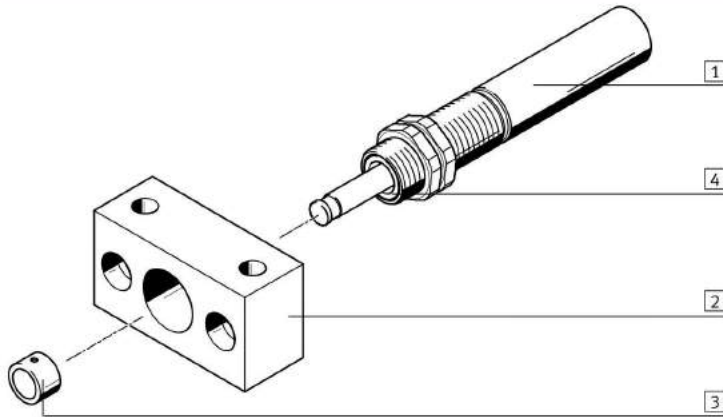


# Shock absorbers DYSR

Peripherals overview and type codes

## Peripherals overview



Accessories			
	Type	Brief description	→ Page/Internet
1	Shock absorber DYSR	Hydraulic shock absorber with adjustable cushioning characteristics	15
2	Mounting flange YSRF	Mounting option for shock absorber	42
3	Buffer YSRP	For protecting the piston rod	44
4	Wiper seal <sup>1)</sup> ; hardened piston rod <sup>2)</sup>	The wiper seal (prevents the ingress of dirt) and the hardened piston rod (protects against scratches) greatly increase the service life	-

1) As of size 12

2) As of size 16

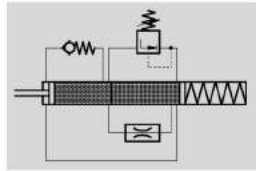
## Type codes

DYSR		-	16	-	20	-	Y5	-	T
<b>Type</b>									
DYSR	Shock absorber								
<b>Size</b>									
<b>Stroke [mm]</b>									
<b>Geometric characteristics</b>									
Y5	Internal hexagon for cushioning adjustment								
<b>Specific characteristics</b>									
	Standard thread								
T	Special thread								

# Shock absorbers DYSR

Technical data

Function



- $\varnothing$  - Size  
8 ... 32
- | - Stroke length  
8 ... 60 mm



General technical data							
Size		8	12	16	20	25	32
Stroke	[mm]	8	12	20	25	40	60
Mode of operation	Hydraulic shock absorber with spring return Single acting, pushing						
Cushioning	Adjustable, force-dependent, hard characteristic curve						
Cushioning length	[mm]	8	12	20	25	40	60
Type of mounting	Via lock nut						
Impact velocity	[m/s]	0.1 ... 3					
Mounting position	Any						
Product weight	[g]	60	105/120 <sup>1)</sup>	200/250 <sup>1)</sup>	355/425 <sup>1)</sup>	715	1,355
Ambient temperature	[°C]	-10 ... +80					
Corrosion resistance class CRC <sup>2)</sup>	1						

- 1) Applies to shock absorbers with special thread T
- 2) Corrosion resistance class 1 according to Festo standard 940 070  
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers

Reset time [s]							
Size		8	12	16	20	25	32
Reset time <sup>1)</sup>		≤ 0.2			≤ 0.3	≤ 0.4	≤ 0.6

- 1) The specified technical data refers to ambient temperature. At -10 °C, the reset time can be up to 1 s for sizes 12, 16 and up to 3 s for sizes 8, 20, 25, 32

Force [N]							
Size		8	12	16	20	25	32
Min. insertion force <sup>1)</sup>		18	38	66	110	155	175
Max. stop force <sup>2)</sup> in the end positions		400	900	1,600	2,500	4,000	6,400
Min. resetting force <sup>3)</sup>		1.8	4.5	5.4	9	12.5	18

- 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 correspondingly 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 stroke
- 3) This is the maximum force that can act on the piston rod, allowing for full extension of the shock absorber (e.g. protruding bolt)

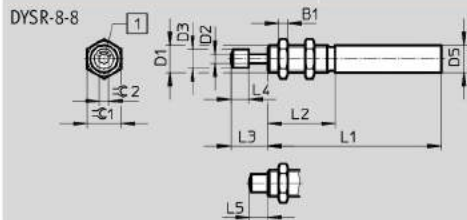
Energy [J]							
Size		8	12	16	20	25	32
Max. energy absorption per stroke		4	10.8	32	62.5	160	384
Max. energy absorption per hour		24,000	60,000	100,000	135,000	220,000	330,000
Max. residual energy		0.01	0.05	0.16	0.32	0.8	2

# Shock absorbers DYSR

Technical data

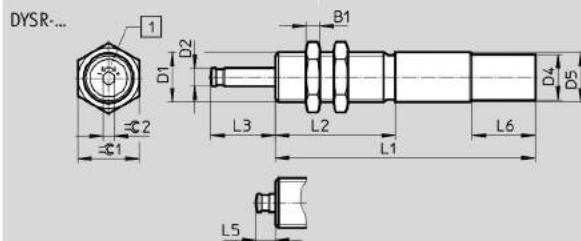


## Dimensions



1 Cushioning adjustment Buffer (included in the scope of delivery)

+ = Cushioning becomes harder  
- = Cushioning becomes softer



1 Cushioning adjustment Buffer YSRP (not included in the scope of delivery)

+ = Cushioning becomes harder  
- = Cushioning becomes softer



Type	B1	D1	D2 Ø	D3 Ø ±0.2	D4 Ø +0.15	D5 Ø +0.15/-0.1	L1	L2 ±0.1
DYSR-8-8-Y5	4	M12x1	4	8	-	12	77±0.1	30
DYSR-12-12-Y5	5	M15x1	6	-	-	15	97±0.1	36
DYSR-12-12-Y5-T		M16x1				16		
DYSR-16-20-Y5	6	M20x1.25	8	-	-	20	115±0.1	53
DYSR-16-20-Y5-T		M22x1.5			22			
DYSR-20-25-Y5	8	M24x1.25	10	-	-	24	138±0.1	60
DYSR-20-25-Y5-T		M26x1.5			26			
DYSR-25-40-Y5	10	M30x1.5	12	-	28.8	30	178±0.1	80
DYSR-32-60-Y5	12	M37x1.5	15	-	34.8	37	230±0.15	108

Type	L3	L4 ±0.2	L5	L6 ±0.2	≈C1	≈C2	Max. tightening torque ≈C1 [Nm]
DYSR-8-8-Y5	16.2+0.6/-0.45	8	8+0.5/-0.35	-	15	4	5
DYSR-12-12-Y5	18.4+0.35/-0.2	-	6.4+0.45/-0.4	-	19	5	20
DYSR-12-12-Y5-T							
DYSR-16-20-Y5	28.5+0.4/-0.3	-	8.5+0.45/-0.4	-	24	5	35
DYSR-16-20-Y5-T				28	27		
DYSR-20-25-Y5	35.6+0.4/-0.3	-	10.6+0.45/-0.4	-	30	5	60
DYSR-20-25-Y5-T				28	32		
DYSR-25-40-Y5	52.8+0.4/-0.3	-	12.8+0.45/-0.4	28	36	6	80
DYSR-32-60-Y5	76+0.5/-0.4	-	16+0.5/-0.4	28	46	6	100

## Ordering data

Size	Part No.	Type
8	1138641	DYSR-8-8-Y5
12	1138642	DYSR-12-12-Y5
	1138643	DYSR-12-12-Y5-T
16	1138644	DYSR-16-20-Y5
	1138645	DYSR-16-20-Y5-T
20	1138646	DYSR-20-25-Y5
	1138647	DYSR-20-25-Y5-T
25	1138648	DYSR-25-40-Y5
32	1138649	DYSR-32-60-Y5