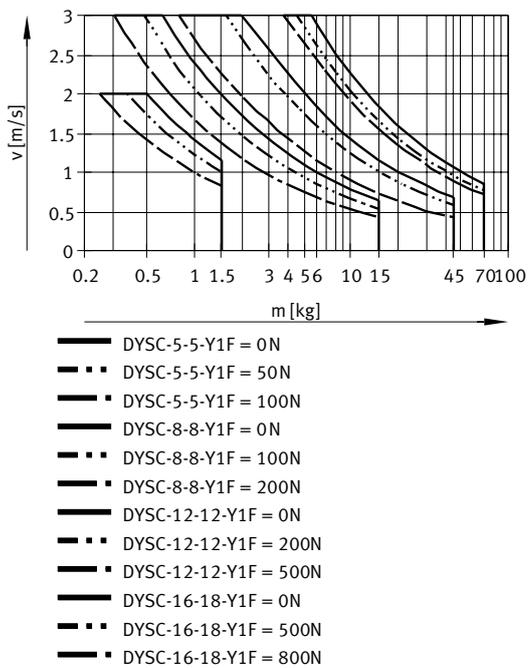
## Materials

Size	4	5	7	8	12	16	20	25
Note on materials	RoHS-compliant							
Material seals	NBR							
Material housing	High-alloy steel				Galvanised steel			
Material piston rod	High-alloy steel							
LABS (PWIS) conformity	VDMA24364-B2-L							

## Datasheet

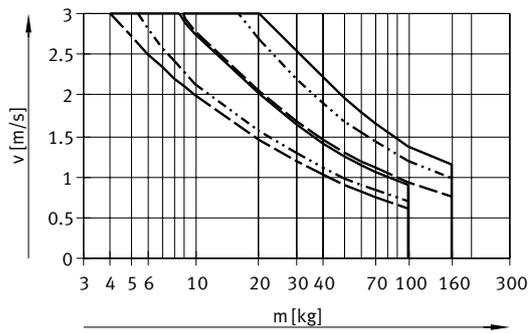
Impact velocity  $v$  as a function of mass  $m$  – DYSC-4/7

Three force curves are shown for each shock absorber. Intermediate values must be averaged.

Impact velocity  $v$  as a function of mass  $m$  – DYSC-5/8/12/16

Three force curves are shown for each shock absorber. Intermediate values must be averaged.

## Datasheet

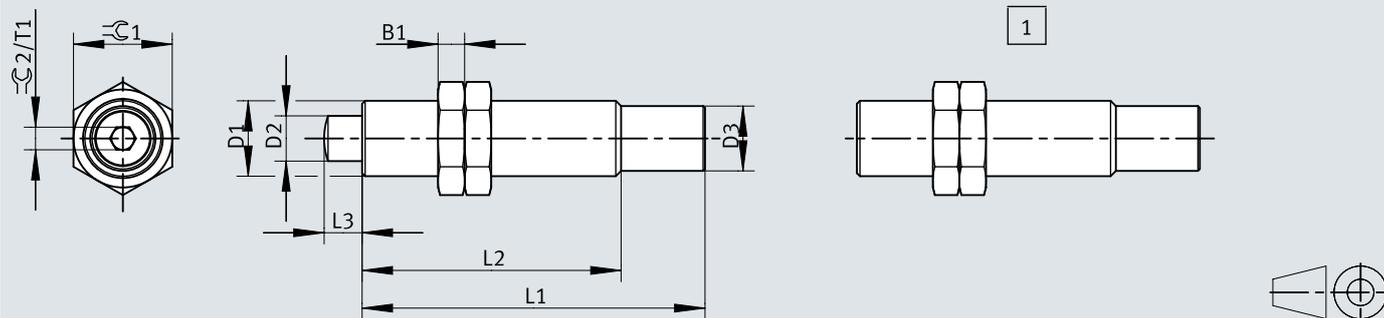
Impact velocity  $v$  as a function of mass  $m$  – DYSC-20/25

- DYSC-20-18-Y1F = 0N
- DYSC-20-18-Y1F = 800N
- - - DYSC-20-18-Y1F = 1200N
- DYSC-25-25-Y1F = 0N
- DYSC-25-25-Y1F = 1200N
- - - DYSC-25-25-Y1F = 2500N

Three force curves are shown for each shock absorber. Intermediate values must be averaged.

## Dimensions

## Dimensions – Shock absorber DYSC

Download CAD data [www.festo.com](http://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).

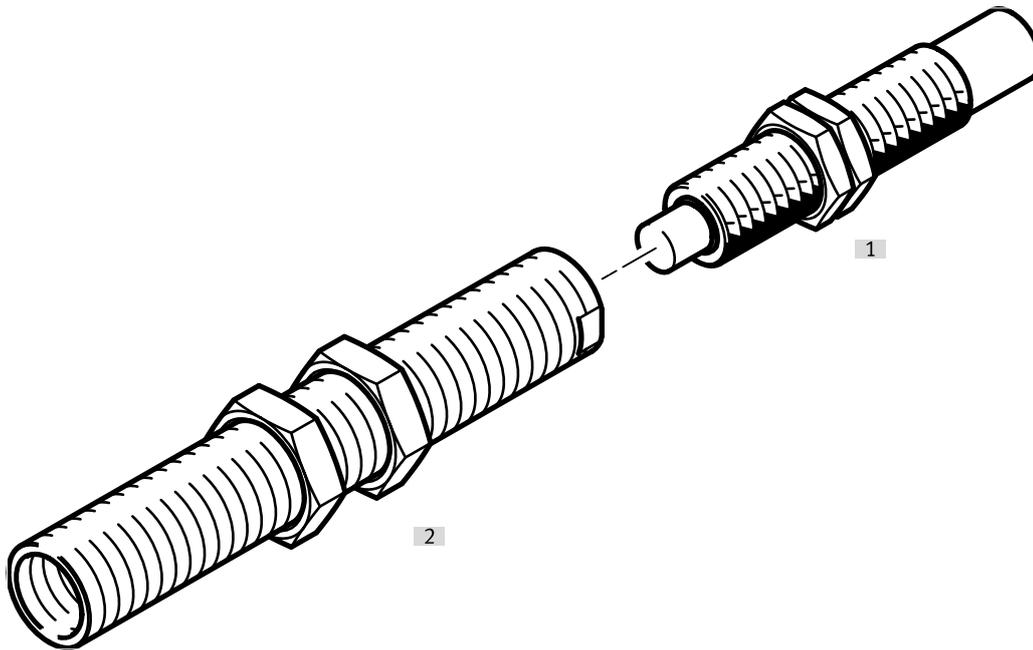
	B1	D1	D2 ø	D3 ø	L1	L2	L3	T1	C1	C2
DYSC-4-4-Y1F	2,5	M6x0,5	3,5 ±0,05	5,4 ±0,05	35,5 +0,1	25,5	4	1,6	8	2
DYSC-5-5-Y1F	3	M8x1	4,7 ±0,1	6,7 ±0,1	38,6 +0,1	28,6	5	1,6	10	2,5
DYSC-7-5-Y1F	3,5	M10x1	6 ±0,1	8,6 ±0,1	45,2 +0,1	34,15	5	2	13	3
DYSC-8-8-Y1F	4	M12x1	7 ±0,1	10,4 ±0,1	59,1 +0,1	46,05	8	2,5	15	4
DYSC-12-12-Y1F	5	M16x1	11 ±0,1	14,5 ±0,1	82,5 +0,1	69,5	12	2,5	19	5
DYSC-16-18-Y1F	6	M22x1,5	15 ±0,1	19,6 ±0,1	110 +0,1	93	18	3,5	27	5
DYSC-20-18-Y1F	8	M26x1,5	18,8 ±0,1	23,8 ±0,1	122 +0,1	105	18	4,5	32	6
DYSC-25-25-Y1F	10	M30x1,5	22,8 ±0,1	27,8 ±0,1	165 +0,1	137	25	5	36	8

## Ordering data

Shock absorber DYSC					
	Size	Stroke	Cushioning	Part no.	Type
	4	4 mm	Self-adjusting	570506	DYSC-4-4-Y1F
	5	5 mm		548011	DYSC-5-5-Y1F
	7			548012	DYSC-7-5-Y1F
	8	8 mm		548013	DYSC-8-8-Y1F
	12	12 mm		548014	DYSC-12-12-Y1F
	16	18 mm		553593	DYSC-16-18-Y1F
	20			2479149	DYSC-20-18-Y1F
	25	25 mm		2480234	DYSC-25-25-Y1F

## Peripherals

## Shock absorber DYSC



Accessories			→ Link
Type/order code	Description		
[1] Shock absorber DYSC	Hydraulic shock absorber with rapidly increasing cushioning curve		<a href="#">dysc</a>
[2] Reducing sleeve DAYH	To improve the cushioning characteristics at low loads, the installed shock absorber can be replaced with the next size down shock absorber using the reducing sleeve.		<a href="#">10</a>

## Accessories

## Reducing sleeve DAYH for shock absorber DYSC-5-5-Y1F

	Type of mounting	Material stops	Product weight	Part no.	Type
	Via lock nut	High-alloy stainless steel	22 g	<b>1165480</b>	<b>DAYH-5</b>

## Reducing sleeve DAYH for shock absorber DYSC-7-5-Y1F

	Type of mounting	Material stops	Product weight	Part no.	Type
	Via lock nut	High-alloy stainless steel	31 g	<b>1165484</b>	<b>DAYH-7</b>