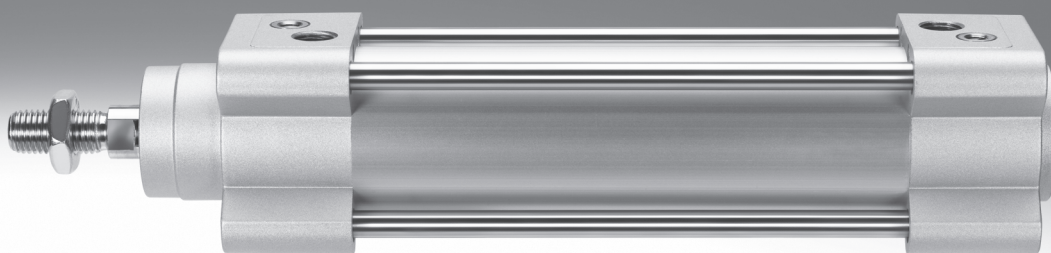


Standard cylinders DSBG, to ISO 15552

FESTO



Standard cylinders DSBG, to ISO 15552

Key features

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At a glance



DIN

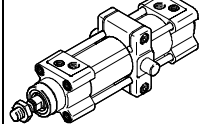


- Standards-based cylinders to ISO 15552 (corresponds to the withdrawn standards ISO 6431, DIN ISO 6431, VDMA 24 562, NF E 49 003.1 and UNI 10290)

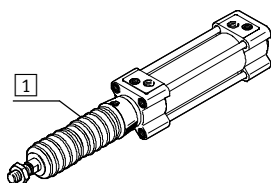
- Sturdy tie rod design
- Double-acting
- For contactless position sensing
- Optionally with protection against rotation
- An extensive range of accessories makes it possible to install the cylinder virtually anywhere

- Three types of cushioning available:
 - P cushioning: elastic cushioning rings/pads at both ends
 - PPS cushioning: pneumatic cushioning, self-adjusting at both ends
 - PPV cushioning: pneumatic cushioning, adjustable at both ends

- The variants can be configured according to individual needs thanks to the modular product system
- High flexibility thanks to the wide range of variants

Variants from the modular product system		
Symbol	Key features	Description
	Q Square piston rod	Protection against rotation. For correctly oriented feeding
	U Constant, slow movement	Suitable for slow stroke movements at a constant, judder-free speed over the full stroke of the cylinder. Seal contains silicone grease (not free of paint-wetting impairment substances)
	T Through piston rod	For working at both ends with the same force in the forward and return stroke, for attaching external stops
	F Female piston rod thread	–
	R3 High corrosion protection	All external cylinder surfaces comply with corrosion resistance class 3 to Festo standard 940 070. The piston rod is made from corrosion and acid-resistant steel
	T1 Heat-resistant seals	Temperature range 0 ... +120 °C
	T3 Low temperature	Temperature range –40 ... +80 °C
	T4 Heat-resistant seals	Temperature range 0 ... +150 °C (not free of paint-wetting impairment substances)
	A3 Unlubricated operation	Cleaning processes degrease the piston rod. A special piston rod seal permits a longer service life with grease-free operation compared to the standard seal
	...E Extended piston rod	–
	...L Extended male piston rod thread	–
	...V Swivel mounting position	Attached swivel mounting

Longer service life with bellows kit DADB



The bellows kit is a leak-free system. To prevent unwanted media from being drawn in, the supply and exhaust air must be ducted via a venting hole in the connection part **1**. The kit protects the piston rod, seal and bearings against a wide variety of

media, for example:

- Dust
- Chippings
- Oil
- Grease
- Fuel

Standard cylinders DSBG, to ISO 15552

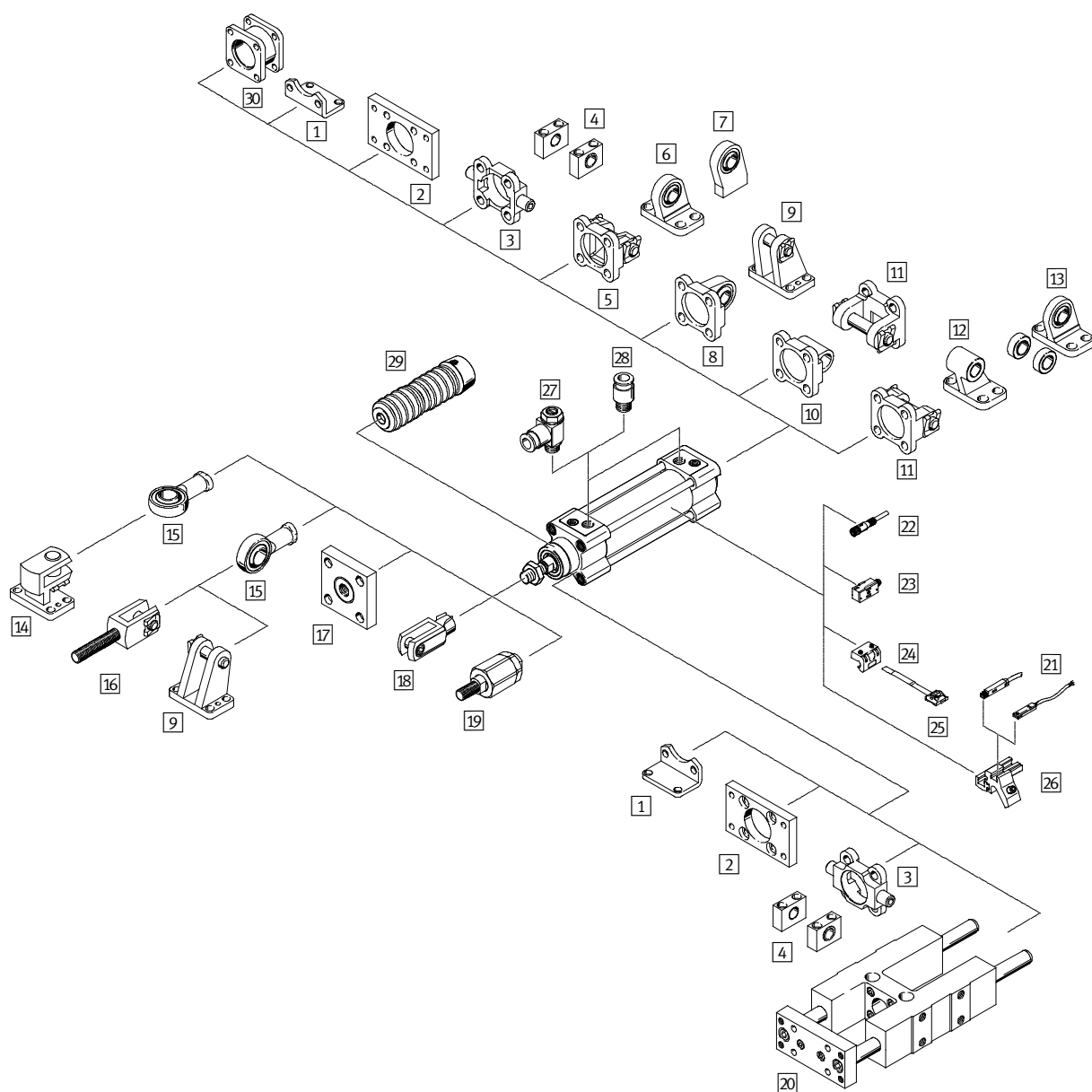
Type codes

		DSBG	-		-	32	-	50	-		-	PPV		-	A	-	N3		T1
Type																			
Double-acting																			
DSBG	Standard cylinder																		
Protection against rotation																			
-	Without protection against rotation																		
Q	With protection against rotation																		
Running characteristics																			
-	Standard																		
U	Constant, slow movement																		
Piston Ø [mm]																			
Stroke [mm]																			
Piston rod type																			
-	Piston rod at one end																		
T	Through piston rod																		
Piston rod thread type																			
-	Male thread																		
F	Female thread																		
Cushioning																			
P	Elastic cushioning rings/pads at both ends																		
PPS	Pneumatic cushioning, self-adjusting at both ends																		
PPV	Pneumatic cushioning, adjustable at both ends																		
Position sensing																			
A	Via proximity sensor																		
Standard																			
N3	Based on ISO 15552																		
Variants																			
R3	High corrosion protection																		
T1	Temperature range 0 ... +120 °C																		
T3	Temperature range -40 ... +80 °C																		
T4	Temperature range 0 ... +150 °C																		
A3	For unlubricated operation																		
...V	Swivel mounting position																		
...E	Piston rod extension																		
...L	Piston rod thread extension																		

Standard cylinders DSBG, to ISO 15552

Peripherals overview

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Mounting attachments and accessories		
	Brief description	→ Page/Internet
1	Foot mounting HNC/CRHNC	For bearing or end caps 16
2	Flange mounting FNC/CRFNG	– For bearing or end caps – Cannot be used on the bearing cap in combination with bellows kit DADB 17
3	Trunnion flange ZNCF/CRZNG	– For bearing or end caps – Cannot be used on the bearing cap in combination with bellows kit DADB 18
4	Trunnion support LNZG/CRLNZG	– 19
5	Swivel flange SNC	For end caps 20
6	Clevis foot LSNG	With spherical bearing 22

Standard cylinders DSBG, to ISO 15552

Peripherals overview

Mounting attachments and accessories		
	Brief description	→ Page/Internet
7	Clevis foot LSNSG	Weld-on, with spherical bearing
8	Swivel flange SNCS	With spherical bearing for end caps
9	Clevis foot LBG	–
10	Swivel flange SNCL	For end caps
11	Swivel flange SNCB/SNCB-...-R3	For end caps
12	Clevis foot LNG/CRLNG	–
13	Clevis foot LSN	With spherical bearing
14	Right-angle clevis foot LQG	–
15	Rod eye SGS/CRSGS	With spherical bearing
16	Rod clevis SGA	With male thread
17	Coupling piece KSG	For compensating radial deviations
	Coupling piece KSZ	For cylinders with a non-rotating piston rod for compensating radial deviations
18	Rod clevis SG/CRSG	Permits a swivelling movement of the cylinder in one plane
19	Self-aligning rod coupler FK	For compensating radial and angular deviations
20	Guide unit FENG	For protecting standard cylinders against rotation at high torque loads
21	Proximity sensor SME/SMT-8M	Can be integrated in the cylinder profile barrel
22	Connecting cable NEBU	–
23	Proximity sensor SMEO-1/SMT0-1/SMPO-1-H-B	–
24	Mounting kit SMB	For proximity sensor SMEO-1/SMT0-1
25	Mounting kit SMBS	For proximity sensor SMPO-1-H-B
26	Mounting kit SMBZ-8- ...	For proximity sensor SME/SMT-8M
27	One-way flow control valve GRLA	For regulating speed
28	Push-in fitting QA	For connecting compressed air tubing with standard O.D.
29	Bellows kit DADB	- Protects the cylinder (piston rod, seal and bearings) against a wide range of media and thus prevents premature wear - The kit can only be used in combination with an extended piston rod (E)
30	Multi-position kit DPNC	For connecting two cylinders with identical piston diameters to form a multi-position cylinder

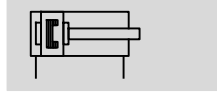
Standard cylinders DSBG, to ISO 15552

Technical data

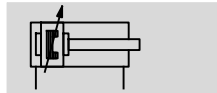
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Function

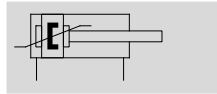
P cushioning



PPV cushioning



PPS cushioning



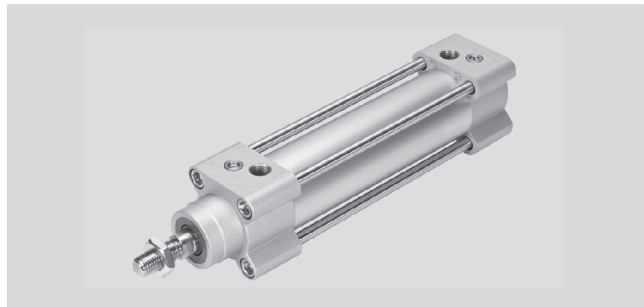
DIN



- Ø - Diameter
32 ... 100 mm

- | - Stroke length
1 ... 2,800 mm

- T - www.festo.com



General technical data						
Piston Ø	32	40	50	63	80	100
Pneumatic connection	G1/8	G1/4	G1/4	G3/8	G3/8	G1/2
Stroke						
DSBG-... [mm]	1 ... 2,800					
DSBG-...-U [mm]	1 ... 500					
DSBG-...-...E [mm]	1 ... 2,000					
DSBG-...-L [mm]	1 ... 2,000					
Min. stroke with position sensing						
DSBG-... [mm]	2	2	2	3	3	3
DSBG-...-T3 [mm]	3	4	3	4	4	4
Design	Piston					
	Piston rod					
	Tie rod					
	Cylinder barrel					
Mode of operation	Double-acting					
Cushioning						
DSBG-...-P	Elastic cushioning rings/pads at both ends					
DSBG-...-PPV	Pneumatic cushioning, adjustable at both ends					
DSBG-...-PPS	Pneumatic cushioning, self-adjusting at both ends					
Cushioning length [mm]	20	20	22	22	32	32
Position sensing	Via proximity sensor					
Type of mounting	Via female thread					
	Via accessories					
Mounting position	Any					

Forces [N] and impact energy [J]						
Piston Ø	32	40	50	63	80	100
Theoretical force at 6 bar, advancing	483	754	1,178	1,870	3,016	4,712
Theoretical force at 6 bar, retracting	415	633	990	1,682	2,721	4,418
Max. impact energy in the end positions						
DSBG-...	0.4	0.7	1.0	1.3	1.8	2.5
DSBG-...-T1, T3	0.2	0.35	0.5	0.65	0.9	1.25

Permissible impact velocity:

$$v_{\text{perm.}} = \sqrt{\frac{2 \times E_{\text{perm.}}}{m_{\text{dead}} + m_{\text{load}}}}$$

Maximum permissible load:

$$m_{\text{load}} = \frac{2 \times E_{\text{perm.}}}{v^2} - m_{\text{dead}}$$

$v_{\text{perm.}}$ Permissible impact velocity

$E_{\text{perm.}}$ Max. impact energy

m_{dead} Moving load (drive)

m_{load} Moving effective load

Standard cylinders DSBG, to ISO 15552

Technical data

Operating and environmental conditions						
Piston Ø	32	40	50	63	80	100
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]					
Note on operating/pilot medium	Operation with lubricated medium possible (in which case lubricated operation will always be required)					
Operating pressure						
DSBG-... [bar]	0.6 ... 12					
DSBG-...-T3 [bar]	1 ... 12					
DSBG-...-A3 [bar]	1.5 ... 12		1 ... 12		0.6 ... 12	
Ambient temperature						
DSBG-... [°C]	−20 ... +80					
DSBG-...-T1 [°C]	0 ... +120					
DSBG-...-T3 [°C]	−40 ... +80					
DSBG-...-T4 [°C]	0 ... +150					
Corrosion resistance class CRC						
DSBG-...	2 ¹⁾					
DSBG-...-R3	3 ²⁾					

- 1) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.
- 2) Corrosion resistance class 3 according to Festo standard 940 070
Components subject to high corrosion stress. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

Weight [g]						
Piston Ø	32	40	50	63	80	100
Basic design; variant T1, T3, T4, A3, U						
Product weight with 0 mm stroke	510	790	1,240	1,775	2,780	3,900
Additional weight per 10 mm stroke	25	35	52	55	85	94
Moving load with 0 mm stroke	120	205	370	430	830	1,043
Moving load per 10 mm stroke	9	16	25	25	39	39
Variant Q						
Product weight with 0 mm stroke	503	755	1,241	1,821	2,717	3,827
Additional weight per 10 mm stroke	25	30	47	50	78	87
Moving load with 0 mm stroke	115	170	332	391	757	890
Moving load per 10 mm stroke	8	11	20	20	31	31
Variant T (through piston rod)						
Product weight with 0 mm stroke	581	924	1,523	2,103	3,243	4,353
Additional weight per 10 mm stroke	34	50	76	97	123	133
Moving load with 0 mm stroke	181	339	613	684	1,292	1,516
Moving load per 10 mm stroke	18	32	50	50	78	78

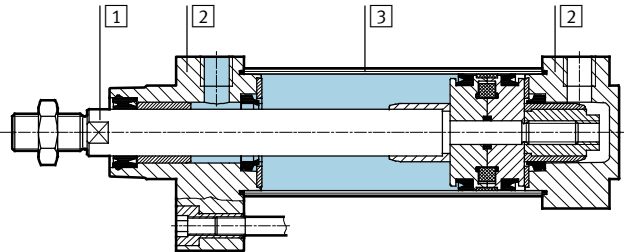
Standard cylinders DSBG, to ISO 15552

Technical data

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Materials

Sectional view

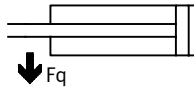
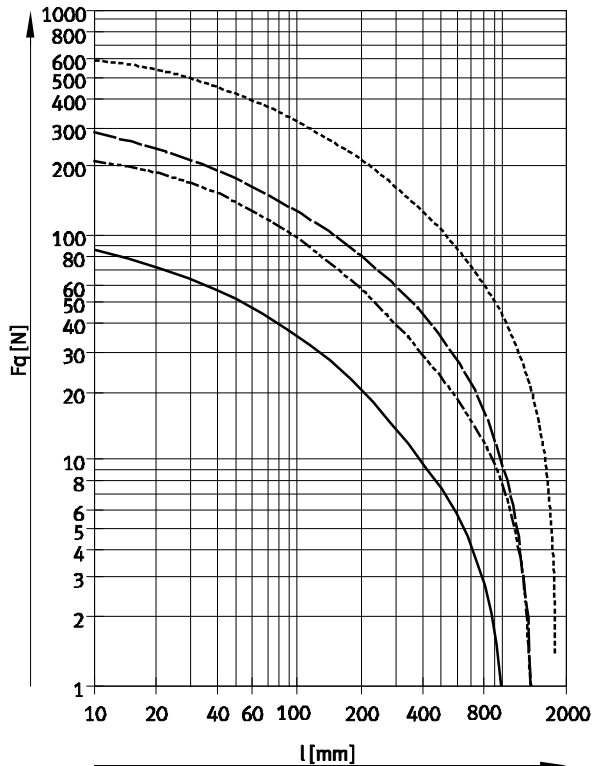


Standard cylinder

1	Piston rod	High-alloy stainless steel
2	Cover	Coated die-cast aluminium
3	Cylinder barrel	Anodised wrought aluminium alloy
- Piston seal		
-		Polyurethane
T1, T4		Fluoro elastomer
T3		Low-temperature polyurethane
Cushioning seal		
-		Polyurethane
T1, T4		Fluoro elastomer
T3		Low-temperature polyurethane
Cushion piston		
-		Polyacetal
T1, T3, T4		Aluminium
Note on materials		
-		RoHS-compliant
U, T3, T4, A3		Contains PWIS (paint-wetting impairment substances)

Max. lateral force F_q as a function of stroke length l

Basic version



— Ø 32 - - - - - Ø 50, 63
 - - - - - Ø 40 - · - · - Ø 80, 100

Permissible torsional backlash with variant Q – With protection against rotation

Piston Ø	32	40	50	63	80	100
Torsional backlash [°]	±0.65	±0.6	±0.45	±0.45	±0.45	±0.45

Standard cylinders DSBG, to ISO 15552

Technical data

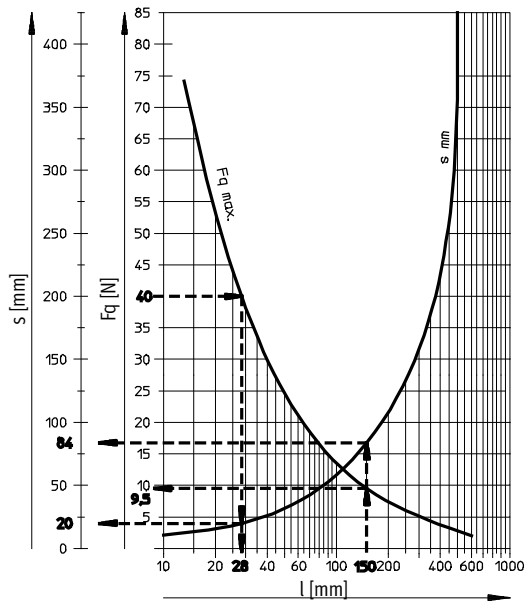
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Lateral force F_q as a function of stroke length l and lever arm s

Q – Square piston rod

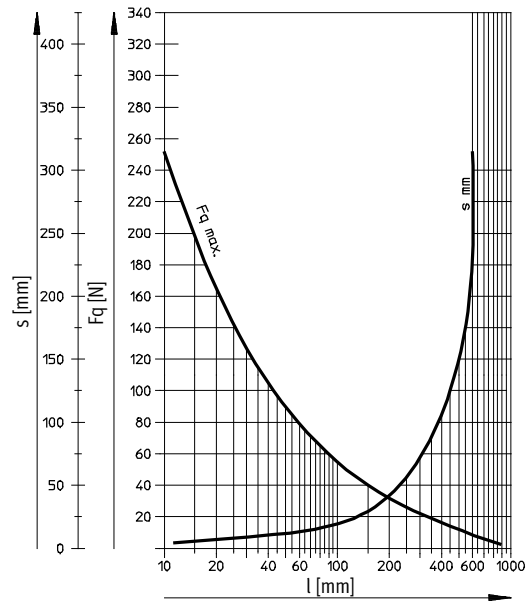
Ø 32

Max. torque = 800 Nmm / Max. stroke = 300 mm



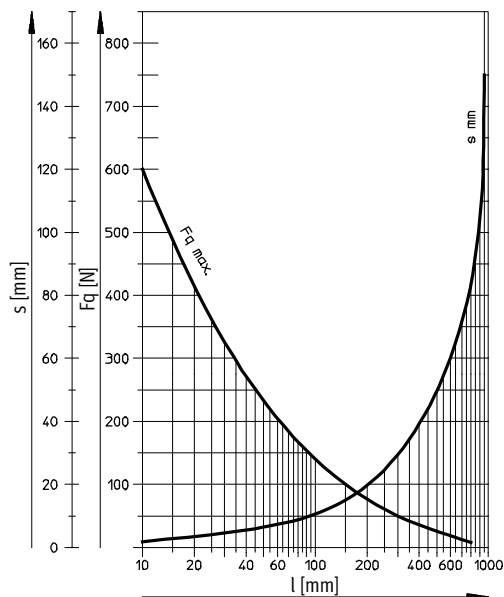
Ø 40

Max. torque = 1,100 Nmm / Max. stroke = 400 mm



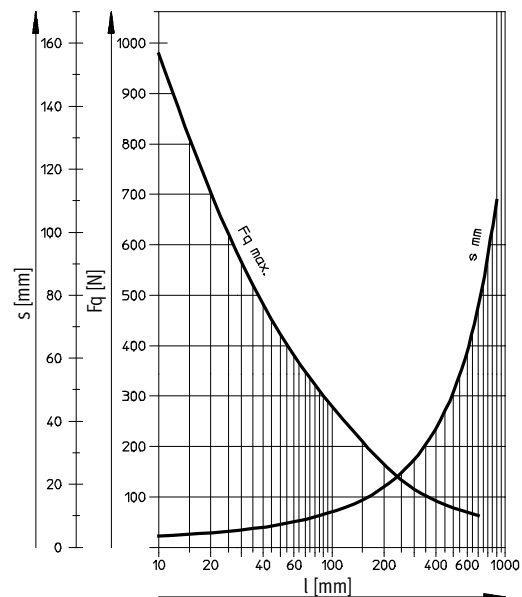
Ø 50/63

Max. torque = 1,500 Nmm / Max. stroke = 500 mm



Ø 80/100

Max. torque = 3,000 Nmm / Max. stroke = 600 mm



Examples for piston Ø 32 mm

Example 1:

Stroke length l = 150 mm

Result: permissible

Lateral force F_q = 9.5 N

Lever arm s = 84 mm

Example 2:

Lateral force F_q = 40 N

Result: permissible

Stroke length l = 28 mm

Lever arm s = 20 mm

Example 3:

Stroke length l = 150 mm

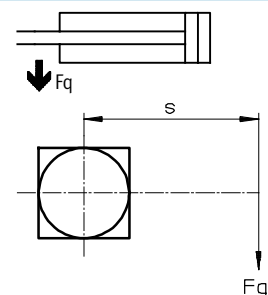
Lever arm s = 100 mm

$F_q = \frac{\text{Max. torque } 800 \text{ Nmm}}{\text{Lever arm } 100 \text{ mm}}$

= 8 N

Result: permissible

$F_q = 8 \text{ N} < F_{q\text{max.}} = 9.5 \text{ N}$



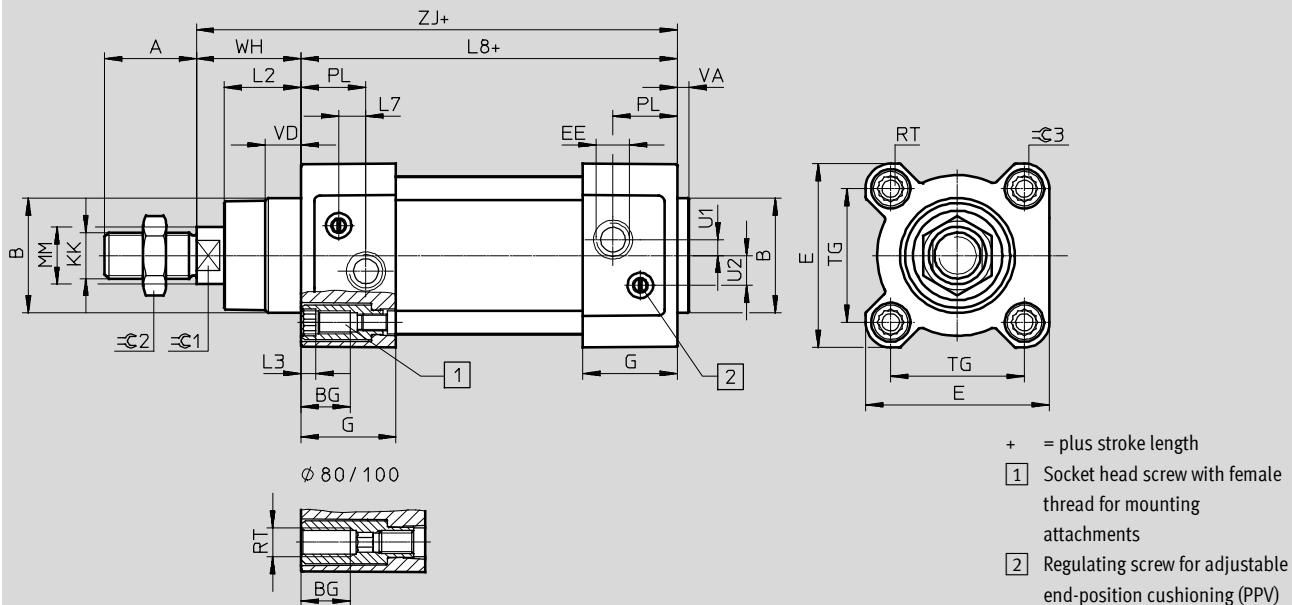
Standard cylinders DSBG, to ISO 15552

Technical data

FESTO

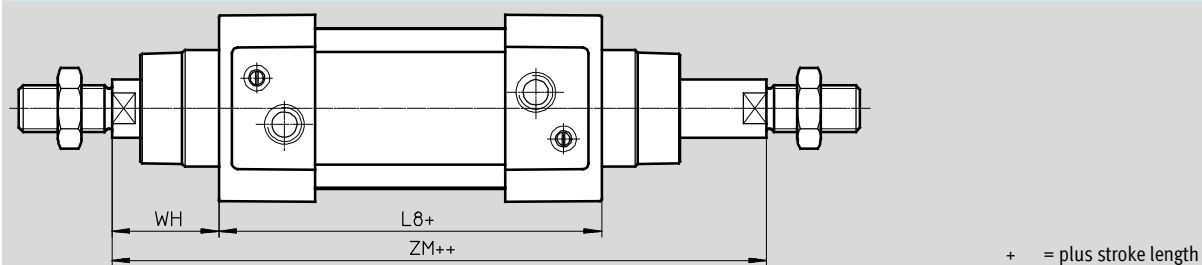
Dimensions

Download CAD data → www.festo.com



Variant

T – Through piston rod



$\varnothing$	A	B	BG	E	EE	G	U2	U1	KK	L2	L3	L7	L8
[mm]	-0.5	$\varnothing$ d11	min.	+0.5		-0.2	± 0.1	± 0.1		-0.2	max.		± 0.4
32	22	30	16	45	G $\frac{1}{8}$	28	5.7	5.25	M10x1.25	18	5	6.5	94
40	24	35	16	54	G $\frac{1}{4}$	33	8	4	M12x1.25	21.3	5	7.5	105
50	32	40	17	64	G $\frac{1}{4}$	33	10.4	5.5	M16x1.5	26.8	5	9.5	106
63	32	45	17	75	G $\frac{3}{8}$	40.5	12.75	6.25	M16x1.5	27	5	9	121
80	40	45	17	93	G $\frac{3}{8}$	43	12.5	8	M20x1.5	34.2	–	11	128
100	40	55	17	110	G $\frac{1}{2}$	48	13.5	10	M20x1.5	38	–	7.5	138

$\varnothing$	MM $\varnothing$	PL	RT	TG	VA	VD	WH	ZJ	ZM	$\varnothing 1$	$\varnothing 2$	$\varnothing 3$
[mm]		± 0.1		± 0.3	-0.2	+0.5	+2.2	+1.8	+1			
32	12	19.5	M6	32.5	4	10	26	119.1	146.1	10	16	6
40	16	22.5	M6	38	4	10.5	28.7	133.9	164.8	13	18	6
50	20	22.5	M8	46.5	4	11.5	35.6	141.8	179.8	17	24	8
63	20	27.5	M8	56.5	4	15	35.9	157.1	195.4	17	24	8
80	25	30	M10	72	4	15.7	45.4	173.6	221	22	30	6
100	25	31.5	M10	89	4	19.2	49.3	187.5	238.8	22	30	6

Standard cylinders DSBG, to ISO 15552

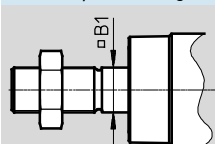
Technical data

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Dimensions – Variants

Download CAD data → www.festo.com

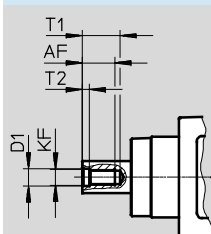
Q – With protection against rotation



Note

Protection against rotation at one end in combination with the variant T.

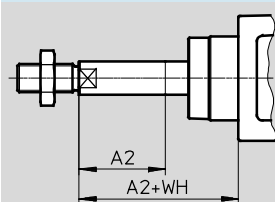
F – Female thread



Note

Female thread at both ends in combination with the variant T.

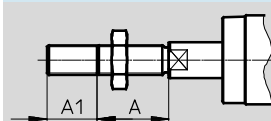
...E – Piston rod extension



Note

In combination with variant T, the piston rod is extended at one end.

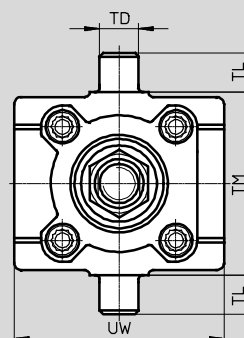
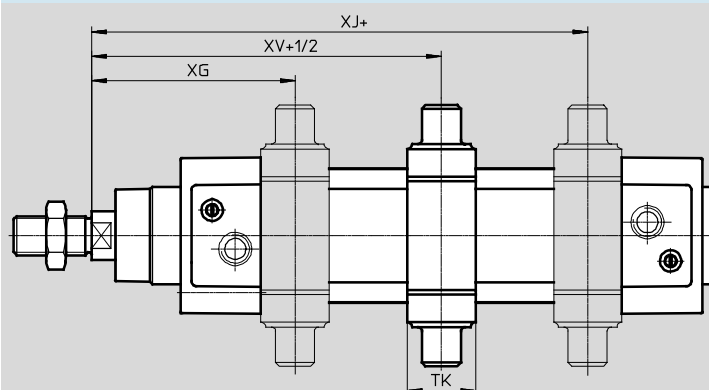
...L – Piston rod thread extension



Note

In combination with variant T, the piston rod is extended at both ends.

...V – Swivel mounting position



+ = plus stroke length
++ = plus 2x stroke length
+1/2 = plus half stroke length

Ø [mm]	A	A1		A2		AF min.	B1	D1	KF	T1 max.
		min.	max.	min.	max.					
32	22	1	35	1	500	12	10	6.4	M6	16
40	24	1	35	1	500	12	12	8.4	M8	16
50	32	1	70	1	500	16	16	10.5	M10	21
63	32	1	70	1	500	16	16	10.5	M10	21
80	40	1	70	1	500	20	20	13	M12	26.5
100	40	1	70	1	500	20	20	13	M12	26.5

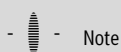
Ø [mm]	T2	WH	TD Ø e9	TK	TL h14	TM h14	UW	XG min.	XJ max.	XV
32	2.6	26	12	20	12	50	65	64±1.4	81±1.4	73±1.4
40	3.3	28.7	16	25	16	63	72	74.2±1.4	88.4±1.4	81.2±1.4
50	4.7	35.6	16	28	16	75	86	82.6±1.4	94.8±1.4	88.6±1.4
63	4.7	35.9	20	30	20	90	98	91.4±1.8	101.6±1.8	96.4±1.8
80	6.1	45.4	20	32	20	110	110	104.4±1.8	114.6±1.8	109.4±1.8
100	6.1	49.3	25	38	25	132	136	116.3±1.8	120.5±1.8	118.3±1.8

Standard cylinders DSBG, to ISO 15552

Technical data

FESTO

Ordering data					
Piston Ø [mm]	Stroke [mm]	With PPV cushioning		With PPS cushioning	
		Part No.	Type	Part No.	Type
32	25	1638842	DSBG-32-25-PPVA-N3	1645460	DSBG-32-25-PPSA-N3
	40	1638843	DSBG-32-40-PPVA-N3	1645461	DSBG-32-40-PPSA-N3
	50	1638844	DSBG-32-50-PPVA-N3	1645462	DSBG-32-50-PPSA-N3
	80	1638845	DSBG-32-80-PPVA-N3	1645463	DSBG-32-80-PPSA-N3
	100	1638846	DSBG-32-100-PPVA-N3	1645464	DSBG-32-100-PPSA-N3
	125	1638848	DSBG-32-125-PPVA-N3	1645465	DSBG-32-125-PPSA-N3
	160	1638849	DSBG-32-160-PPVA-N3	1645466	DSBG-32-160-PPSA-N3
	200	1638850	DSBG-32-200-PPVA-N3	1645467	DSBG-32-200-PPSA-N3
	250	1638851	DSBG-32-250-PPVA-N3	1645468	DSBG-32-250-PPSA-N3
	320	1638852	DSBG-32-320-PPVA-N3	1645469	DSBG-32-320-PPSA-N3
	400	1638853	DSBG-32-400-PPVA-N3	1645470	DSBG-32-400-PPSA-N3
	500	1638854	DSBG-32-500-PPVA-N3	1645471	DSBG-32-500-PPSA-N3
	1 ... 2,800	1634781	DSBG-32-...-PPVA-N3	1634560	DSBG-32-...-PPSA-N3
40	25	1646547	DSBG-40-25-PPVA-N3	1646559	DSBG-40-25-PPSA-N3
	40	1646548	DSBG-40-40-PPVA-N3	1646560	DSBG-40-40-PPSA-N3
	50	1646549	DSBG-40-50-PPVA-N3	1646561	DSBG-40-50-PPSA-N3
	80	1646550	DSBG-40-80-PPVA-N3	1646562	DSBG-40-80-PPSA-N3
	100	1646551	DSBG-40-100-PPVA-N3	1646563	DSBG-40-100-PPSA-N3
	125	1646552	DSBG-40-125-PPVA-N3	1646564	DSBG-40-125-PPSA-N3
	160	1646553	DSBG-40-160-PPVA-N3	1646565	DSBG-40-160-PPSA-N3
	200	1646554	DSBG-40-200-PPVA-N3	1646566	DSBG-40-200-PPSA-N3
	250	1646555	DSBG-40-250-PPVA-N3	1646567	DSBG-40-250-PPSA-N3
	320	1646556	DSBG-40-320-PPVA-N3	1646568	DSBG-40-320-PPSA-N3
	400	1646557	DSBG-40-400-PPVA-N3	1646569	DSBG-40-400-PPSA-N3
	500	1646558	DSBG-40-500-PPVA-N3	1646570	DSBG-40-500-PPSA-N3
	1 ... 2,800	1644503	DSBG-40-...-PPVA-N3	1645473	DSBG-40-...-PPSA-N3
50	25	1646709	DSBG-50-25-PPVA-N3	1646723	DSBG-50-25-PPSA-N3
	40	1646710	DSBG-50-40-PPVA-N3	1646724	DSBG-50-40-PPSA-N3
	50	1646711	DSBG-50-50-PPVA-N3	1646725	DSBG-50-50-PPSA-N3
	80	1646712	DSBG-50-80-PPVA-N3	1646726	DSBG-50-80-PPSA-N3
	100	1646713	DSBG-50-100-PPVA-N3	1646727	DSBG-50-100-PPSA-N3
	125	1646714	DSBG-50-125-PPVA-N3	1646728	DSBG-50-125-PPSA-N3
	160	1646715	DSBG-50-160-PPVA-N3	1646729	DSBG-50-160-PPSA-N3
	200	1646716	DSBG-50-200-PPVA-N3	1646730	DSBG-50-200-PPSA-N3
	250	1646717	DSBG-50-250-PPVA-N3	1646731	DSBG-50-250-PPSA-N3
	320	1646718	DSBG-50-320-PPVA-N3	1646732	DSBG-50-320-PPSA-N3
	400	1646719	DSBG-50-400-PPVA-N3	1646733	DSBG-50-400-PPSA-N3
	500	1646720	DSBG-50-500-PPVA-N3	1646734	DSBG-50-500-PPSA-N3
	1 ... 2,800	1646708	DSBG-50-...-PPVA-N3	1646722	DSBG-50-...-PPSA-N3



Note

Further variants in the modular product system → 14

Standard cylinders DSBG, to ISO 15552

Technical data

Ordering data					
Piston Ø [mm]	Stroke [mm]	With PPV cushioning		With PPS cushioning	
		Part No.	Type	Part No.	Type
63	25	1646740	DSBG-63-25-PPVA-N3	1646754	DSBG-63-25-PPSA-N3
	40	1646741	DSBG-63-40-PPVA-N3	1646755	DSBG-63-40-PPSA-N3
	50	1646742	DSBG-63-50-PPVA-N3	1646756	DSBG-63-50-PPSA-N3
	80	1646743	DSBG-63-80-PPVA-N3	1646757	DSBG-63-80-PPSA-N3
	100	1646744	DSBG-63-100-PPVA-N3	1646758	DSBG-63-100-PPSA-N3
	125	1646745	DSBG-63-125-PPVA-N3	1646760	DSBG-63-125-PPSA-N3
	160	1646746	DSBG-63-160-PPVA-N3	1646761	DSBG-63-160-PPSA-N3
	200	1646747	DSBG-63-200-PPVA-N3	1646762	DSBG-63-200-PPSA-N3
	250	1646748	DSBG-63-250-PPVA-N3	1646763	DSBG-63-250-PPSA-N3
	320	1646749	DSBG-63-320-PPVA-N3	1646764	DSBG-63-320-PPSA-N3
	400	1646750	DSBG-63-400-PPVA-N3	1646765	DSBG-63-400-PPSA-N3
	500	1646751	DSBG-63-500-PPVA-N3	1646766	DSBG-63-500-PPSA-N3
	1 ... 2,800	1646739	DSBG-63-...-PPVA-N3	1646753	DSBG-63-...-PPSA-N3
80	25	1646771	DSBG-80-25-PPVA-N3	1646785	DSBG-80-25-PPSA-N3
	40	1646772	DSBG-80-40-PPVA-N3	1646786	DSBG-80-40-PPSA-N3
	50	1646773	DSBG-80-50-PPVA-N3	1646787	DSBG-80-50-PPSA-N3
	80	1646774	DSBG-80-80-PPVA-N3	1646788	DSBG-80-80-PPSA-N3
	100	1646775	DSBG-80-100-PPVA-N3	1646789	DSBG-80-100-PPSA-N3
	125	1646776	DSBG-80-125-PPVA-N3	1646790	DSBG-80-125-PPSA-N3
	160	1646777	DSBG-80-160-PPVA-N3	1646791	DSBG-80-160-PPSA-N3
	200	1646778	DSBG-80-200-PPVA-N3	1646792	DSBG-80-200-PPSA-N3
	250	1646779	DSBG-80-250-PPVA-N3	1646793	DSBG-80-250-PPSA-N3
	320	1646780	DSBG-80-320-PPVA-N3	1646794	DSBG-80-320-PPSA-N3
	400	1646781	DSBG-80-400-PPVA-N3	1646795	DSBG-80-400-PPSA-N3
	500	1646782	DSBG-80-500-PPVA-N3	1646796	DSBG-80-500-PPSA-N3
	1 ... 2,800	1646770	DSBG-80-...-PPVA-N3	1646784	DSBG-80-...-PPSA-N3
100	25	1646801	DSBG-100-25-PPVA-N3	1646815	DSBG-100-25-PPSA-N3
	40	1646802	DSBG-100-40-PPVA-N3	1646816	DSBG-100-40-PPSA-N3
	50	1646803	DSBG-100-50-PPVA-N3	1646817	DSBG-100-50-PPSA-N3
	80	1646804	DSBG-100-80-PPVA-N3	1646818	DSBG-100-80-PPSA-N3
	100	1646805	DSBG-100-100-PPVA-N3	1646819	DSBG-100-100-PPSA-N3
	125	1646806	DSBG-100-125-PPVA-N3	1646820	DSBG-100-125-PPSA-N3
	160	1646807	DSBG-100-160-PPVA-N3	1646821	DSBG-100-160-PPSA-N3
	200	1646808	DSBG-100-200-PPVA-N3	1646822	DSBG-100-200-PPSA-N3
	250	1646809	DSBG-100-250-PPVA-N3	1646823	DSBG-100-250-PPSA-N3
	320	1646810	DSBG-100-320-PPVA-N3	1646824	DSBG-100-320-PPSA-N3
	400	1646811	DSBG-100-400-PPVA-N3	1646825	DSBG-100-400-PPSA-N3
	500	1646812	DSBG-100-500-PPVA-N3	1646826	DSBG-100-500-PPSA-N3
	1 ... 2,800	1646800	DSBG-100-...-PPVA-N3	1646814	DSBG-100-...-PPSA-N3



Note

Further variants in the modular product system → 14

Standard cylinders DSBG, to ISO 15552

Ordering data – Modular products

FESTO

Ordering table									
Size	32	40	50	63	80	100	Condi- tions	Code	Enter code
M Module No.	1634484	1645477	1646707	1646738	1646769	1646799			
Function	Standard cylinder, double-acting, based on ISO 15552							DSBG	DSBG
O Protection against rotation	Without protection against rotation								
	With protection against rotation						1	-Q	
Running characteristics	Standard								
	Constant, slow movement						2	U	
M Piston Ø [mm]	32	40	50	63	80	100		-...	
Stroke [mm]	1 ... 2,800							-...	
O Piston rod type	Piston rod at one end								
	Through piston rod							-T	
Piston rod thread type	Male thread								
	Female thread						3	F	
M Cushioning	Elastic cushioning rings/pads at both ends							-P	
	Pneumatic cushioning, self-adjusting at both ends						4	-PPS	
	Pneumatic cushioning, adjustable at both ends							-PPV	
↓ Position sensing	Via proximity sensor							A	

- 1** **Q** Not with U, T3, T4, A3
2 **U** Not with PPS, T1, T3, T4, A3
3 **F** Not with ...L
4 **PPS** Not with T1, T3, T4

Transfer order code

	DSBG	-		-		-		-		-		-		-	
--	------	---	--	---	--	---	--	---	--	---	--	---	--	---	--

Standard cylinders DSBG, to ISO 15552

FESTO

Ordering data – Modular products

Ordering table									
Size	32	40	50	63	80	100	Condi- tions	Code	Enter code
Standard 0 Corrosion protection Temperature range Wiper seal variant Swivel mounting position [mm] Piston rod extension [mm] Piston rod thread extension [mm]	Not according to standard								
	Based on ISO 15552							-N3	
	Standard								
	High corrosion protection						5	R3	
	Standard								
	Heat-resistant seals up to max. 120 °C							T1	
	-40 ... +80							T3	
	0 ... +150							T4	
	None								
	For unlubricated operation						6	A3	
	None								
	0 ... 2800							-...V	
	None								
	1 ... 500						7	-...E	
	None								
	1 ... 35		1 ... 70				7	-...L	

- 5** **R3** Not with ...V
6 **A3** Not with T1, T3, T4
7 **-...E, -...L** Only up to stroke 2,000 mm

Transfer order code

-

-

-

-

-

-

Standard cylinders DSBG, to ISO 15552

Accessories

FESTO

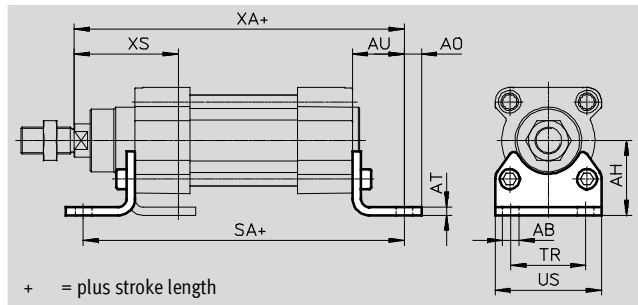
Foot mounting HNC/CRHNC

Material:

HNC: Galvanised steel

CRHNC: High-alloy steel

Free of copper, PTFE and silicone



Dimensions and ordering data										
For Ø	AB Ø	AH	AO	AT	AU	SA	TR	US	XA	XS
[mm]										
32	7	32	6.5	4	24	142	32	45	143.1	46
40	10	36	9	4	28	161	36	54	161.9	52.7
50	10	45	9.5	5	32	170	45	64	173.8	62.6
63	10	50	12.5	5	32	185	50	75	189.1	62.9
80	12	63	15	6	41	210	63	93	214.6	80.4
100	14.5	71	17.5	6	41	220	75	110	228.5	84.3

For Ø	Basic design				High corrosion protection			
	CRC ¹⁾	Weight [g]	Part No.	Type	CRC ¹⁾	Weight [g]	Part No.	Type
[mm]								
32	2	144	174369	HNC-32	4	139	176937	CRHNC-32
40	2	193	174370	HNC-40	4	188	176938	CRHNC-40
50	2	353	174371	HNC-50	4	341	176939	CRHNC-50
63	2	436	174372	HNC-63	4	424	176940	CRHNC-63
80	2	829	174373	HNC-80	4	809	176941	CRHNC-80
100	2	1,009	174374	HNC-100	4	990	176942	CRHNC-100

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

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Corrosion resistance class 4 according to Festo standard 940 070

Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Standard cylinders DSBG, to ISO 15552

Accessories

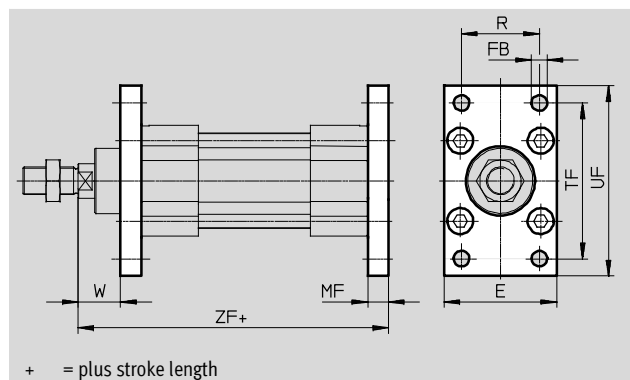
Flange mounting FNC/CRFNG

Material:

FNC: Galvanised steel

CRFNG: High-alloy steel

Free of copper, PTFE and silicone



Dimensions and ordering data								
For Ø	E	FB	MF	R	TF	UF	W	ZF
[mm]		Ø H13						
32	45	7	10	32	64	80	16	129.1
40	54	9	10	36	72	90	18.7	143.9
50	65	9	12	45	90	110	23.6	153.8
63	75	9	12	50	100	120	23.9	169.1
80	93	12	16	63	126	150	29.4	189.6
100	110	14	16	75	150	175	33.3	203.5

For Ø	Basic design				High corrosion protection			
	CRC ¹⁾	Weight	Part No.	Type	CRC ¹⁾	Weight	Part No.	Type
[mm]		[g]				[g]		
32	1	221	174376	FNC-32	4	225	161846	CRFNG-32
40	1	291	174377	FNC-40	4	300	161847	CRFNG-40
50	1	536	174378	FNC-50	4	540	161848	CRFNG-50
63	1	679	174379	FNC-63	4	680	161849	CRFNG-63
80	1	1,495	174380	FNC-80	4	1,500	161850	CRFNG-80
100	1	2,041	174381	FNC-100	4	2,100	161851	CRFNG-100

1) 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.

Corrosion resistance class 4 according to Festo standard 940 070

Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Standard cylinders DSBG, to ISO 15552

Accessories

FESTO

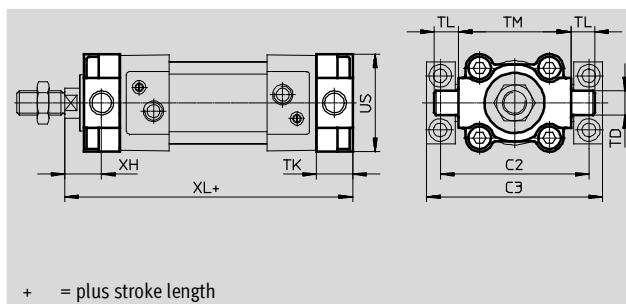
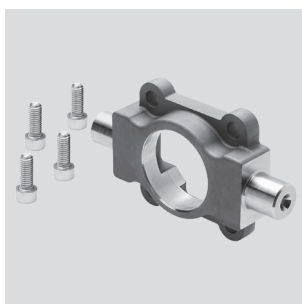
Trunnion flange ZNCF/CRZNG

Material:

ZNCF: Stainless steel casting

CRZNG: Electropolished stainless steel casting

Free of copper, PTFE and silicone



Dimensions and ordering data									
For Ø	C2	C3	TD Ø e9	TK max.	TL	TM h14	US	XH	XL
[mm]									
32	71	86	12	16	12	50	50	18	127.1
40	87	105	16	20	16	63	55	18.7	143.9
50	99	117	16	24	16	75	65	23.6	153.8
63	116	136	20	24	20	90	75	23.9	169.1
80	136	156	20	28	20	110	100	31.4	187.6
100	164	189	25	38	25	132	120	30.3	206.5

For Ø [mm]	Basic design				High corrosion protection			
	CRC ¹⁾	Weight [g]	Part No.	Type	CRC ¹⁾	Weight [g]	Part No.	Type
32	2	150	174411	ZNCF-32	4	150	161852	CRZNG-32
40	2	285	174412	ZNCF-40	4	285	161853	CRZNG-40
50	2	473	174413	ZNCF-50	4	473	161854	CRZNG-50
63	2	687	174414	ZNCF-63	4	687	161855	CRZNG-63
80	2	1,296	174415	ZNCF-80	4	1,296	161856	CRZNG-80
100	2	2,254	174416	ZNCF-100	4	2,254	161857	CRZNG-100

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

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Corrosion resistance class 4 according to Festo standard 940 070

Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Standard cylinders DSBG, to ISO 15552

Accessories

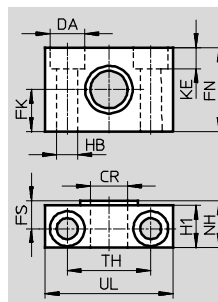
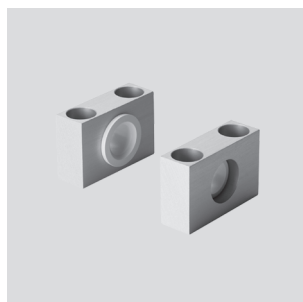
Trunnion support LN2G

Material:

Trunnion support: Anodised aluminium

Plain bearing: Plastic

Free of copper, PTFE and silicone



Dimensions and ordering data

For Ø	CR	DA	FK	FN	FS	H1	HB	KE	NH	TH	UL	CRC ¹⁾	Weight	Part No.	Type
[mm]	Ø	Ø	Ø				Ø			±0.2			[g]		
32	12	11	15	30	10.5	15	6.6	6.8	18	32	46	2	83	32959	LN2G-32
40, 50	16	15	18	36	12	18	9	9	21	36	55	2	129	32960	LN2G-40/50
63, 80	20	18	20	40	13	20	11	11	23	42	65	2	178	32961	LN2G-63/80
100	25	20	25	50	16	24.5	14	13	28.5	50	75	2	306	32962	LN2G-100/125

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

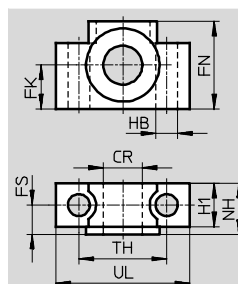
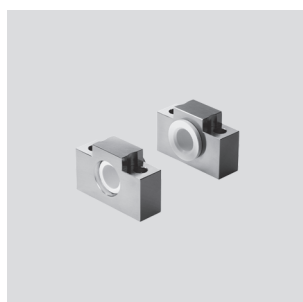
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Trunnion support CRLN2G

Material:

High-alloy steel

Free of copper, PTFE and silicone



Dimensions and ordering data

For Ø	CR	FK	FN	FS	H1	HB	NH	TH	UL	CRC ¹⁾	Weight	Part No.	Type
[mm]	Ø	Ø				Ø		±0.2			[g]		
32	12	15	30	10.5	15	6.6	18	32	46	4	205	161874	CRLN2G-32
40, 50	16	18	36	12	18	9	21	36	55	4	323	161875	CRLN2G-40/50
63, 80	20	20	40	13	20	11	23	42	65	4	435	161876	CRLN2G-63/80
100	25	25	50	16	24.5	14	28.5	50	75	4	739	161877	CRLN2G-100/125

1) Corrosion resistance class 4 according to Festo standard 940 070

Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

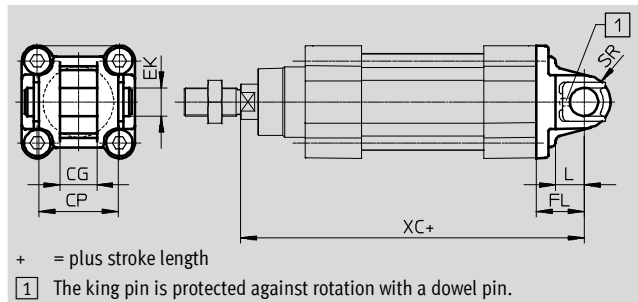
Standard cylinders DSBG, to ISO 15552

Accessories

FESTO

Swivel flange SNC

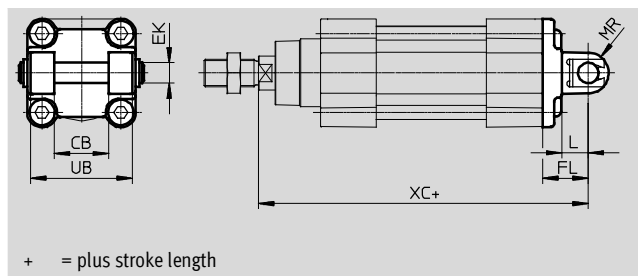
Material:
Die-cast aluminium



Dimensions and ordering data										
For Ø	CG	CP	EK Ø	FL	L	SR	XC	CRC ¹⁾	Weight	Part No. Type
[mm]	H14	h14	H9	±0.2					[g]	
32	14	34	10	22	13	10	141.1	2	90	174383 SNC-32
40	16	40	12	25	16	12	158.9	2	120	174384 SNC-40
50	21	45	16	27	16	12	168.8	2	240	174385 SNC-50
63	21	51	16	32	21	16	189.1	2	320	174386 SNC-63
80	25	65	20	36	22	16	209.6	2	625	174387 SNC-80
100	25	75	20	41	27	20	228.5	2	830	174388 SNC-100

Swivel flange SNCB/SNCB-...-R3

Material:
SNCB: Die-cast aluminium
SNCB-...-R3: Die-cast aluminium with
protective coating, high corrosion
protection
Free of copper, PTFE and silicone



Dimensions and ordering data							
For Ø	CB	EK Ø	FL	L	MR	UB	XC
[mm]	H14	e8	±0.2			h14	
32	26	10	22	13	8.5	45	141.1
40	28	12	25	16	12	52	158.9
50	32	12	27	16	12	60	168.8
63	40	16	32	21	16	70	189.1
80	50	16	36	22	16	90	209.6
100	60	20	41	27	20	110	228.5

For Ø	Basic design				Variant R3 – High corrosion protection			
	CRC ¹⁾	Weight [g]	Part No.	Type	CRC ¹⁾	Weight [g]	Part No.	Type
[mm]								
32	2	103	174390	SNCB-32	3	100	176944	SNCB-32-R3
40	2	155	174391	SNCB-40	3	151	176945	SNCB-40-R3
50	2	232	174392	SNCB-50	3	228	176946	SNCB-50-R3
63	2	375	174393	SNCB-63	3	371	176947	SNCB-63-R3
80	2	636	174394	SNCB-80	3	632	176948	SNCB-80-R3
100	2	1,035	174395	SNCB-100	3	986	176949	SNCB-100-R3

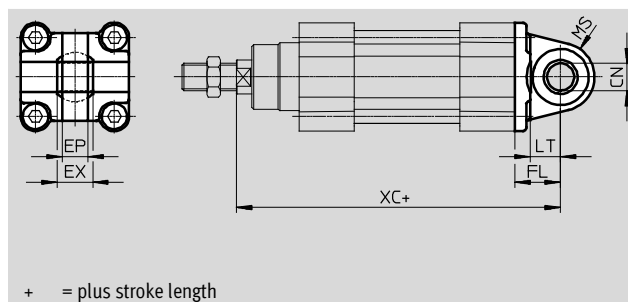
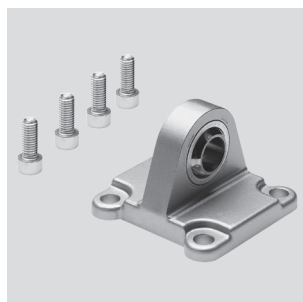
1) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.
Corrosion resistance class 3 according to Festo standard 940 070
Components subject to high corrosion stress. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment or media such as solvents and cleaning agents.

Standard cylinders DSBG, to ISO 15552

Accessories

Swivel flange SNCS

Material:
Die-cast aluminium



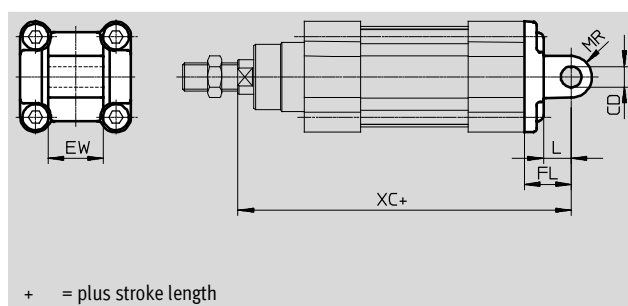
Dimensions and ordering data											
For Ø	CN	EP	EX	FL	LT	MS	XC	CRC ¹⁾	Weight	Part No.	Type
[mm]	Ø H7	±0.2		±0.2					[g]		
32	10	10.5	14	22	13	15	141.1	2	85	174397	SNCS-32
40	12	12	16	25	16	17	158.9	2	125	174398	SNCS-40
50	16	15	21	27	16	20	168.8	2	210	174399	SNCS-50
63	16	15	21	32	21	22	189.1	2	280	174400	SNCS-63
80	20	18	25	36	22	27	209.6	2	540	174401	SNCS-80
100	20	18	25	41	27	29	228.5	2	700	174402	SNCS-100

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

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Swivel flange SNCL

Material:
Die-cast aluminium
Free of copper, PTFE and silicone



Dimensions and ordering data										
For Ø	CD Ø	EW	FL	L	MR	XC	CRC ¹⁾	Weight	Part No.	Type
[mm]	H9	h12	±0.2					[g]		
32	10	26	22	13	10	141.1	2	75	174404	SNCL-32
40	12	28	25	16	12	158.9	2	100	174405	SNCL-40
50	12	32	27	16	12	168.8	2	160	174406	SNCL-50
63	16	40	32	21	16	189.1	2	250	174407	SNCL-63
80	16	50	36	22	16	209.6	2	405	174408	SNCL-80
100	20	60	41	27	20	228.5	2	655	174409	SNCL-100

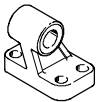
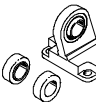
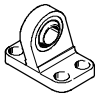
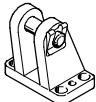
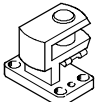
1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Standard cylinders DSBG, to ISO 15552

Accessories

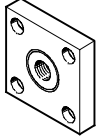
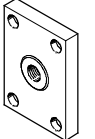
FESTO

Ordering data – Mounting attachments				Technical data → Internet: clevis foot			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Clevis foot LNG				Clevis foot LSN			
	32	33890	LNG-32		32	5561	LSN-32
	40	33891	LNG-40		40	5562	LSN-40
	50	33892	LNG-50		50	5563	LSN-50
	63	33893	LNG-63		63	5564	LSN-63
	80	33894	LNG-80		80	5565	LSN-80
	100	33895	LNG-100		100	5566	LSN-100
Clevis foot LSNG				Clevis foot LSNSG			
	32	31740	LSNG-32		32	31747	LSNSG-32
	40	31741	LSNG-40		40	31748	LSNSG-40
	50	31742	LSNG-50		50	31749	LSNSG-50
	63	31743	LSNG-63		63	31750	LSNSG-63
	80	31744	LSNG-80		80	31751	LSNSG-80
	100	31745	LSNG-100		100	31752	LSNSG-100
Clevis foot LBG				Right-angle clevis foot LQG			
	32	31761	LBG-32		32	31768	LQG-32
	40	31762	LBG-40		40	31769	LQG-40
	50	31763	LBG-50		50	31770	LQG-50
	63	31764	LBG-63		63	31771	LQG-63
	80	31765	LBG-80		80	31772	LQG-80
	100	31766	LBG-100		100	31773	LQG-100

Ordering data – Mounting attachments, corrosion-resistant			Technical data → Internet: crlng	
Designation	For Ø	Part No.	Type	
Clevis foot CRLNG				
	32	161840	CRLNG-32	
	40	161841	CRLNG-40	
	50	161842	CRLNG-50	
	63	161843	CRLNG-63	
	80	161844	CRLNG-80	
	100	161845	CRLNG-100	

Standard cylinders DSBG, to ISO 15552

Accessories

Ordering data – Piston rod attachments				Technical data → Internet: piston rod attachment			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Rod eye SGS				Rod clevis SGA			
	32	9261	SGS-M10x1,25		32	32954	SGA-M10x1,25
	40	9262	SGS-M12x1,25		40	10767	SGA-M12x1,25
	50	9263	SGS-M16x1,5		50	10768	SGA-M16x1,5
	63				63		
	80	9264	SGS-M20x1,5		80	10769	SGA-M20x1,5
	100				100		
Rod clevis SG				Self-aligning rod coupler FK			
	32	6144	SG-M10x1,25		32	6140	FK-M10x1,25
	40	6145	SG-M12x1,25		40	6141	FK-M12x1,25
	50	6146	SG-M16x1,5		50	6142	FK-M16x1,5
	63				63		
	80	6147	SG-M20x1,5		80	6143	FK-M20x1,5
	100				100		
Coupling piece KSG				Coupling piece KSZ			
	32	32963	KSG-M10x1,25		32	36125	KSZ-M10x1,25
	40	32964	KSG-M12x1,25		40	36126	KSZ-M12x1,25
	50	32965	KSG-M16x1,5		50	36127	KSZ-M16x1,5
	63				63		
	80	32966	KSG-M20x1,5		80	36128	KSZ-M20x1,5
	100				100		

Ordering data – Piston rod attachments, corrosion-resistant				Technical data → Internet: crsg			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Rod eye CRSGS				Rod clevis CRSG			
	32	195582	CRSGS-M10x1,25		32	13569	CRSG-M10x1,25
	40	195583	CRSGS-M12x1,25		40	13570	CRSG-M12x1,25
	50	195584	CRSGS-M16x1,5		50	13571	CRSG-M16x1,5
	63				63		
	80	195585	CRSGS-M20x1,5		80	13572	CRSG-M20x1,5
	100				100		

Standard cylinders DSBG, to ISO 15552

Accessories

FESTO

Bellows kit DADB



General technical data							
Type DADB-V6-		32	40	50	63	80	100
Max. stroke range of cylinder ¹⁾	[mm]	10 ... 500	10 ... 500	10 ... 500	10 ... 500	10 ... 500	10 ... 500
Type of mounting		Via threaded pin					
Mounting position		Any					
Resistance to media		Dust, chippings, oil, grease, fuel (➔ Internet: Resistance to media)					
Ambient temperature ²⁾	[°C]	-10 ... +80					
Protection class		IP54					
Corrosion resistance class CRC ³⁾		3					

1) In combination with the bellows kit DADB

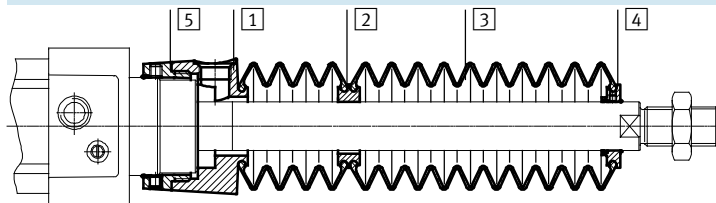
2) Note operating range of proximity sensors and cylinder

3) Corrosion resistance class 3 according to Festo standard 940 070

Components subject to high corrosion stress. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

Materials

Sectional view



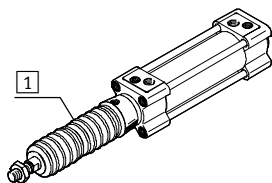
Bellows		
1	Connection	Polyamide
2	Adapter	Polyamide
3	Bellows	Nitrile rubber
4	End piece	Polyamide
5	Connector	Polyamide
-	O-ring	Nitrile rubber
Note on materials		Free of copper and PTFE
		Conforms to RoHS

Weight [g]						
Type DADB-V6-	32	40	50	63	80	100
Stroke [mm]						
10 ... 50	29	42	71	69	99	124
51 ... 125	41	56	91	89	127	152
126 ... 175	52	68	105	103	140	165
176 ... 250	66	85	129	127	193	218
251 ... 300	79	100	147	145	231	255
301 ... 350	92	115	166	164	268	293
351 ... 375	92	115	167	165	259	284
376 ... 425	104	129	185	183	296	321
426 ... 475	117	144	204	202	334	359
476 ... 500	117	144	205	203	324	349

Standard cylinders DSBG, to ISO 15552

Accessories

Travel speed v as a function of tubing length l



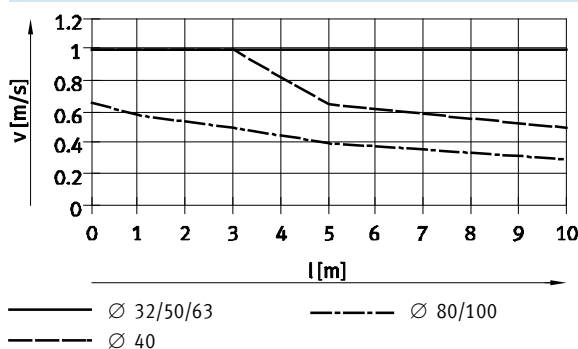
The bellows kit is a leak-free system. To prevent unwanted media from being drawn in, the supply and exhaust air must be ducted via a venting hole

in the connection part **1**.

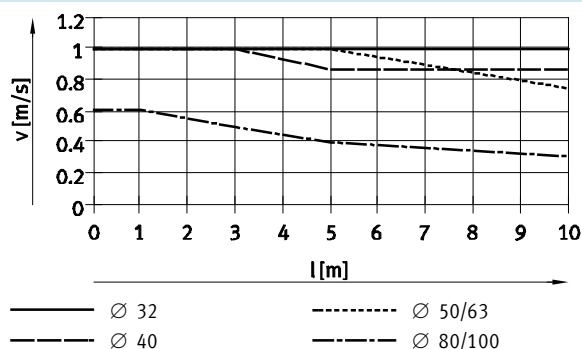
The pressure generated in the bellows kit by the travel motion is primarily defined by the travel speed and tubing

length. The recommended tubing length based on the travel speed of the drive can be read from the graph.

Advancing



Retracting



Note

The push-in fittings opposite must be used for the venting hole. Silencers can be used as an alternative. This reduces the travel speed slightly.

Tubing length and push-in fitting for venting hole

Ø [mm]	Tubing O.D. [mm]	Push-in fitting	
		Part No.	Type
32, 40	8	186109	QS-G $\frac{1}{8}$ -8-I
		533929	QS-F-G $\frac{1}{8}$ -8-I
		533880	QS-F-G $\frac{1}{8}$ -8H
50, 63, 80, 100	12	186350	QS-G $\frac{1}{4}$ -12
		533848	QS-F-G $\frac{1}{4}$ -12
		533884	QS-F-G $\frac{1}{4}$ -12H

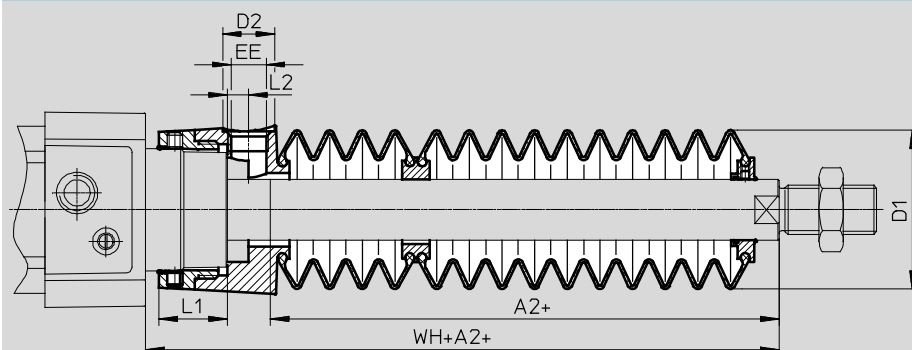
Standard cylinders DSBG, to ISO 15552

Accessories

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Dimensions

Download CAD data → www.festo.com



+ = plus stroke length

Ø Stroke [mm]	32							40						
	A2 ¹⁾	D1 max.	D2	EE	L1	L2	WH+A2	A2 ¹⁾	D1 max.	D2	EE	L1	L2	WH+A2
10 ... 50	29	38	14	G ¹ / ₈	12.9	5.4	55	28	46	14	G ¹ / ₈	16.3	5.4	56.7
51 ... 125	47						73	43						71.7
126 ... 175	61						87	56						84.7
176 ... 250	80						106	72						100.7
251 ... 300	96						122	86						114.7
301 ... 350	112						138	100						128.7
351 ... 375	114						140	101						129.7
376 ... 425	130						156	115						143.7
426 ... 475	145						171	130						158.7
476 ... 500	147						173	131						159.7

Ø Stroke [mm]	50							63						
	A2 ¹⁾	D1 max.	D2	EE	L1	L2	WH+A2	A2 ¹⁾	D1 max.	D2	EE	L1	L2	WH+A2
10 ... 50	28	57	17	G ¹ / ₄	22.35	7	63.6	28	57	17	G ¹ / ₄	22.4	7	63.9
51 ... 125	46						81.6	46						81.9
126 ... 175	56						91.6	56						91.9
176 ... 250	73						108.6	73						108.9
251 ... 300	86						121.6	86						121.9
301 ... 350	97						132.6	97						132.9
351 ... 375	105						140.6	105						140.9
376 ... 425	116						151.6	116						151.9
426 ... 475	126						161.6	126						161.9
476 ... 500	134						169.6	134						169.9

Ø Stroke [mm]	80							100						
	A2 ¹⁾	D1 max.	D2	EE	L1	L2	WH+A2	A2 ¹⁾	D1 max.	D2	EE	L1	L2	WH+A2
10 ... 50	25	93	17	G ¹ / ₄	28	4	70.4	25	93	17	G ¹ / ₄	28	4	74.3
51 ... 125	37						82.4	37						86.3
126 ... 175	49						94.4	49						98.3
176 ... 250	62						107.4	62						111.3
251 ... 300	74						119.4	74						123.3
301 ... 350	86						131.4	86						135.3
351 ... 375	87						132.4	87						136.3
376 ... 425	98						143.4	98						147.3
426 ... 475	110						155.4	110						159.3
476 ... 500	111						156.4	111						160.3

1) The dimension corresponds to the E value (piston rod extension) of the drive

Standard cylinders DSBG, to ISO 15552

Accessories

Ordering data – Bellows kit

An extended piston rod (order code E) is required when using a bellows kit

→ Ordering data – Modular products.

The necessary dimensions for order code E as a function of piston diameter and cylinder stroke as well as the corresponding bellows kit are indicated in the table below:

Order example:

Selected standard cylinder:

DSBG-32-320-PPV-A-...

The dimension for the corresponding E value (see table):

112 mm

Complete type code for standard cylinder:

DSBG-32-320-PPV-A-...-112E

The corresponding bellows kit:

DADB-V6-32-S301-350

Cylinder data			Bellows kit	
Ø	Stroke	Dimension for E	Part No.	Type
[mm]	[mm]	[mm]		
32	10 ... 50	29	553271	DADB-V6-32-S10-50
	51 ... 125	47	553273	DADB-V6-32-S51-125
	126 ... 175	61	553275	DADB-V6-32-S126-175
	176 ... 250	80	553277	DADB-V6-32-S176-250
	251 ... 300	96	553279	DADB-V6-32-S251-300
	301 ... 350	112	553281	DADB-V6-32-S301-350
	351 ... 375	114	553283	DADB-V6-32-S351-375
	376 ... 425	130	553285	DADB-V6-32-S376-425
	426 ... 475	145	553287	DADB-V6-32-S426-475
	476 ... 500	147	553289	DADB-V6-32-S476-500
50	10 ... 50	28	553311	DADB-V6-50-S10-50
	51 ... 125	46	553313	DADB-V6-50-S51-125
	126 ... 175	56	553315	DADB-V6-50-S126-175
	176 ... 250	73	553317	DADB-V6-50-S176-250
	251 ... 300	86	553319	DADB-V6-50-S251-300
	301 ... 350	97	553321	DADB-V6-50-S301-350
	351 ... 375	105	553323	DADB-V6-50-S351-375
	376 ... 425	116	553325	DADB-V6-50-S376-425
	426 ... 475	126	553327	DADB-V6-50-S426-475
	476 ... 500	134	553329	DADB-V6-50-S476-500
63	10 ... 50	28	553331	DADB-V6-63-S10-50
	51 ... 125	46	553333	DADB-V6-63-S51-125
	126 ... 175	56	553335	DADB-V6-63-S126-175
	176 ... 250	73	553337	DADB-V6-63-S176-250
	251 ... 300	86	553339	DADB-V6-63-S251-300
	301 ... 350	97	553341	DADB-V6-63-S301-350
	351 ... 375	105	553343	DADB-V6-63-S351-375
	376 ... 425	116	553345	DADB-V6-63-S376-425
	426 ... 475	126	553347	DADB-V6-63-S426-475
	476 ... 500	134	553349	DADB-V6-63-S476-500
80	10 ... 50	25	553351	DADB-V6-80-S10-50
	51 ... 125	37	553353	DADB-V6-80-S51-125
	126 ... 175	49	553355	DADB-V6-80-S126-175
	176 ... 250	62	553357	DADB-V6-80-S176-250
	251 ... 300	74	553359	DADB-V6-80-S251-300
	301 ... 350	86	553361	DADB-V6-80-S301-350
	351 ... 375	87	553363	DADB-V6-80-S351-375
	376 ... 425	98	553365	DADB-V6-80-S376-425
	426 ... 475	110	553367	DADB-V6-80-S426-475
	476 ... 500	111	553369	DADB-V6-80-S476-500
100	10 ... 50	25	553371	DADB-V6-100-S10-50
	51 ... 125	37	553373	DADB-V6-100-S51-125
	126 ... 175	49	553375	DADB-V6-100-S126-175
	176 ... 250	62	553377	DADB-V6-100-S176-250
	251 ... 300	74	553379	DADB-V6-100-S251-300
	301 ... 350	86	553381	DADB-V6-100-S301-350
	351 ... 375	87	553383	DADB-V6-100-S351-375
	376 ... 425	98	553385	DADB-V6-100-S376-425
	426 ... 475	110	553387	DADB-V6-100-S426-475
	476 ... 500	111	553389	DADB-V6-100-S476-500

Standard cylinders DSBG, to ISO 15552

Accessories

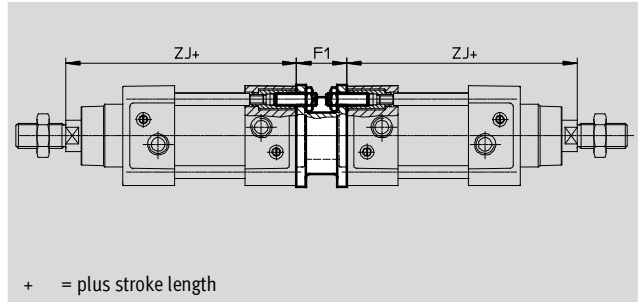
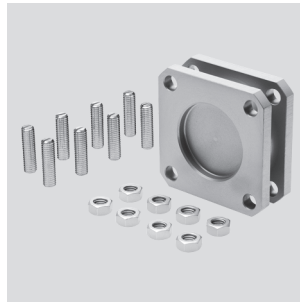
FESTO

Multi-position kit DPNC

Material:

Flange: Wrought aluminium alloy

Threaded studs, hex nuts: Galvanised steel



Note

The maximum overall stroke length must not be exceeded when combining cylinders and multi-position kits.

Dimensions and ordering data						
For Ø	F1	ZJ	Max. overall stroke length	Weight	Part No.	Type
[mm]		+1.8	[mm]	[g]		
32	27	119.1	1,000	85	174418	DPNC-32
40	27	133.9	1,000	115	174419	DPNC-40
50	32	141.8	1,000	210	174420	DPNC-50
63	28	157.1	1,000	360	174421	DPNC-63
80	38	173.6	1,000	620	174422	DPNC-80
100	38	187.5	1,000	1,190	174423	DPNC-100

Connecting two cylinders with identical piston diameters as a 3 or 4-position cylinder

A 3 or 4-position cylinder consists of two separate cylinders whose piston rods advance in opposing directions.

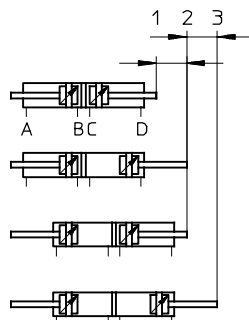
This means that depending on actuation and stroke division, this type of cylinder can assume up to four

positions. In each case the cylinder is driven precisely against a stop. Note that when one end of the piston rod is

fixed, the cylinder barrel executes the movement. The cylinder's connections must be flexible.

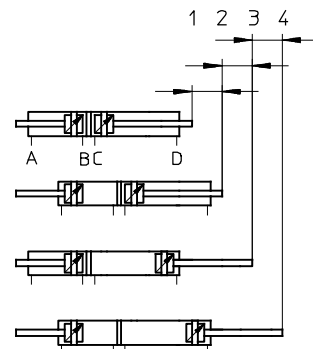
To achieve 3 positions

Two cylinders with identical stroke lengths must be connected together.



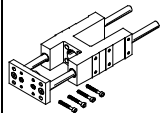
To achieve 4 positions

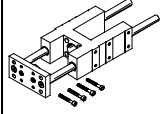
Two cylinders with different stroke lengths must be connected together.



Standard cylinders DSBG, to ISO 15552

Accessories

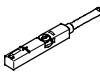
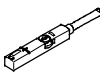
Ordering data – Guide units for fixed strokes (recirculating ball bearing guide only)				Technical data → Internet: festo		
	Stroke [mm]	Part No.	Type	Stroke [mm]	Part No.	Type
	For Ø 32 mm			For Ø 40 mm		
	10 ... 50	34493	FENG-32-50-KF	10 ... 50	34499	FENG-40-50-KF
	10 ... 100	34494	FENG-32-100-KF	10 ... 100	34500	FENG-40-100-KF
	10 ... 160	34495	FENG-32-160-KF	10 ... 160	34501	FENG-40-160-KF
	10 ... 200	34496	FENG-32-200-KF	10 ... 200	34502	FENG-40-200-KF
	10 ... 250	150289	FENG-32-250-KF	10 ... 250	34503	FENG-40-250-KF
	10 ... 320	34497	FENG-32-320-KF	10 ... 320	34504	FENG-40-320-KF
	10 ... 400	150290	FENG-32-400-KF	10 ... 400	150291	FENG-40-400-KF
	10 ... 500	34498	FENG-32-500-KF	10 ... 500	34505	FENG-40-500-KF
	For Ø 50 mm			For Ø 63 mm		
	10 ... 50	34506	FENG-50-50-KF	10 ... 50	34513	FENG-63-50-KF
	10 ... 100	34507	FENG-50-100-KF	10 ... 100	34514	FENG-63-100-KF
	10 ... 160	34508	FENG-50-160-KF	10 ... 160	34515	FENG-63-160-KF
	10 ... 200	34509	FENG-50-200-KF	10 ... 200	34516	FENG-63-200-KF
	10 ... 250	34510	FENG-50-250-KF	10 ... 250	34517	FENG-63-250-KF
	10 ... 320	34511	FENG-50-320-KF	10 ... 320	34518	FENG-63-320-KF
	10 ... 400	150292	FENG-50-400-KF	10 ... 400	34519	FENG-63-400-KF
	10 ... 500	34512	FENG-50-500-KF	10 ... 500	34520	FENG-63-500-KF
	For Ø 80 mm			For Ø 100 mm		
	10 ... 50	34521	FENG-80-50-KF	10 ... 50	34529	FENG-100-50-KF
	10 ... 100	34522	FENG-80-100-KF	10 ... 100	34530	FENG-100-100-KF
	10 ... 160	34523	FENG-80-160-KF	10 ... 160	34531	FENG-100-160-KF
	10 ... 200	34524	FENG-80-200-KF	10 ... 200	34532	FENG-100-200-KF
	10 ... 250	34525	FENG-80-250-KF	10 ... 250	34533	FENG-100-250-KF
	10 ... 320	34526	FENG-80-320-KF	10 ... 320	34534	FENG-100-320-KF
	10 ... 400	34527	FENG-80-400-KF	10 ... 400	34535	FENG-100-400-KF
	10 ... 500	34528	FENG-80-500-KF	10 ... 500	34536	FENG-100-500-KF

Ordering data – Guide units for variable strokes				Technical data → Internet: festo	
	For Ø [mm]	Stroke [mm]	With recirculating ball bearing guide Part No. Type	With plain-bearing guide Part No. Type	
	32	10 ... 500	34487 FENG-32-...-KF	34481 FENG-32-...	
	40	10 ... 500	34488 FENG-40-...-KF	34482 FENG-40-...	
	50	10 ... 500	34489 FENG-50-...-KF	34483 FENG-50-...	
	63	10 ... 500	34490 FENG-63-...-KF	34484 FENG-63-...	
	80	10 ... 500	34491 FENG-80-...-KF	34485 FENG-80-...	
	100	10 ... 500	34492 FENG-100-...-KF	34486 FENG-100-...	

Standard cylinders DSBG, to ISO 15552

Accessories

FESTO

Ordering data – Proximity sensors for T-slot, magneto-resistive						Technical data → Internet: smt
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with the cylinder profile	PNP	Cable, 3-wire	2.5	543867	SMT-8M-PS-24V-K-2,5-OE
			Plug M8x1, 3-pin	0.3	543866	SMT-8M-PS-24V-K-0,3-M8D
			Plug M12x1, 3-pin	0.3	543869	SMT-8M-PS-24V-K-0,3-M12
		NPN	Cable, 3-wire	2.5	543870	SMT-8M-NS-24V-K-2,5-OE
			Plug M8x1, 3-pin	0.3	543871	SMT-8M-NS-24V-K-0,3-M8D
N/C contact						
	Insertable in the slot from above, flush with the cylinder profile	PNP	Cable, 3-wire	7.5	543873	SMT-8M-PO-24V-K7,5-OE

Ordering data – Proximity sensors for T-slot, magnetic reed					Technical data → Internet: sme	
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	543862	SME-8M-DS-24V-K-2,5-OE
				5.0	543863	SME-8M-DS-24V-K-5,0-OE
			Cable, 2-wire	2.5	543872	SME-8M-ZS-24V-K-2,5-OE
			Plug M8x1, 3-pin	0.3	543861	SME-8M-DS-24V-K-0,3-M8D
N/C contact						
	Insertable in the slot from above, flush with the cylinder profile	Contacting	Cable, 3-wire	7.5	546799	SME-8M-DO-24V-K-7,5-OE

Ordering data – Mounting kits for proximity sensor SME/SMT-8				Technical data → Internet: smbz	
	For Ø	Materials		Part No.	Type
	32 ... 100 mm	Rail: Anodised wrought aluminium alloy Screws: High-alloy stainless steel Free of copper and PTFE		537806	SMBZ-8-32/100

Ordering data – Mounting kits for proximity sensor SME/SMT-8				Technical data → Internet: smbr	
	For Ø	Mounting	CRC ¹⁾	Part No.	Type
	32 ... 100 mm	On the cylinder barrel via clamping strap	4	538937	SMBR-8-8/100-S6

1) Corrosion resistance class 4 according to Festo standard 940 070

Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Standard cylinders DSBG, to ISO 15552

Accessories

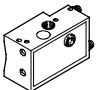
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Ordering data – Connecting cables					Technical data → Internet: nebu	
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part No.	Type	
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541333	NEBU-M8G3-K-2.5-LE3	
			5	541334	NEBU-M8G3-K-5-LE3	
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541363	NEBU-M12G5-K-2.5-LE3	
			5	541364	NEBU-M12G5-K-5-LE3	
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541338	NEBU-M8W3-K-2.5-LE3	
			5	541341	NEBU-M8W3-K-5-LE3	
	Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541367	NEBU-M12W5-K-2.5-LE3	
			5	541370	NEBU-M12W5-K-5-LE3	

Ordering data – Block-shaped proximity sensors, magneto-resistive						Technical data → Internet: smto	
	Mounting	Switching output	Electrical connection		Cable length [m]	Part No.	Type
			Cable	Plug M8			
N/O contact							
	Via accessories	PNP	3-wire	–	2.5	151683	SMT0-1-PS-K-LED-24-C
			–	3-pin	–	151685	SMT0-1-PS-S-LED-24-C
		NPN	3-wire	–	2.5	151684	SMT0-1-NS-K-LED-24-C
			–	3-pin	–	151686	SMT0-1-NS-S-LED-24-C

Ordering data – Block-shaped proximity sensors, magnetic reed						Technical data → Internet: smeo	
	Mounting	Electrical connection		Cable length [m]	Part No.	Type	
		Cable	Plug M8				
N/O contact							
	Via accessories	3-wire	–	2.5	30459	SME0-1-LED-24-B	
		3-wire	–	5.0	151672	SME0-1-LED-24-K5-B	
		–	3-pin	–	150848	SME0-1-S-LED-24-B	

Ordering data – Mounting kits for proximity sensor SMEO/SMT0-1				Technical data → Internet: smb	
	For Ø	Mounting	Part No.	Type	
	32 ... 50 mm	Directly on the mounting or tie rod	36162	SMB-2-B	
	63 ... 100 mm		36163	SMB-3-B	

Ordering data – Block-shaped proximity sensors, pneumatic			Technical data → Internet: smpo	
	Mounting	Pneumatic connection	Part No.	Type
3/2-way valve, normally closed				
	Via accessories	Barbed connector for tubing with 3 mm I.D.	31008	SMPO-1-H-B

Ordering data – Mounting kit for proximity sensor SMPO-1				Technical data → Internet: smbs	
	For Ø	Mounting	Part No.	Type	
	32 ... 100 mm	On the cylinder barrel via clamping strap	151226	SMBS-2	