

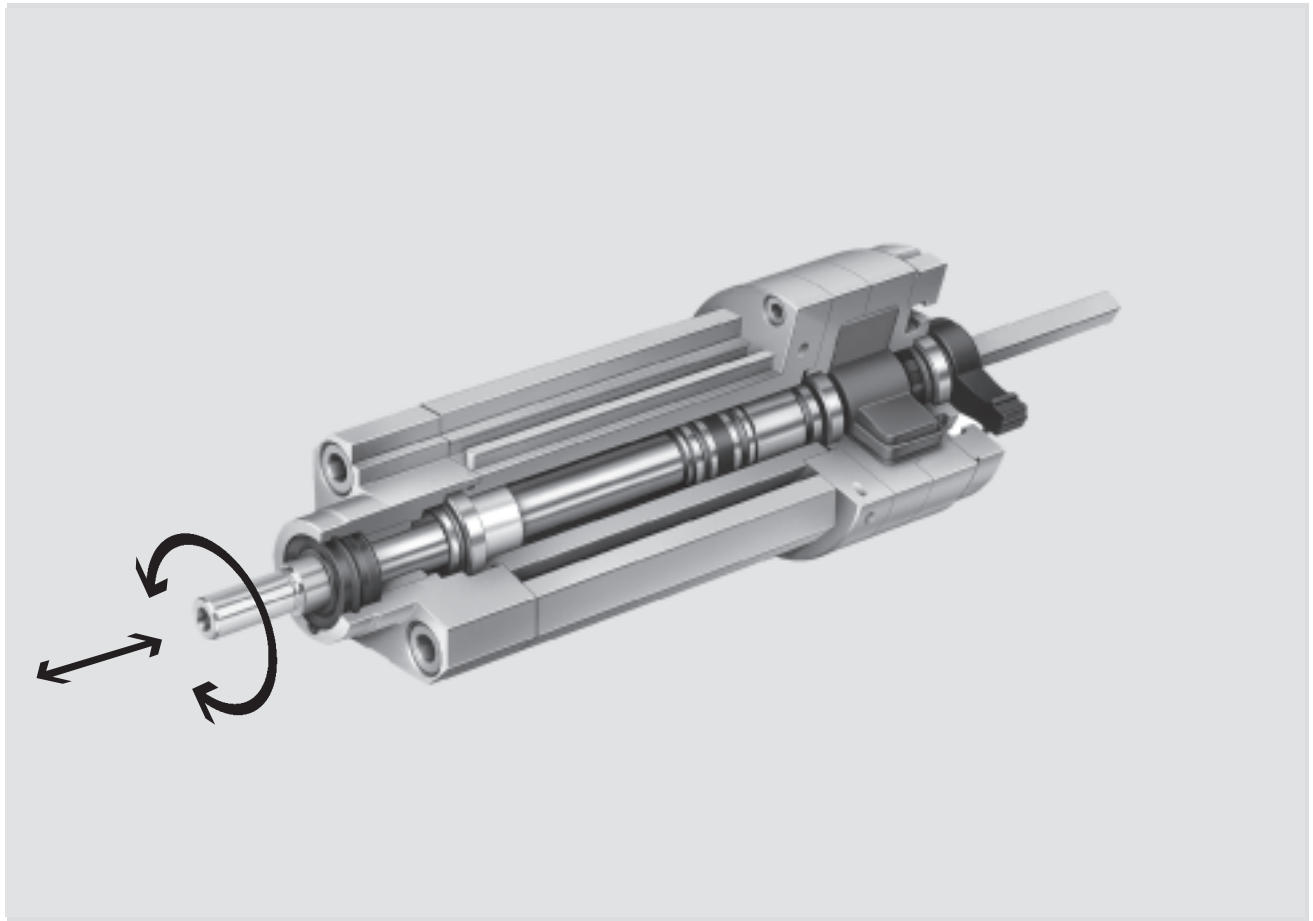


- Simultaneous swivel and linear motion
- With position sensing in both directions
- Backlash-free power transmission
- A broad range of accessories

Swivel/linear units DSL

Features

FESTO



Multifunctional applications

- With plain bearing
- With recirculating ball bearing guide (KF)
- Swivel motion of up to 270°
- Linear motion of up to 200 mm stroke
- Position sensing in both directions of movement
- Both movement types can be controlled individually or simultaneously
- Swivel angle can be set in any desired position
- Infinitely adjustable
- Precision adjustment in the end positions
- High rotational energy possible thanks to direct-mounting, self-adjusting shock absorbers
- Compressed air connections at one end for quick, clear-cut tubing connections
- High precision thanks to recirculating ball bearing guide (KF)
 - Backlash-free rotation
 - Resists torque loads even during linear motion



Calculation of mass moment of inertia

www.festo.com/en/engineering

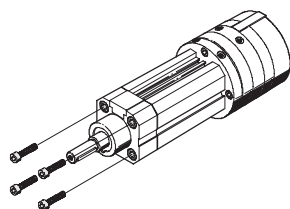
Swivel/linear units DSL

Features

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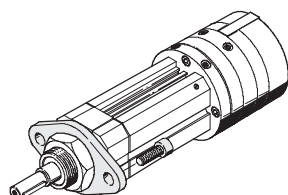
Mounting options

Direct mounting



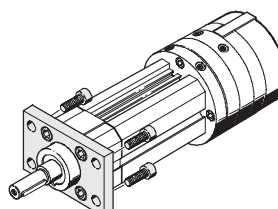
Flange mounting

FBN-20/25



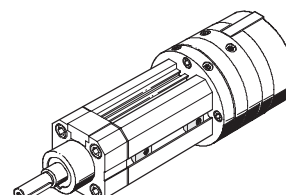
Flange mounting

FNG



Slot nuts in linear profile

NST



Piston Ø 16 mm:
On DSL-16 the mounting thread on the bearing cap complies with DIN ISO 6432.

Piston Ø 20 ... 40 mm:
Mounting hole pattern to DIN ISO 6431, VDMA 24 562 and NF E 49 003.1.
Facilitates use of cylinder mountings from the standard cylinder range.

Position sensing

Proximity sensor and mounting kit

The inductive proximity sensors can be used with either a fixed stop or integrated shock absorbers if the WSM mounting kit is used.

With fixed stop



With shock absorber



End-position cushioning

Scope of delivery

Depending upon version, fixed stop (FF), shock absorber retainer and shock absorber (CL, CR, CC) are included in the scope of delivery of the swivel/linear unit.

The protective cap cannot be fitted on versions CL, CR and CC (with shock absorber), and is not included in the scope of delivery.

Swivel/linear units can be modified or retrofitted at any time with the appropriate accessories.

Basic variant FF fixed stop at both ends



Variant CL shock absorber left fixed stop right



Variant CR shock absorber right fixed stop left



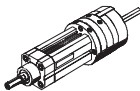
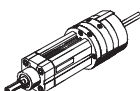
Variant CC shock absorber at both ends



Swivel/linear units DSL

Product range overview

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Function	Design	Type	Piston Ø	Stroke		Max. swivel angle
			[mm]	[mm]		[°]
Double-acting	with plain bearing guide					
		DSL	16, 20, 25	25, 40, 50, 80, 100	10 ... 160	270
			32, 40	25, 40, 50, 80, 100, 125, 160	10 ... 200	
	with recirculating ball bearing guide					
		DSL-KF	16, 20, 25, 32	25, 40, 50, 80, 100	10 ... 100	270
			40	25, 40, 50, 80, 100, 125, 160	10 ... 160	

Swivel/linear units DSL

Product range overview

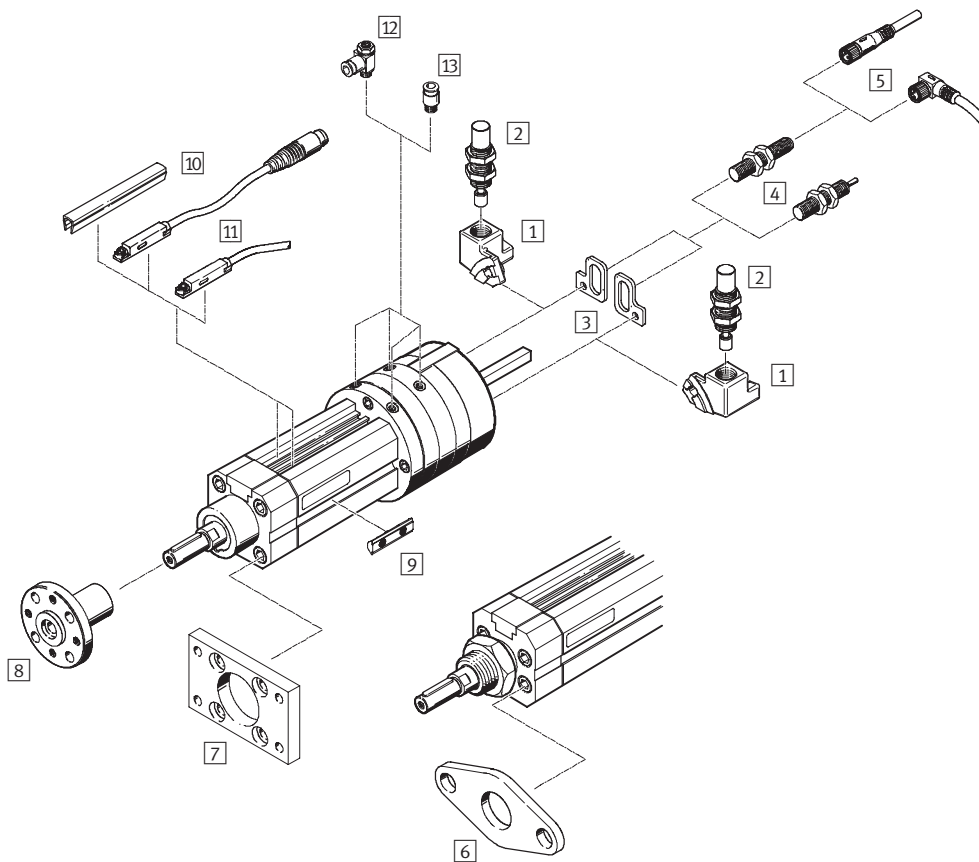
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Type	Through piston rod	Through, hollow piston rod	Fixed stop	Shock absorber			→ Page
	S2	S20		FF	left CL	right CR	
with plain bearing guide							
DSL	■	■	■	■	■	■	1 / 5.9-8
with recirculating ball bearing guide							
DSL-KF	■	■	■	—	—	■	1 / 5.9-8

Swivel/linear units DSL

Peripherals overview

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Accessories		
	Brief description	→ Page
1	Shock absorber retainer DSM-...-CL/CR	1 / 5.9-24
2	Shock absorber YSR-...-...-C	1 / 5.9-27
3	Sensor mounting kit WSM-...	1 / 5.9-27
4	Proximity sensor, inductive SIEN	1 / 5.9-27
5	Connecting cable NEBU	1 / 5.9-28
6	Flange mounting FBN	1 / 5.9-25
7	Flange mounting FNG	1 / 5.9-25
8	Push-on flange FWSR	1 / 5.9-26
9	Slot nut NST	1 / 5.9-26
10	Slot cover ABP	1 / 5.9-27
11	Proximity sensors SME/SMT-8	1 / 5.9-28
12	One-way flow control valve GRLA	1 / 5.9-27
13	Push-in fitting QS	Volume 3

Swivel/linear units DSL

Type codes

FESTO

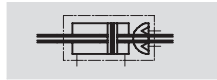
		DSL	–	25	–	80	–	270P	–	S20	–	CC	–	KF
Type														
Double-acting														
DSL	Swivel/linear unit													
Piston Ø [mm]														
Stroke [mm]														
Max. swivel angle and cushioning														
270P	270°, not adjustable at either end													
Piston rod variants														
S2	Through piston rod													
S20	Through, hollow piston rod													
Fixed stop/shock absorber														
FF	Fixed stop													
CL	Shock absorber left													
CR	Shock absorber right													
CC	Shock absorber at both ends													
Guide														
	Plain-bearing guide													
KF	Recirculating ball bearing guide													

Swivel/linear units DSL

Technical data

FESTO

Function



Variant

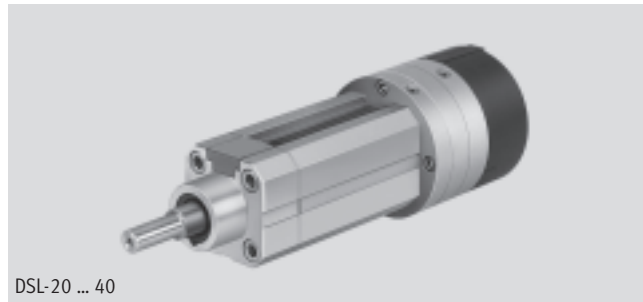


S2

S20

- - Diameter
16 ... 40 mm
- - Stroke length
10 ... 200 mm
- - Force
1.25 ... 20 Nm

- - www.festo.com/en/Spare_parts_service



General technical data							
Piston Ø			16	20	25	32	40
Piston rod dimensions	round, front	[mm]	Ø 10	Ø 12	Ø 16	Ø 20	Ø 25
	square, rear (GF)	[mm]	5.5	7	9	10	12
	profile, rear (KF)	[mm]	6	8	10	13	16
Pneumatic connection			M5			G1/8	
Design			Vane-driven semi-rotary cylinder in combination with a double-acting linear cylinder				
Cushioning	Swivel motion		FF – not adjustable at either end; CL/CR – self-adjusting at one end; CC – self-adjusting at both ends				
	Linear motion		P – not adjustable at either end				
Cushioning angle	Basic variant FF	[°]	1.8 ... 2.6	1.3 ... 2.1	1.1 ... 1.9	0.9 ... 1.7	1.4 ... 2.1
	Shock absorbers CL/CR/CC	[°]	13	12	10	12.5	15
Max. swivel angle ¹⁾	Basic variant FF	[°]	270	270	270	270	270
	with shock absorber CR/CL	[°]	254	254	258	258	255
	with shock absorber CC	[°]	238	238	246	246	246
Swivel angle adjustment (per side)			Basic variant FF: +1 ... -5°; variants CL/CR/CC: 1.5°				
Max. permissible frequency	Basic variant FF	[Hz]	2	2	2	2	2
(at max. swivel angle)	Shock absorbers CL/CR/CC	[Hz]	1.5	1	1	0.7	0.7
Position sensing			With inductive sensors on the semi-rotary drive				
			With proximity sensors on the linear drive				
Type of mounting			With slot nuts				
			With male thread				
Mounting position			Any				

1) Rotary angle backlash at the piston rod: max. 2°

Operating and environmental conditions					
Piston Ø (linear part)		16	20	25	32
Operating medium		Filtered compressed air, lubricated or unlubricated			
Operating pressure		[bar]	2.5 ... 8		
Ambient temperature ¹⁾		[°C]	-10 ... +60		

1) Note operating range of proximity sensors

Swivel/linear units DSL

Technical data

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Forces and torques						
Piston Ø		16	20	25	32	40
Torque at 6 bar ¹⁾	[Nm]	1.25	2.5	5	10	20
Theoretical force at 6 bar, advancing with plain bearing	[N]	102.5	159	246	422.5	660
Theoretical force at 6 bar, advancing with recirculating ball bearing guide	[N]	103.5	158	248	403.5	603
Theoretical force at 6 bar, retracting	[N]	73.5	120.5	173.5	294	495
Max. permissible applied load → 1 / 5.9-11	[g]	300	500	1,300	2,000	4,000
Max. permissible radial force on piston rod at max. stroke → 1 / 5.9-11	[N]	3.3	5.5	12	35	70

1) Theoretical values

Changes in load capacity ¹⁾						
Piston Ø (linear part)		16	20	25	32	40
Permissible mass moment of inertia without shock absorber	[kgm ²]	0.35 x 10 ⁻⁴	0.7 x 10 ⁻⁴	1.1 x 10 ⁻⁴	1.7 x 10 ⁻⁴	2.4 x 10 ⁻⁴
Permissible mass moment of inertia with shock absorber	[kgm ²]	7 x 10 ⁻⁴	12 x 10 ⁻⁴	16 x 10 ⁻⁴	21 x 10 ⁻⁴	40 x 10 ⁻⁴
Increase factor compared to no shock absorber		20	17	15	12	16

1) Unthrottled, please see diagrams → 1 / 5.9-12

Weights [g]						
Piston Ø (linear part)		16	20	25	32	40
Plain-bearing guide						
Basic variant FF		650	1,050	1,500	2,840	5,000
Shock absorber CC		700	1,130	1,610	3,000	5,200
Additional weight per 10 mm stroke		33	52	67	109	170
Recirculating ball bearing guide						
Basic variant FF		700	1,140	1,650	3,120	5,200
Shock absorber CC		750	1,220	1,750	3,280	5,350
Additional weight per 10 mm stroke		33	52	67	109	170

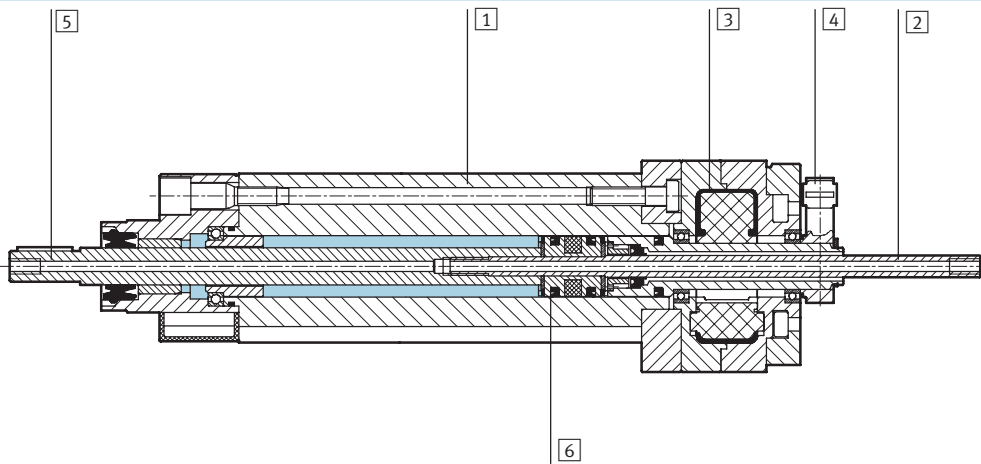
Swivel/linear units DSL

Technical data

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Materials

Sectional view



Swivel/linear unit

1	Cylinder barrel, housing	Anodised aluminium
2	Shaft	Nickel plated steel
3	Rotary vane	Fibreglass reinforced plastic
4	Stop lever	Anodised aluminium
5	Piston rod	Stainless steel
6	Piston	Brass
-	Fixed stops, shock absorber retainer	Stainless steel
-	Cap	Fibreglass reinforced plastic
-	Seals	Polyurethane

Note

The swivel angle is infinitely adjustable over the entire swivel range. End positions can be adjusted by means of stop screws and lock nuts. The impact of the stop lever is cushioned with flexible plastic pads with fixed stop FF.

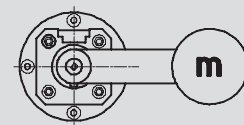
End-position cushioning is accomplished by means of YSR-...-C shock absorbers with CL/CR/CC variants. The rotary vane itself is not suitable for use in defining end positions, i.e. the stop lever and the stops may not be removed.

With plain-bearing guide:

If the applied load is attached eccentrically, increased internal friction forces occur when installed horizontally, thereby causing a reduction of the effective force of the linear movement.

With recirculating ball bearing guide:

Observe max. dynamic torque load (linear motion).



Swivel/linear units DSL

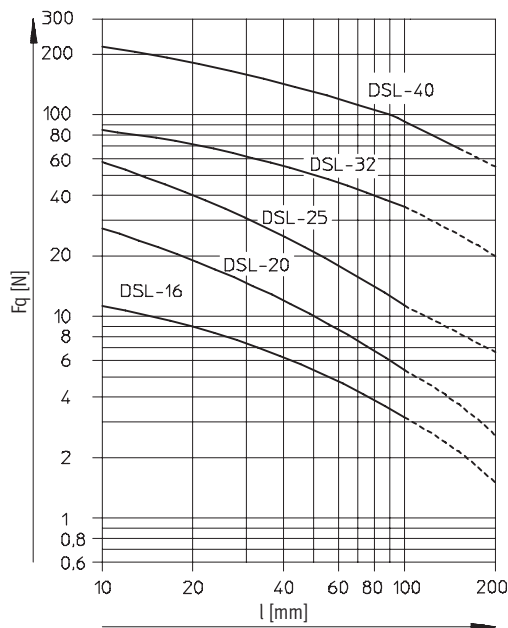
Technical data

FESTO

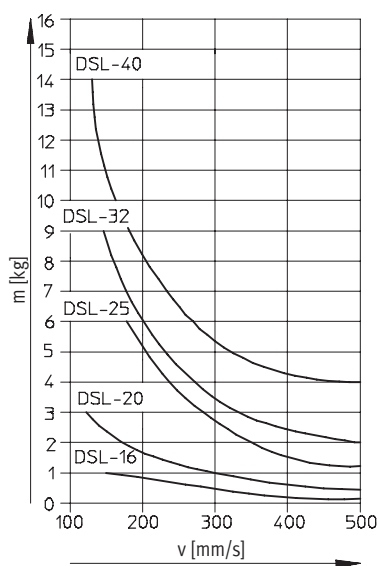
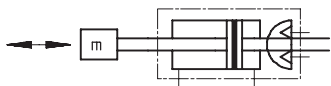
Lateral force F_q as a function of stroke length l



- Piston rod with bearings at both ends
- Resists high torques and lateral forces



Max. permissible applied load m as a function of piston speed v



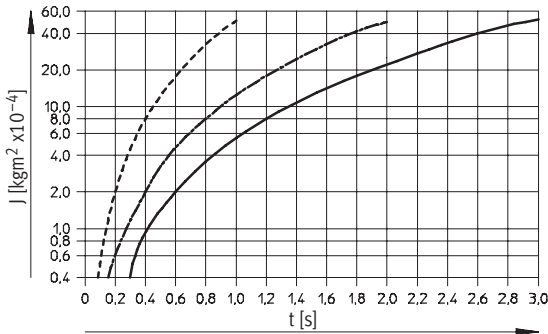
Swivel/linear units DSL

Technical data

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Max. permissible mass moment of inertia J as a function of swivel time t

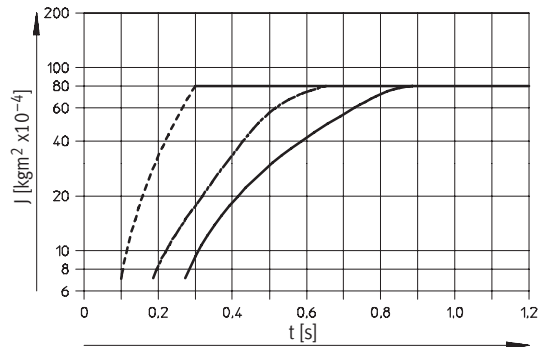
DSL-16-...-FF



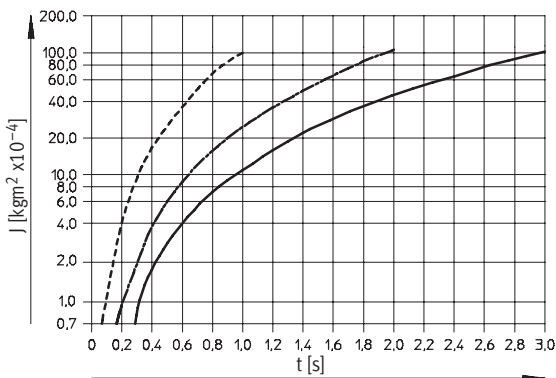
DSL-16-...-CL/CR/CC

Max. permissible mass moment of inertia: $80 \times 10^{-4} \text{ kgm}^2$,

Cushioning time, shock absorber YSR-5-5-C: approx. 0.1 s



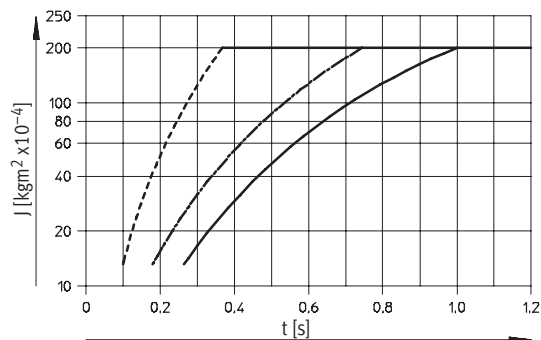
DSL-20-...-FF



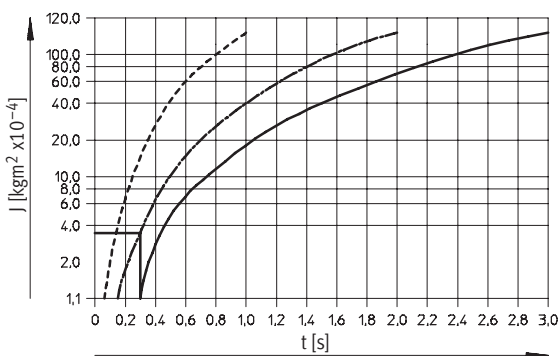
DSL-20-...-CL/CR/CC

Max. permissible mass moment of inertia: $200 \times 10^{-4} \text{ kgm}^2$,

Cushioning time, shock absorber YSR-7-5-C: approx. 0.1 s



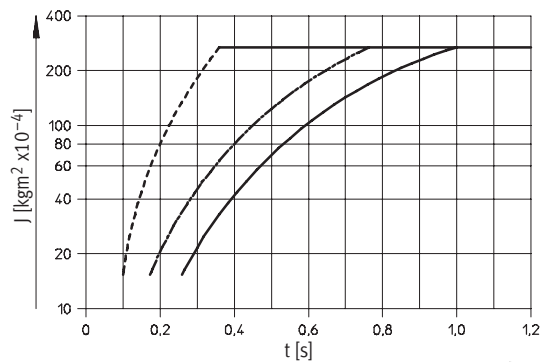
DSL-25-...-FF



DSL-25-...-CL/CR/CC

Max. permissible mass moment of inertia: $280 \times 10^{-4} \text{ kgm}^2$,

Cushioning time, shock absorber YSR-7-5-C: approx. 0.1 s



90° - - - - -
180° - · - · -
270° —————

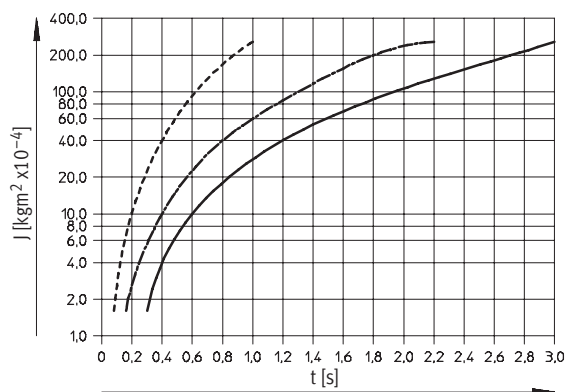
Swivel/linear units DSL

Technical data

FESTO

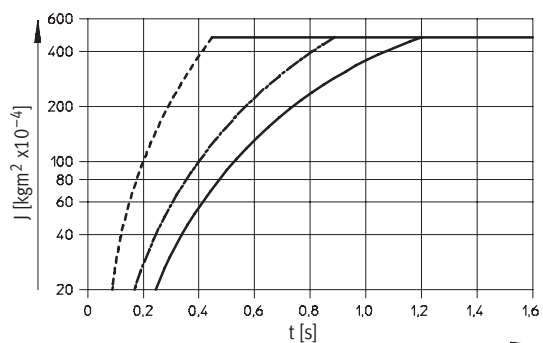
Max. permissible mass moment of inertia J as a function of swivel time t

DSL-32-...-FF

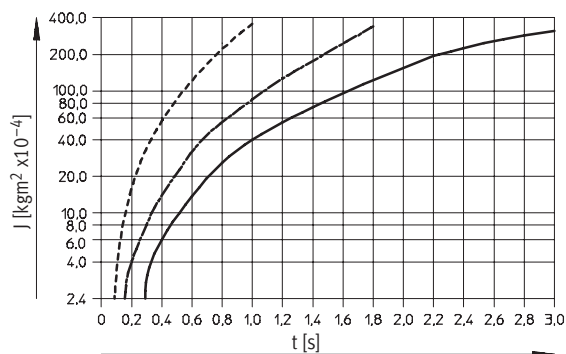


DSL-32-...-CL/CR/CC

Max. permissible mass moment of inertia: $500 \times 10^{-4} \text{ kgm}^2$,
Cushioning time, shock absorber YSR-8-8-C: approx. 0.25 s

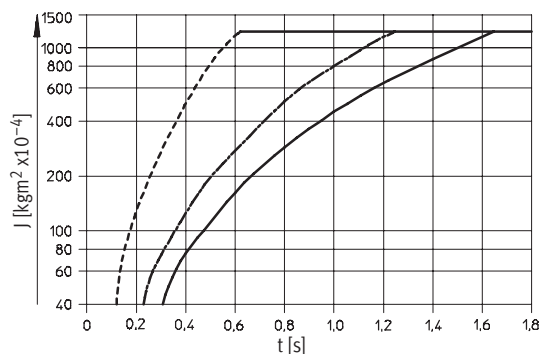


DSL-40-...-FF



DSL-40-...-CL/CR/CC

Max. permissible mass moment of inertia: $1200 \times 10^{-4} \text{ kgm}^2$,
Cushioning time, shock absorber YSR-8-8-C: approx. 0.3 s



90° -----
180° - · - · -
270° —————

Swivel/linear units DSL

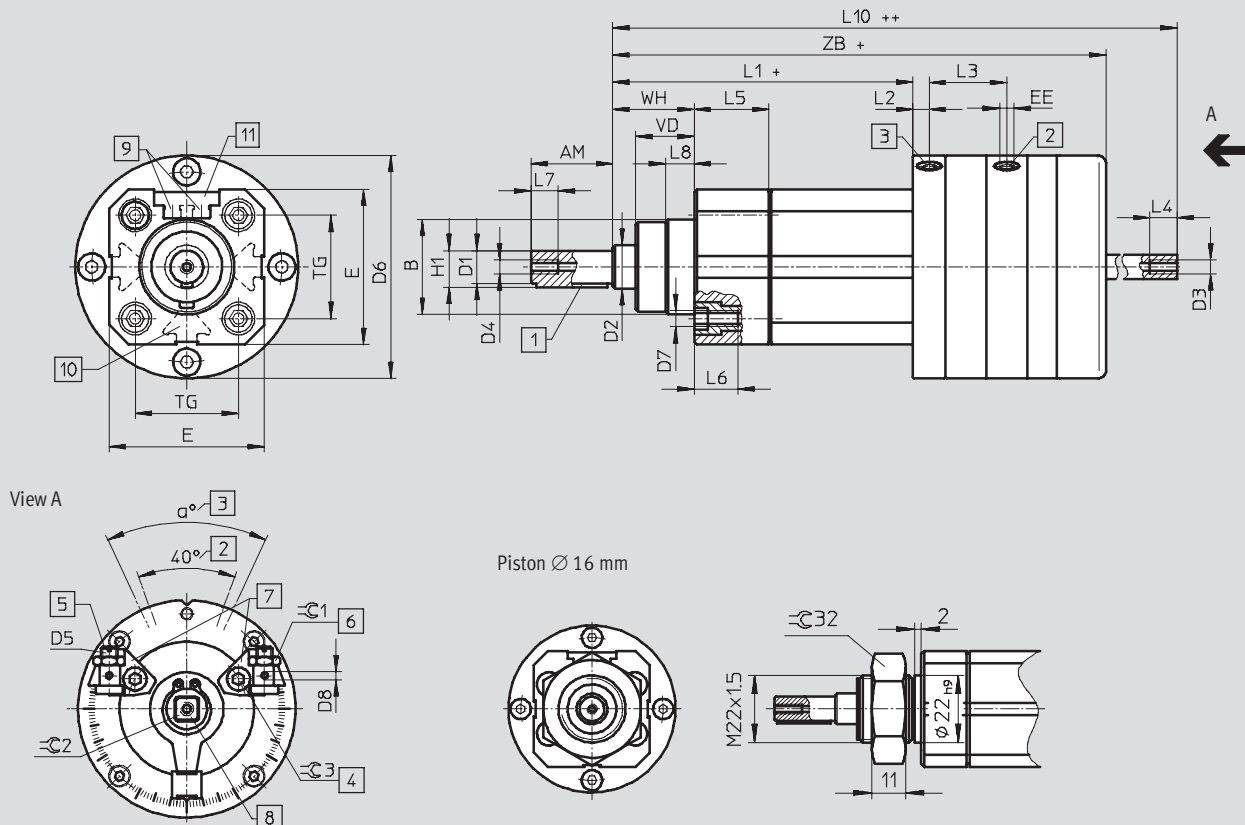
Technical data

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Dimensions

Download CAD data → www.festo.com/en/engineering

Variant with plain bearing



- | | | | |
|--|--|--|--------------------------|
| 1 Woodruff key position at 0° | 4 Locking screw for clamping the stop | 7 Infinitely adjustable fixed stops | 10 Mounting slots |
| 2 Compressed air connection, rotary part | 5 End-position adjustment | 8 Manual override (square) | 11 Removable cover plate |
| 3 Compressed air connection, linear part | 6 Lock nut for end-position adjustment | 9 Sensor slot for SME-/SMT-8 proximity sensors | |

+ = plus stroke length

++ = plus 2 stroke lengths

Swivel/linear units DSL

Technical data

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Ø [mm]	AM	B Ø d11	D1 Ø g7	D2 Ø f8	D3		D4		D5	D6 Ø ±0.2	D7
					S2	S20	S2	S20			
16	20 ±0.2	–	8	10	M3	M3	M3	M3	M4x0.5	58	–
20	23 ±0.2	30	10	12	M5	M5	M5	M5	M5x0.5	69	M6
25	30 ±0.2	35	12	16					M6x0.5	82	
32	40 ±0.3	40	16	20					M8x1	104	M8
40	50 ±0.3	45	20	25	M6	G $\frac{1}{8}$	M6	M7	M10x1	128	

Ø [mm]	D8	E	EE	H1 max.	L1 ¹⁾	L2	L3	L4	L5	L6 +2	L7
16	M3	38	M5	8.8	89 +1.1/-1.3	6	22.5	9 +2	18 +2	–	9 +2
20		50		11.2	95 +1.1/-1.3		26.2	10 +1	26 –2	17	10 +1
25		57		13.5	100.5 +1.2/-1.3		29.5		27.5 –2		
32		72	G $\frac{1}{8}$	18	111 +1.3/-1.4	9	39.5	12.5 +2	28.5 –2	21	12.5 +2
40		83.5		22.5	132 +1.3/-1.4		44.7	6.5 +2	35 –2	18	14 +2

Ø [mm]	L8 ±0.2	L10 ¹⁾	TG	VG ±0.2	WH	ZB ¹⁾
16	–	159 +0.8/-0.1	–	22	28 +1.3/-1.7	154 +1.3/-1.7
20	10.5	175 +0.8/-0.1	32.5	19	26 +1.3/-1.7	167 +1.3/-1.7
25		186.5 +0.8/-0.1	38	21.5	30 +1.4/-1.7	181.5 +1.4/-1.7
32	12	224 +0.6/-0.2	46.5	28.5	37 +1.4/-1.8	217.5 +1.4/-1.8
40	15	263 +0.6/-0.2	56.5	34.7	46 +1.4/-1.8	259.5 +1.4/-1.8

Ø [mm]	α	≈C1	≈C2 ¹⁾	≈C3	Woodruff key to DIN 6885	Min. cross section S20 ²⁾
16	60°	7	5.5	2.5	A2x2x16	2.5
20	50°	8	7	3	A3x3x18	3.2
25		10	9	4	A4x4x25	4.2
32		13	10	5	A5x5x36	
40		17	12	6	A6x6x45	5.6

1) Values for variant with plain bearing, dimensions vary for variant with recirculating ball bearing guide → 1 / 5.9-16

2) Through, hollow piston rod

Swivel/linear units DSL

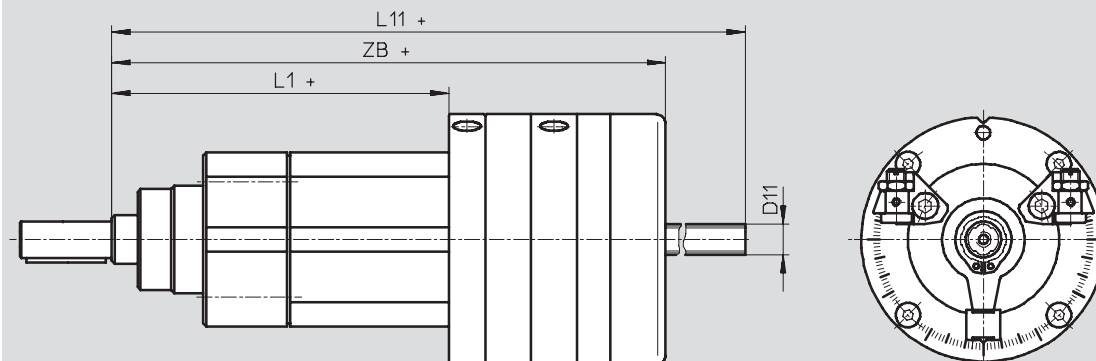
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com/en/engineering

Dimensions vary for variant with recirculating ball bearing guide KF



+ = plus stroke length

Ø [mm]	Stroke [mm]	D11 Ø h7	L1	L11		ZB
				S2	S20	
16	25	6	104 +1.1/-1.3	1)	198	169 +1.4/-1.1
	≤ 50				233	
	> 50			213	273	
20	≤ 50	8	111 +1.1/-1.3	1)	241	183 +1.4/-1.1
	≤ 50			225	291	
	> 50					
25	≤ 50	10	129.5 +1.1/-1.3	1)	266	210.5 +1.5/-1.2
	≤ 50			238	316	
	> 50					
32	≤ 50	13	143 +1.3/-1.4	1)	305	249.5 +1.6/-1.3
	≤ 50			253	355	
	> 50					
40	≤ 50	16	182 +1.3/-1.4	1)	364	309.5 +1.6/-1.3
	≤ 50				414	
	> 50					
	> 100			352	474	

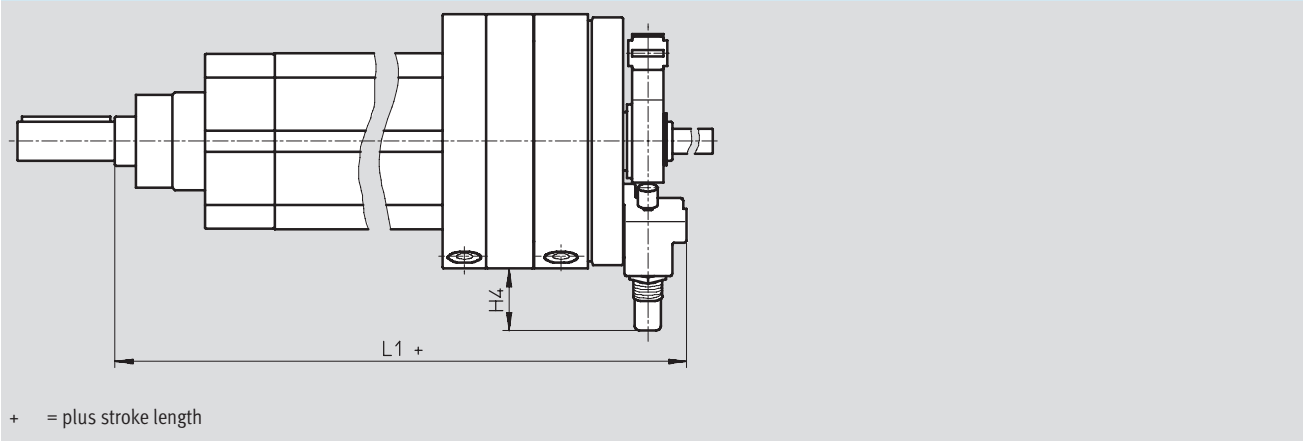
1) Profile rod does not protrude beyond the drive unit.

Swivel/linear units DSL

Technical data



Dimensions Download CAD data → www.festo.com/en/engineering
Dimensions vary for variants with shock absorbers CL/CR/CC



Ø	H4	L1	
			-KF
[mm]	max.		
16	18	148.7 +1.4/-1.5	163.7 +1.4/-1.5
20	22.5	168.8 +1.4/-1.5	184.8 +1.4/-1.5
25	19.5	180.8 +1.4/-1.2	209.8 +1.4/-1.2
32	27.5	211 +1.5/-1.9	243 +1.5/-1.9
40	41	251.5 +1.8/-1.9	301.5 +1.8/-1.9

Swivel/linear units DSL

Technical data

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Ordering data – With plain bearing					
Design	Ø	Stroke	Basic variant FF fixed stop at both ends		Variant CL shock absorber left fixed stop right
	[mm]	[mm]	Part No.	Type	Part No. Type
S2 – Through piston rod					
	16	25	159 542	DSL-16-25-270P-S2-FF	164 815 DSL-16-25-270P-S2-CL
		40	163 008	DSL-16-40-270P-S2-FF	164 821 DSL-16-40-270P-S2-CL
		50	159 543	DSL-16-50-270P-S2-FF	164 827 DSL-16-50-270P-S2-CL
		80	163 010	DSL-16-80-270P-S2-FF	164 833 DSL-16-80-270P-S2-CL
		100	159 544	DSL-16-100-270P-S2-FF	164 839 DSL-16-100-270P-S2-CL
		10 ... 160	159 568	DSL-16-...-270P-S2-FF ¹⁾	164 809 DSL-16-...-270P-S2-CL ¹⁾
	20	25	161 035	DSL-20-25-270P-S2-FF	163 018 DSL-20-25-270P-S2-CL
		40	163 024	DSL-20-40-270P-S2-FF	163 025 DSL-20-40-270P-S2-CL
		50	161 037	DSL-20-50-270P-S2-FF	163 032 DSL-20-50-270P-S2-CL
		80	163 038	DSL-20-80-270P-S2-FF	163 039 DSL-20-80-270P-S2-CL
		100	161 039	DSL-20-100-270P-S2-FF	163 046 DSL-20-100-270P-S2-CL
		10 ... 160	161 033	DSL-20-...-270P-S2-FF ¹⁾	163 012 DSL-20-...-270P-S2-CL ¹⁾
	25	25	159 548	DSL-25-25-270P-S2-FF	163 058 DSL-25-25-270P-S2-CL
		40	163 064	DSL-25-40-270P-S2-FF	163 065 DSL-25-40-270P-S2-CL
		50	159 549	DSL-25-50-270P-S2-FF	163 072 DSL-25-50-270P-S2-CL
		80	163 078	DSL-25-80-270P-S2-FF	163 079 DSL-25-80-270P-S2-CL
		100	159 550	DSL-25-100-270P-S2-FF	163 086 DSL-25-100-270P-S2-CL
		10 ... 160	159 570	DSL-25-...-270P-S2-FF ¹⁾	163 052 DSL-25-...-270P-S2-CL ¹⁾
	32	25	159 554	DSL-32-25-270P-S2-FF	163 098 DSL-32-25-270P-S2-CL
		40	163 104	DSL-32-40-270P-S2-FF	163 105 DSL-32-40-270P-S2-CL
		50	159 555	DSL-32-50-270P-S2-FF	163 112 DSL-32-50-270P-S2-CL
		80	163 118	DSL-32-80-270P-S2-FF	163 119 DSL-32-80-270P-S2-CL
		100	159 556	DSL-32-100-270P-S2-FF	163 126 DSL-32-100-270P-S2-CL
		10 ... 200	159 572	DSL-32-...-270P-S2-FF ¹⁾	163 092 DSL-32-...-270P-S2-CL ¹⁾
	40	25	175 863	DSL-40-25-270P-S2-FF	175 864 DSL-40-25-270P-S2-CL
		40	175 871	DSL-40-40-270P-S2-FF	175 872 DSL-40-40-270P-S2-CL
		50	175 879	DSL-40-50-270P-S2-FF	175 880 DSL-40-50-270P-S2-CL
		80	175 887	DSL-40-80-270P-S2-FF	175 888 DSL-40-80-270P-S2-CL
		100	175 895	DSL-40-100-270P-S2-FF	175 896 DSL-40-100-270P-S2-CL
		125	175 903	DSL-40-125-270P-S2-FF	175 904 DSL-40-125-270P-S2-CL
		160	175 911	DSL-40-160-270P-S2-FF	175 912 DSL-40-160-270P-S2-CL
		10 ... 200	175 855	DSL-40-...-270P-S2-FF ¹⁾	175 856 DSL-40-...-270P-S2-CL ¹⁾

1) Minimum order quantity 5

Swivel/linear units DSL

Technical data

FESTO

Ordering data – With plain bearing						
Design	Ø	Stroke	Variant CR		Variant CC	
			shock absorber right fixed stop left		shock absorber at both ends	
	[mm]	[mm]	Part No.	Type	Part No.	Type
S2 – Through piston rod						
	16	25	164 816	DSL-16-25-270P-S2-CR	164 817	DSL-16-25-270P-S2-CC
		40	164 822	DSL-16-40-270P-S2-CR	164 823	DSL-16-40-270P-S2-CC
		50	164 828	DSL-16-50-270P-S2-CR	164 829	DSL-16-50-270P-S2-CC
		80	164 834	DSL-16-80-270P-S2-CR	164 835	DSL-16-80-270P-S2-CC
		100	164 840	DSL-16-100-270P-S2-CR	164 841	DSL-16-100-270P-S2-CC
		10 ... 160	164 810	DSL-16-...-270P-S2-CR ¹⁾	164 811	DSL-16-...-270P-S2-CC ¹⁾
	20	25	163 019	DSL-20-25-270P-S2-CR	163 020	DSL-20-25-270P-S2-CC
		40	163 026	DSL-20-40-270P-S2-CR	163 027	DSL-20-40-270P-S2-CC
		50	163 033	DSL-20-50-270P-S2-CR	163 034	DSL-20-50-270P-S2-CC
		80	163 040	DSL-20-80-270P-S2-CR	163 041	DSL-20-80-270P-S2-CC
		100	163 047	DSL-20-100-270P-S2-CR	163 048	DSL-20-100-270P-S2-CC
		10 ... 160	163 013	DSL-20-...-270P-S2-CR ¹⁾	163 014	DSL-20-...-270P-S2-CC ¹⁾
	25	25	163 059	DSL-25-25-270P-S2-CR	163 060	DSL-25-25-270P-S2-CC
		40	163 066	DSL-25-40-270P-S2-CR	163 067	DSL-25-40-270P-S2-CC
		50	163 073	DSL-25-50-270P-S2-CR	163 074	DSL-25-50-270P-S2-CC
		80	163 080	DSL-25-80-270P-S2-CR	163 081	DSL-25-80-270P-S2-CC
		100	163 087	DSL-25-100-270P-S2-CR	163 088	DSL-25-100-270P-S2-CC
		10 ... 160	163 053	DSL-25-...-270P-S2-CR ¹⁾	163 054	DSL-25-...-270P-S2-CC ¹⁾
	32	25	163 099	DSL-32-25-270P-S2-CR	163 100	DSL-32-25-270P-S2-CC
		40	163 106	DSL-32-40-270P-S2-CR	163 107	DSL-32-40-270P-S2-CC
		50	163 113	DSL-32-50-270P-S2-CR	163 114	DSL-32-50-270P-S2-CC
		80	163 120	DSL-32-80-270P-S2-CR	163 121	DSL-32-80-270P-S2-CC
		100	163 127	DSL-32-100-270P-S2-CR	163 128	DSL-32-100-270P-S2-CC
		10 ... 200	163 093	DSL-32-...-270P-S2-CR ¹⁾	163 094	DSL-32-...-270P-S2-CC ¹⁾
	40	25	175 865	DSL-40-25-270P-S2-CR	175 866	DSL-40-25-270P-S2-CC
		40	175 873	DSL-40-40-270P-S2-CR	175 874	DSL-40-40-270P-S2-CC
		50	175 881	DSL-40-50-270P-S2-CR	175 882	DSL-40-50-270P-S2-CC
		80	175 889	DSL-40-80-270P-S2-CR	175 890	DSL-40-80-270P-S2-CC
		100	175 897	DSL-40-100-270P-S2-CR	175 898	DSL-40-100-270P-S2-CC
		125	175 905	DSL-40-125-270P-S2-CR	175 906	DSL-40-125-270P-S2-CC
		160	175 913	DSL-40-160-270P-S2-CR	175 914	DSL-40-160-270P-S2-CC
		10 ... 200	175 857	DSL-40-...-270P-S2-CR ¹⁾	175 858	DSL-40-...-270P-S2-CC ¹⁾

1) Minimum order quantity 5

Swivel/linear units DSL

Technical data

FESTO

Ordering data – With plain bearing					
Design	Ø	Stroke	Basic variant FF		Variant CL
	[mm]	[mm]	fixed stop at both ends		shock absorber left fixed stop right
			Part No.	Type	Part No. Type
S20 – Through, hollow piston rod					
	16	25	159 545	DSL-16-25-270P-S20-FF	164 818 DSL-16-25-270P-S20-CL
		40	163 009	DSL-16-40-270P-S20-FF	164 824 DSL-16-40-270P-S20-CL
		50	159 546	DSL-16-50-270P-S20-FF	164 830 DSL-16-50-270P-S20-CL
		80	163 011	DSL-16-80-270P-S20-FF	164 836 DSL-16-80-270P-S20-CL
		100	159 547	DSL-16-100-270P-S20-FF	164 842 DSL-16-100-270P-S20-CL
		10 ... 160	159 569	DSL-16-...-270P-S20-FF ¹⁾	164 812 DSL-16-...-270P-S20-CL ¹⁾
	20	25	161 036	DSL-20-25-270P-S20-FF	163 021 DSL-20-25-270P-S20-CL
		40	163 028	DSL-20-40-270P-S20-FF	163 029 DSL-20-40-270P-S20-CL
		50	161 038	DSL-20-50-270P-S20-FF	163 035 DSL-20-50-270P-S20-CL
		80	163 042	DSL-20-80-270P-S20-FF	163 043 DSL-20-80-270P-S20-CL
		100	161 040	DSL-20-100-270P-S20-FF	163 049 DSL-20-100-270P-S20-CL
		10 ... 160	161 034	DSL-20-...-270P-S20-FF ¹⁾	163 015 DSL-20-...-270P-S20-CL ¹⁾
	25	25	159 551	DSL-25-25-270P-S20-FF	163 061 DSL-25-25-270P-S20-CL
		40	163 068	DSL-25-40-270P-S20-FF	163 069 DSL-25-40-270P-S20-CL
		50	159 552	DSL-25-50-270P-S20-FF	163 075 DSL-25-50-270P-S20-CL
		80	163 082	DSL-25-80-270P-S20-FF	163 083 DSL-25-80-270P-S20-CL
		100	159 553	DSL-25-100-270P-S20-FF	163 089 DSL-25-100-270P-S20-CL
		10 ... 160	159 571	DSL-25-...-270P-S20-FF ¹⁾	163 055 DSL-25-...-270P-S20-CL ¹⁾
	32	25	159 557	DSL-32-25-270P-S20-FF	163 101 DSL-32-25-270P-S20-CL
		40	163 108	DSL-32-40-270P-S20-FF	163 109 DSL-32-40-270P-S20-CL
		50	159 558	DSL-32-50-270P-S20-FF	163 115 DSL-32-50-270P-S20-CL
		80	163 122	DSL-32-80-270P-S20-FF	163 123 DSL-32-80-270P-S20-CL
		100	159 559	DSL-32-100-270P-S20-FF	163 129 DSL-32-100-270P-S20-CL
		10 ... 200	159 573	DSL-32-...-270P-S20-FF ¹⁾	163 095 DSL-32-...-270P-S20-CL ¹⁾
	40	25	175 867	DSL-40-25-270P-S20-FF	175 868 DSL-40-25-270P-S20-CL
		40	175 875	DSL-40-40-270P-S20-FF	175 876 DSL-40-40-270P-S20-CL
		50	175 883	DSL-40-50-270P-S20-FF	175 884 DSL-40-50-270P-S20-CL
		80	175 891	DSL-40-80-270P-S20-FF	175 892 DSL-40-80-270P-S20-CL
		100	175 899	DSL-40-100-270P-S20-FF	175 900 DSL-40-100-270P-S20-CL
		125	175 907	DSL-40-125-270P-S20-FF	175 908 DSL-40-125-270P-S20-CL
		160	175 915	DSL-40-160-270P-S20-FF	175 916 DSL-40-160-270P-S20-CL
		10 ... 200	175 859	DSL-40-...-270P-S20-FF ¹⁾	175 860 DSL-40-...-270P-S20-CL ¹⁾

1) Minimum order quantity 5

Swivel/linear units DSL

Technical data

FESTO

Ordering data – With plain bearing						
Design	Ø	Stroke	Variant CR		Variant CC	
			shock absorber right fixed stop left		shock absorber at both ends	
	[mm]	[mm]	Part No.	Type	Part No.	Type
S20 – Through, hollow piston rod						
	16	25	164 819	DSL-16-25-270P-S20-CR	164 820	DSL-16-25-270P-S20-CC
		40	164 825	DSL-16-40-270P-S20-CR	164 826	DSL-16-40-270P-S20-CC
		50	164 831	DSL-16-50-270P-S20-CR	164 832	DSL-16-50-270P-S20-CC
		80	164 837	DSL-16-80-270P-S20-CR	164 838	DSL-16-80-270P-S20-CC
		100	164 843	DSL-16-100-270P-S20-CR	164 844	DSL-16-100-270P-S20-CC
		10 ... 160	164 813	DSL-16-...-270P-S20-CR ¹⁾	164 814	DSL-16-...-270P-S20-CC ¹⁾
	20	25	163 022	DSL-20-25-270P-S20-CR	163 023	DSL-20-25-270P-S20-CC
		40	163 030	DSL-20-40-270P-S20-CR	163 031	DSL-20-40-270P-S20-CC
		50	163 036	DSL-20-50-270P-S20-CR	163 037	DSL-20-50-270P-S20-CC
		80	163 044	DSL-20-80-270P-S20-CR	163 045	DSL-20-80-270P-S20-CC
		100	163 050	DSL-20-100-270P-S20-CR	163 051	DSL-20-100-270P-S20-CC
		10 ... 160	163 016	DSL-20-...-270P-S20-CR ¹⁾	163 017	DSL-20-...-270P-S20-CC ¹⁾
	25	25	163 062	DSL-25-25-270P-S20-CR	163 063	DSL-25-25-270P-S20-CC
		40	163 070	DSL-25-40-270P-S20-CR	163 071	DSL-25-40-270P-S20-CC
		50	163 076	DSL-25-50-270P-S20-CR	163 077	DSL-25-50-270P-S20-CC
		80	163 084	DSL-25-80-270P-S20-CR	163 085	DSL-25-80-270P-S20-CC
		100	163 090	DSL-25-100-270P-S20-CR	163 091	DSL-25-100-270P-S20-CC
		10 ... 160	163 056	DSL-25-...-270P-S20-CR ¹⁾	163 057	DSL-25-...-270P-S20-CC ¹⁾
	32	25	163 102	DSL-32-25-270P-S20-CR	163 103	DSL-32-25-270P-S20-CC
		40	163 110	DSL-32-40-270P-S20-CR	163 111	DSL-32-40-270P-S20-CC
		50	163 116	DSL-32-50-270P-S20-CR	163 117	DSL-32-50-270P-S20-CC
		80	163 124	DSL-32-80-270P-S20-CR	163 125	DSL-32-80-270P-S20-CC
		100	163 130	DSL-32-100-270P-S20-CR	163 131	DSL-32-100-270P-S20-CC
		10 ... 200	163 096	DSL-32-...-270P-S20-CR ¹⁾	163 097	DSL-32-...-270P-S20-CC ¹⁾
	40	25	175 869	DSL-40-25-270P-S20-CR	175 870	DSL-40-25-270P-S20-CC
		40	175 877	DSL-40-40-270P-S20-CR	175 878	DSL-40-40-270P-S20-CC
		50	175 885	DSL-40-50-270P-S20-CR	175 886	DSL-40-50-270P-S20-CC
		80	175 893	DSL-40-80-270P-S20-CR	175 894	DSL-40-80-270P-S20-CC
		100	175 901	DSL-40-100-270P-S20-CR	175 902	DSL-40-100-270P-S20-CC
		125	175 909	DSL-40-125-270P-S20-CR	175 910	DSL-40-125-270P-S20-CC
		160	175 917	DSL-40-160-270P-S20-CR	175 918	DSL-40-160-270P-S20-CC
		10 ... 200	175 861	DSL-40-...-270P-S20-CR ¹⁾	175 862	DSL-40-...-270P-S20-CC ¹⁾

1) Minimum order quantity 5

Swivel/linear units DSL

Technical data

FESTO

Ordering data – With recirculating ball bearing guide					
Design	Ø	Stroke	Basic variant FF		Variant CC
	[mm]	[mm]	fixed stop at both ends		shock absorber at both ends
			Part No.	Type	Part No. Type
S2 – Through piston rod					
	16	25	177 159	DSL-16-25-270P-S2-FF-KF	177 160 DSL-16-25-270P-S2-CC-KF
		40	177 163	DSL-16-40-270P-S2-FF-KF	177 164 DSL-16-40-270P-S2-CC-KF
		50	177 167	DSL-16-50-270P-S2-FF-KF	177 168 DSL-16-50-270P-S2-CC-KF
		80	177 171	DSL-16-80-270P-S2-FF-KF	177 172 DSL-16-80-270P-S2-CC-KF
		100	177 175	DSL-16-100-270P-S2-FF-KF	177 176 DSL-16-100-270P-S2-CC-KF
		10 ... 100	177 179	DSL-16-...-270P-S2-FF-KF ¹⁾	177 180 DSL-16-...-270P-S2-CC-KF ¹⁾
	20	25	177 183	DSL-20-25-270P-S2-FF-KF	177 184 DSL-20-25-270P-S2-CC-KF
		40	177 187	DSL-20-40-270P-S2-FF-KF	177 188 DSL-20-40-270P-S2-CC-KF
		50	177 191	DSL-20-50-270P-S2-FF-KF	177 192 DSL-20-50-270P-S2-CC-KF
		80	177 195	DSL-20-80-270P-S2-FF-KF	177 196 DSL-20-80-270P-S2-CC-KF
		100	177 199	DSL-20-100-270P-S2-FF-KF	177 200 DSL-20-100-270P-S2-CC-KF
		10 ... 100	177 203	DSL-20-...-270P-S2-FF-KF ¹⁾	177 204 DSL-20-...-270P-S2-CC-KF ¹⁾
	25	25	177 207	DSL-25-25-270P-S2-FF-KF	177 208 DSL-25-25-270P-S2-CC-KF
		40	177 211	DSL-25-40-270P-S2-FF-KF	177 212 DSL-25-40-270P-S2-CC-KF
		50	177 215	DSL-25-50-270P-S2-FF-KF	177 216 DSL-25-50-270P-S2-CC-KF
		80	177 219	DSL-25-80-270P-S2-FF-KF	177 220 DSL-25-80-270P-S2-CC-KF
		100	177 223	DSL-25-100-270P-S2-FF-KF	177 224 DSL-25-100-270P-S2-CC-KF
		10 ... 100	177 227	DSL-25-...-270P-S2-FF-KF ¹⁾	177 228 DSL-25-...-270P-S2-CC-KF ¹⁾
	32	25	177 231	DSL-32-25-270P-S2-FF-KF	177 232 DSL-32-25-270P-S2-CC-KF
		40	177 235	DSL-32-40-270P-S2-FF-KF	177 236 DSL-32-40-270P-S2-CC-KF
		50	177 239	DSL-32-50-270P-S2-FF-KF	177 240 DSL-32-50-270P-S2-CC-KF
		80	177 243	DSL-32-80-270P-S2-FF-KF	177 244 DSL-32-80-270P-S2-CC-KF
		100	177 247	DSL-32-100-270P-S2-FF-KF	177 248 DSL-32-100-270P-S2-CC-KF
		10 ... 100	177 251	DSL-32-...-270P-S2-FF-KF ¹⁾	177 252 DSL-32-...-270P-S2-CC-KF ¹⁾
	40	25	177 255	DSL-40-25-270P-S2-FF-KF	177 256 DSL-40-25-270P-S2-CC-KF
		40	177 259	DSL-40-40-270P-S2-FF-KF	177 260 DSL-40-40-270P-S2-CC-KF
		50	177 263	DSL-40-50-270P-S2-FF-KF	177 264 DSL-40-50-270P-S2-CC-KF
		80	177 267	DSL-40-80-270P-S2-FF-KF	177 268 DSL-40-80-270P-S2-CC-KF
		100	177 271	DSL-40-100-270P-S2-FF-KF	177 272 DSL-40-100-270P-S2-CC-KF
		125	177 275	DSL-40-125-270P-S2-FF-KF	177 276 DSL-40-125-270P-S2-CC-KF
		160	177 279	DSL-40-160-270P-S2-FF-KF	177 280 DSL-40-160-270P-S2-CC-KF
		10 ... 160	177 283	DSL-40-...-270P-S2-FF-KF ¹⁾	177 284 DSL-40-...-270P-S2-CC-KF ¹⁾

1) Minimum order quantity 5

Swivel/linear units DSL

Technical data

FESTO

Ordering data – With recirculating ball bearing guide					
Design	Ø	Stroke	Basic variant FF		Variant CC
	[mm]	[mm]	fixed stop at both ends		shock absorber at both ends
			Part No.	Type	Part No. Type
S20 – Through, hollow piston rod					
	16	25	177 161	DSL-16-25-270P-S20-FF-KF	177 162 DSL-16-25-270P-S20-CC-KF
		40	177 165	DSL-16-40-270P-S20-FF-KF	177 166 DSL-16-40-270P-S20-CC-KF
		50	177 169	DSL-16-50-270P-S20-FF-KF	177 170 DSL-16-50-270P-S20-CC-KF
		80	177 173	DSL-16-80-270P-S20-FF-KF	177 174 DSL-16-80-270P-S20-CC-KF
		100	177 177	DSL-16-100-270P-S20-FF-KF	177 178 DSL-16-100-270P-S20-CC-KF
		10 ... 100	177 181	DSL-16-...-270P-S20-FF-KF ¹⁾	177 182 DSL-16-...-270P-S20-CC-KF ¹⁾
	20	25	177 185	DSL-20-25-270P-S20-FF-KF	177 186 DSL-20-25-270P-S20-CC-KF
		40	177 189	DSL-20-40-270P-S20-FF-KF	177 190 DSL-20-40-270P-S20-CC-KF
		50	177 193	DSL-20-50-270P-S20-FF-KF	177 194 DSL-20-50-270P-S20-CC-KF
		80	177 197	DSL-20-80-270P-S20-FF-KF	177 198 DSL-20-80-270P-S20-CC-KF
		100	177 201	DSL-20-100-270P-S20-FF-KF	177 202 DSL-20-100-270P-S20-CC-KF
		10 ... 100	177 205	DSL-20-...-270P-S20-FF-KF ¹⁾	177 206 DSL-20-...-270P-S20-CC-KF ¹⁾
	25	25	177 209	DSL-25-25-270P-S20-FF-KF	177 210 DSL-25-25-270P-S20-CC-KF
		40	177 213	DSL-25-40-270P-S20-FF-KF	177 214 DSL-25-40-270P-S20-CC-KF
		50	177 217	DSL-25-50-270P-S20-FF-KF	177 218 DSL-25-50-270P-S20-CC-KF
		80	177 221	DSL-25-80-270P-S20-FF-KF	177 222 DSL-25-80-270P-S20-CC-KF
		100	177 225	DSL-25-100-270P-S20-FF-KF	177 226 DSL-25-100-270P-S20-CC-KF
		10 ... 100	177 229	DSL-25-...-270P-S20-FF-KF ¹⁾	177 230 DSL-25-...-270P-S20-CC-KF ¹⁾
	32	25	177 233	DSL-32-25-270P-S20-FF-KF	177 234 DSL-32-25-270P-S20-CC-KF
		40	177 237	DSL-32-40-270P-S20-FF-KF	177 238 DSL-32-40-270P-S20-CC-KF
		50	177 241	DSL-32-50-270P-S20-FF-KF	177 242 DSL-32-50-270P-S20-CC-KF
		80	177 245	DSL-32-80-270P-S20-FF-KF	177 246 DSL-32-80-270P-S20-CC-KF
		100	177 249	DSL-32-100-270P-S20-FF-KF	177 250 DSL-32-100-270P-S20-CC-KF
		10 ... 100	177 253	DSL-32-...-270P-S20-FF-KF ¹⁾	177 254 DSL-32-...-270P-S20-CC-KF ¹⁾
	40	25	177 257	DSL-40-25-270P-S20-FF-KF	177 258 DSL-40-25-270P-S20-CC-KF
		40	177 261	DSL-40-40-270P-S20-FF-KF	177 262 DSL-40-40-270P-S20-CC-KF
		50	177 265	DSL-40-50-270P-S20-FF-KF	177 266 DSL-40-50-270P-S20-CC-KF
		80	177 269	DSL-40-80-270P-S20-FF-KF	177 270 DSL-40-80-270P-S20-CC-KF
		100	177 273	DSL-40-100-270P-S20-FF-KF	177 274 DSL-40-100-270P-S20-CC-KF
		125	177 277	DSL-40-125-270P-S20-FF-KF	177 278 DSL-40-125-270P-S20-CC-KF
		160	177 281	DSL-40-160-270P-S20-FF-KF	177 282 DSL-40-160-270P-S20-CC-KF
		10 ... 160	177 285	DSL-40-...-270P-S20-FF-KF ¹⁾	177 286 DSL-40-...-270P-S20-CC-KF ¹⁾

1) Minimum order quantity 5

Swivel/linear units DSL

Accessories

FESTO

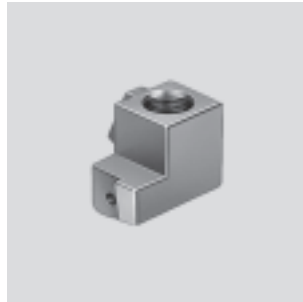
Shock absorber retainer

DSM-...-CL/CR

Material:

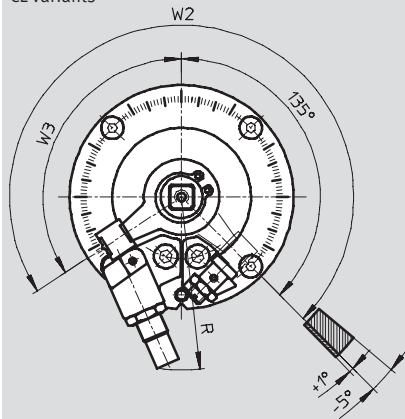
Galvanised steel

Free of copper, PTFE and silicone

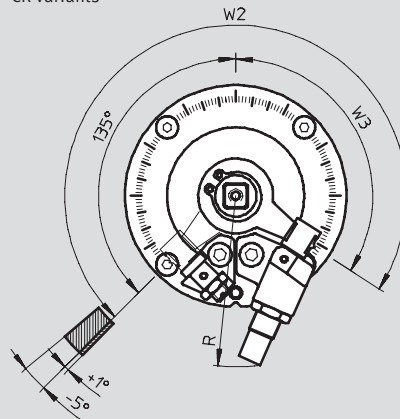


Dimensions

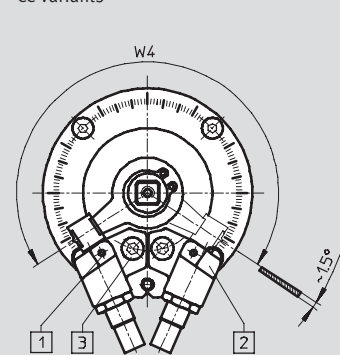
CL variants



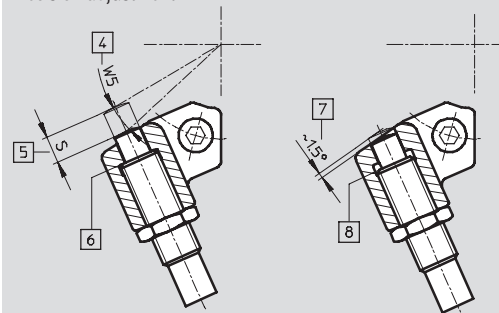
CR variants



CC variants



Precision adjustment



- 1 Mounting thread for WSM mounting kit
- 2 Infinitely adjustable shock absorber retainers for adjustment of swivel angle
- 3 Locking screw for tightening the shock absorber retainer
- 4 Cushioning angle
- 5 Cushioning length
- 6 Shock absorber at rear stop on retainer
- 7 Precision adjustment
- 8 Shock absorber unscrewed

Dimensions and ordering data

For Ø	R	S	W2	W3	W4	W5	For shock absorbers	CRC ¹⁾	Weight	Mounting	Part No.	Type
[mm]	max.								[g]			
16	48	4.5	254°	119°	238°	13°	YSR-5-5-C	2	30	left	164 324	DSM-12-CL
										right	164 325	DSM-12-CR
20	58	5	254°	119°	238°	12°	YSR-7-5-C	2	50	left	161 184	DSM-16-CL
										right	161 185	DSM-16-CR
25	61	5	258°	123°	246°	10°	YSR-7-5-C	2	51	left	161 186	DSM-25-CL
										right	161 187	DSM-25-CR
32	81	8	258°	123°	246°	12.5°	YSR-8-8-C	2	95	left	161 188	DSM-32-CL
										right	161 189	DSM-32-CR
40	108	12	255°	120°	240°	15°	YSR-12-12-C	2	175	left	161 190	DSM-40-CL
										right	161 191	DSM-40-CR

1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

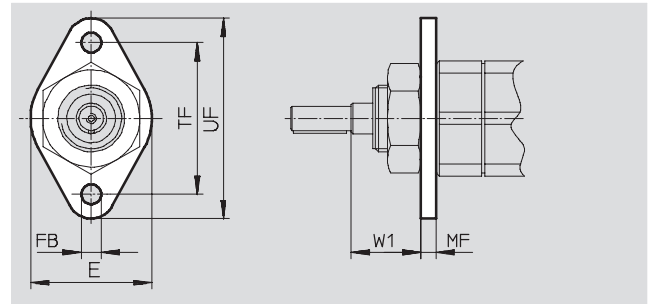
Swivel/linear units DSL

Accessories

FESTO

Flange mounting FBN

Material:
Galvanised steel
Free of copper, PTFE and silicone



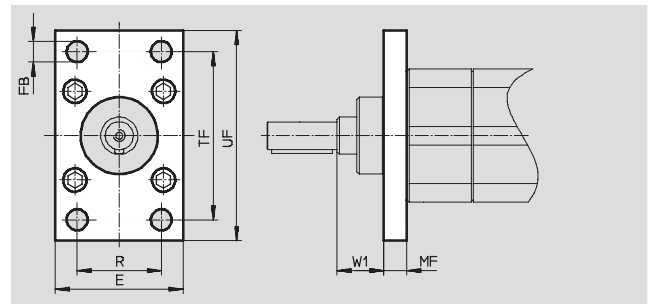
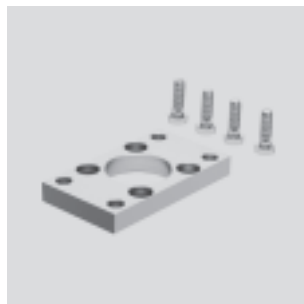
Dimensions and ordering data										
For Ø	E	FB Ø H13	MF	TF	UF	W1	CRC ¹⁾	Weight [g]	Part No.	Type
16	40	6.6	5	50	66	23	2	47	5 131	FBN-20/25

1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Flange mounting FNG

Material:
Galvanised steel
Free of copper, PTFE and silicone



Dimensions and ordering data										
For Ø	E	FB Ø H13	MF	R	TF	UF	W1	CRC ¹⁾	Weight [g]	Part No. Type
20	45	7	10	32	64	80	16	2	245	32 940 FNG-32
25	54	9	10	36	72	90	20	2	290	32 941 FNG-40
32	65	9	12	45	90	110	25	2	520	32 942 FNG-50
40	75	9	12	50	100	120	34	2	690	32 943 FNG-63

1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Swivel/linear units DSL

Accessories

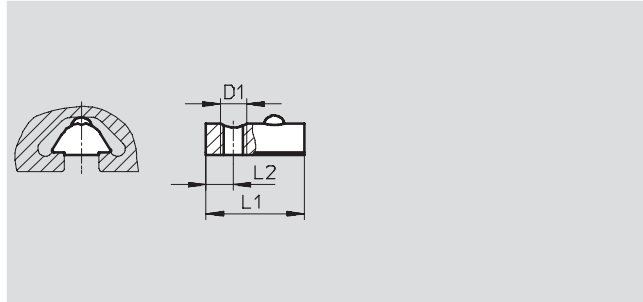
FESTO

Slot nut NST

Material:

Non-alloyed tempered steel

Free of copper, PTFE and silicone



Dimensions and ordering data							
For Ø	D1	L1	L2	CRC ¹⁾	Weight	Part No.	Type
[mm]		±0.5			[g]		
16	M5	12	4	2	3	150 914	NST-5-M5
20							
25	M6	22.5	6.25	2	11	150 915	NST-8-M6
32							
40							

1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

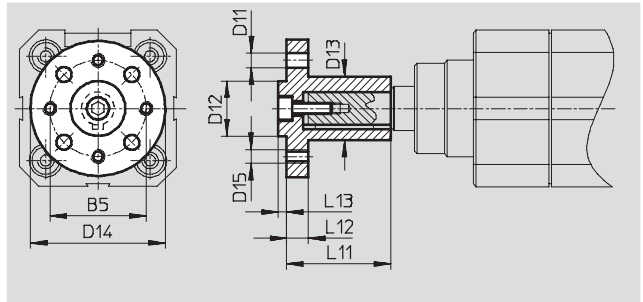
Push-on flange FWSR

Permissible tightening torque may not be exceeded when attaching additional components to the spigot shaft.

Material:

Wrought aluminium alloy, anodised

Free of copper, PTFE and silicone



Dimensions and ordering data													
For Ø	B5	D11 H13	D12 f8	D13	D14	D15	L11	L12	L13	Tightening torque [Nm]	CRC ¹⁾	Weight	Part No. Type
[mm]		Ø	Ø	Ø	Ø							[g]	
16	25	3.4	14	15	35	M3	25	3	3	1.2	2	21	14 659 FWSR-12
20	28	4.5	16	17	40	M4	28	5	6	5.5	2	32	170 153 FWSR-16-M5
25	35	5.5	20	23	50	M5	38	8	3	5.5	2	70	170 154 FWSR-25-M5
32	45	6.6	28	28	60	M6	48	10	4	5.5	2	127	13 241 FWSR-32
40	54	9	36	38	70	M8	60	11	5	10	2	240	14 656 FWSR-40

1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

Swivel/linear units DSL

Accessories

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Ordering data – Shock absorbers			Technical data → 1 / 9.0-2	
	For Ø	Remarks	Part No.	Type
	16	For shock absorber retainer type DSM-...-CL/CR	158 981	YSR-5-5-C
	20, 25		160 272	YSR-7-5-C
	32		34 571	YSR-8-8-C
	40		34 572	YSR-12-12-C

Ordering data – Mounting kits			Part No.	Type
	For Ø	Remarks		
	16	For inductive proximity sensors type SIEN-M5	161 041	WSM-12-J-M5
	20		161 042	WSM-16-J-M5
	25		161 043	WSM-25-J-M5
	32	For inductive proximity sensors type SIEN-M8	161 044	WSM-32-J-M8
	40		161 045	WSM-40-J-M8

Ordering data – Proximity sensors, inductive			Technical data → Volume 4	
	For Ø	Remarks	Connection	Part No. Type
	16 ... 25	For mounting kit WSM-...-J-M5	Cable	150 370 SIEN-M5B-PS-K-L
			Plug	150 371 SIEN-M5B-PS-S-L
	32, 40	For mounting kit WSM-...-J-M8	Cable	150 386 SIEN-M8B-PS-K-L
			Plug	150 387 SIEN-M8B-PS-S-L

Ordering data – Slot covers for T-slot					
	For Ø	Application	Mounting	Length [m]	Part No. Type
	16 ... 40	For sensor slots	Insertable from above	2x 0.5	151 680 ABP-5-S
	16, 20	For profile slots	Insertable from above	2x 0.5	151 681 ABP-5
	25 ... 40				151 682 ABP-8

Ordering data – Spare parts			Part No.	Type
	For Ø	Designation		
	16	Cushioning pad for swivel lever	342 628	DSM-12-270P
	20		342 629	DSM-16-270P
	25		342 660	DSM-25-270P
	32		342 630	DSM-32-270P
	40		342 631	DSM-40-270P
	16	Buffer for shock absorber	351 444	YSR-5-5-C
	20, 25		353 634	YSR-7-5-C
	32		334 644	YSR-8-8-B/C
	40		334 645	YSR-12-12-C

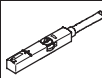
Ordering data – One-way flow control valves					Technical data➔ Volume 2	
	Connection		Material	Part No.	Type	
	Thread	For tubing OD				
For exhaust air						
	M5	3	Metal design	193 137	GRLA-M5-QS-3-D	
		4		193 138	GRLA-M5-QS-4-D	
		6		193 139	GRLA-M5-QS-6-D	
	G1/8	3		193 142	GRLA-1/8-QS-3-D	
		4		193 143	GRLA-1/8-QS-4-D	
		6		193 144	GRLA-1/8-QS-6-D	
		8		193 145	GRLA-1/8-QS-8-D	

Swivel/linear units DSL

Accessories

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Ordering data – Proximity sensors for T-slot, magneto-resistive					Technical data → www.festo.com/catalogue/sm	
	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with cylinder profile	PNP	Cable, 3-wire	2.5	543 867	SMT-8M-PS-24V-K-2,5-OE
			Plug M8x1, 3-pin	0.3	543 866	SMT-8M-PS-24V-K-0,3-M8D
			Plug M12x1, 3-pin	0.3	543 869	SMT-8M-PS-24V-K-0,3-M12
		NPN	Cable, 3-wire	2.5	543 870	SMT-8M-NS-24V-K-2,5-OE
			Plug M8x1, 3-pin	0.3	543 871	SMT-8M-NS-24V-K-0,3-M8D
	Insertable in the slot lengthwise, flush with the cylinder profile	PNP	Cable, 3-wire	2.5	175 436	SMT-8-PS-K-LED-24-B
			Plug M8x1, 3-pin	0.3	175 484	SMT-8-PS-S-LED-24-B
N/C contact						
	Insertable in the slot from above, flush with cylinder profile	PNP	Cable, 3-wire	7.5	543 873	SMT-8M-PO-24V-K7,5-OE

Ordering data – Proximity sensors for T-slot, magnetic reed					Technical data → www.festo.com/catalogue/sm	
	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with cylinder profile	Contacting	Cable, 3-wire	2.5	543 862	SME-8M-DS-24V-K-2,5-OE
				5.0	543 863	SME-8M-DS-24V-K-5,0-OE
			Cable, 3-wire	2.5	543 872	SME-8M-ZS-24V-K-2,5-OE
			Plug M8x1, 3-pin	0.3	543 861	SME-8M-DS-24V-K-0,3-M8D
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	150 855	SME-8-K-LED-24
			Plug M8x1, 3-pin	0.3	150 857	SME-8-S-LED-24
N/C contact						
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	7.5	160 251	SME-8-O-K-LED-24

Ordering data – Connecting cables				Technical data → www.festo.com/catalogue/nebu	
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part No.	Type
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541 333	NEBU-M8G3-K-2.5-LE3
			5	541 334	NEBU-M8G3-K-5-LE3
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541 363	NEBU-M12G5-K-2.5-LE3
			5	541 364	NEBU-M12G5-K-5-LE3
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541 338	NEBU-M8W3-K-2.5-LE3
			5	541 341	NEBU-M8W3-K-5-LE3
	Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541 367	NEBU-M12W5-K-2.5-LE3
			5	541 370	NEBU-M12W5-K-5-LE3