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

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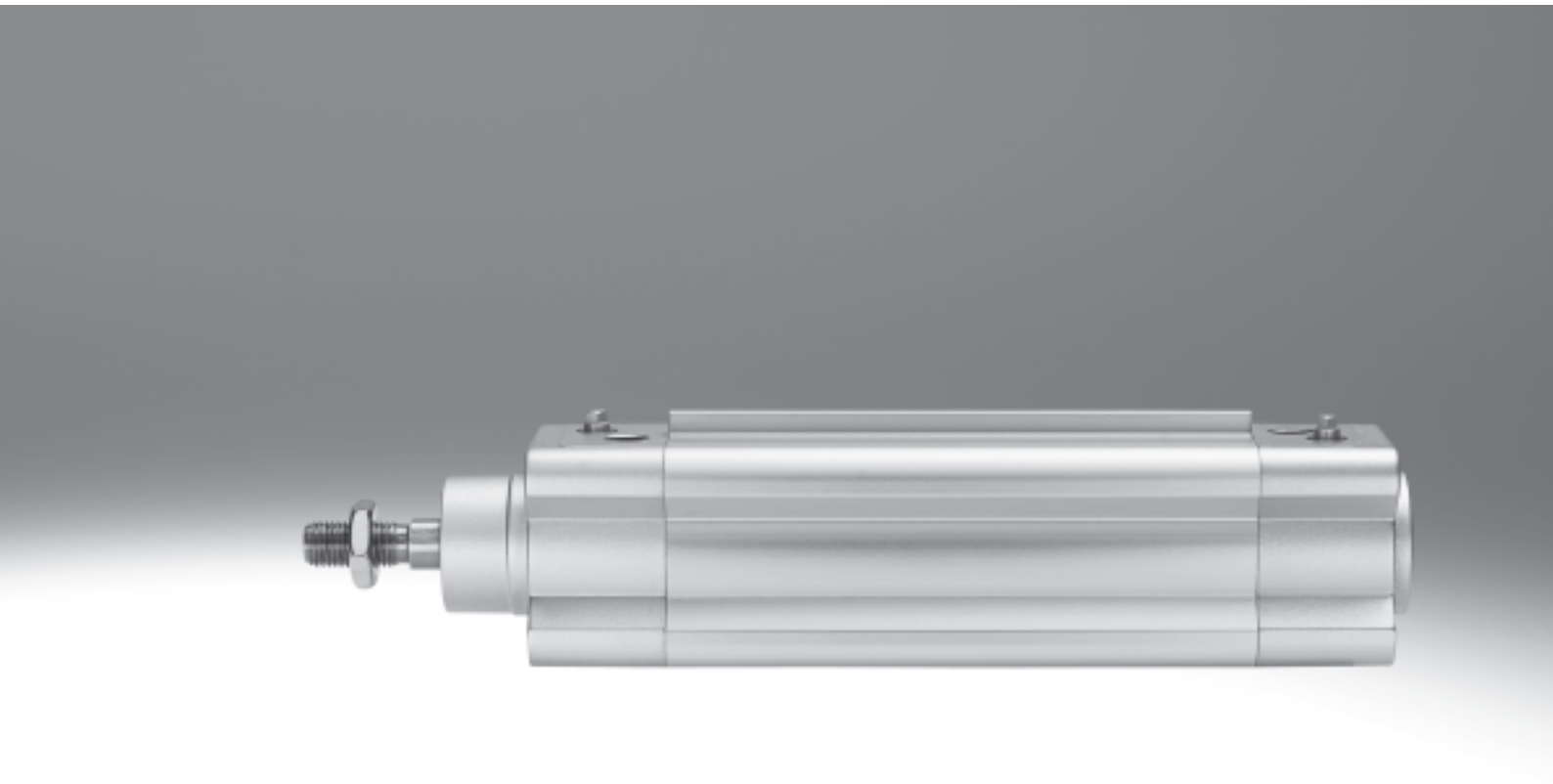


New

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

Key features

At a glance

Design

- Standards-based cylinders to ISO 15552 (corresponds to the withdrawn standards ISO 6431, DIN ISO 6431, VDMA 24 562, NF E 49 003.1 and UNI 10290)

Easy to clean

- 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 ➔ 20)
- Resistant to conventional cleaning agents
- Increased corrosion protection

Easy to mount

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

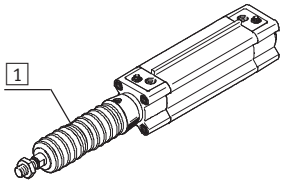
Flexible

- 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

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



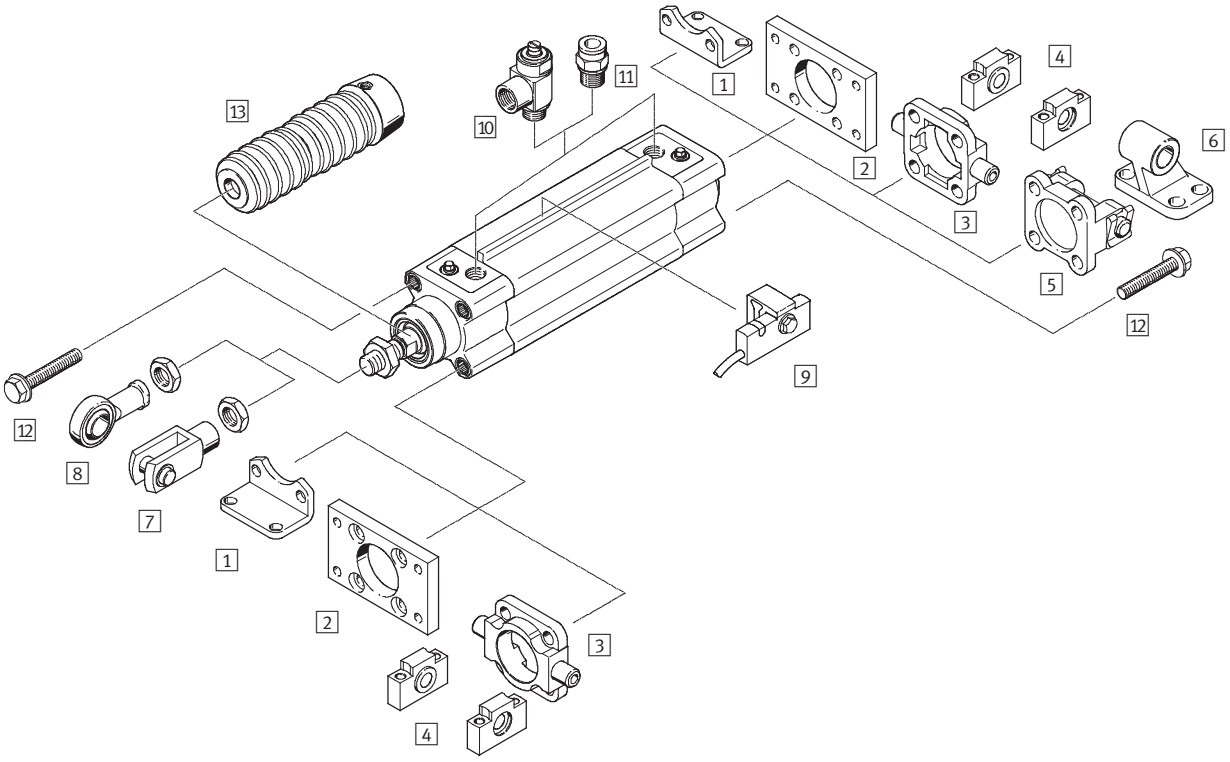
The bellows kit is a leak-free system. To prevent unwanted media from being drawn in, the supply and exhaust air must be ducted via a venting hole in the connection part 1.

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

- dust
- chippings
- oil
- grease
- fuel

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

Peripherals overview

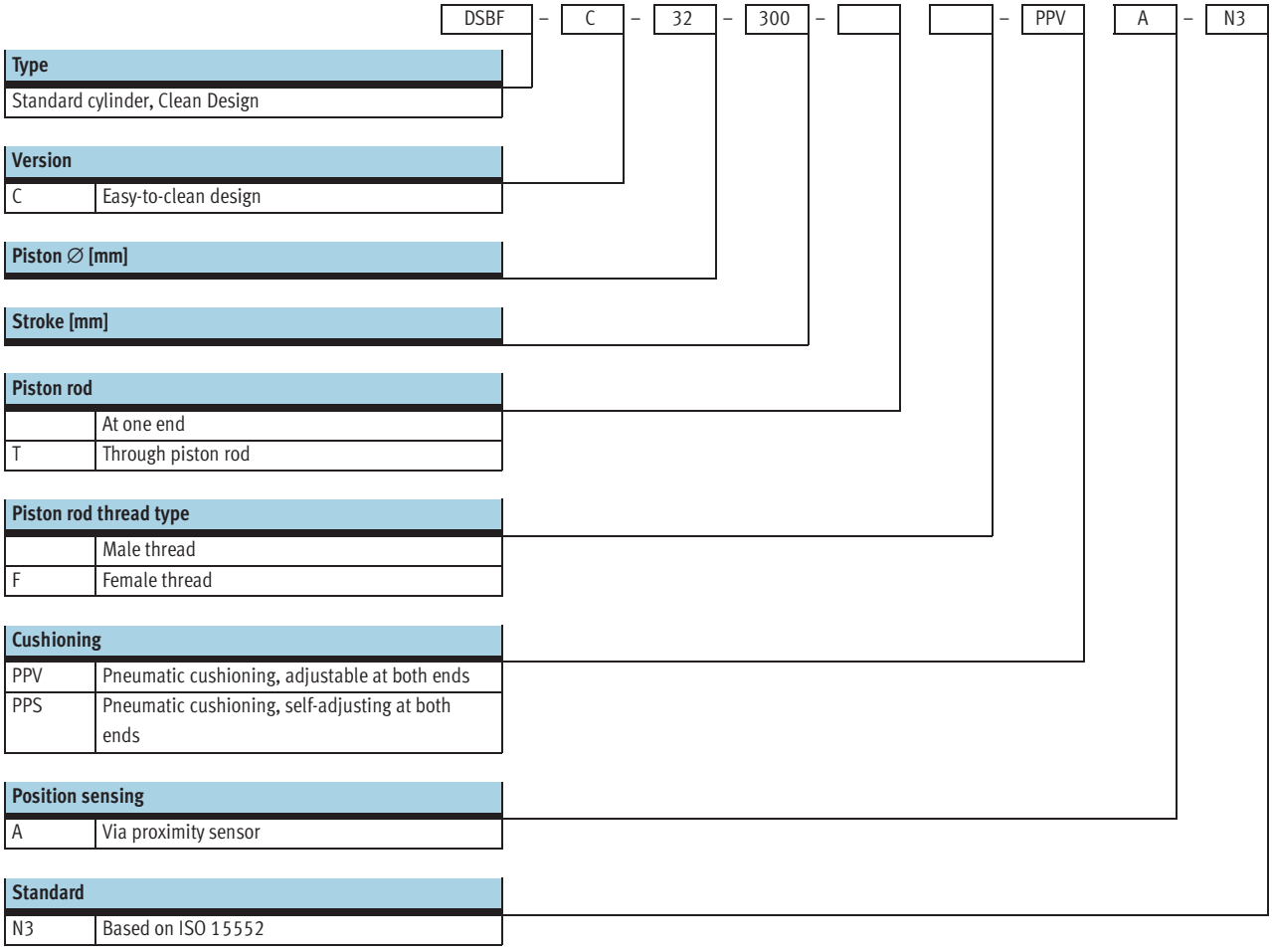


Mounting attachments and accessories		
	Brief description	**➔ Page/Internet**
1 Foot mounting CRHNC	For bearing and end caps	11
2 Flange mounting CRFNG	– For bearing or end caps – Cannot be used on the bearing cap in combination with bellows kit DADB	11
3 Trunnion flange CRZNG	– For bearing or end caps in combination with trunnion supports CRLNZG – Cannot be used on the bearing cap in combination with bellows kit DADB	12
4 Trunnion support CRLNZG	For swivel mounting CRZNG	12
5 Swivel flange SNCB- ... -R3	For end caps	13
6 Clevis foot CRLNG	For swivel flange SNCB- ... -R3	13
7 Rod clevis CRSG	Permits a swivelling movement of the cylinder in one plane	20
8 Rod eye CRSGS	With spherical bearing	20
9 Proximity sensor SMT-C1	For sensing the piston rod position	18
10 One-way flow control valve CRGRLA	For regulating speed	19
11 Push-in fitting QS-F/QSL-F/CRQS/CRQSL	For connecting compressed air tubing with standard O.D.	18
12 Blanking screw DAMD	For covering unused mounting threads	20
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)	14

New

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

Type codes



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

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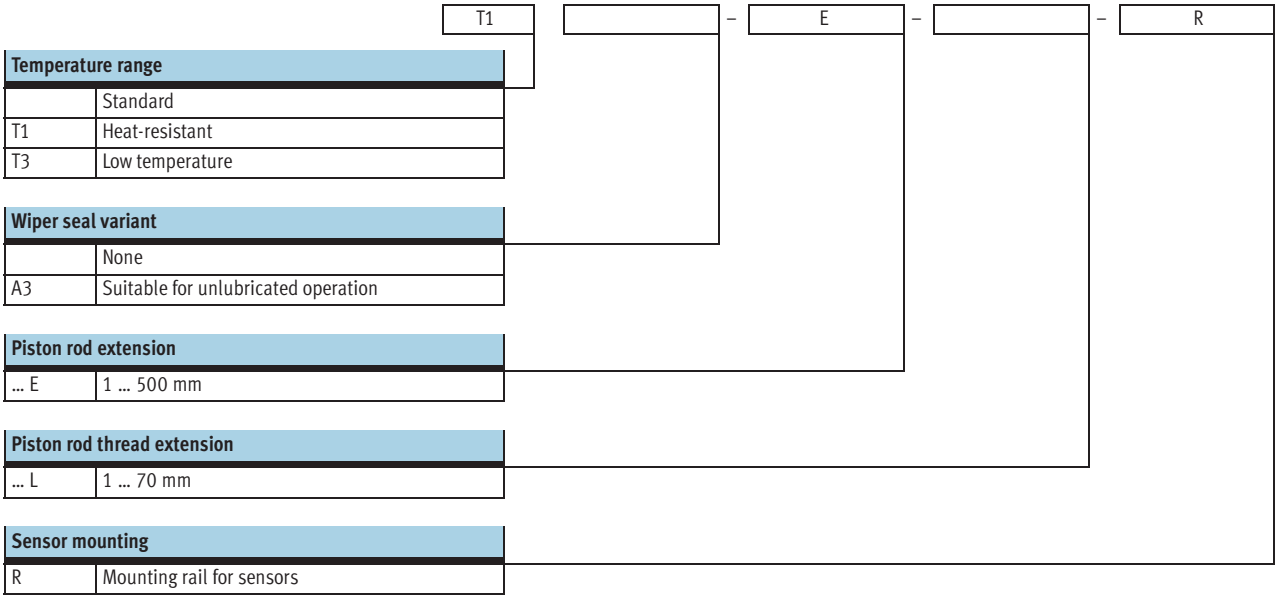
Type codes



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

New

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

Technical data

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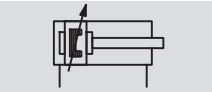
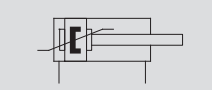
Function

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)

Diameter
32 ... 100 mm

Stroke length
1 ... 2,000 mm

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General technical data								
Piston ∅			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
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			
Operating medium			Dried compressed air, lubricated or unlubricated
Operating pressure		[bar]	0.6 ... 12
	T3	[bar]	1 ... 12
Ambient temperature[1]		[°C]	–20 ... +80
	T1	[°C]	0 ... +120
	T3	[°C]	–40 ... +80
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.

Forces [N] and impact energy [J]							
Piston ∅		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		0.4	0.7	1.0	1.3	1.8	2.5
in the end positions	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:

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

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

Technical data

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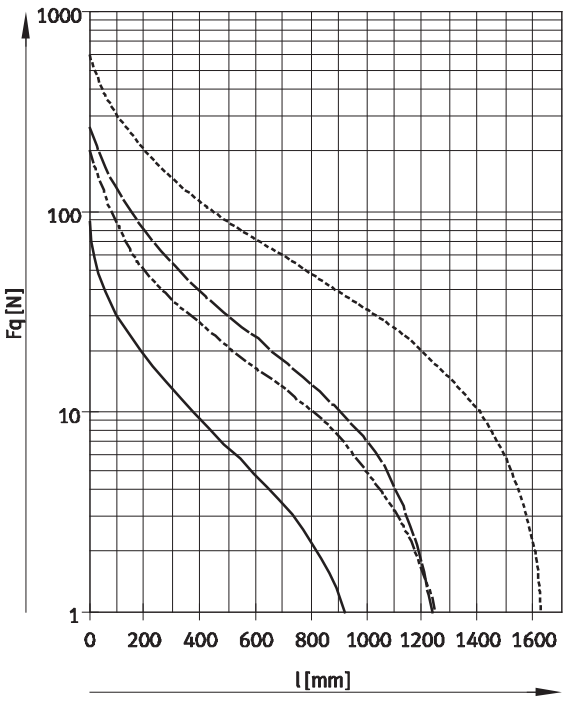
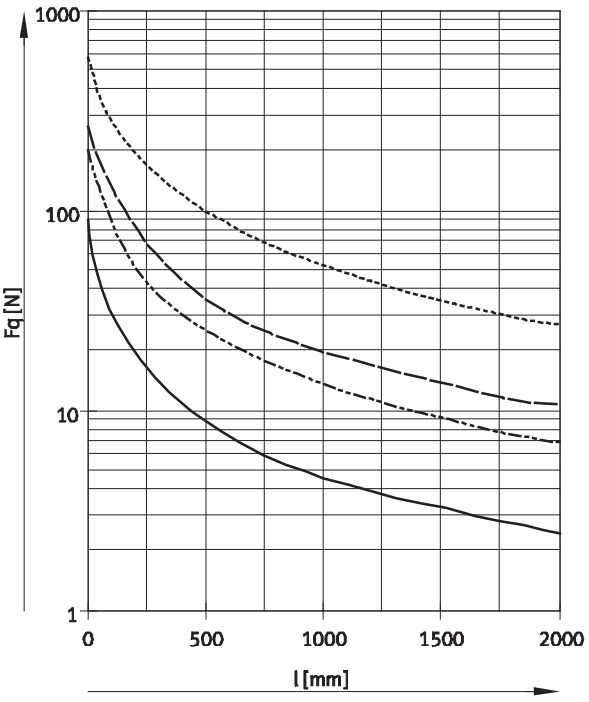
Max. lateral force Fq as a function of stroke length l

Horizontal mounting



Vertical mounting

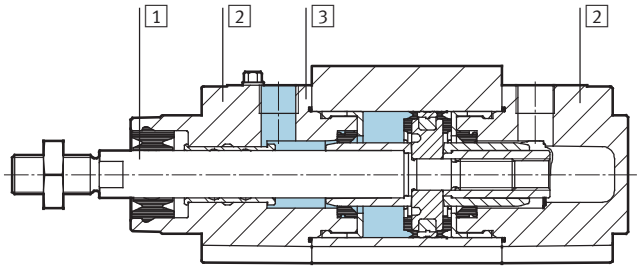


Weight [g]

Piston ∅	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
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)

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

Technical data

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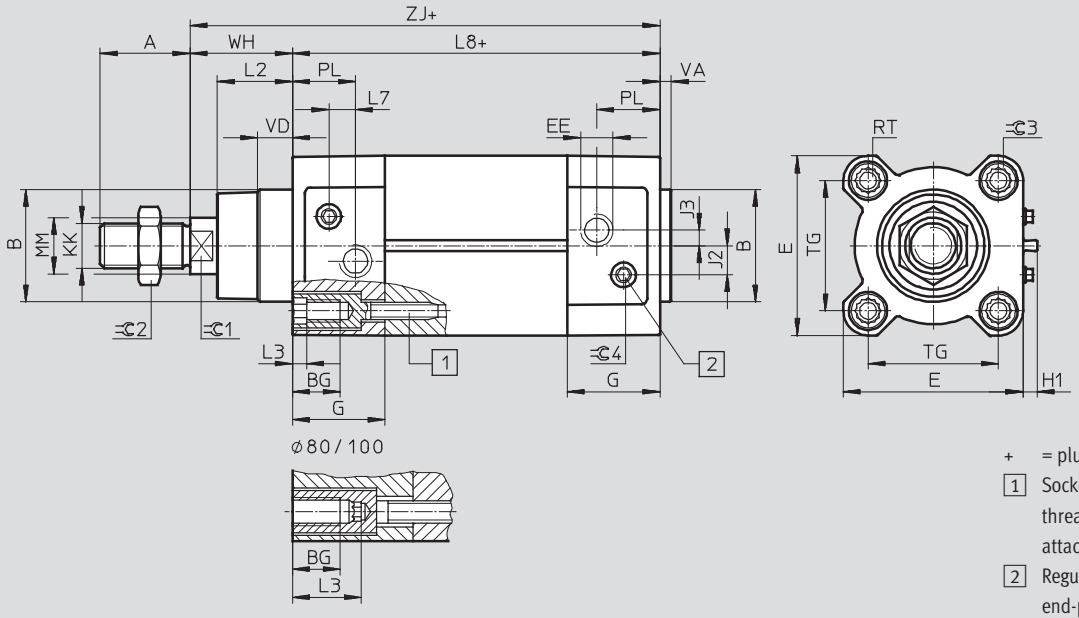
Dimensions Download CAD data ➔ **www.festo.com**

Basic version and A3 – Unlubricated operation



\+ = plus stroke length

1 Socket head screw with female thread for mounting attachments

2 Regulating screw for adjustable end-position cushioning

∅ [mm]	A −0.5	B ∅ d11	BG min.	E +0.5	EE	G −0.2	H1 ±0.2	J2 ±0.1	J3 ±0.1
32	22	30	16	45	G⅛	28	5	5.7	5.25
40	24	35	16	54	G¼	33	5	8	4
50	32	40	16	64	G¼	33	5	10.4	5.5
63	32	45	16	75	G⅜	40.5	5	12.75	6.25
80	40	45	17	93	G⅜	43	5	12.5	8
100	40	55	17	110	G½	48	5	13.5	10

∅ [mm]	KK	L2 −0.2	L3	L7	L8 ±0.4	MM ∅	PL ±0.1	RT	TG ±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	min. 24.5	11	128	25	30	M10	72
100	M20x1.5	38	min. 24.5	7.5	138	25	31.5	M10	89

∅ [mm]	VA −0.2	VD +0.5	WH +2.2	ZJ +1.8	=C1	=C2	=C3	=C4
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

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

Technical data

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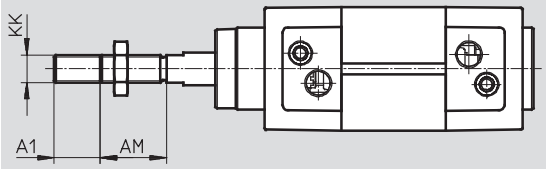
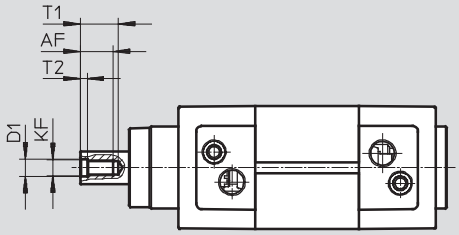
Dimensions – Variants Download CAD data ➔ **www.festo.com**

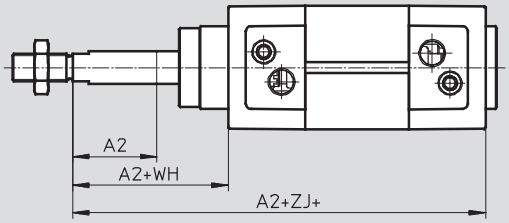
L – Piston rod thread extension



F – Piston rod with female thread

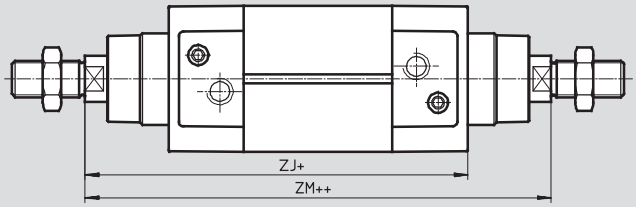


E – Piston rod extension



\+ = plus stroke length

T – Through piston rod



\+ = plus stroke length
++ = plus 2x stroke length

∅ [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

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

New

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

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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 ... 2,000							**-...**		
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							**-...E**		
	Piston rod thread extension [mm]	1 ... 35		1 ... 70					**-...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

Note

Cylinders with position sensing require a minimum stroke of 10 mm to ensure reliable sensing.

Transfer order code

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

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

Accessories

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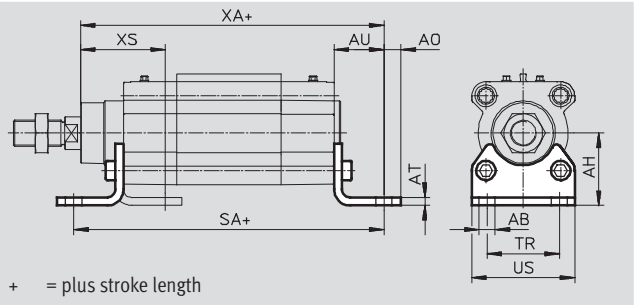
Foot mounting CRHNC

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



Dimensions and ordering data

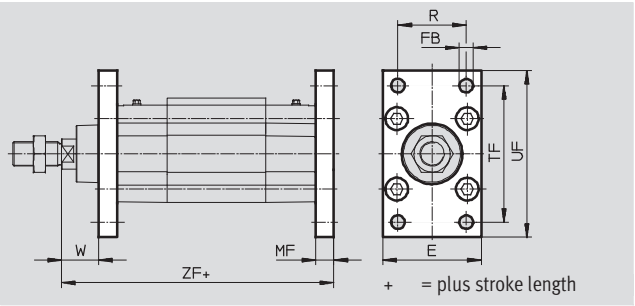
For ∅ [mm]	AB ∅	AH	AO	AT	AU	SA	TR	US	XA	XS	CRC[1]	Weight [g]	Part No.	Type
32	7	32	6.5	4	24	142	32	45	143.1	46	4	135	**176937**	**CRHNC-32**
40	10	36	9	4	28	161	36	54	161.9	52.7	4	180	**176938**	**CRHNC-40**
50	10	45	9.5	5	32	170	45	64	173.8	62.6	4	325	**176939**	**CRHNC-50**
63	10	50	12.5	5	32	185	50	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 ∅ [mm]	E	FB ∅	MF	R	TF	UF	W	ZF	CRC[1]	Weight [g]	Part No.	Type
32	45	7	10	32	64	80	16	129.1	4	240	**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	550	**161848**	**CRFNG-50**
63	75	9	12	50	100	120	23.9	169.1	4	710	**161849**	**CRFNG-63**
80	93	12	16	63	126	150	29.4	189.6	4	1,680	**161850**	**CRFNG-80**
100	110	14	16	75	150	175	33.3	203.5	4	2,450	**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.

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

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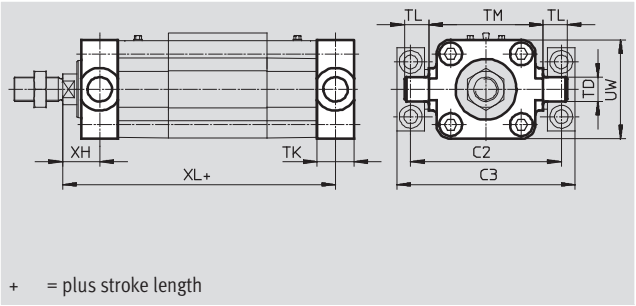
Accessories

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.



\+ = plus stroke length

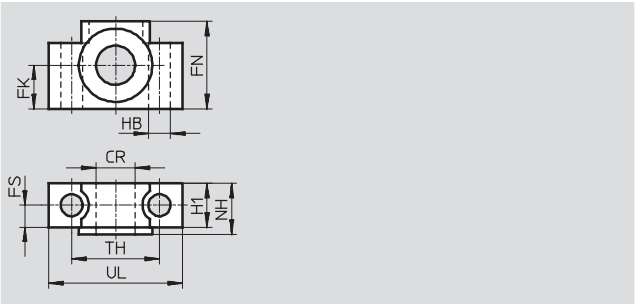
Dimensions and ordering data

For ∅ [mm]	C2	C3	TD ∅ e9	TK	TL	TM	UW	XH	XL	CRC[1]	Weight [g]	Part No.	Type
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 ∅ [mm]	CR ∅ D11	FK ∅ ±0.1	FN	FS	H1	HB ∅ H13	NH	TH ±0.2	UL	CRC[1]	Weight [g]	Part No.	Type
32	12	15	30	10.5	15	6.6	18	32	46	4	200	**161874**	**CRLNZG-32**
40, 50	16	18	36	12	18	9	21	36	55	4	330	**161875**	**CRLNZG-40/50**
63, 80	20	20	40	13	20	11	23	42	65	4	440	**161876**	**CRLNZG-63/80**
100	25	25	50	16	24.5	14	28.5	50	75	4	740	**161877**	**CRLNZG-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.

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

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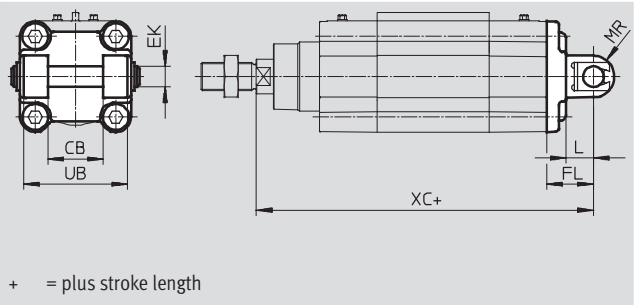
Accessories

Swivel flange SNCB- ... R3

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



\+ = plus stroke length

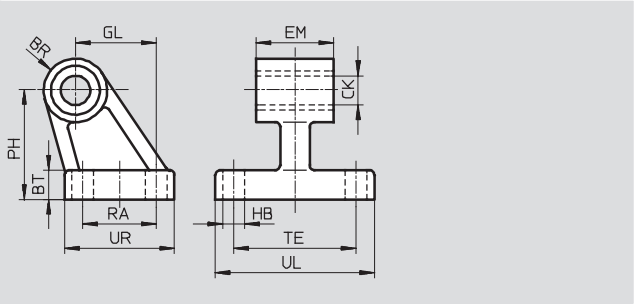
Dimensions and ordering data

For ∅ [mm]	CB H14	EK ∅ e8	FL ±0.2	L	MR	UB h14	XC	CRC[1]	Weight [g]	Part No.	Type
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	150	**176945**	**SNCB-40-R3**
50	32	12	27	16	12	60	168.8	3	225	**176946**	**SNCB-50-R3**
63	40	16	32	21	16	70	189.1	3	365	**176947**	**SNCB-63-R3**
80	50	16	36	22	16	90	209.6	3	610	**176948**	**SNCB-80-R3**
100	60	20	41	27	20	110	228.5	3	925	**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 ∅ [mm]	BR	BT	CK ∅ D11	EM –0.4	GL	HB ∅ H13	PH	RA	TE	UL	UR	CRC[1]	Weight [g]	Part No.	Type
32	10	8	10	25.8	21	6.6	32	18	38	51	31	4	120	**161840**	**CRLNG-32**
40	11	10	12	27.8	24	6.6	36	22	41	54	35	4	160	**161841**	**CRLNG-40**
50	12	12	12	31.8	33	9	45	30	50	65	45	4	280	**161842**	**CRLNG-50**
63	15	12	16	39.8	37	9	50	35	52	67	50	4	375	**161843**	**CRLNG-63**
80	15	14	16	49.8	47	11	63	40	66	86	60	4	580	**161844**	**CRLNG-80**
100	19	15	20	59.8	55	11	71	50	76	96	70	4	935	**161845**	**CRLNG-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.

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

Accessories

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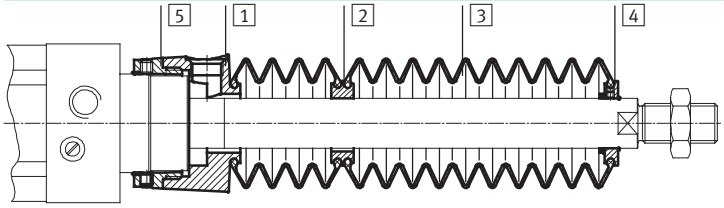
Bellows kit DADB

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- Stroke [mm]	32	40	50	63	80	100
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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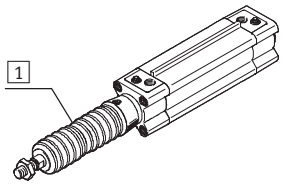
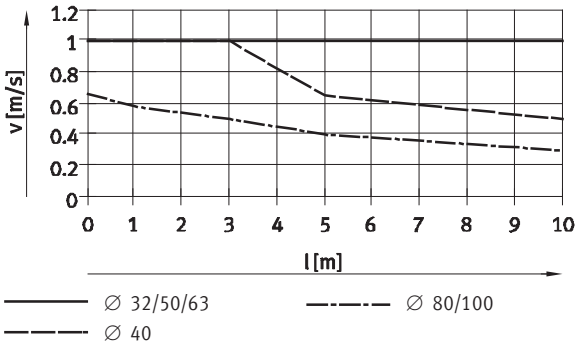
Speed of travel v as a function of tubing length l

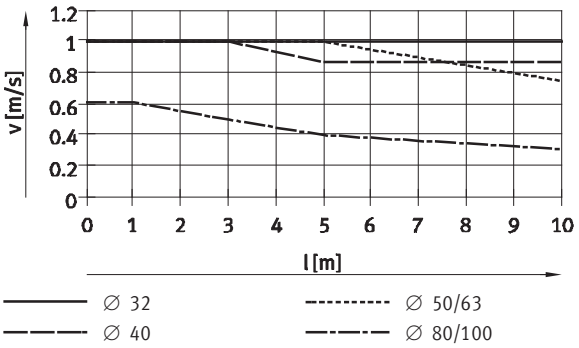


The bellows kit is a leak-free system. To prevent unwanted media from being drawn in, the supply and exhaust air must be ducted via a venting hole in the connection part 1. The pressure generated in the bellows kit by the positioning motion is primarily defined by speed of travel and tubing length. The 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

∅ [mm]	Tubing O.D. [mm]	Push-in fitting Part No.	Type
32, 40	8	**186109**	**QS-G⅛-8-I**
		533929	**QS-F-G⅛-8-I**
		533880	**QS-F-G⅛-8H**
50, 63, 80, 100	12	**186350**	**QS-G¼-12**
		533848	**QS-F-G¼-12**
		533884	**QS-F-G¼-12H**

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

Accessories

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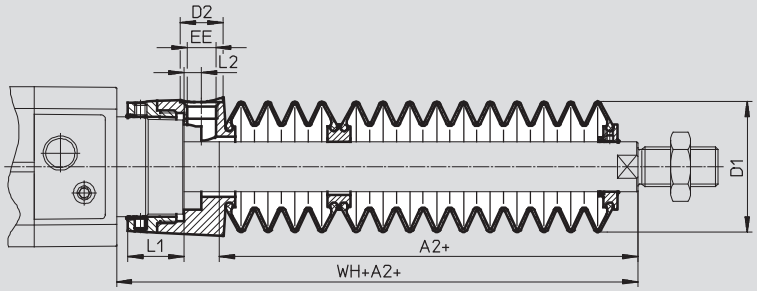
Dimensions Download CAD data ➔ **www.festo.com**



\+ = plus stroke length

∅	32							40						
Stroke [mm]	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	G⅛	12.9	5.4	55	28	46	14	G⅛	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

∅	50							63						
Stroke [mm]	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	G¼	22.35	7	63.6	28	57	17	G¼	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

∅	80							100						
Stroke [mm]	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	G¼	28	4	70.4	25	93	17	G¼	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

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Ordering data – Bellows kit

An extended piston rod (order code E) ➔ 10 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

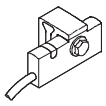
Cylinder data			Bellows kit		Cylinder data			Bellows kit	
∅ [mm]	Stroke [mm]	Dimension for E [mm]	Part No.	Type	∅ [mm]	Stroke [mm]	Dimension for E [mm]	Part No.	Type
32	10 ... 50	29	**553271**	**DADB-V6-32-S10-50**	40	10 ... 50	28	**553291**	**DADB-V6-40-S10-50**
	51 ... 125	47	**553273**	**DADB-V6-32-S51-125**		51 ... 125	43	**553293**	**DADB-V6-40-S51-125**
	126 ... 175	61	**553275**	**DADB-V6-32-S126-175**		126 ... 175	56	**553295**	**DADB-V6-40-S126-175**
	176 ... 250	80	**553277**	**DADB-V6-32-S176-250**		176 ... 250	72	**553297**	**DADB-V6-40-S176-250**
	251 ... 300	96	**553279**	**DADB-V6-32-S251-300**		251 ... 300	86	**553299**	**DADB-V6-40-S251-300**
	301 ... 350	112	**553281**	**DADB-V6-32-S301-350**		301 ... 350	100	**553301**	**DADB-V6-40-S301-350**
	351 ... 375	114	**553283**	**DADB-V6-32-S351-375**		351 ... 375	101	**553303**	**DADB-V6-40-S351-375**
	376 ... 425	130	**553285**	**DADB-V6-32-S376-425**		376 ... 425	115	**553305**	**DADB-V6-40-S376-425**
	426 ... 475	145	**553287**	**DADB-V6-32-S426-475**		426 ... 475	130	**553307**	**DADB-V6-40-S426-475**
	476 ... 500	147	**553289**	**DADB-V6-32-S476-500**		476 ... 500	131	**553309**	**DADB-V6-40-S476-500**
50	10 ... 50	28	**553311**	**DADB-V6-50-S10-50**	63	10 ... 50	28	**553331**	**DADB-V6-63-S10-50**
	51 ... 125	46	**553313**	**DADB-V6-50-S51-125**		51 ... 125	46	**553333**	**DADB-V6-63-S51-125**
	126 ... 175	56	**553315**	**DADB-V6-50-S126-175**		126 ... 175	56	**553335**	**DADB-V6-63-S126-175**
	176 ... 250	73	**553317**	**DADB-V6-50-S176-250**		176 ... 250	73	**553337**	**DADB-V6-63-S176-250**
	251 ... 300	86	**553319**	**DADB-V6-50-S251-300**		251 ... 300	86	**553339**	**DADB-V6-63-S251-300**
	301 ... 350	97	**553321**	**DADB-V6-50-S301-350**		301 ... 350	97	**553341**	**DADB-V6-63-S301-350**
	351 ... 375	105	**553323**	**DADB-V6-50-S351-375**		351 ... 375	105	**553343**	**DADB-V6-63-S351-375**
	376 ... 425	116	**553325**	**DADB-V6-50-S376-425**		376 ... 425	116	**553345**	**DADB-V6-63-S376-425**
	426 ... 475	126	**553327**	**DADB-V6-50-S426-475**		426 ... 475	126	**553347**	**DADB-V6-63-S426-475**
	476 ... 500	134	**553329**	**DADB-V6-50-S476-500**		476 ... 500	134	**553349**	**DADB-V6-63-S476-500**
80	10 ... 50	25	**553351**	**DADB-V6-80-S10-50**	100	10 ... 50	25	**553371**	**DADB-V6-100-S10-50**
	51 ... 125	37	**553353**	**DADB-V6-80-S51-125**		51 ... 125	37	**553373**	**DADB-V6-100-S51-125**
	126 ... 175	49	**553355**	**DADB-V6-80-S126-175**		126 ... 175	49	**553375**	**DADB-V6-100-S126-175**
	176 ... 250	62	**553357**	**DADB-V6-80-S176-250**		176 ... 250	62	**553377**	**DADB-V6-100-S176-250**
	251 ... 300	74	**553359**	**DADB-V6-80-S251-300**		251 ... 300	74	**553379**	**DADB-V6-100-S251-300**
	301 ... 350	86	**553361**	**DADB-V6-80-S301-350**		301 ... 350	86	**553381**	**DADB-V6-100-S301-350**
	351 ... 375	87	**553363**	**DADB-V6-80-S351-375**		351 ... 375	87	**553383**	**DADB-V6-100-S351-375**
	376 ... 425	98	**553365**	**DADB-V6-80-S376-425**		376 ... 425	98	**553385**	**DADB-V6-100-S376-425**
	426 ... 475	110	**553367**	**DADB-V6-80-S426-475**		426 ... 475	110	**553387**	**DADB-V6-100-S426-475**
	476 ... 500	111	**553369**	**DADB-V6-80-S476-500**		476 ... 500	111	**553389**	**DADB-V6-100-S476-500**

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

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						
	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

FESTO

Ordering data – Push-in L-fittings — Technical data ➔ Internet: quick star

	Connection		Material	Weight	Part No.	Type	PU[3]
	Thread	Tubing O.D.		[g]			
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: crgrla

	Connection		Material	Weight	Part No.	Type
	Thread	For push-in fitting		[g]		
	G1/8	CRQS/CRQSL/CRQST, Quick Star	Electrolytically polished stainless steel casting	44	**161404**	**CRGRLA-1/8-B**
	G1/4			83	**161405**	**CRGRLA-1/4-B**
	G3/8			150	**161406**	**CRGRLA-3/8-B**
	G1/2			315	**161407**	**CRGRLA-1/2-B**

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

Accessories

FESTO

Ordering data – Blanking screws, corrosion-resistant

	For ∅	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 ∅	Part No.	Type
Rod eye CRSGS			
	32	**195582**	**CRSGS-M10x1,25**
	40	**195583**	**CRSGS-M12x1,25**
	50, 63	**195584**	**CRSGS-M16x1,5**
	80, 100	**195585**	**CRSGS-M20x1,5**

	For ∅	Part No.	Type
Rod clevis CRSG			
	32	**13569**	**CRSG-M10x1,25**
	40	**13570**	**CRSG-M12x1,25**
	50, 63	**13571**	**CRSG-M16x1,5**
	80, 100	**13572**	**CRSG-M20x1,5**