

Standard cylinders DSBF-C, to ISO 15552, Clean Design

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Key features

At a glance



DIN

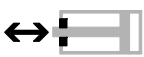


- Standards-based cylinders to ISO 15552 (corresponds to the withdrawn standards ISO 6431, DIN ISO 6431, VDMA 24 562, NF E 49 003.1 and UNI 10290)

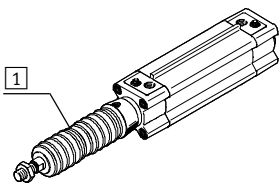
- Clean Design means smooth surfaces without slots and edges, which means fewer places where dirt can collect
- For hygiene reasons, the threads on the cylinder caps should be sealed with suitable blanking screws (available as accessories → 22)
- Resistant to conventional cleaning agents
- Increased corrosion protection

- Two types of cushioning:
 - 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
- Comprehensive range of mounting accessories for just about every type of installation
- Contactless position sensing via proximity sensors

Variants		
Symbol	Features	Description
	A3 Unlubricated operation	Cleaning processes degrease the piston rod. A special piston rod seal permits a longer service life compared to the standard seal.
	T Through piston rod	For working at both ends with the same force in the forward and return stroke, for attaching external stops.
	L Piston rod thread extension	–
	F Female piston rod thread	–
	E Piston rod extension	–
	T1 Heat-resistant seals	Temperature resistance up to max. 120 °C. The seals used and the grease mean that this variant is not suitable for direct contact with foodstuffs.
	T3 Low temperature	Temperature resistance down to max. –40 °C.

Longer service life with bellows kit DADB



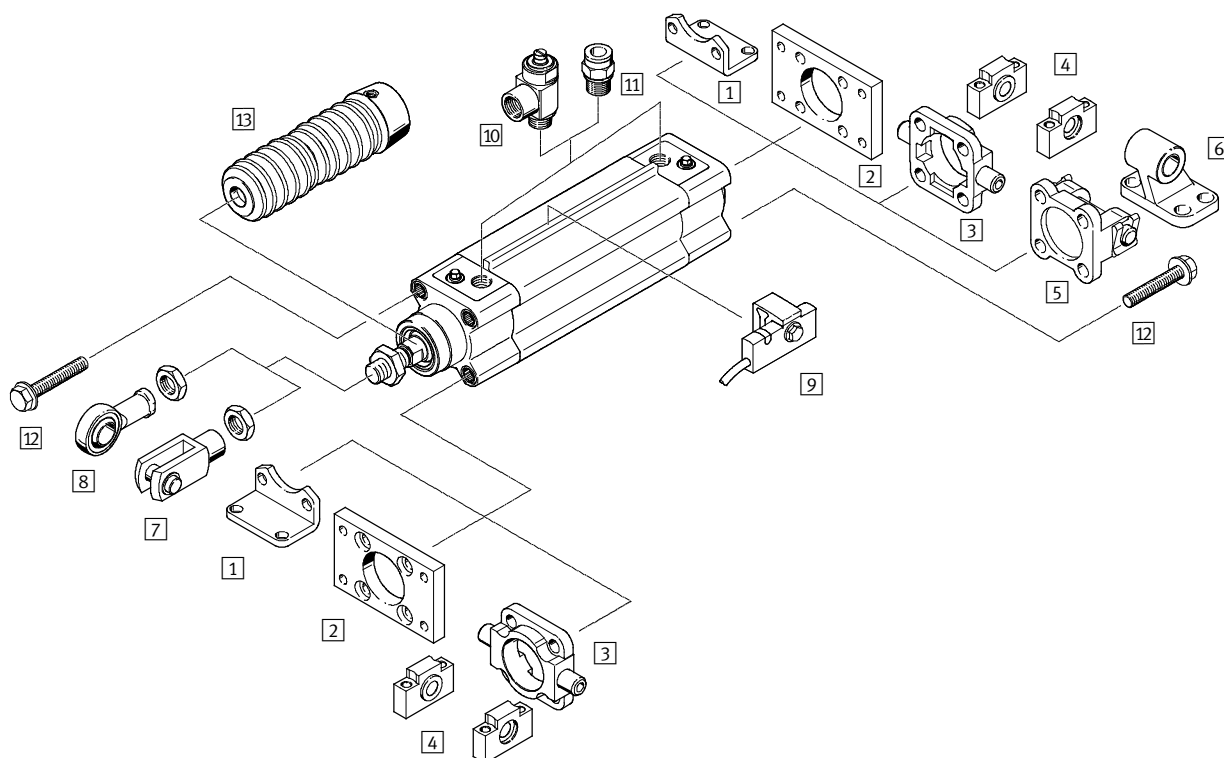
The bellows kit is a leak-free system. To prevent unwanted media from being drawn in, the supply and exhaust air must be ducted via a venting hole in the connection part **1**.

The kit protects the piston rod, seal and bearings against a wide variety of media, for example:

- dust
- chippings
- oil
- grease
- fuel

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Peripherals overview



Mounting attachments and accessories		
	Brief description	→ Page/Internet
1	Foot mounting CRHNC	For bearing and end caps 13
2	Flange mounting CRFNG	– For bearing or end caps – Cannot be used on the bearing cap in combination with bellows kit DADB 13
3	Trunnion flange CRZNG	– For bearing or end caps in combination with trunnion supports CRLNZG – Cannot be used on the bearing cap in combination with bellows kit DADB 14
4	Trunnion support CRLNZG	For swivel mounting CRZNG 14
5	Swivel flange SNCB- ... -R3	For end caps 15
6	Clevis foot CRLNG	For swivel flange SNCB- ... -R3 15
7	Rod clevis CRSG	Permits a swivelling movement of the cylinder in one plane 22
8	Rod eye CRSGS	With spherical bearing 22
9	Proximity sensor SMT-C1	For sensing the piston rod position 20
10	One-way flow control valve CRGRLA	For regulating speed 21
11	Push-in fitting QS-F/QL-F/CRQS/CRQSL	For connecting compressed air tubing with standard O.D. 20
12	Blanking screw DAMD	For covering unused mounting threads 22
13	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 a piston rod extension (feature: E) 16

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Type codes

		DSBF	-	C	-	32	-	300	-		-		-	PPV		A	-	N3
Type																		
Standard cylinder, Clean Design																		
Version																		
C	Easy-to-clean design																	
Piston Ø [mm]																		
Stroke [mm]																		
Piston rod																		
-	At one end																	
T	Through piston rod																	
Piston rod thread type																		
-	Male thread																	
F	Female thread																	
Cushioning																		
PPV	Pneumatic cushioning, adjustable at both ends																	
PPS	Pneumatic cushioning, self-adjusting at both ends																	
Position sensing																		
A	Via proximity sensor																	
Standard																		
N3	Based on ISO 15552																	

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Type codes

		T1		-	E	-		-	R
Temperature range									
-	Standard								
T1	Heat-resistant								
T3	Low temperature								
Wiper seal variant									
-	None								
A3	Suitable for unlubricated operation								
Piston rod extension									
... E	1 ... 500 mm								
Piston rod thread extension									
... L	1 ... 70 mm								
Sensor mounting									
R	Mounting rail for sensors								

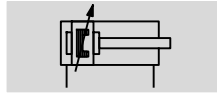
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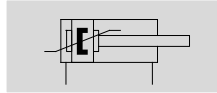
Technical data

Function

PPV



PPS



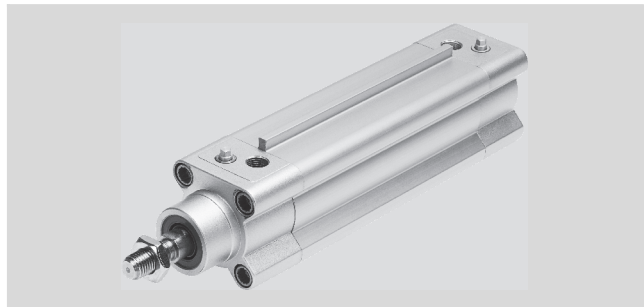
- Standards-based cylinders to ISO 15552 (corresponds to the withdrawn standards ISO 6431, DIN ISO 6431, VDMA 24 562, NF E 49 003.1 and UNI 10290)



DIN



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-  Diameter
32 ... 100 mm
-  Stroke length
1 ... 2,800 mm

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	
Piston rod thread	M10x1.25	M12x1.25	M16x1.5	M16x1.5	M20x1.5	M20x1.5	
Design	Piston						
	Piston rod						
	Profile barrel						
Mode of operation	Double-acting						
Cushioning							
PPV	Pneumatic cushioning, adjustable at both ends						
PPS	Pneumatic cushioning, self-adjusting at both ends						
Cushioning length	[mm]	20	20	22	22	32	32
Stroke							
	[mm]	1 ... 2,800					
...E	[mm]	1 ... 2,000					
...L	[mm]	1 ... 2,000					
Min. Stroke with position sensing	[mm]	18	17	13	10	10	10
Position sensing	Via proximity sensor						
Type of mounting	Via female thread						
	Via accessories						
Mounting position	Any						

Operating and environmental conditions						
Piston Ø	32	40	50	63	80	100
Operating medium		Compressed air in accordance with 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						
	[bar]	0.6 ... 12				
T3	[bar]	1 ... 12				
A3	[bar]	1.5 ... 12		1 ... 12	0.6 ... 12	
Ambient temperature ¹⁾						
	[°C]	-20 ... +80				
T1	[°C]	0 ... +120				
T3	[°C]	-40 ... +80				
Suitability for use in the food industry		As per manufacturer's declaration (➔ Support / Downloads)				
Corrosion resistance class CRC ²⁾		3				

1) Note operating range of proximity sensors

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.

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Technical data

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						
	0.4	0.7	1.0	1.3	1.8	2.5
T1	0.2	0.35	0.5	0.65	0.9	1.25
T3	0.2	0.35	0.5	0.65	0.9	1.25

Permissible impact velocity:

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

$v_{perm.}$ Permissible impact velocity
 $E_{perm.}$ Max. impact energy
 $m_{intrinsic}$ Moving load (drive)
 m_{Load} Moving effective load

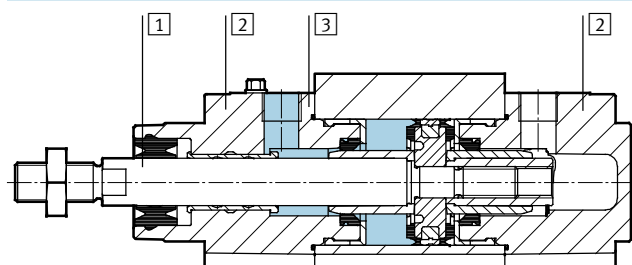
Maximum permissible load:

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

Weight [g]						
Piston Ø	32	40	50	63	80	100
Product weight with 0 mm stroke	472	778	1,241	1,803	3,131	4,551
Additional weight per 10 mm stroke	28	40	58	65	95	106
Moving load with 0 mm stroke	108	204	363	460	800	1,045
Additional load per 10 mm stroke	9	16	25	25	39	39

Materials

Sectional view



Standard cylinder	Basic version, variants	A3, T1
1 Piston rod	High-alloy stainless steel	
2 Cap	Coated die-cast aluminium	
3 Profile barrel	Anodised wrought aluminium alloy	
– Seals	Polyurethane	
	Fluoro elastomer	
	Polyethylene	
Note on materials	RoHS-compliant	
	Free from PWIS (paint-wetting impairment substances)	Contains PWIS (paint wetting impairment substances)

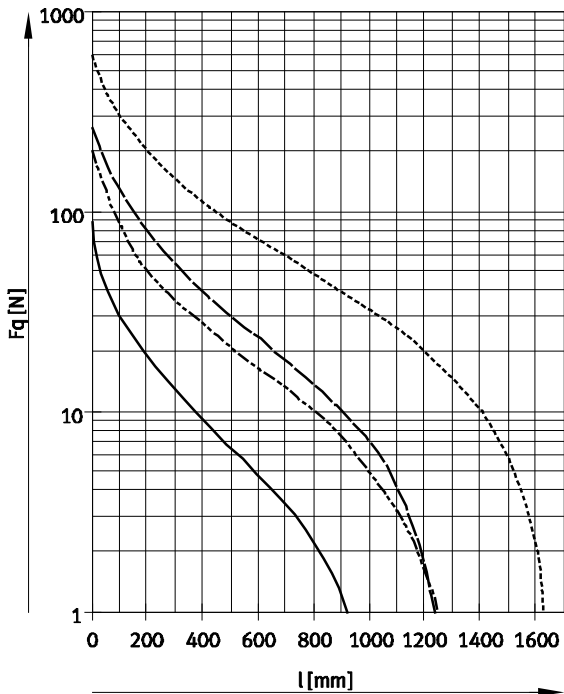
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Technical data

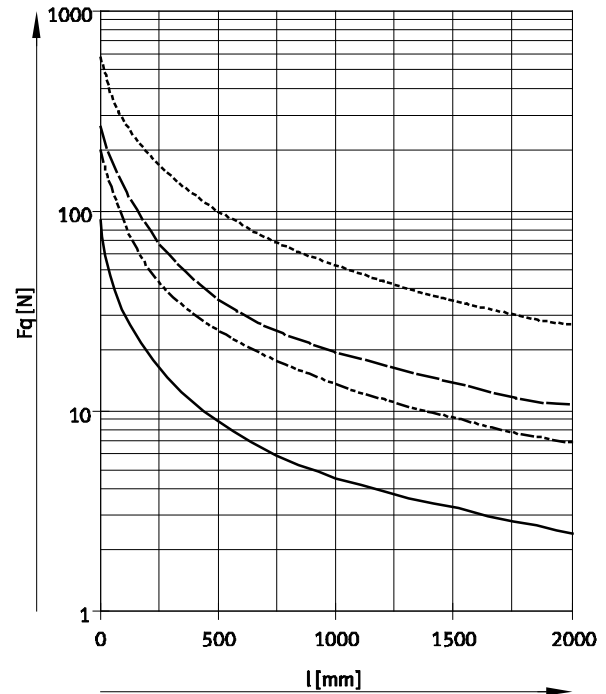
Max. lateral force F_q as a function of stroke length l

Horizontal mounting



———— $\varnothing$ 32 - · - · $\varnothing$ 50, 63
 - - - - $\varnothing$ 40 · · · · $\varnothing$ 80, 100

Vertical mounting



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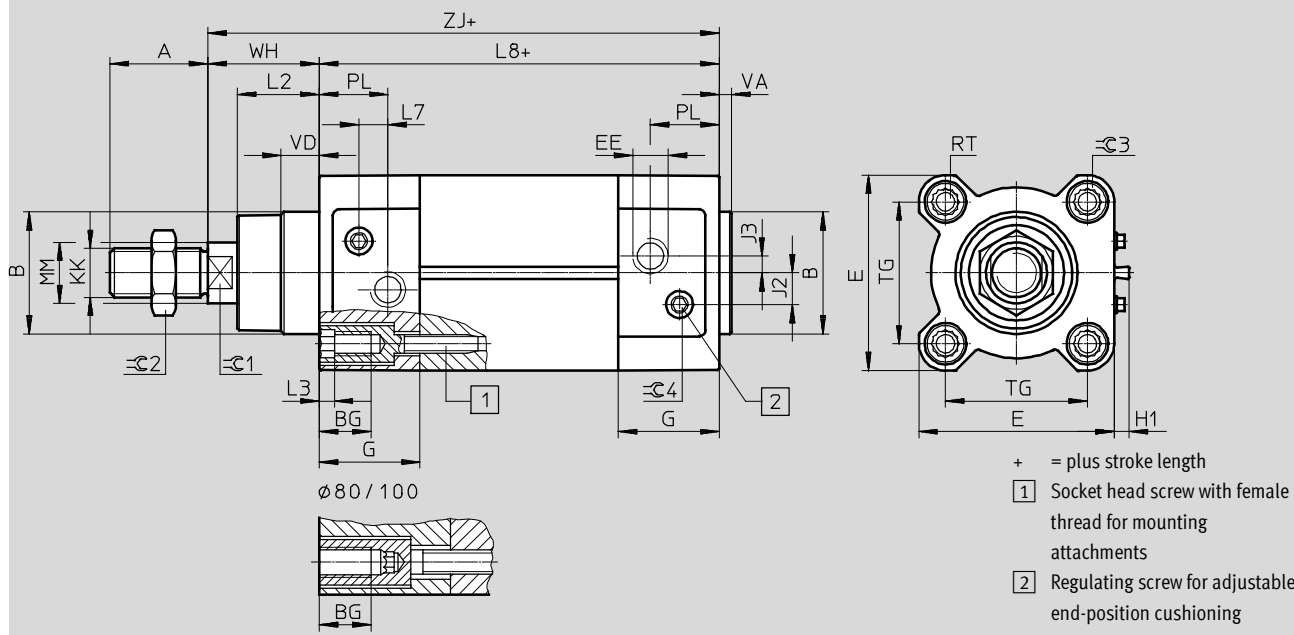
Technical data

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Dimensions

Download CAD data → www.festo.com

Basic version and A3 – Unlubricated operation



Ø [mm]	A	B Ø d11	BG min.	E	EE	G	H1	J2	J3
32	-0.5	30	16	+0.5	G $\frac{1}{8}$	28	±0.2	±0.1	±0.1
40	22	35	16	45	G $\frac{1}{4}$	33	5	5.7	5.25
50	24	40	16	54	G $\frac{1}{4}$	33	5	8	4
63	32	45	16	64	G $\frac{3}{8}$	40.5	5	10.4	5.5
80	32	45	16	75	G $\frac{3}{8}$	43	5	12.75	6.25
100	40	55	17	93	G $\frac{3}{8}$	48	5	12.5	8
	40		17	110	G $\frac{1}{2}$		5	13.5	10

Ø [mm]	KK	L2	L3	L7	L8	MM Ø	PL	RT	TG
		-0.2			±0.4		±0.1		±0.3
32	M10x1.25	18	max. 5	6.5	94	12	19.5	M6	32.5
40	M12x1.25	21.3	max. 5	7.5	105	16	22.5	M6	38
50	M16x1.5	26.8	max. 5	9.5	106	20	22.5	M8	46.5
63	M16x1.5	27	max. 5	9	121	20	27.5	M8	56.5
80	M20x1.5	34.2	-	11	128	25	30	M10	72
100	M20x1.5	38	-	7.5	138	25	31.5	M10	89

Ø [mm]	VA	VD	WH	ZJ	≈C1	≈C2	≈C3	≈C4
	-0.2	+0.5	+2.2	+1.8				
32	4	10	26	119.1	10	16	6	4
40	4	10.5	28.7	133.9	13	18	6	4
50	4	11.5	35.6	141.8	17	24	8	4
63	4	15	35.9	157.1	17	24	8	4
80	4	15.7	45.4	173.6	22	30	6	4
100	4	19.2	49.3	187.5	22	30	6	5

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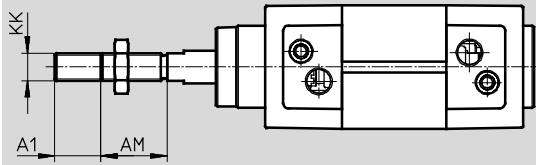
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Technical data

Dimensions – Variants

Download CAD data → www.festo.com

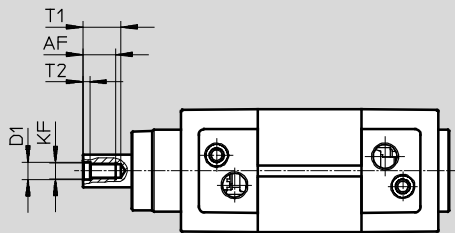
L – Piston rod thread extension



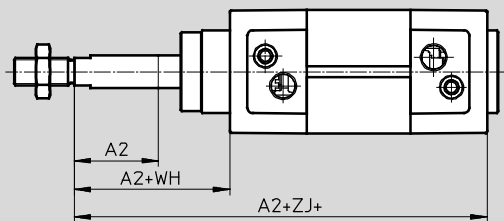
 Note

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

F – Piston rod with female thread



E – Piston rod extension

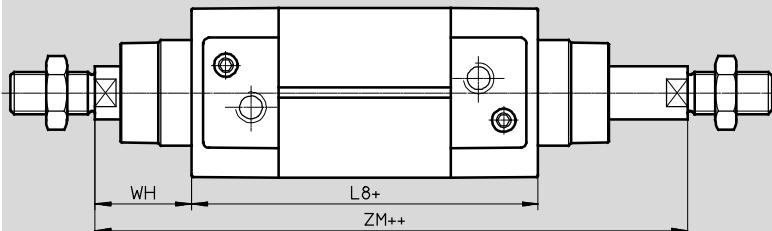


 Note

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

+ = plus stroke length

T – Through piston rod



+ = plus stroke length

++ = plus 2x stroke length

Standard cylinders DSBF-C, to ISO 15552, Clean Design

Technical data

Ø [mm]	A1 max.	A2 max.	AM	AF	D1	KF
32	35	500	22	12	6.4	M6
40			24	12	8.4	M8
50	70		32	16	10.5	M10
63			32	16	10.5	M10
80			40	20	13	M12
100			40	20	13	M12

Ø [mm]	KK	L8 ±0.4	T1	T2	WH +2.2	ZJ +1.8	ZM +1
32	M10x1.25	94	16	2.6	26	119.1	146.1
40	M12x1.25	105	16	3.3	28.7	133.9	164.8
50	M16x1.5	106	21	4.7	35.6	141.8	179.8
63	M16x1.5	121	21	4.7	35.9	157.1	195.4
80	M20x1.5	128	26.5	6.1	45.4	173.6	221
100	M20x1.5	138	26.5	6.1	49.3	187.5	238.8

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Ordering data – Modular products

Ordering table											
Size		32	40	50	63	80	100	Condi- tions	Code	Enter code	
M	Module No.	570077	570078	570079	570080	570081	570082				
	Function	Clean Design standard cylinder							DSBF		DSBF
	Product design	Easy-to-clean design							-C		-C
	Piston diameter [mm]	32	40	50	63	80	100		-...		
	Stroke [mm]	1 ... 2,800							-...		
O	Piston rod	At one end									
		Through piston rod							-T		
	Piston rod thread type	Male thread									
		Female thread						1	F		
M	Cushioning	Pneumatic cushioning, adjustable at both ends							-PPV		
		Pneumatic cushioning, self-adjusting at both ends						2	-PPS		
	Position sensing	Via proximity sensor							A	A	
	Standard	Based on ISO 15552							-N3	-N3	
O	Temperature range	Standard -20 ... +80 °C									
		Heat-resistant 0 ... +120 °C						3	T1		
		Low temperature -40 ... +80 °C						3	T3		
	Wiper seal variant	None									
		For unlubricated operation							A3		
	Piston rod extension [mm]	1 ... 500						4	-...E		
	Piston rod thread extension [mm]	1 ... 35			1 ... 70			4	-...L		
M	Sensor mounting	Mounting rail for sensors							-R	-R	

- 1 F** Not with piston rod thread extension ...L
2 PPS Not with temperature range T1, T3
3 T1, T3 Not with wiper seal variant A3
4 ...E, ...L Only for strokes up to 2,000 mm


Note

Cylinders with position sensing require a minimum stroke to ensure reliable sensing.

→ 6

Transfer order code

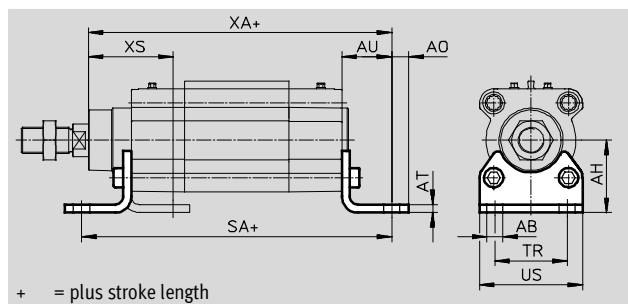
	DSBF	-	C	-		-		-		-		A	-	N3			-		-		-	R
--	------	---	---	---	--	---	--	---	--	---	--	---	---	----	--	--	---	--	---	--	---	---

Standard cylinders DSBF-C, to ISO 15552, Clean Design

Accessories

Foot mounting CRHNC

Material:
High-alloy steel
Free of copper, PTFE and silicone



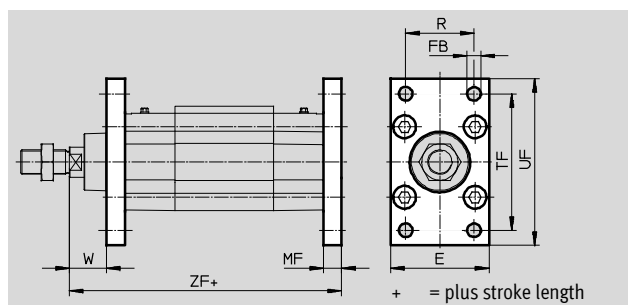
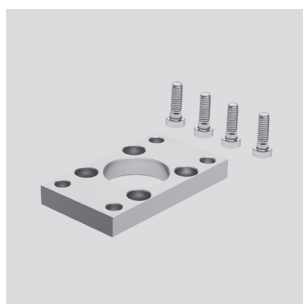
Dimensions and ordering data													
For Ø	AB Ø	AH	AO	AT	AU	SA	TR	US	XA	XS	CRC ¹⁾	Weight	Part No. Type
[mm]												[g]	
32	7	32	6.5	4	24	142	32	45	143.1	46	4	135	176937 CRHNC-32
40	10	36	9	4	28	161	36	54	161.9	52.7	4	180	176938 CRHNC-40
50	10	45	9.5	5	32	170	45	64	173.8	62.6	4	325	176939 CRHNC-50
63	10	50	12.5	5	32	185	50	75	189.1	62.9	4	405	176940 CRHNC-63
80	12	63	15	6	41	210	63	93	214.6	80.4	4	820	176941 CRHNC-80
100	14.5	71	17.5	6	41	220	75	110	228.5	84.3	4	1,000	176942 CRHNC-100

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.

Flange mounting CRFNG

Material:
High-alloy steel
Free of copper, PTFE and silicone

Cannot be used on the bearing cap in combination with bellows kit DADB.



Dimensions and ordering data												
For Ø	E	FB Ø	MF	R	TF	UF	W	ZF	CRC ¹⁾	Weight	Part No.	Type
[mm]										[g]		
32	45	7	10	32	64	80	16	129.1	4	225	161846	CRFNG-32
40	54	9	10	36	72	90	18.7	143.9	4	300	161847	CRFNG-40
50	64	9	12	45	90	110	23.6	153.8	4	540	161848	CRFNG-50
63	75	9	12	50	100	120	23.9	169.1	4	680	161849	CRFNG-63
80	93	12	16	63	126	150	29.4	189.6	4	1,500	161850	CRFNG-80
100	110	14	16	75	150	175	33.3	203.5	4	2,100	161851	CRFNG-100

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.

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Accessories

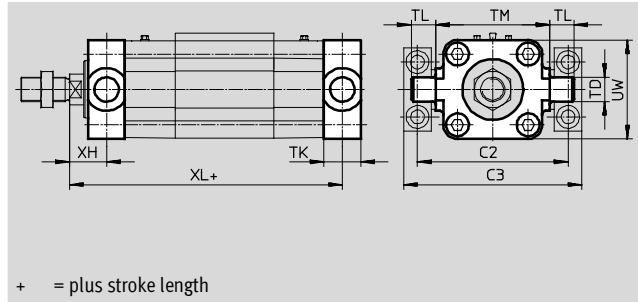
Trunnion flange CRZNG

Material:

High-alloy steel

Free of copper, PTFE and silicone

Cannot be used on the bearing cap in combination with bellows kit DADB.



Dimensions and ordering data												
For Ø	C2	C3	TD	TK	TL	TM	UW	XH	XL	CRC ¹⁾	Weight	Part No. Type
[mm]			Ø e9								[g]	
32	71	86	12	16	12	50	50	18	127.1	4	150	161852 CRZNG-32
40	87	105	16	20	16	63	55	18.7	143.9	4	285	161853 CRZNG-40
50	99	117	16	24	16	75	65	23.6	153.8	4	473	161854 CRZNG-50
63	116	136	20	24	20	90	75	23.9	169.1	4	687	161855 CRZNG-63
80	136	156	20	28	20	110	100	31.4	187.6	4	1,296	161856 CRZNG-80
100	164	189	25	38	25	132	120	30.3	206.5	4	2,254	161857 CRZNG-100

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

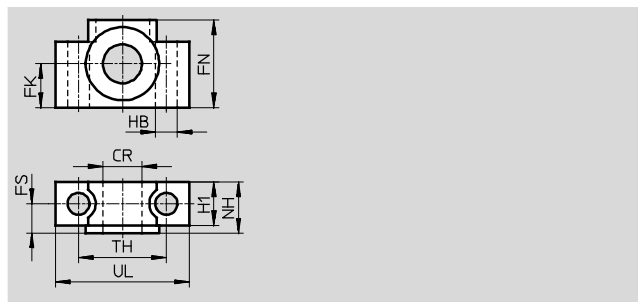
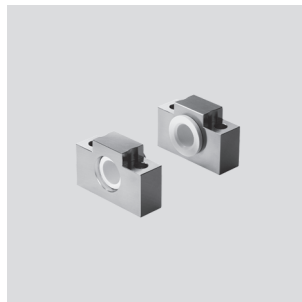
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Trunnion supports CRLNZG

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⁾
Ø	Ø	Ø				Ø				
[mm]	D11	±0.1				H13		±0.2		
32	12	15	30	10.5	15	6.6	18	32	46	4
40, 50	16	18	36	12	18	9	21	36	55	4
63, 80	20	20	40	13	20	11	23	42	65	4
100	25	25	50	16	24.5	14	28.5	50	75	4

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

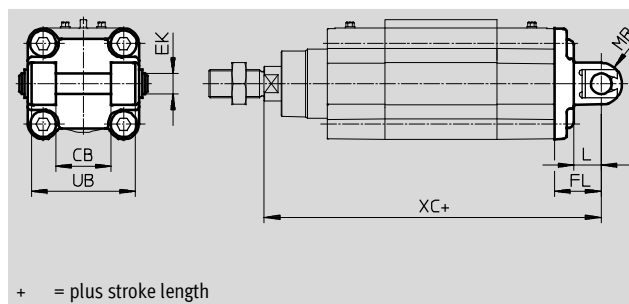
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

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Accessories

Swivel flange SNCB- ... R3

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



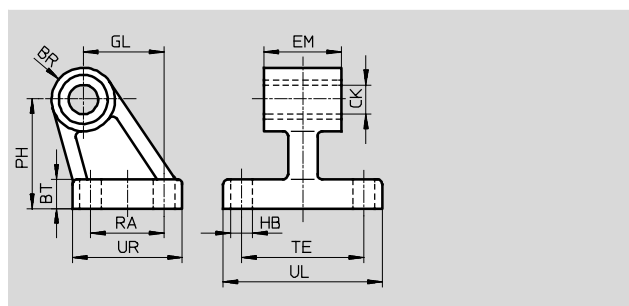
Dimensions and ordering data											
For Ø	CB	EK Ø	FL	L	MR	UB	XC	CRC ¹⁾	Weight	Part No.	Type
[mm]	H14	e8	±0.2			h14			[g]		
32	26	10	22	13	8.5	45	141.1	3	100	176944	SNCB-32-R3
40	28	12	25	16	12	52	158.9	3	151	176945	SNCB-40-R3
50	32	12	27	16	12	60	168.8	3	228	176946	SNCB-50-R3
63	40	16	32	21	16	70	189.1	3	371	176947	SNCB-63-R3
80	50	16	36	22	16	90	209.6	3	632	176948	SNCB-80-R3
100	60	20	41	27	20	110	228.5	3	986	176949	SNCB-100-R3

1) 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.

Clevis foot CRLNG

Material:
High-alloy steel
Free of copper, PTFE and silicone



Dimensions and ordering data													
For Ø	BR	BT	CK Ø	EM	GL	HB Ø	PH	RA	TE	UL	UR	CRC ¹⁾	Weight
[mm]			D11	-0.4		H13							[g]
32	10	8	10	25.8	21	6.6	32	18	38	51	31	4	120
40	11	10	12	27.8	24	6.6	36	22	41	54	35	4	160
50	12	12	12	31.8	33	9	45	30	50	65	45	4	280
63	15	12	16	39.8	37	9	50	35	52	67	50	4	375
80	15	14	16	49.8	47	11	63	40	66	86	60	4	580
100	19	15	20	59.8	55	11	71	50	76	96	70	4	935

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 DSBF-C, to ISO 15552, Clean Design

FESTO

Accessories

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

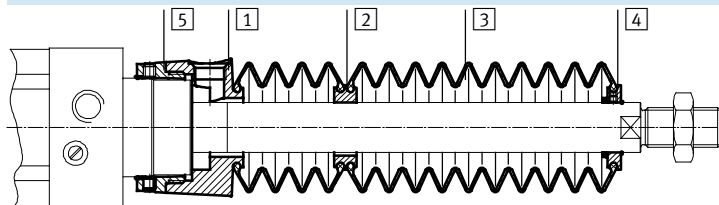
2) Note operating range of proximity sensors and cylinder

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
		RoHS-compliant

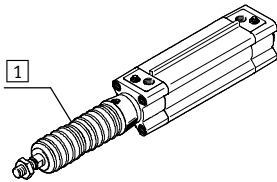
Weight [g]						
Type DADB-V6-	32	40	50	63	80	100
Stroke [mm]						
10 ... 50	29	42	71	69	99	124
51 ... 125	41	56	91	89	127	152
126 ... 175	52	68	105	103	140	165
176 ... 250	66	85	129	127	193	218
251 ... 300	79	100	147	145	231	255
301 ... 350	92	115	166	164	268	293
351 ... 375	92	115	167	165	259	284
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 DSBF-C, to ISO 15552, Clean Design

Accessories

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Speed of travel v as a function of tubing length l

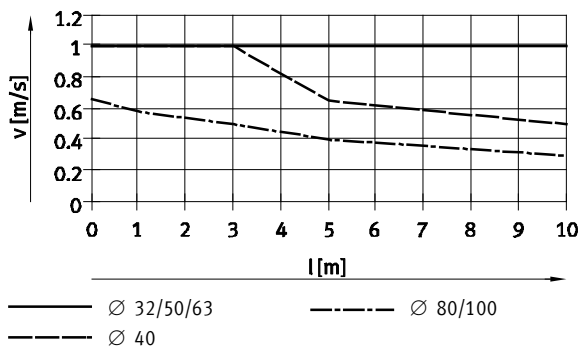


The bellows kit is a leak-free system. To prevent unwanted media from being drawn in, the supply and exhaust air must be ducted via a venting

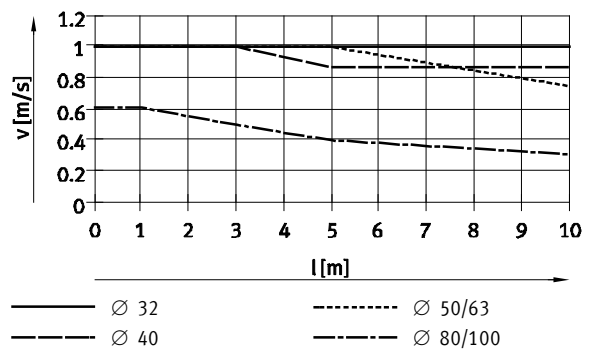
hole in the connection part **1**. The pressure generated in the bellows kit by the positioning motion is primarily defined by speed of travel

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

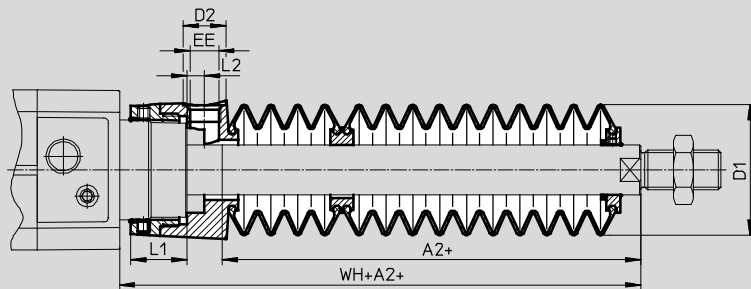
Standard cylinders DSBF-C, to ISO 15552, Clean Design

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 $\frac{1}{8}$	12.9	5.4	55	28	46	14	G $\frac{1}{8}$	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 $\frac{1}{4}$	22.35	7	63.6	28	57	17	G $\frac{1}{4}$	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 $\frac{1}{4}$	28	4	70.4	25	93	17	G $\frac{1}{4}$	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 (extended piston rod) of the drive

Standard cylinders DSBF-C, to ISO 15552, Clean Design

Accessories

Ordering data – Bellows kit

An extended piston rod (order code E)

→ 12 is absolutely necessary for using a bellows kit.

The necessary dimensions for 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:

DSBF-C-32-320-PPV-A-N3-...E-R

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

112 mm

Complete type code for standard cylinder:

DSBF-C-32-320-PPV-A-N3-112E-R

The corresponding bellows kit:

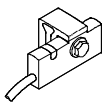
DADB-V6-32-S301-350

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 DSBF-C, to ISO 15552, Clean Design

Accessories

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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							
	Is mounted on the mounting rail	PNP	Cable, 3-wire	5.0	571339	SMT-C1-PS-24V-K-5,0-OE	
			Plug M8x1, 3-pin	0.3	571342	SMT-C1-PS-24V-K-0,3-M8D	
			Plug M12x1, 3-pin	0.3	571341	SMT-C1-PS-24V-K-0,3-M12	

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 – Push-in fittings					Technical data → Internet: quick star					
	Connection		Material	Weight [g]	Part No.	Type	PU ³⁾			
	Thread	Tubing O.D.								
With external hex										
	G1/8	4	Brass, nickel and chrome-plated	8	193408	QS-F-G1/8-4 ¹⁾	10			
		6		12	193409	QS-F-G1/8-6 ¹⁾				
		8		14	193410	QS-F-G1/8-8 ¹⁾				
	G1/4	6		16	193411	QS-F-G1/4-6 ¹⁾				
		8		16	193412	QS-F-G1/4-8 ¹⁾				
		10		22	193413	QS-F-G1/4-10 ¹⁾				
	G3/8	8		20	193414	QS-F-G3/8-8 ¹⁾				
		10		30	193415	QS-F-G3/8-10 ¹⁾				
		12		38	193487	QS-F-G3/8-12 ¹⁾				
	G1/2	10		42	193416	QS-F-G1/2-10 ¹⁾				
		12		46	193417	QS-F-G1/2-12 ¹⁾				
		R1/8		6	Stainless steel	9.9		162862	CRQS-1/8-6 ²⁾	1
				8		13		162863	CRQS-1/8-8 ²⁾	
		R1/4		8		18		162864	CRQS-1/4-8 ²⁾	
10			22	162865		CRQS-1/4-10 ²⁾				
R3/8		10	29	162866		CRQS-3/8-10 ²⁾				
		12	38	162867		CRQS-3/8-12 ²⁾				
R1/2		12	55	162868		CRQS-1/2-12 ²⁾				
		16	59	162869		CRQS-1/2-16 ²⁾				
With internal hex										
		G1/8	4	Brass, nickel and chrome-plated		8.6	533927	QS-F-G1/8-4-I ¹⁾	10	
	6		13.4		533928	QS-F-G1/8-6-I ¹⁾				
	8		13.1		533929	QS-F-G1/8-8-I ¹⁾				
	G1/4	8	14.6		533930	QS-F-G1/4-8-I ¹⁾				
		10	21		533931	QS-F-G1/4-10-I ¹⁾				
	G3/8	12	34.3		533932	QS-F-G3/8-12-I ¹⁾				

- 1) With sealing ring
 2) With PTFE coating
 3) Packaging unit quantity

Standard cylinders DSBF-C, to ISO 15552, Clean Design

Accessories

Ordering data – Push-in L-fittings					Technical data ➔ Internet: quick star		
	Connection		Material	Weight [g]	Part No.	Type	PU ³⁾
	Thread	Tubing O.D.					
With external hex							
	G1/8	4	Brass, nickel and chrome-plated	17.6	193418	QSL-F-G1/8-4 ¹⁾	10
		6		16	193419	QSL-F-G1/8-6 ¹⁾	
		8		20	193420	QSL-F-G1/8-8 ¹⁾	
	G1/4	6		24.5	193421	QSL-F-G1/4-6 ¹⁾	
		8		24	193422	QSL-F-G1/4-8 ¹⁾	
		10		34.6	193423	QSL-F-G1/4-10 ¹⁾	
	G3/8	8		34.2	193424	QSL-F-G3/8-8 ¹⁾	
		10		36.6	193425	QSL-F-G3/8-10 ¹⁾	
	G1/2	10		66	193426	QSL-F-G1/2-10 ¹⁾	
		12		70	193427	QSL-F-G1/2-12 ¹⁾	
	R1/8	6	Stainless steel	20	162872	CRQSL-1/8-6 ²⁾	1
		8		27	162873	CRQSL-1/8-8 ²⁾	
	R1/4	8		31	162874	CRQSL-1/4-8 ²⁾	
		10		46	162875	CRQSL-1/4-10 ²⁾	
	R3/8	10		52	162876	CRQSL-3/8-10 ²⁾	
		12		69	162877	CRQSL-3/8-12 ²⁾	
	R1/2	12		89	162878	CRQSL-1/2-12 ²⁾	
		16		105	162879	CRQSL-1/2-16 ²⁾	

- 1) With sealing ring
2) With PTFE coating
3) Packaging unit quantity

Ordering data – Plastic tubing, standard O.D.			Technical data → Internet: tubing
			Type
	Good resistance to chemicals and hydrolysis		PLN
	Pneumatic tubing with resistance to high temperatures and chemicals		PFAN
	Approved for use in the food industry and resistant to hydrolysis		PUN-H

Ordering data – One-way flow control valves					Technical data → Internet: crgria	
	Connection		Material	Weight [g]	Part No.	Type
	Thread	For push-in fitting				
	G $\frac{1}{8}$	CRQS/CRQSL/CRQST, Quick Star	Electrolytically polished stainless steel casting	44	161404	CRGRLA- $\frac{1}{8}$ -B
	G $\frac{1}{4}$			83	161405	CRGRLA- $\frac{1}{4}$ -B
	G $\frac{3}{8}$			150	161406	CRGRLA- $\frac{3}{8}$ -B
	G $\frac{1}{2}$			315	161407	CRGRLA- $\frac{1}{2}$ -B

Standard cylinders DSBF-C, to ISO 15552, Clean Design

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Accessories

Ordering data – Blanking screws, corrosion-resistant							
	For Ø	Material	CRC ¹⁾	Weight [g]	Part No.	Type	PU ²⁾
	32, 40	High-alloy steel	3	7	1355016	DAMD-PS-M6-12-R1	4
	50, 63		3	14	650121	DAMD-PS-M8-16-R1	
	80, 100		3	23	1355026	DAMD-PS-M10-16-R1	

1) 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.

2) Packaging unit quantity

Ordering data – Corrosion and acid-resistant piston rod attachments					Technical data → Internet: crsg		
	For Ø	Part No.	Type		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, 63	195584	CRSGS-M16x1,5		50, 63	13571	CRSG-M16x1,5
	80, 100	195585	CRSGS-M20x1,5		80, 100	13572	CRSG-M20x1,5