Stainless-steel cylinders

FESTO



Key features

Their applications

Reliable components need to be fully functional and operational, even in harsh operating conditions. The aim is to maximise availability of machinery while minimising downtimes. Stainless-steel cylinders are therefore used in applications where the surface finish of normal pneumatic drives would not be able to withstand the surrounding media. However, designing a corrosion-resistant system involves more than simply selecting a suitable steel: it also requires the selection of a matching concept for mounting components and accessories.

Sample application:
The atmosphere in the maturing cellar of a cheese factory consists of an unpleasant mix of ammonia, lactic acid and 98% humidity.

Our strength

Festo's stainless-steel cylinders are characterised by resistant materials, such as 1.4301 and 1.4401. These popular high-alloy, stainless austenitic chrome-nickel and chrome-nickel-molybdenum steels protect against chemical or electrochemical stress as well as damage to the surface materials caused by cleaning agents or disinfectants. These groups of materials are particularly resistant to uniform surface corrosion and offer increased protection against pitting and crevice corrosion.

The benefits to you

Festo's worldwide service network ensures optimum availability of stainless-steel cylinders. As well as a comprehensive range of standards-based cylinders to DIN ISO 15552 and 6432, we also offer a range of matching mounting components and accessories. The stainless-steel cylinders are assembled with grease that is compliant with NSF-H1 and wipers in accordance with BGVV (Federal Institute for Risk Assessment) guidelines. This means that they are suitable for use in the food area. We will be pleased to provide you with further information about future additions to our stainless-steel range. Just get in touch with us.

Good to know

Our many years of experience in the area of stainless steel are invaluable when you are investigating solutions for harsh environments. Our experts will answer any questions you might have about surface finishes and chemical resistance.

Key features

Resistance

Complete resistance to pitting and crevice corrosion is not always possible, even with ideal application parameters. The following parameters increase the pitting effect of chloride ions:

- Concentration of chloride ions
- Duration of contact
- Temperature
- Decreasing pH value

It must therefore be ensured during design, assembly and operation that all parts of the machinery can be properly cleaned to avoid an accumulation of chloride ions.

Selected sealing materials ensure very high resistance to a wide range of chemical compounds.
Further information on media resistance can be obtained on the Internet at www.festo.com.

In principle, we recommend that the cylinder be cleaned with the piston rod in the retracted position to avoid the risk of washing out the lifetime lubrication.

Various types of machinery contamination make cleaning processes necessary in many industry sectors. The degree of cleaning required ranges from wiping the machinery with a dry cloth to wet cleaning to foam cleaning with different exposure times and concentrations.

It is therefore impossible to make a general recommendation on compatibility.

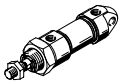
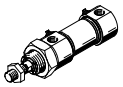
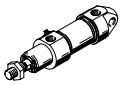
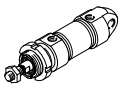
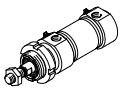
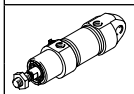
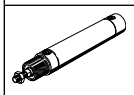
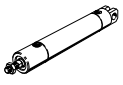
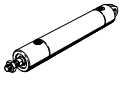
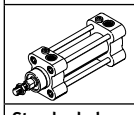
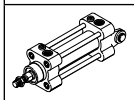


Wet cleaning



Foam cleaning

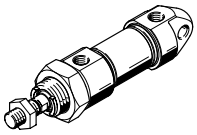
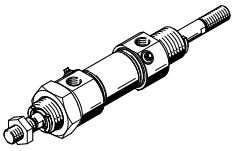
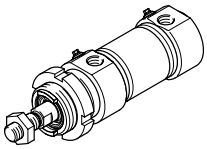
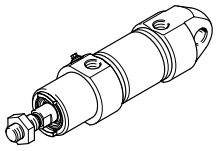
Product range overview

Function	Design	Type	Piston ⌀	Stroke	Piston rod				
					Through	Extended	Male thread		Female thread
							Extended	Custom thread	
			[mm]	[mm]	S2	K8	K2	K5	K3
Double-acting	**Standards-based cylinders to ISO 6432**								
		**CRDSNU** Piston rod at one end	12, 16	1 ... 200	■	■	■	■ From diam. 25	■ From diam. 20
			20	1 ... 320					
			25	1 ... 500					
		**CRDSNU-MQ** Short end cap without swivel mounting	12, 16	1 ... 200	–	■	■	■ From diam. 25	■ From diam.
			20	1 ... 320					
			25	1 ... 500					
		**CRDSNU-MG** Bearing cap without mounting thread	12, 16	1 ... 200	–	■	■	■ From diam. 25	■ From diam. 20
			20	1 ... 320					
			25	1 ... 500					
		CRDSNU-B-MG Bearing cap without mounting thread (stocked parts)	16	10, 25, 40, 50, 80, 100, 125, 160, 200	–	–	–	–	–
			20, 25	10, 25, 40, 50, 80, 100, 125, 160, 200					
	Round cylinders								
		**CRDSNU** Piston rod at one end	32, 40, 50, 63	1 ... 500	■	■	■	■	■
			80, 100	1 ... 500	■	■	■	■	■
		**CRDSNU-MQ** Short end cap without swivel mounting	32, 40, 50, 63	1 ... 500	–	■	■	■	■
			80, 100	1 ... 500	–	■	■	■	■
		**CRDSNU-MG** Bearing cap without mounting thread	32, 40, 50, 63	1 ... 500	–	■	■	■	■
			80, 100	80, 100	–	■	■	■	■
		CRDSNU-B-MG Bearing cap without mounting thread (stocked parts)	32, 40	10, 25, 40, 50, 80, 100, 125, 160, 200	–	–	–	–	–
		**CRHD-MQ** Bearing cap with male thread	32, 40, 50, 63, 80, 100	10 ... 500 Special lengths on request	–	–	–	–	–
		**CRHD-MC** End cap with clevis	32, 40, 50, 63, 80, 100	10 ... 500 Special lengths on request	–	–	–	–	–
		**CRHD-MS** End cap with lug	32, 40, 50, 63, 80, 100	10 ... 500 Special lengths on request	–	–	–	–	–
	Standards-based cylinders to ISO 15552 (ISO 6431 and VDMA 24562)								
		**CRDNG** Piston rod at one end	32, 40, 50, 63, 80, 100, 125	10 ... 2000	■	–	–	–	–
	Standards-based cylinders with swivel bearing at rear to ISO 15552 (ISO 6431 and VDMA 24562)								
		**CRDNGS** Piston rod at one end	32, 40, 50, 63, 80, 100, 125	10 ... 2000	–	–	–	–	–

Product range overview

Type	Position sensing	Cushioning			Wiper variant			Heat-resistant seal	Low temperature	EU certification	→ Page/ Internet
		Fixed	Adjustable	Self-adjusting	Increased chem. resistance	Hard wiper	Unlubricated operation				
	A	P	PPV	PPS	A1	A2	A3	S6	TT	EX4	
Standards-based cylinders to ISO 6432											
CRDSNU Piston rod at one end	■	■	■ From diam. 20	■ From diam. 16	■	■	■	■	■ From diam. 16	■	6
CRDSNU-MQ Short end cap without swivel mounting	■	■	■ From diam. 20	■ From diam. 20	■	■	■	■	■ From diam. 16	■	6
CRDSNU-MG Bearing cap without mounting thread	■	■	■ From diam. 20	■ From diam.	■	–	■	■	–	■	6
CRDSNU-B-MG Bearing cap without mounting thread (stocked parts)	■	■ –	–	– ■	■	–	–	–	–	■	
Round cylinders											
CRDSNU Piston rod at one end	■	■	■	■	■	■	■	■	■	■	19
	■	■	■	■	■	–	■	–	–	–	
CRDSNU-MQ Short end cap without swivel mounting	■	■	■	■	■	■	■	■	■	■	19
	■	■	■	■	■	–	■	–	–	–	
CRDSNU-MG Bearing cap without mounting thread	■	■	■	■	■	–	■	■	–	■	19
	■	■	■	■	■	–	■	–	–	–	
CRDSNU-B-MG Bearing cap without mounting thread (stocked parts)	■	–	–	■	■	–	–	–	–	■	
CRHD-MQ Bearing cap with male thread	■	–	■	–	–	–	–	■	–	–	32
CRHD-MC End cap with clevis	■	–	■	–	–	–	–	■	–	–	32
CRHD-MS End cap with lug	■	–	■	–	–	–	–	■	–	–	32
Standards-based cylinders to ISO 15552 (ISO 6431 and VDMA 24562)											
CRDNG Piston rod at one end	■	–	■	–	–	–	–	■	–	–	40
Standards-based cylinders with swivel bearing at rear to ISO 15552 (ISO 6431 and VDMA 24562)											
CRDNGS Piston rod at one end	■	–	■	–	–	–	–	■	–	–	40

Key features

Variants			
CRDSNU Basic version	CRDSNU-S2: Through piston rod	CRDSNU-MQ: Short end cap without swivel mounting	CRDSNU-MG/CRDSNU-B-MG: Bearing cap without mounting thread
			

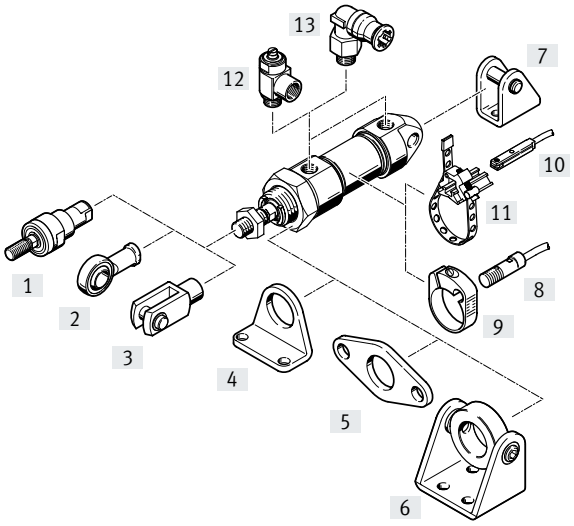
Further variants

Symbol	Key features	Description
	S2 Through piston rod	For working at both ends, equal force in the forward and return stroke, for attaching external stops
	S6 Heat-resistant seal	Temperature resistance up to max. 120°C
	K2 Extended male piston rod thread	–
	K3 Female piston rod thread	–
	K5 Custom piston rod thread	Metric standard thread to ISO
	K8 Extended piston rod	–
	A1 Wiper variant	Increased chemical resistance: Wiper made from fluoro rubber
	A2 Wiper variant	Hard wiper: Cylinder with hard wiper seal for dust, particles and viscous media
	A3 Wiper variant	Unlubricated operation: Cleaning processes degrease the piston rod. A special piston rod seal permits a longer service life compared to the standard seal.
	TT Low temperature	Temperature resistance down to max. –40°C

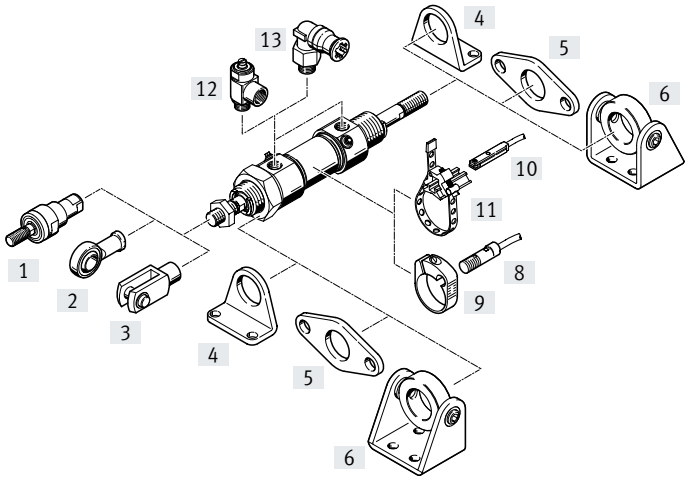
Cushioning types			
	Cushioning P	Cushioning PPS	Cushioning PPV
Mode of operation	• The drive is equipped with polymer flexible end-position cushioning	• The drive is equipped with self-adjusting end-position cushioning	• The drive is equipped with adjustable end-position cushioning
Application	• Small loads • Low speeds • Low impact energies	• Small to medium loads • Low to medium speeds • Medium impact energies	• Medium to high loads • High speeds • High impact energies
Advantages	• No adjustment required • Saves time	• No adjustment required • Saves time • Powerful	• Very powerful

Peripherals overview

CRDSNU-...



CRDSNU-...-S2



Mounting attachments and accessories

		Description	CRDSNU-				CRDSNU-B	→ Page/ Internet
			Basic version	MQ	MG	S2	MG	
[1]	Self-aligning rod coupler CRFK	To compensate for radial and angular deviations	■	■	■	■	■	56
[2]	Rod eye CRSGS	With spherical bearing	■	■	■	■	■	56
[3]	Rod clevis CRSG	Permits a swivelling movement of the cylinder in one plane	■	■	■	■	■	56
[4]	Foot mounting CRHBN	• For bearing caps • With CRDSNU-S2 for bearing and end caps	■	■	–	■	–	48
[5]	Flange mounting CRFBN	• For bearing caps • With CRDSNU-S2 for bearing and end caps	■	■	–	■	–	50
[6]	Swivel mounting CRSBN	• For bearing caps • With CRDSNU-S2 for bearing and end caps	■	■	–	■	–	48
[7]	Clevis foot CRLBN	For end caps	■	–	■	–	■	53
[8]	Proximity switch CRSMEO-4	• Round design • For position sensing	■	■	■	■	■	56
[9]	Mounting kit CRSMBR	For proximity switches CRSMEO-4	■	■	■	■	■	57
[10]	Proximity switch CRSMT-8M	• Design for T-slot • For position sensing	■	■	■	■	■	56
[11]	Mounting kit SMBR	For proximity switches CRSMT-8	■	■	■	■	■	57
[12]	One-way flow control valve CRGRLA	For regulating speed	■	■	■	■	■	57
[13]	Push-in fitting CRQS	For connecting tubing with standard O.D.	■	■	■	■	■	qs

Type codes

001	Series	
CRDSNU	Round cylinder, double-acting, stainless steel	

002	Piston diameter [mm]	
12	12	
16	16	
20	20	
25	25	

003	Stroke range [mm]	
...	1 ... 500	

004	Cushioning	
P	Elastic cushioning rings/plates on both sides	
PPS	Pneumatic cushioning, self-adjusting at both ends	
PPV	Pneumatic cushioning, adjustable at both ends	

005	Position sensing	
A	For proximity sensor	

006	Cylinder end cap	
	Standard	
MQ	Short end cap without swivel mounting	
MG	Bearing cap without mounting thread	

007	Scraper variant	
	None	
A1	Increased chemical resistance	
A2	Hard scraper	
A3	For unlubricated operation	

008	Piston rod type	
	At one end	
S2	Through piston rod	

009	Piston rod thread type	
	Male thread	
K3	Female thread	

010	Custom thread	
“M10”K5	M10	

011	Piston rod extension	
	None	
...K8	1 ... 500 mm	

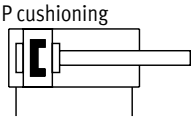
012	Temperature resistance	
	Standard	
S6	Heat-resistant seals max. 120 °C	

013	Temperature range	
	Standard	
TT	-40 ... +80°C	

014	EU certification	
	None	
EX4	II 2GD	

Data sheet

P cushioning



- Diameter
  12 ... 25 mm
- Stroke length
  1 ... 500 mm
  Longer strokes on request
- Spare parts service



General technical data						
Piston ø			12	16	20	25
Pneumatic connection			M5	M5	G1/8	G1/8
Piston rod thread			M6	M6	M8	M10x1.25
Design			Piston			
			Piston rod			
			Cylinder barrel			
Cushioning	P		Elastic cushioning rings/pads at both ends			
	PPV		–		Cushioning, adjustable at both ends	
	PPS		–	Cushioning, self-adjusting at both ends		
Cushioning length	PPV	[mm]	–		15	17
	PPS	[mm]	–	12	15	17
Position sensing			Via proximity switch			
Type of mounting			With accessories			
			With male thread			
Mounting position			Any			

Operating conditions		
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Note on the operating/ pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)
Operating pressure[1]	[MPa]	0.1 ... 1
	[bar]	1 ... 10
	[psi]	14.5 ... 145
Food-safe[2]		→ Supplementary material information

1) An increase in the minimum operating pressure is possible with variants
2) Additional information www.festo.com/sp → Certificates.

Environmental conditions					
Standards-based cylinders		Basic type/A3	A1	TT	S6
Ambient temperature[1]	[°C]	–20 ... +80	0 ... +80	–40 ... +80	0 ... +120
Corrosion resistance class CRC[2]		3			

1) Note operating range of proximity switches
2) Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

Data sheet

ATEX[1]	
ATEX category for gas	II 2G
Type of ignition protection for gas	Ex h IIC T4 Gb
ATEX category for dust	II 2D
Type of ignition protection for dust	Ex h IIIC T120°C Db
Explosion-proof ambient temperature	–20°C <= Ta <= +60°C
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)

1) Note the ATEX certification of the accessories.

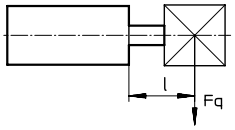
Forces [N] and impact energy [J]				
Piston ø	12	16	20	25
Theoretical force at 0.6 MPa (6 bar, 87 psi), advancing	68	121	188	295
Theoretical force at 0.6 MPa (6 bar, 87 psi), retracting	51	104	158	247
Impact energy in the end positions for P cushioning[1]	0.07	0.15	0.20	0.30

1) The values are reduced by approx. 50% at an ambient temperature of 80°C

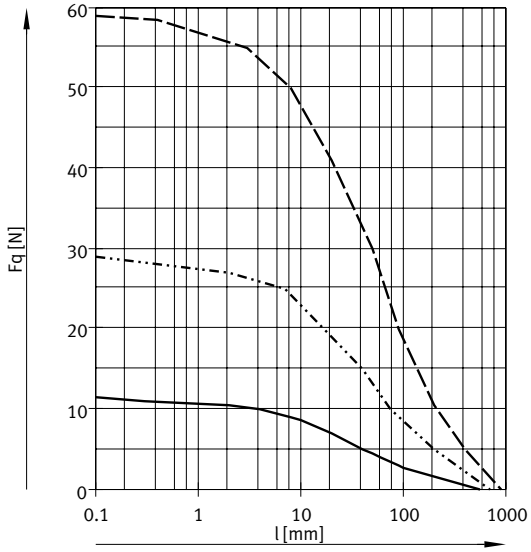
Weight [g]				
Piston ø	12	16	20	25
Basic weight with 0 mm stroke	101	130	310	410
Additional weight per 10 mm stroke	4	5	7	11
Moving mass with 0 mm stroke	19	21	42	73
Add. moving mass per 10 mm stroke	2	2	4	6

Data sheet

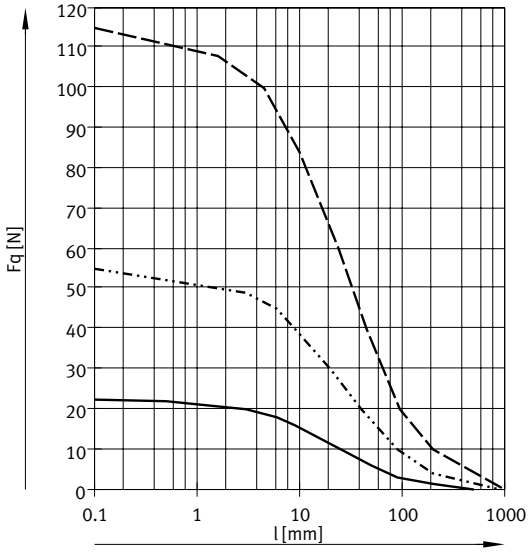
Max. transverse force Fq as a function of projection l



Basic version



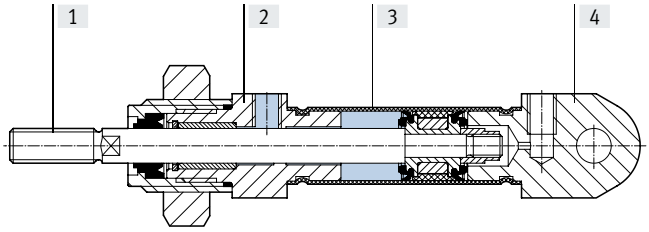
S2 – Through piston rod



DSNU-12/16
DSNU-20
DSNU-25

Materials

Sectional view



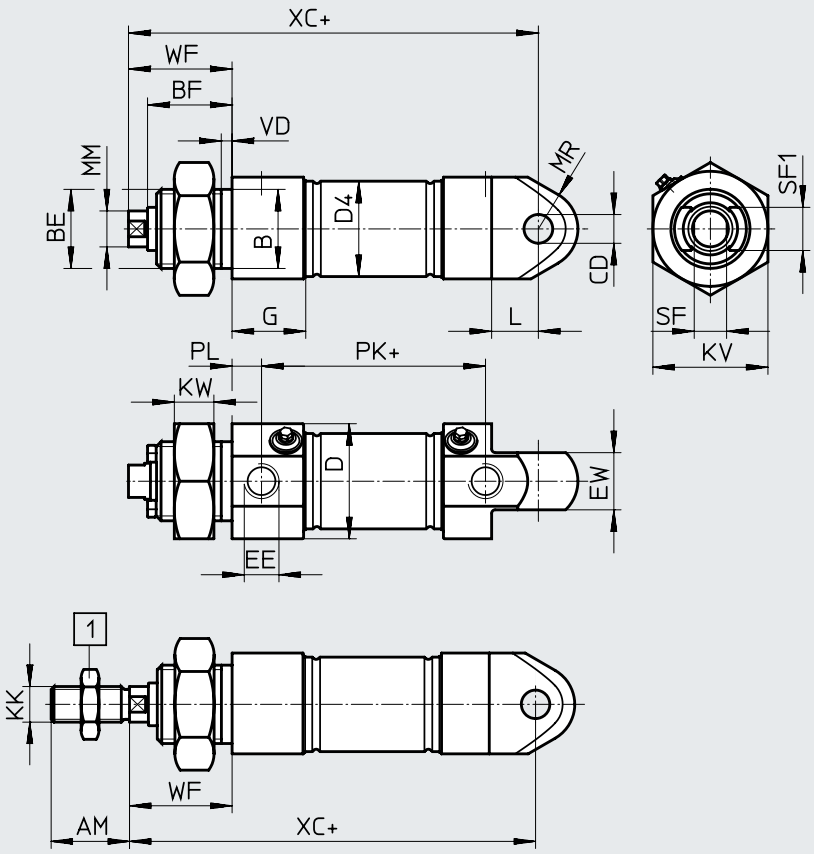
Standards-based cylinders		Basic version	A1	A3	TT	S6
[1]	Piston rod	High-alloy stainless steel				
[2]	Bearing cap	High-alloy stainless steel				
[3]	Cylinder barrel	High-alloy stainless steel				
[4]	End cap	High-alloy stainless steel				
–	Seals	TPE-U (PUR) media seal (modified for resistance to hydrolysis and cleaning)	FPM	UHMW-PE	TPE-U (PUR) (suitable for low temperatures)	FPM
	Note on materials	RoHS-compliant				
		–		Contains paint-wetting impairment substances		–
	PWIS conformity	VDMA24364-B2-L				
Maritime classification[1)]		See certificate				

1) Additional information www.festo.com/sp → Certificates

Data sheet

Dimensions Download CAD data ➔ www.festo.com

Basic version



Note

[1] Piston rod nut is not included in the scope of delivery for diameter 8 ... 20.

\+ = plus stroke length

ø [mm]	AM	B ø h9	BE	BF	CD ø H8	D ø	D4 ø
12	16	16	M16x1.5	18	6	20	13.3
16	16	16	M16x1.5	18	6	20	17.3
20	20	22	M22x1.5	20.7	8	30	21.3
25	22	22	M22x1.5	23.5	8	32	26.5

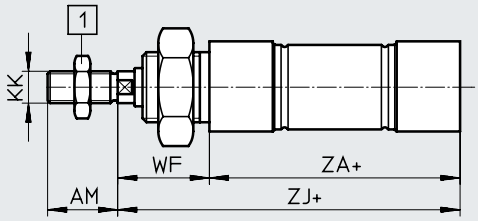
ø [mm]	EE	EW	G	KK	KV	KW	L	MM ø
12	M5	12	9.5	M6	24	8	10	6
16	M5	12	9.7	M6	24	8	10	6
20	G1/8	16	20.5	M8	32	11	13	8
25	G1/8	16	20.5	M10x1.25	32	11	13	10

ø [mm]	MR	PL	SF	SF1	VD	WF	XC ±1
12	8	6	5	9	3.5	22	75
16	8	6	5	9	3.5	22	82
20	11	8.2	7	12	3.5	24	95
25	11	8.2	9	12	3.5	28	104

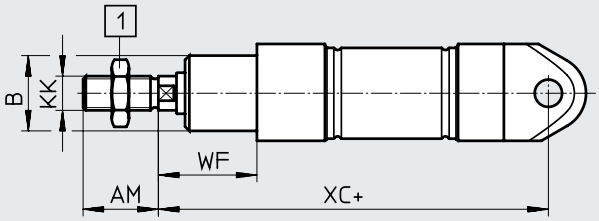
Data sheet

Dimensions Download CAD data ➔ www.festo.com

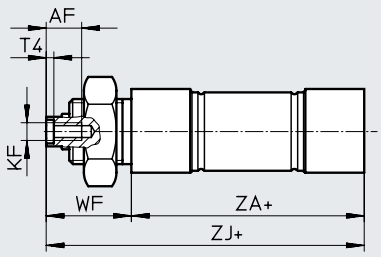
MQ – Short end cap without swivel mounting



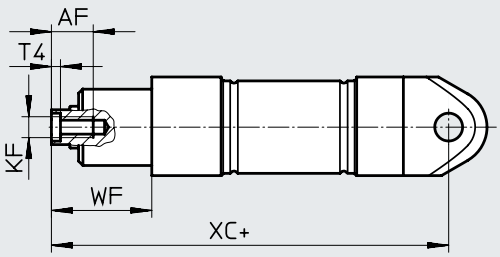
MG – Bearing cap without mounting thread



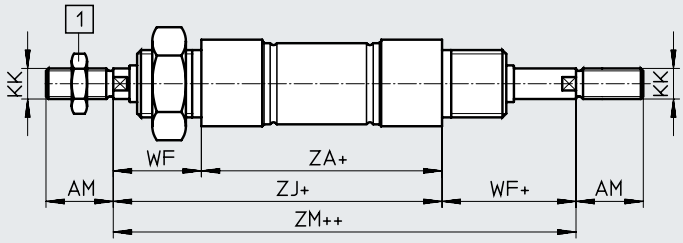
MQ-K3 – Short end cap without swivel mounting, with female piston rod thread



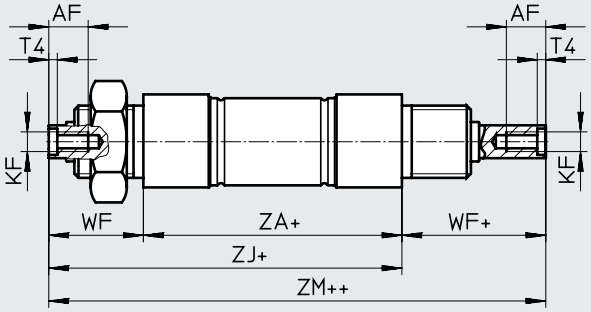
MG-K3 – Bearing cap without mounting thread, with female piston rod thread



S2 – Through piston rod



S2-K3 – Through piston rod, with female thread



Note

[1] Piston rod nut is not included in the scope of delivery for diameter 8 ... 20.

\+ = plus stroke length

++ = plus 2x stroke length

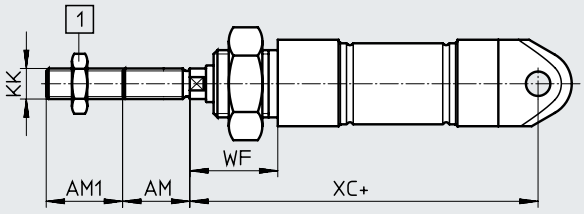
ø [mm]	AF	AM	B ø h9	KF	KK
12	–	16	16	–	M6
16	–	16	16	–	M6
20	12	20	22	M4	M8
25	12	22	22	M6	M10x1.25

ø [mm]	T4	WF	XC ±1	ZA	ZJ	ZM
12	–	22	75	50	72	95
16	–	22	82	56	78	101
20	2	24	95	68	92	117
25	2.6	28	104	69.5	97.5	126

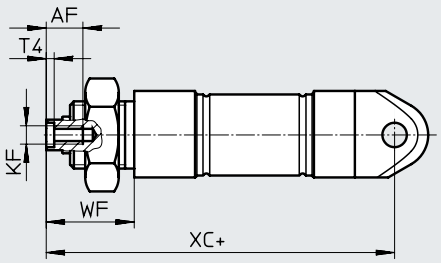
Data sheet

Dimensions Download CAD data ➔ www.festo.com

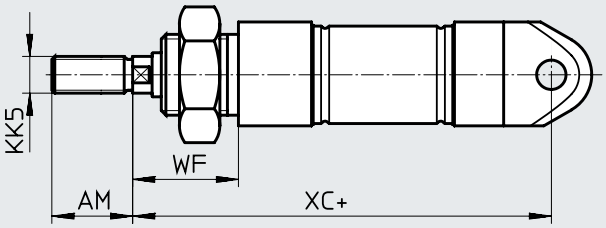
K2 – Extended male piston rod thread



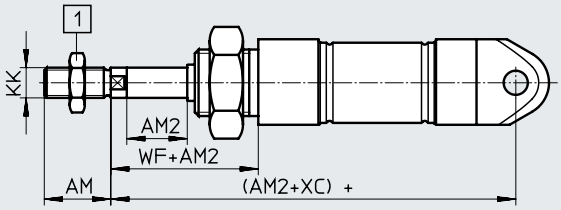
K3 – Female piston rod thread



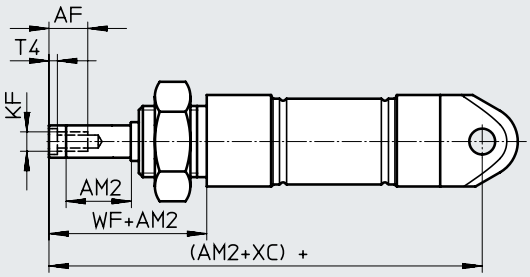
K5 – Custom piston rod thread



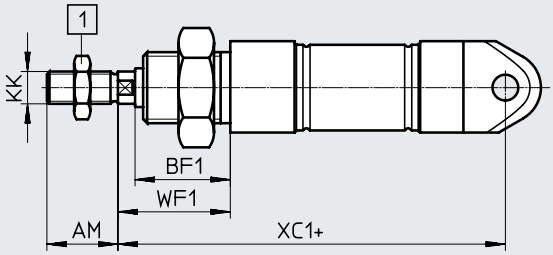
K8 – Extended piston rod



K3-K8 – Extended piston rod, with female thread



TT – Low temperature / A2 – Hard wiper



Note

[1] Piston rod nut is not included in the scope of delivery for diameter 8 ... 20.

\+ = plus stroke length

Data sheet

ø [mm]	AF	AM	AM1 max.	AM2 max.
12	–	16	1 ... 20	1 ... 100
16	–	16	1 ... 20	1 ... 100
20	12	20	1 ... 25	1 ... 100
25	12	22	1 ... 35	1 ... 100

ø [mm]	BF1	KF	KK	KK5
12	24	–	M6	–
16	24	–	M6	–
20	26.7	M4	M8	–
25	29.5	M6	M10x1.25	M10

ø [mm]	T4	WF	WF1	XC ±1	XC1 ±1
12	–	22	28	75	81
16	–	22	28	82	88
20	2	24	30	95	101
25	2.6	28	34	104	110

Ordering data

Ordering data

Type	Piston ø	Stroke	P – Elastic cushioning rings/plates A – With position sensing	
	[mm]	[mm]	Part no.	Type
	12	10	**8152524**	**CRDSNU-12-10-P-A**
		25	**8152525**	**CRDSNU-12-25-P-A**
		40	**8152526**	**CRDSNU-12-40-P-A**
		50	**8152527**	**CRDSNU-12-50-P-A**
		80	**8152528**	**CRDSNU-12-80-P-A**
		100	**8152529**	**CRDSNU-12-100-P-A**
	16	10	**8152548**	**CRDSNU-16-10-P-A**
		15	**8152549**	**CRDSNU-16-15-P-A**
		20	**8152550**	**CRDSNU-16-20-P-A**
		25	**8152551**	**CRDSNU-16-25-P-A**
		40	**8152552**	**CRDSNU-16-40-P-A**
		50	**8152553**	**CRDSNU-16-50-P-A**
		80	**8152554**	**CRDSNU-16-80-P-A**
		100	**8152555**	**CRDSNU-16-100-P-A**
	20	10	**8152557**	**CRDSNU-20-10-P-A**
		15	**8152558**	**CRDSNU-20-15-P-A**
		20	**8152559**	**CRDSNU-20-20-P-A**
		25	**8152560**	**CRDSNU-20-25-P-A**
		40	**8152561**	**CRDSNU-20-40-P-A**
		50	**8152562**	**CRDSNU-20-50-P-A**
		80	**8152563**	**CRDSNU-20-80-P-A**
		100	**8152564**	**CRDSNU-20-100-P-A**
	25	10	**8152627**	**CRDSNU-25-10-P-A**
		15	**8152628**	**CRDSNU-25-15-P-A**
		20	**8152629**	**CRDSNU-25-20-P-A**
		25	**8152630**	**CRDSNU-25-25-P-A**
		40	**8152631**	**CRDSNU-25-40-P-A**
		50	**8152632**	**CRDSNU-25-50-P-A**
		80	**8152633**	**CRDSNU-25-80-P-A**
		100	**8152634**	**CRDSNU-25-100-P-A**

Ordering data

Ordering data – Stocked parts

P – Elastic cushioning rings/plates
PPS – Pneumatic cushioning, self-adjusting at both ends
A – With position sensing
MG – Bearing cap without mounting thread
A1 – Wiper variant: increased chemical resistance

Type	Piston ⌀ [mm]	Stroke [mm]	Part no.	Type
	16	10	**8073759**	**CRDSNU-B-16-10-P-A-MG-A1**
		25	**8073760**	**CRDSNU-B-16-25-P-A-MG-A1**
		40	**8073761**	**CRDSNU-B-16-40-P-A-MG-A1**
		50	**8073762**	**CRDSNU-B-16-50-P-A-MG-A1**
		80	**8073763**	**CRDSNU-B-16-80-P-A-MG-A1**
		100	**8073764**	**CRDSNU-B-16-100-P-A-MG-A1**
		125	**8073765**	**CRDSNU-B-16-125-P-A-MG-A1**
		160	**8073766**	**CRDSNU-B-16-160-P-A-MG-A1**
		200	**8073767**	**CRDSNU-B-16-200-P-A-MG-A1**
	20	10	**8073980**	**CRDSNU-B-20-10-PPS-A-MG-A1**
		25	**8073979**	**CRDSNU-B-20-25-PPS-A-MG-A1**
		40	**8073978**	**CRDSNU-B-20-40-PPS-A-MG-A1**
		50	**8073977**	**CRDSNU-B-20-50-PPS-A-MG-A1**
		80	**8073976**	**CRDSNU-B-20-80-PPS-A-MG-A1**
		100	**8073975**	**CRDSNU-B-20-100-PPS-A-MG-A1**
		125	**8073974**	**CRDSNU-B-20-125-PPS-A-MG-A1**
		160	**8073973**	**CRDSNU-B-20-160-PPS-A-MG-A1**
		200	**8073972**	**CRDSNU-B-20-200-PPS-A-MG-A1**
	25	10	**2159636**	**CRDSNU-B-25-10-PPS-A-MG-A1**
		25	**2159637**	**CRDSNU-B-25-25-PPS-A-MG-A1**
		40	**2159638**	**CRDSNU-B-25-40-PPS-A-MG-A1**
		50	**2159639**	**CRDSNU-B-25-50-PPS-A-MG-A1**
		80	**2159640**	**CRDSNU-B-25-80-PPS-A-MG-A1**
		100	**2159641**	**CRDSNU-B-25-100-PPS-A-MG-A1**
		125	**2159642**	**CRDSNU-B-25-125-PPS-A-MG-A1**
		160	**2159643**	**CRDSNU-B-25-160-PPS-A-MG-A1**
		200	**2159644**	**CRDSNU-B-25-200-PPS-A-MG-A1**

Note

The bearing cap on stocked parts is made of one piece.
When ordered using the modular product system, the bearing cap is made of two pieces, which makes it possible to exchange the wiper in the event of a repair.

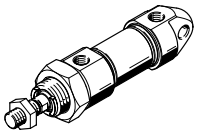
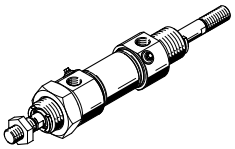
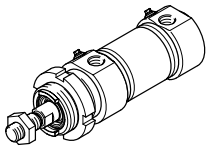
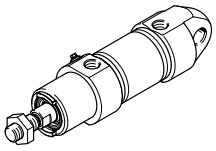
Ordering data

Ordering table – Modular product system

Size		12	16	20	25	Conditions	Code		Enter code
Module no.		**552787**	**552788**	**552789**	**552790**				
Design		Stainless steel					**CR**		CR
Function		Standards-based cylinder, double-acting, to ISO 6432					**DSNU**		DSNU
Piston ø	[mm]	12	16	20	25		**-...**		
Stroke	[mm]	1 ... 200		1 ... 320	1 ... 500	[1]	**-...**		
Cushioning		Elastic cushioning rings/pads at both ends				[10]	**-P**		
		–	Pneumatic cushioning, self-adjusting			[2] [8]	**-PPS**		
		–	–	Pneumatic cushioning, adjustable at both ends			**-PPV**		
Position sensing		Via proximity switch					**-A**		-A
Cylinder cap		Short end cap without swivel mounting					**-MQ**		
		Bearing cap without mounting thread					**-MG**		
Wiper variant		Increased chemical resistance				[2]	**-A1**		
		Hard wiper				[2] [3] [9]	**-A2**		
		Unlubricated operation				[2]	**-A3**		
Piston rod		Through piston rod				[3] [4]	**-S2**		
Extended male thread		Extended male piston rod thread							
	[mm]	1 ... 20		1 ... 25	1 ... 35		**-...K2**		
Female thread		Piston rod with female thread							
		–	–	(M4)	(M6)	[5]	**-K3**		
Custom thread		Custom thread on the piston rod							
		–	–	–	M10		**-"..."K5**		
Extended piston rod	[mm]	1 ... 100					**-...K8**		
Temperature resistance		Heat-resistant seal up to max. 120°C					**-S6**		
Low temperature		–	Seals and lubricating grease from –40°C ... +80°C			[3] [6] [9]	**-TT**		
EU certification		II 2GD				[7]	**-EX4**		

[1] -... Longer strokes on request
[2] PPS, A1, A2, A3 Not with S6, TT
[3] A2, S2, TT Not with MG
[4] S2 Not with MQ
[5] K3 Not with K2, K5
[6] TT Not with S6
[7] EX4 Not with S6, TT
[8] PPS Not with MQ for piston ø 16
[9] A2, TT Not with S2, K3
[10] P Not with B except for piston ø 16

Key features

Variants			
CRDSNU Basic version	CRDSNU-S2: Through piston rod	CRDSNU-MQ: Short end cap without swivel mounting	CRDSNU-MG: Bearing cap without mounting thread
			

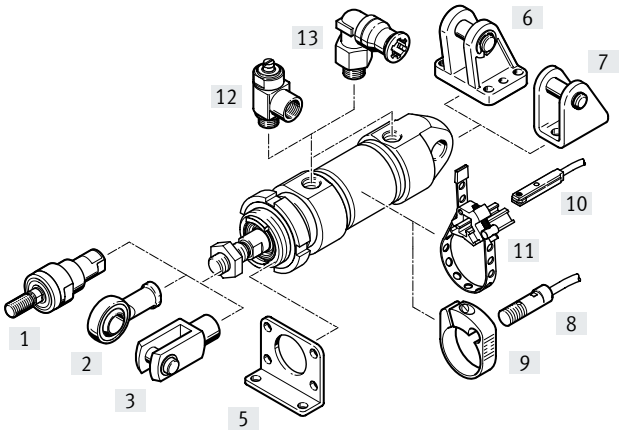
Further variants

Symbol	Key features	Description
	S2 Through piston rod	For working at both ends, equal force in the forward and return stroke, for attaching external stops
	S6 Heat-resistant seal	Temperature resistance up to max. 120°C
	K2 Extended male piston rod thread	–
	K3 Female piston rod thread	–
	K5 Custom piston rod thread	Metric standard thread to ISO
	K8 Extended piston rod	–
	A1 Wiper variant	Increased chemical resistance
	A2 Wiper variant	Hard wiper: Cylinder with hard
	A3 Wiper variant	Unlubricated operation: Cleaning processes degrease the piston rod. A special piston rod seal permits a longer service life compared to the standard seal.
	TT Low temperature	Temperature resistance down to max. –40°C

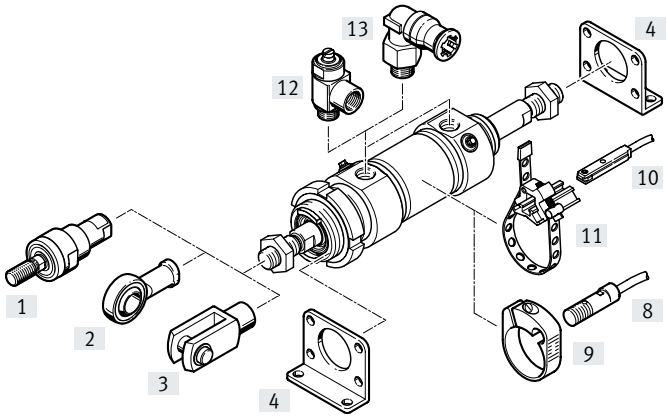
Cushioning types			
	Cushioning P	Cushioning PPS	Cushioning PPV
Mode of operation	• The drive is equipped with polymer flexible end-position cushioning	• The drive is equipped with self-adjusting end-position cushioning	• The drive is equipped with adjustable end-position cushioning
Application	• Small loads • Low speeds • Low impact energies	• Small to medium loads • Low to medium speeds • Medium impact energies	• Medium to high loads • High speeds • High impact energies
Advantages	• No adjustment required • Saves time	• No adjustment required • Saves time • Powerful	• Very powerful

Peripherals overview

CRDSNU-...



CRDSNU-...-S2



Mounting attachments and accessories

		Description	CRDSNU- Basic version	MQ	MG	S2	→ Page/ Internet
[1]	Self-aligning rod coupler CRFK	To compensate for radial and angular deviations	■	■	■	■	56
[2]	Rod eye CRSGS	With spherical bearing	■	■	■	■	56
[3]	Rod clevis CRSG	Permits a swivelling movement of the cylinder in one plane	■	■	■	■	56
[4]	Foot mounting CRH	• 2 included in the scope of delivery • With CRDSNU-S2 for bearing and end caps	–	–	–	■	49
[5]	Flange mounting CRFV	• 1 included in the scope of delivery • For bearing caps	■	■	–	–	50
[6]	Clevis foot CRLBN	For end caps	■	–	■	–	53
[7]	Clevis foot LBG	For end caps	■	–	■	–	54
[8]	Proximity switch CRSMEO-4	• Round design • For position sensing	■	■	■	■	56
[9]	Mounting kit CRSMBR	For proximity switches CRSMEO-4	■	■	■	■	57
[10]	Proximity switch CRSMT-8M	• Design for T-slot • For position sensing	■	■	■	■	56
[11]	Mounting kit SMBR	For proximity switches CRSMT-8	■	■	■	■	57
[12]	One-way flow control valve CRGRLA	For regulating speed	■	■	■	■	57
[13]	Push-in fitting CRQS	For connecting tubing with standard O.D.	■	■	■	■	qs

Type codes

001	Series	
CRDSNU	Round cylinder, double-acting, stainless steel	

002	Piston diameter	
32	32	
40	40	
50	50	
63	63	
80	80	
100	100	

003	Stroke	
...	1 ... 500	

004	Cushioning	
P	Elastic cushioning rings/plates on both sides	
PPS	Pneumatic cushioning, self-adjusting at both ends	
PPV	Pneumatic cushioning, adjustable at both ends	

005	Position sensing	
A	For proximity sensor	

006	Cylinder end cap	
	Standard	
MQ	Short end cap without swivel mounting	
MG	Bearing cap without mounting thread	

007	Scraper variant	
	None	
A1	Increased chemical resistance	
A2	Hard scraper	
A3	For unlubricated operation	

008	Piston rod type	
	At one end	
S2	Through piston rod	

009	Piston rod thread extension	
	None	
...K2	1 ... 70 mm	

010	Piston rod thread type	
	Male thread	
K3	Female thread	

011	Custom thread	
“M10”K5	M10	
“M12”K5	M12	
“M16”K5	M16	
“M20”K5	M20	

012	Piston rod extension	
	None	
...K8	1 ... 500 mm	

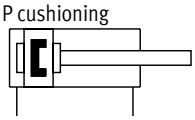
013	Temperature resistance	
	Standard	
S6	Heat-resistant seals max. 120 °C	

014	Temperature range	
	Standard	
TT	-40 ... +80°C	

015	EU certification	
	None	
EX4	II 2GD	

Data sheet

P cushioning



- Diameter
  32 ... 100 mm
- Stroke length
  1 ... 500 mm
  Longer strokes on request
- Spare parts service



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					
			Cylinder barrel					
Cushioning	P		Elastic cushioning rings/pads at both ends					
	PPV		Cushioning, adjustable at both ends					
	PPS		Cushioning, self-adjusting at both ends					
Cushioning length	PPV	[mm]	14	18	20	21	31	31
	PPS	[mm]	14	18	20	21	31	31
Position sensing			Via proximity switch					
Type of mounting			With accessories					
			With male thread					
Mounting position			Any					

Operating conditions		
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Note on the operating/ pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)
Operating pressure[1]	[MPa]	0.1 ... 1
	[bar]	1 ... 10
	[psi]	14.5 ... 145
Food-safe[2]		→ Supplementary material information

1) An increase in the minimum operating pressure is possible with variants
2) Additional information www.festo.com/sp → Certificates.

Environmental conditions					
Standards-based cylinders		Basic type/A3	A1	TT	S6
Ambient temperature[1]	[°C]	–20 ... +80	0 ... +80	–40 ... +80	0 ... +120
Corrosion resistance class CRC					
ø 32 ... 63		3[2]			
ø 80 ... 100		4[3]			

1) Note operating range of proximity switches
2) Corrosion resistance class CRC 3 to Festo standard FN 940070
   High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.
3) Corrosion resistance class CRC 4 to Festo standard FN 940070
   Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Data sheet

ATEX[1]	
ATEX category for gas	II 2G
Type of ignition protection for gas	Ex h IIC T4 Gb
ATEX category for dust	II 2D
Type of ignition protection for dust	Ex h IIIC T120°C Db
Explosion-proof ambient temperature	–20°C <= Ta <= +60°C
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)

1) Note the ATEX certification of the accessories.

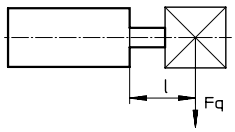
Forces [N] and impact energy [J]						
Piston ø	32	40	50	63	80	100
Theoretical force at 0.6 MPa (6 bar, 87 psi), advancing	483	754	1178	1870	3016	4712
Theoretical force at 0.6 MPa (6 bar, 87 psi), retracting	415	633	990	1682	2721	4418
Impact energy in the end positions for P cushioning[1]	0.4	0.7	1.0	1.3	1.8	2.5

1) The values are reduced by approx. 50% at an ambient temperature of 80°C

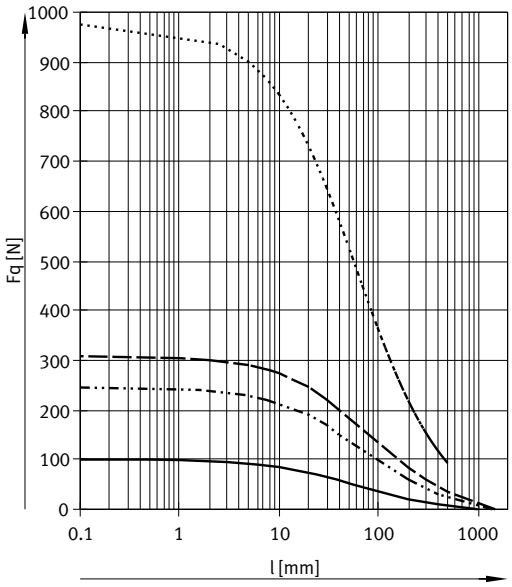
Weight [g]						
Piston ø	32	40	50	63	80	100
Basic weight with 0 mm stroke	670	1327	2020	2943	5891	8527
Additional weight per 10 mm stroke	15	24	40	44	68	75
Moving mass with 0 mm stroke	118	232	416	472	860	1018
Add. moving mass per 10 mm stroke	9	16	25	25	39	39

Data sheet

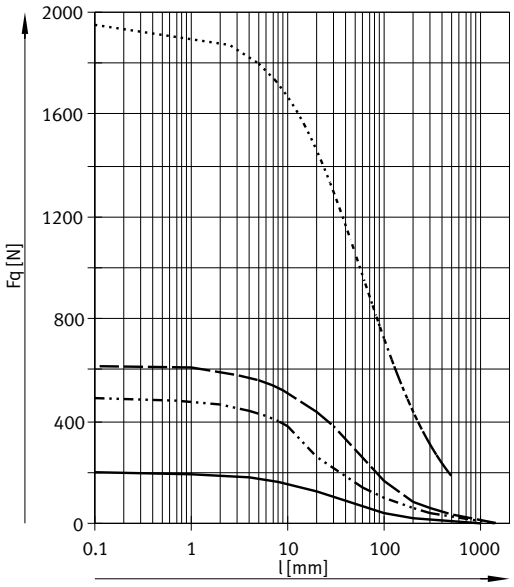
Max. transverse force Fq as a function of projection l



Basic version



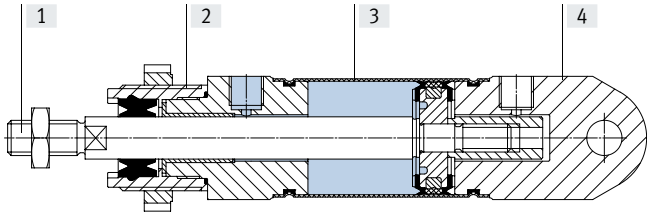
S2 – Through piston rod



DSNU-32
DSNU-40
DSNU-50/63
DSNU-80/100

Materials

Sectional view

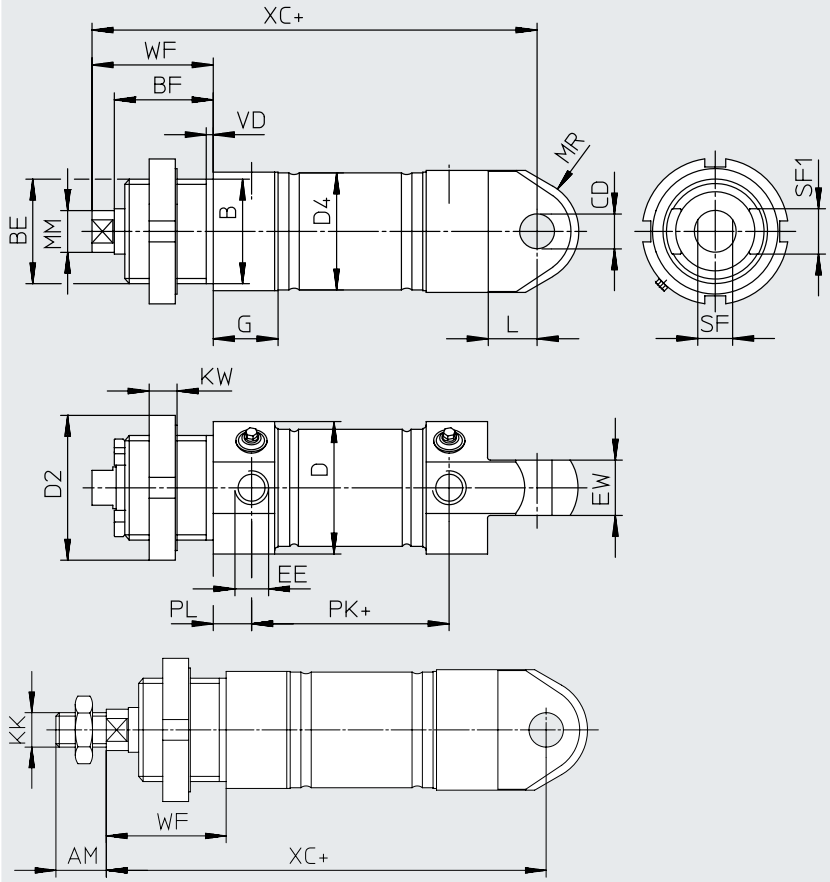


Standards-based cylinders		Basic version	A1	A3	TT	S6
[1]	Piston rod	High-alloy stainless steel				
[2]	Bearing cap	High-alloy stainless steel				
[3]	Cylinder barrel	High-alloy stainless steel				
[4]	End cap	High-alloy stainless steel				
–	Seals	TPE-U (PUR) media seal (modified for resistance to hydrolysis and cleaning)	FPM	UHMW-PE	TPE-U (PUR) (suitable for low temperatures)	FPM
	Note on materials	RoHS-compliant				
		–		Contains paint-wetting impairment substances		–
	PWIS conformity	VDMA24364-B2-L				

Data sheet

Dimensions Download CAD data ➔ www.festo.com

Basic version



\+ = plus stroke length

ø [mm]	AM	B ø h9	BE	BF	CD ø H8	D ø	D2 ø	D4 ø
32	22	30	M30x1.5	28.4	10	38	42	33.6
40	24	38	M38x1.5	32	12	49	50	41.6
50	32	45	M45x1.5	36.4	16	57	60	52.4
63	32	45	M45x1.5	36.4	16	70	60	65.4
80	40	50	M50x2	42.2	20	88	75	82.8
100	40	50	M50x2	42.2	20	108	75	102.8

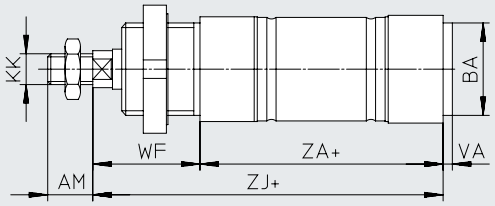
ø [mm]	EE	EW	G	KK	KW	L	MM ø
32	G1/8	16	18.6	M10x1.25	8	14	12
40	G1/4	18	24.7	M12x1.25	10	16	16
50	G1/4	21	24.4	M16x1.5	10	17	20
63	G3/8	21	27.4	M16x1.5	10	17	20
80	G3/8	35	32.4	M20x1.5	13	22	25
100	G1/2	35	32.4	M20x1.5	13	22	25

ø [mm]	MR	PL	SF	SF1	VD	WF	XC ±1
32	15	9	10	13	4.3	34	118
40	19	12	13	18	4.3	39	140
50	22.5	12	17	22	4.3	44	147
63	22.5	13	17	22	4.3	44	156
80	30	16	22	22	4.5	50	193
100	36	16	22	22	4.5	50	196

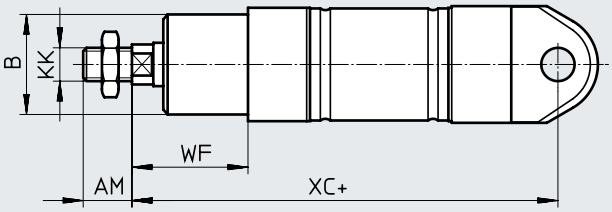
Data sheet

Dimensions Download CAD data ➔ www.festo.com

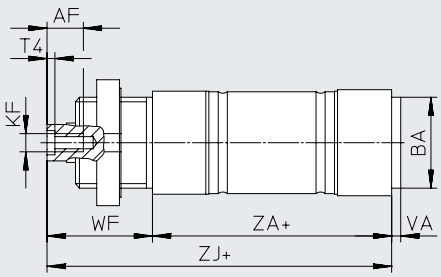
MQ – Short end cap without swivel mounting



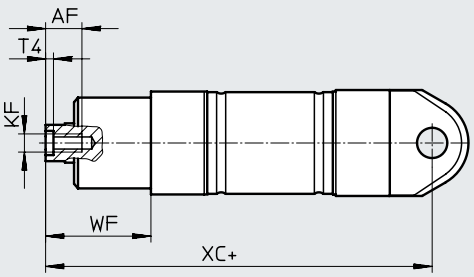
MG – Bearing cap without mounting thread



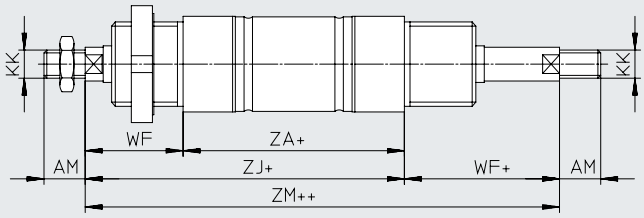
MQ-K3 – Short end cap without swivel mounting, with female piston rod thread



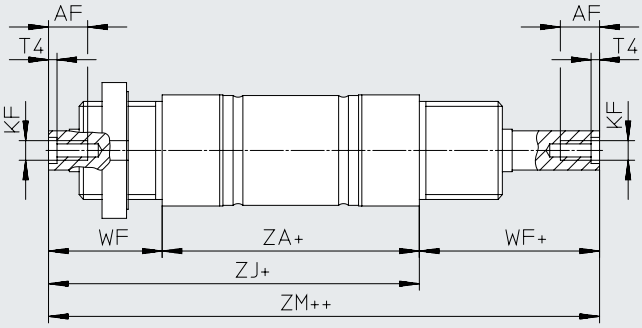
MG-K3 – Bearing cap without mounting thread, with female piston rod thread



S2 – Through piston rod



S2-K3 – Through piston rod, with female thread



\+ = plus stroke length

++ = plus 2x stroke length

Data sheet

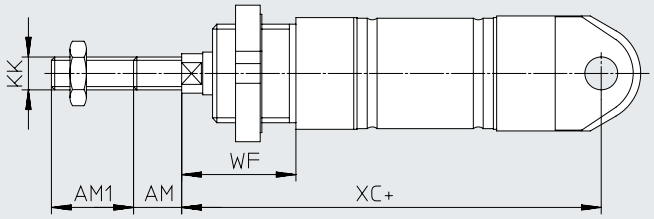
ø [mm]	AF	AM	B ø h9	BA h9	KF	KK
32	12	22	30	30	M6	M10x1.25
40	12	24	38	38	M8	M12x1.25
50	16	32	45	45	M10	M16x1.5
63	16	32	45	45	M10	M16x1.5
80	20	40	50	45	M12	M20x1.5
100	20	40	50	55	M12	M20x1.5

ø [mm]	T4	VA	WF	XC ±1	ZA	ZJ	ZM
32	2.6	3	34	118	69.5	104	138
40	3.3	4	39	140	84.6	124	163
50	4.7	4	44	147	86.2	130	175
63	4.7	4	44	156	94.2	139	183
80	6.1	4	50	193	120.7	171	221
100	6.1	4	50	196	123.7	174	224

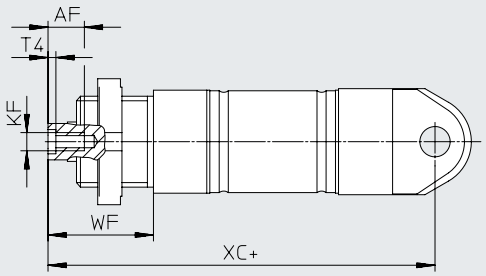
Data sheet

Dimensions Download CAD data ➔ www.festo.com

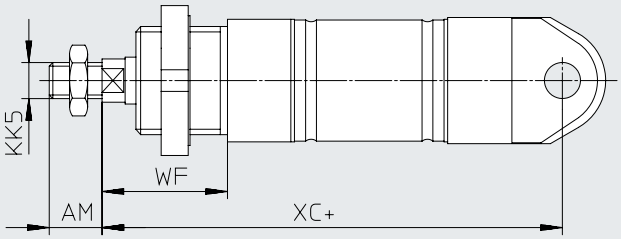
K2 – Extended male piston rod thread



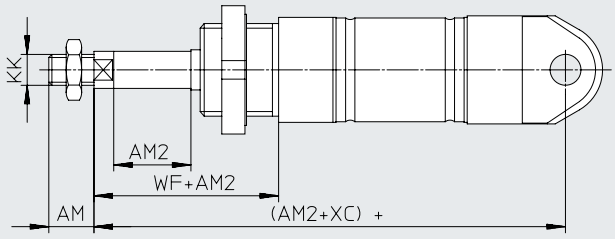
K3 – Female piston rod thread



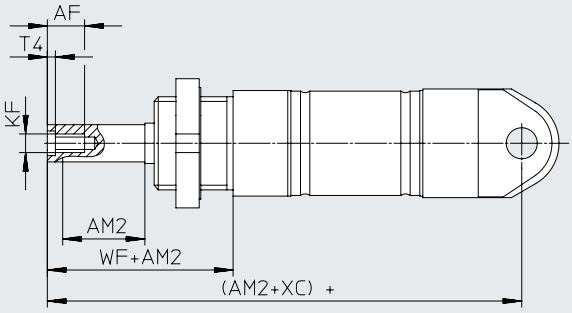
K5 – Custom piston rod thread



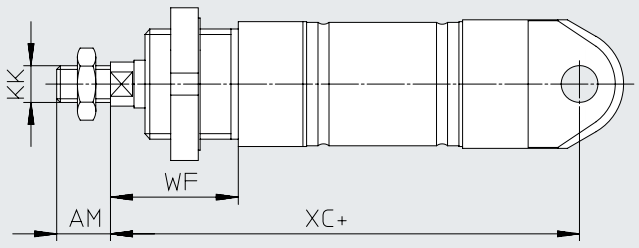
K8 – Extended piston rod



K3-K8 – Extended piston rod, with female thread



TT – Low temperature / A2 – Hard wiper



\+ = plus stroke length

Data sheet

ø [mm]	AF	AM	AM1 max.	AM2 max.	KF
32	12	22	1 ... 35	1 ... 500	M6
40	12	24	1 ... 35	1 ... 500	M8
50	16	32	1 ... 70	1 ... 500	M10
63	16	32	1 ... 70	1 ... 500	M10
80	20	40	1 ... 70	1 ... 500	M12
100	20	40	1 ... 70	1 ... 500	M12

ø [mm]	KK	KK5	T4	WF	XC ±1
32	M10x1.25	M10	2.6	34	118
40	M12x1.25	M12	3.3	39	140
50	M16x1.5	M16	4.7	44	147
63	M16x1.5	M16	4.7	44	156
80	M20x1.5	M20	6.1	50	193
100	M20x1.5	M20	6.1	50	196

Ordering data

Ordering data

Type	Piston ø	Stroke	P – Elastic cushioning rings/plates A – With position sensing	
	[mm]	[mm]	Part no.	Type
	32	10	**8152637**	**CRDSNU-32-10-P-A**
		25	**8152638**	**CRDSNU-32-25-P-A**
		40	**8152639**	**CRDSNU-32-40-P-A**
		50	**8152640**	**CRDSNU-32-50-P-A**
		80	**8152641**	**CRDSNU-32-80-P-A**
		100	**8152642**	**CRDSNU-32-100-P-A**

Ordering data – Stocked parts

Type	Piston ø	Stroke	PPS – Pneumatic cushioning, self-adjusting at both ends A – With position sensing MG – Bearing cap without mounting thread A1 – Wiper variant: increased chemical resistance	
	[mm]	[mm]	Part no.	Type
	32	10	**2176399**	**CRDSNU-B-32-10-PPS-A-MG-A1**
		25	**2176400**	**CRDSNU-B-32-25-PPS-A-MG-A1**
		40	**2176401**	**CRDSNU-B-32-40-PPS-A-MG-A1**
		50	**2176402**	**CRDSNU-B-32-50-PPS-A-MG-A1**
		80	**2176403**	**CRDSNU-B-32-80-PPS-A-MG-A1**
		100	**2176404**	**CRDSNU-B-32-100-PPS-A-MG-A1**
		125	**2176405**	**CRDSNU-B-32-125-PPS-A-MG-A1**
		160	**2176406**	**CRDSNU-B-32-160-PPS-A-MG-A1**
		200	**2176407**	**CRDSNU-B-32-200-PPS-A-MG-A1**
	40	10	**8073989**	**CRDSNU-B-40-10-PPS-A-MG-A1**
		25	**8073988**	**CRDSNU-B-40-25-PPS-A-MG-A1**
		40	**8073987**	**CRDSNU-B-40-40-PPS-A-MG-A1**
		50	**8073986**	**CRDSNU-B-40-50-PPS-A-MG-A1**
		80	**8073985**	**CRDSNU-B-40-80-PPS-A-MG-A1**
		100	**8073984**	**CRDSNU-B-40-100-PPS-A-MG-A1**
		125	**8073983**	**CRDSNU-B-40-125-PPS-A-MG-A1**
		160	**8073982**	**CRDSNU-B-40-160-PPS-A-MG-A1**
		200	**8073981**	**CRDSNU-B-40-200-PPS-A-MG-A1**

Note

The bearing cap on stocked parts is made of one piece.
When ordered using the modular product system, the bearing cap is made of two pieces, which makes it possible to exchange the wiper in the event of a repair.

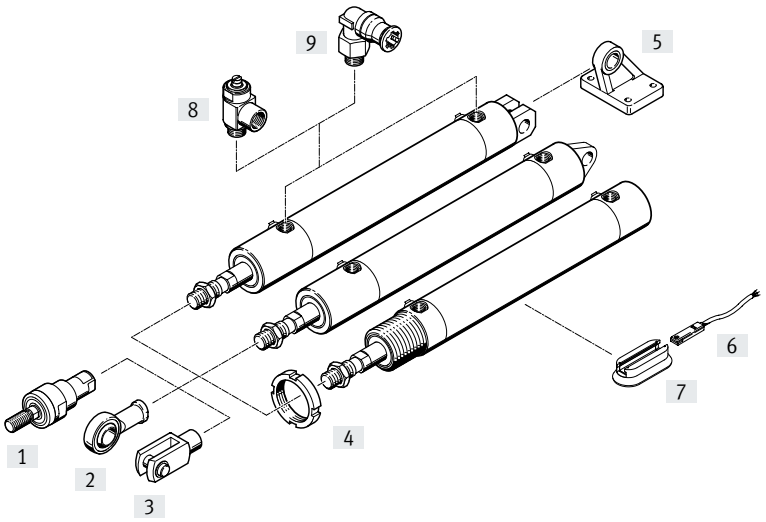
Ordering data

Ordering table – Modular product system

Size		32	40	50	63	80	100	Conditions	Code	Enter code
Module no.		552791	552792	552793	552794	8126418	8126417			
Design		Stainless steel							**CR**	CR
Function		Round cylinder, double-acting							**DSNU**	DSNU
Piston ø	[mm]	32	40	50	63	80	100		**-...**	
Stroke	[mm]	1 ... 500						[1]	**-...**	
Cushioning		Elastic cushioning rings/pads at both ends							**-P**	
		Pneumatic cushioning, self-adjusting						[2]	**-PPS**	
		Pneumatic cushioning, adjustable at both ends							**-PPV**	
Position sensing		Via proximity switch							**-A**	-A
Cylinder cap		Short end cap without swivel mounting							**-MQ**	
		Bearing cap without mounting thread							**-MG**	
Wiper variant		Increased chemical resistance						[2]	**-A1**	
		Hard wiper				–		[2] [3]	**-A2**	
		Unlubricated operation						[2]	**-A3**	
Piston rod		Through piston rod						[3] [4]	**-S2**	
Extended male thread		Extended male piston rod thread								
	[mm]	1 ... 35		1 ... 70					**-...K2**	
Female thread		Piston rod with female thread								
		M6	M8	M10	M10	M12	M12	[5]	**-K3**	
Custom thread		Custom thread on the piston rod								
		M10	M12	M16	M16	M20	M20		**-"..."K5**	
Extended piston rod	[mm]	1 ... 500							**-...K8**	
Temperature resistance		Heat-resistant seal up to max. 120°C				–			**-S6**	
Low temperature		Seals and lubricating grease from –40°C ... +80°C				–		[3] [6]	**-TT**	
EU certification		II 2GD				–		[7]	**-EX4**	

[1] -... Longer strokes on request
[2] PPS, A1, A2, A3 Not with S6, TT
[3] A2, S2, TT Not with MG
[4] S2 Not with MQ
[5] K3 Not with K2, K5
[6] TT Not with S6
[7] EX4 Not with S6, TT

Peripherals overview



Mounting attachments and accessories

		Description	CRHD-MQ	CRHD-MC	CRHD-MS	→ Page/Internet
[1]	Self-aligning rod coupler CRFK	To compensate for radial and angular deviations	■	■	■	56
[2]	Rod eye CRSGS	With spherical bearing	■	■	■	56
[3]	Rod clevis CRSG	Permits a swivelling movement of the cylinder in one plane	■	■	■	56
[4]	Nut CR	For bearing caps	■	–	–	55
[5]	Clevis foot CRLMC	For end caps	–	■	–	54
[6]	Proximity switch CRSMT	With light emitting diode for switching status indication	■	■	■	56
[7]	Mounting kit CRSMB-8-3 2/100	For proximity switches CRSMT	■	■	■	57
[8]	One-way flow control valve CRGRLA	For regulating speed	■	■	■	57
[9]	Push-in fittings CRQS	For connecting tubing with standard O.D.	■	■	■	qs

Type codes

001	Series	
CRHD	Round cylinder, double-acting, stainless steel	

002	Piston diameter	
32	32	
40	40	
50	50	
63	63	
80	80	
100	100	

003	Stroke	
...	10 ... 500	

004	Cushioning	
PPV	Pneumatic cushioning, adjustable at both ends	

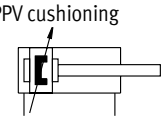
005	Position sensing	
A	For proximity sensor	

006	Type of end cap	
MQ	Without mounting threads	
MS	With strap	
MC	With clevis	

007	Temperature range	
	Standard	
S6	Heat-resistant seals max. 120 °C	

Data sheet

PPV cushioning



- Diameter
  32 ... 100 mm
- Stroke length
  10 ... 500 mm
- Spare parts service

Variant
S6



The variant S6 is not suitable for direct contact with food products because of the seals and the grease used.



General technical data							
Piston ø		32	40	50	63	80	100
Pneumatic connection		G1/8	G1/8	G1/4	G3/8	G3/8	G3/8
Piston rod thread		M10x1.25	M12x1.25	M16x1.5	M16x1.5	M20x1.5	M20x1.5
Design		Piston					
		Piston rod					
		Cylinder barrel					
Cushioning		Pneumatic cushioning, adjustable at both ends					
Cushioning length		17	19.5	21	21	31	31
Position sensing		Via proximity switch					
Type of mounting		With accessories					
Mounting position		Any					

Operating and environmental conditions			
Variant		CRHD	S6
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]	
Note on the operating/ pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)	
Operating pressure	[MPa]	0.1 ... 1	
	[bar]	1 ... 10	
	[psi]	14.5 ... 145	
Ambient temperature[1]	[°C]	–20 ... +80	0 ... +120
Food-safe[2]		→ Supplementary material information	
Corrosion resistance class CRC[3]		3	

1) Note operating range of proximity switches
2) Additional information www.festo.com/sp → Certificates.
3) Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

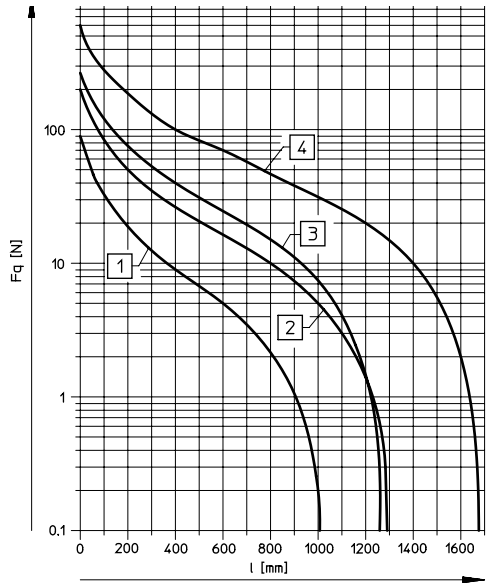
Forces [N]						
Piston ø	32	40	50	63	80	100
Theoretical force at 0.6 MPa (6 bar, 87 psi), advancing	483	754	1178	1870	3016	4712
Theoretical force at 0.6 MPa (6 bar, 87 psi) retracting	415	633	990	1682	2721	4418

Weight [g]						
Piston ø	32	40	50	63	80	100
Basic weight with 10 mm stroke	676	1196	1849	2977	5172	8472
Additional weight per 10 mm stroke	26	42	57	65	100	115
Moving mass with 10 mm stroke	106	198	340	398	717	968
Add. moving mass per 10 mm stroke	9	16	25	25	38	38

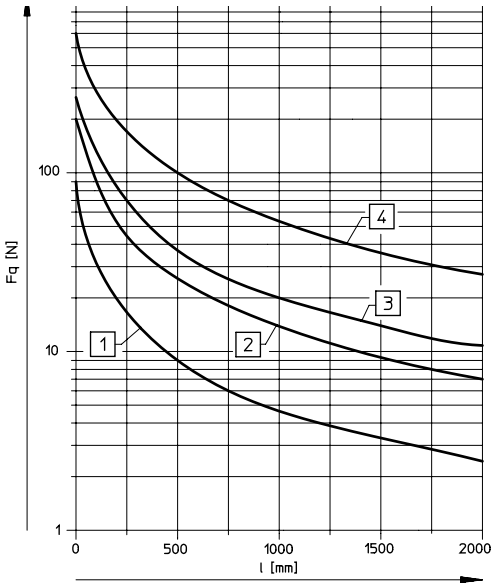
Data sheet

Permissible transverse force Fq as a function of stroke length l

Horizontal installation



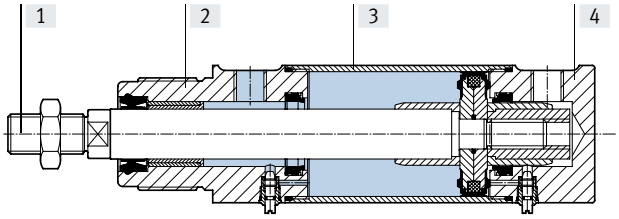
Vertical installation



[1] Ø 32
[2] Ø 40
[3] Ø 50, 63
[4] Ø 80, 100

Materials

Sectional view

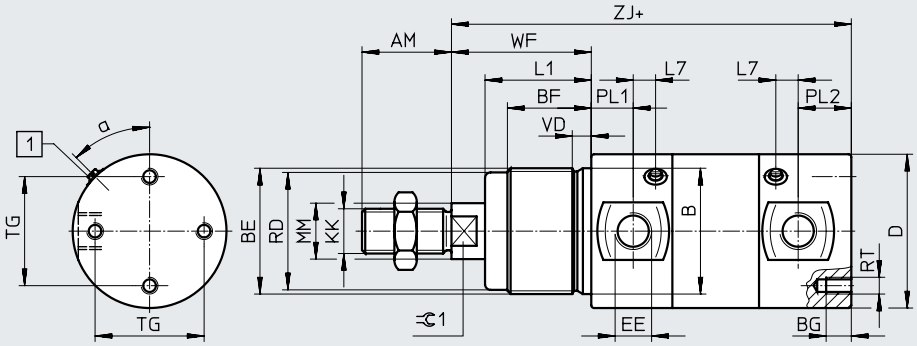


Round cylinders		Basic version	S6
[1]	Piston rod	High-alloy stainless steel	
[2]	Bearing cap	High-alloy stainless steel	
[3]	Cylinder barrel	High-alloy stainless steel	
[4]	End cap	High-alloy stainless steel	
–	Seals	NBR, TPE-U (PUR) media seal (modified for resistance to hydrolysis and cleaning)	FPM

Data sheet

Dimensions Download CAD data ➔ www.festo.com

MQ – Bearing cap with male thread



[1] Adjusting screw for end-position cushioning
\+ = plus stroke length

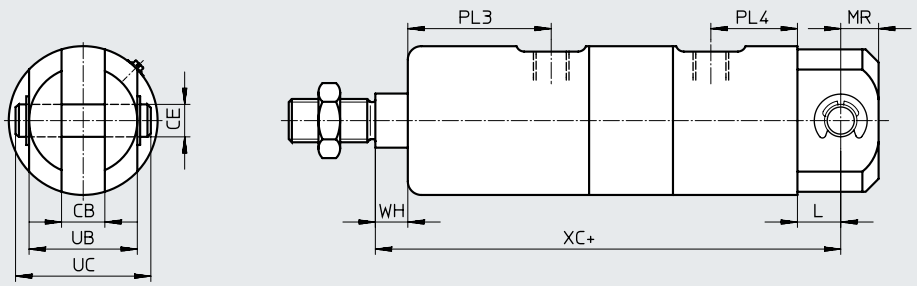
ø [mm]	α	AM	B ø h9	BE	BF	BG	D ø	EE	KK	L1
32	50°	22	30	M30x1.5	25	8	36	G1/8	M10x1.25	30
40	45°	24	38	M38x1.5	29	8	45	G1/8	M12x1.25	35
50	45°	32	45	M45x1.5	30	8	55	G1/4	M16x1.5	38
63	45°	32	45	M45x1.5	30	10	68	G3/8	M16x1.5	38
80	45°	40	50	M50x2	30	15	86	G3/8	M20x1.5	38
100	45°	40	50	M50x2	30	15	106	G3/8	M20x1.5	38

ø [mm]	L7	MM ø	RD ø	RT	PL1	PL2	TG	VD	WF	ZJ	⫧1
32	5	12	27	M5	13	21	22	7	38	120	10
40	8	16	35	M6	15	18	30	7	45	135	13
50	5	20	42	M6	15	19	39	6.25	50	143	17
63	8	20	42	M8	17	24	49	6.25	50	158	17
80	9	25	47	M10	18	31	65	7.5	50	174	22
100	13	25	47	M10	22	30	82	7.5	50	189	22

Data sheet

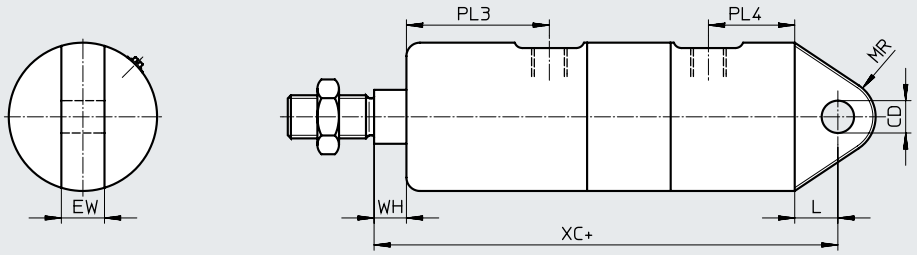
Dimensions Download CAD data ➔ www.festo.com

MC – End cap with clevis



\+ = plus stroke length

MS – End cap with lug



\+ = plus stroke length

ø [mm]	CB +0.2/+0.1	CD ø H9	CE ø e8	EW –0.1/–0.2	L	MR	PL3	PL4	UB –0.1/–0.2	UC	WH	XC
32	10	10	10	10	15	12	43	28	26	35	8	142
40	12	12	12	12	16	14	50	27	32	43	10	160
50	16	12	12	16	16	14	53	30	40	51	12	170
63	16	16	16	16	22	18	55	34	40	53	12	190
80	20	16	16	20	22	20	56	45	60	73	12	210
100	20	20	20	20	27	25	60	43.5	60	73	12	230

Data sheet

Ordering data

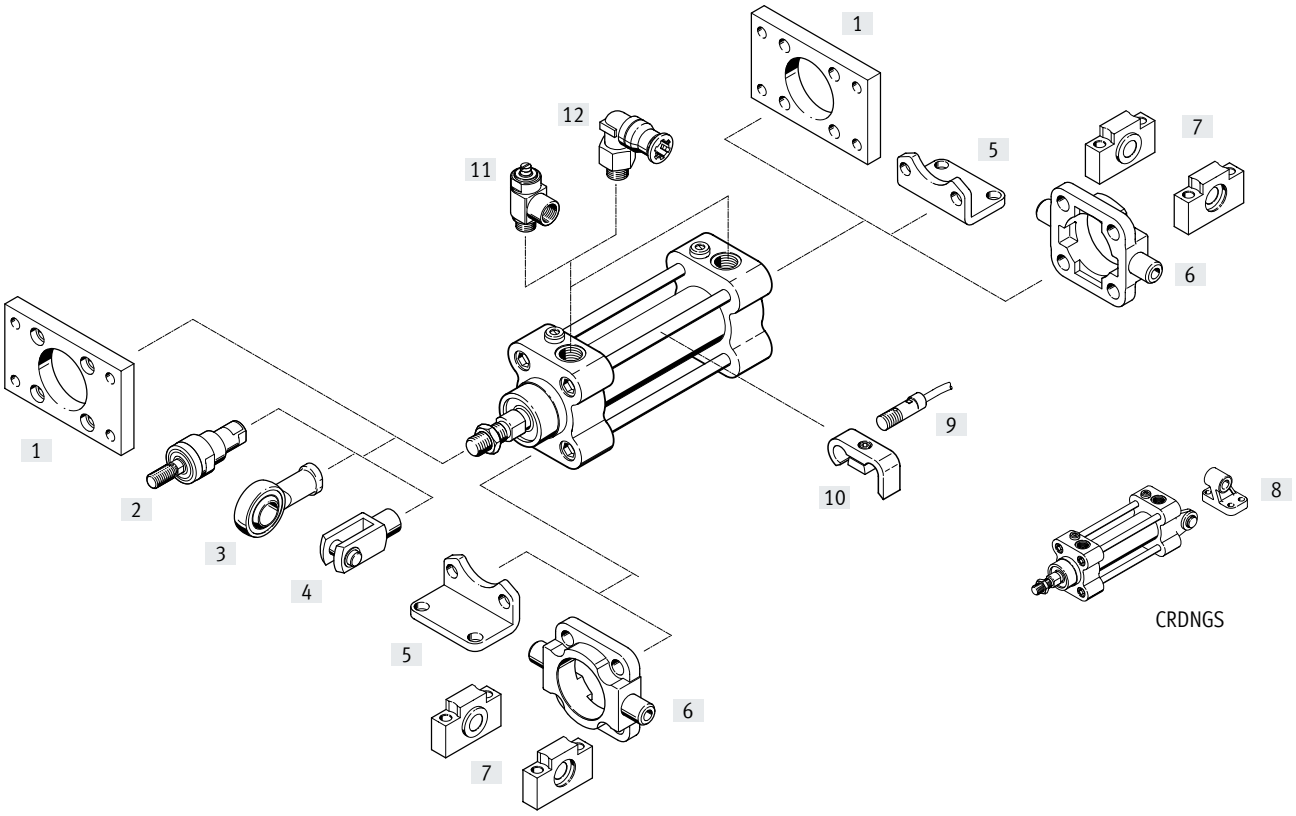
Type	Piston ø [mm]	Stroke [mm]	Part no.	Type
MQ – Bearing cap with male thread				
	32	10 ... 500	**195507**	**CRHD-32-...-PPV-A-MQ**
	40		**195508**	**CRHD-40-...-PPV-A-MQ**
	50		**195509**	**CRHD-50-...-PPV-A-MQ**
	63		**195510**	**CRHD-63-...-PPV-A-MQ**
	80		**195511**	**CRHD-80-...-PPV-A-MQ**
	100		**195512**	**CRHD-100-...-PPV-A-MQ**
S6 – Heat-resistant up to 120°C				
	32	10 ... 500	**195543**	**CRHD-32-...-PPV-A-MQ-S6**
	40		**195544**	**CRHD-40-...-PPV-A-MQ-S6**
	50		**195545**	**CRHD-50-...-PPV-A-MQ-S6**
	63		**195546**	**CRHD-63-...-PPV-A-MQ-S6**
	80		**195547**	**CRHD-80-...-PPV-A-MQ-S6**
	100		**195548**	**CRHD-100-...-PPV-A-MQ-S6**
MC – End cap with clevis (pivot pin and lock included in the scope of delivery)				
	32	10 ... 500	**195513**	**CRHD-32-...-PPV-A-MC**
	40		**195514**	**CRHD-40-...-PPV-A-MC**
	50		**195515**	**CRHD-50-...-PPV-A-MC**
	63		**195516**	**CRHD-63-...-PPV-A-MC**
	80		**195517**	**CRHD-80-...-PPV-A-MC**
	100		**195518**	**CRHD-100-...-PPV-A-MC**

Data sheet

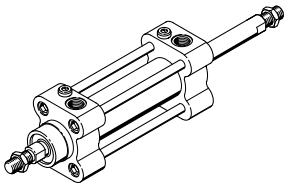
Ordering data

Type	Piston ø [mm]	Stroke [mm]	Part no.	Type
S6 – Heat-resistant up to 120°C				
	32	10 ... 500	**195549**	**CRHD-32-...-PPV-A-MC-S6**
	40		**195550**	**CRHD-40-...-PPV-A-MC-S6**
	50		**195551**	**CRHD-50-...-PPV-A-MC-S6**
	63		**195552**	**CRHD-63-...-PPV-A-MC-S6**
	80		**195553**	**CRHD-80-...-PPV-A-MC-S6**
	100		**195554**	**CRHD-100-...-PPV-A-MC-S6**
MS – End cap with lug				
	32	10 ... 500	**195519**	**CRHD-32-...-PPV-A-MS**
	40		**195520**	**CRHD-40-...-PPV-A-MS**
	50		**195521**	**CRHD-50-...-PPV-A-MS**
	63		**195522**	**CRHD-63-...-PPV-A-MS**
	80		**195523**	**CRHD-80-...-PPV-A-MS**
	100		**195524**	**CRHD-100-...-PPV-A-MS**
S6 – Heat-resistant up to 120°C				
	32	10 ... 500	**195555**	**CRHD-32-...-PPV-A-MS-S6**
	40		**195556**	**CRHD-40-...-PPV-A-MS-S6**
	50		**195557**	**CRHD-50-...-PPV-A-MS-S6**
	63		**195558**	**CRHD-63-...-PPV-A-MS-S6**
	80		**195559**	**CRHD-80-...-PPV-A-MS-S6**
	100		**195560**	**CRHD-100-...-PPV-A-MS-S6**

Peripherals overview



Variant
CRDNG-S2



Peripherals overview

Mounting attachments and accessories					
		Description	CRDNG	CRDNGS	→ Page/Internet
[1]	Flange mounting CRFNG	For bearing or end caps	■	–	51
[2]	Self-aligning rod coupler CRFK	To compensate for radial and angular deviations	■	■	56
[3]	Rod eye CRSGS	With spherical bearing	■	■	56
[4]	Rod clevis CRSG	Permits a swivelling movement of the cylinder in one plane	■	■	56
[5]	Foot mounting CRHNC	For bearing and end caps	■	–	49
[6]	Trunnion flange CRZNG	For bearing and end caps in combination with trunnion supports CRLNZG	■	–	52
[7]	Trunnion support CRLNZG	For supporting trunnion flange CRZNG	■	–	52
[8]	Clevis foot CRLNG	For variant with swivel flange	–	■	53
[9]	Proximity switch CRSMEO-4	With light emitting diode for switching status indication	■	■	56
[10]	Mounting kit CRSMB	For proximity switches CRSMEO-4	■	■	57
[11]	One-way flow control valve CRGRLA	For regulating speed	■	■	57
[12]	Push-in fittings CRQS	For connecting tubing with standard O.D.	■	■	qs

Type codes

001	Series	
CRDNG	Standard-based cylinder, double-acting, based on ISO 15552, stainless steel	
CRDNGS	Standards-based cylinder with swivel flange, double-acting, based on ISO 15552, stainless steel	

002	Piston diameter	
32	32	
40	40	
50	50	
63	63	
80	80	
100	100	
125	125	

003	Stroke	
...	10 ... 2000	

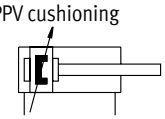
004	Cushioning	
PPV	Pneumatic cushioning, adjustable at both ends	

005	Position sensing	
A	For proximity sensor	

006	Temperature range	
	Standard	
S6	Heat-resistant seals max. 120 °C	

Data sheet

PPV cushioning



Diameter
32 ... 125 mm

Stroke length
10 ... 2000 mm

Spare parts service

Variant

S2



S6



The variant S6 is not suitable for direct contact with food products because of the seals and the grease used.



Conforms to standard
- ISO 15552
- ISO 6431
- VDMA 24562

General technical data								
Piston ø		32	40	50	63	80	100	125
Pneumatic connection		G1/8	G1/4	G1/4	G3/8	G3/8	G1/2	G1/2
Piston rod thread		M10x1.25	M12x1.25	M16x1.5	M16x1.5	M20x1.5	M20x1.5	M27x2
Design		Piston						
		Piston rod						
		Cylinder barrel						
Cushioning		Pneumatic cushioning, adjustable at both ends						
Cushioning length	[mm]	20	20	23	23	30	30	40
Position sensing		Via proximity switch						
Type of mounting		With accessories						
		With female thread						
Mounting position		Any						

Operating and environmental conditions			
Variant		CRDNG/CRDNGS	S6
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]	
Note on the operating/ pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)	
Operating pressure	[MPa]	0.06 ... 1	
	[bar]	0.6 ... 10	
	[psi]	8.7 ... 145	
Ambient temperature[1]	[°C]	–20 ... +80	0 ... +120
Food-safe[2]		→ Supplementary material information	
Corrosion resistance class CRC[3]		4	

1) Note operating range of proximity switches
2) Additional information www.festo.com/sp → Certificates.
3) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

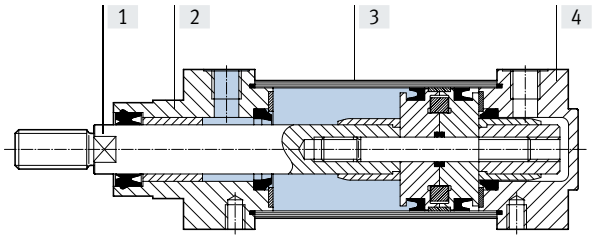
Forces [N]							
Piston ø	32	40	50	63	80	100	125
Theoretical force at 0.6 MPa (6 bar, 87 psi), advancing	482	753	1178	1870	3015	4712	7360
Theoretical force at 0.6 MPa (6 bar, 87 psi), retracting	415	633	990	1682	2720	4418	6880

Data sheet

Weight [g]							
Piston ø	32	40	50	63	80	100	125
CRDNG							
Basic weight with 0 mm stroke	1045	1360	2160	3455	5935	8070	
Additional weight per 10 mm stroke	20	30	60	60	100	110	
CRDNGS							
Basic weight with 0 mm stroke	1070	1460	2330				
Additional weight per 10 mm stroke	20	30	60				

Materials

Sectional view CRDNG

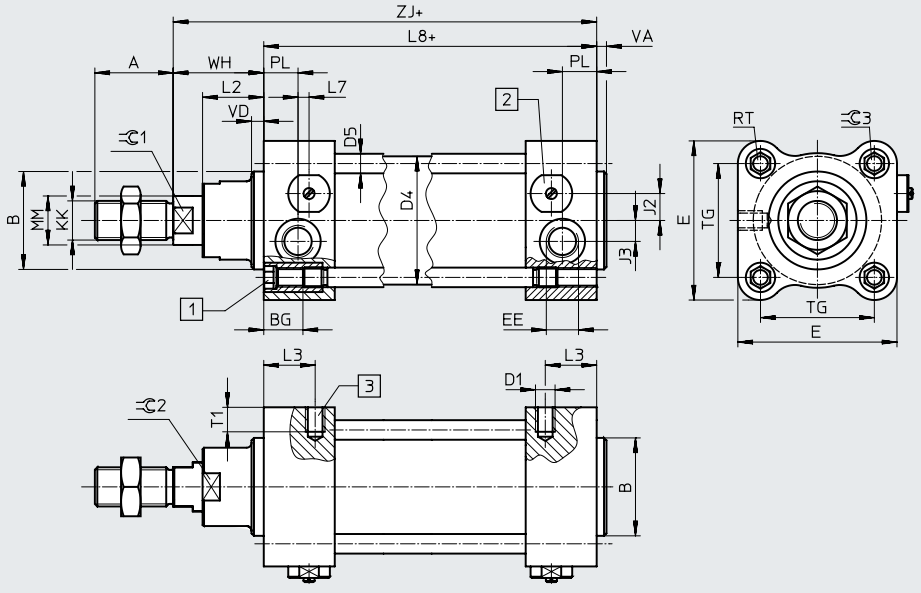


Standards-based cylinders		Basic version	
[1]	Piston rod	High-alloy stainless steel	
[2]	Bearing cap	Stainless steel casting	
[3]	Cylinder barrel	High-alloy stainless steel	
[4]	End cap	Stainless steel casting	
–	Tie rod	High-alloy stainless steel	
–	Seals	NBR, TPE-U (PUR) media seal (modified for resistance to hydrolysis and cleaning)	FPM

Data sheet

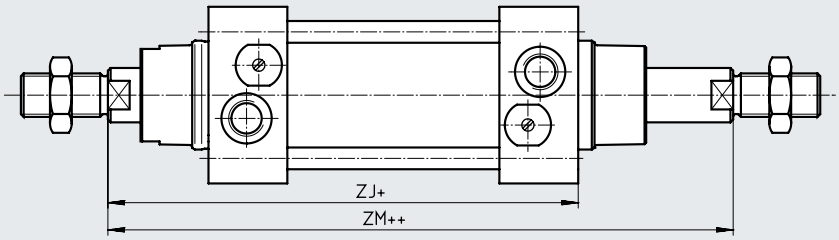
Dimensions CRDNG

Basic version



[1] Socket head screw with female thread
[2] Covering for adjustable end-position cushioning
[3] Threaded hole for direct mounting
\+ = plus stroke length

S2 – Through piston rod



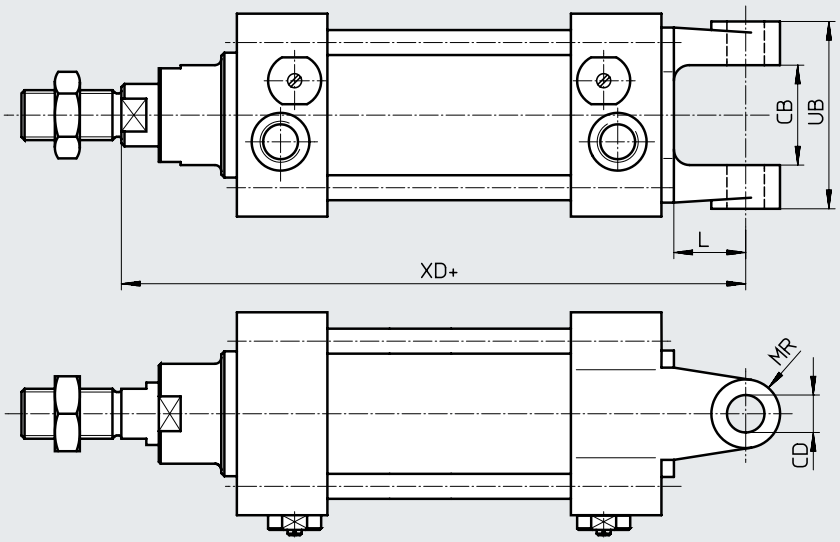
\+ = plus stroke length
++ = plus 2x stroke length

ø [mm]	A	B ø e11	BG	D1	D4 ø	D5 ø	E	EE	J2	J3	KK	L2	L3
32	22	30	16	M6	33.6	6	50	G1/8	7	5.7	M10x1.25	16	13
40	24	35	16	M6	41.6	6	55	G1/4	10	6.5	M12x1.25	18	16.5
50	32	40	16	M8	52.4	8	65	G1/4	11.5	8.6	M16x1.5	25	21
63	32	45	16	M10	65.4	8	75	G3/8	14.5	12	M16x1.5	25	22
80	40	45	23	M10	82.8	10	100	G3/8	15	13	M20x1.5	31	22.5
100	40	55	23	M12	102.8	10	120	G1/2	23	14	M20x1.5	36	22.5
125	54	60	23	M12	128.6	12	145	G1/2	28.5	8	M27x2	46	23.5

ø [mm]	L7	L8	MM ø	PL	RT	T1	TG	VA	VD	WH	ZJ	ZM	⊂1	⊂2	⊂3
32	5.3	94 +0.4	12	13	M6	9	32.5	4	6	26	120	148	10	26	6
40	2.5	105 +0.4/–0.6	16	14	M6	9	38	4	6	30	135	167	13	30	6
50	4.5	106 +0.4/–0.6	20	14	M8	10	46.5	4	6	37	143	183	17	34	8
63	5	121 +0.4/–0.6	20	18	M8	12	56.5	4	6	37	158	199	17	36	8
80	6	128 +0.4/–0.6	25	17	M10	15	72	4	7	46	174	222	22	41	10
100	9	138 +0.4/–0.6	25	18	M10	18	89	4	7	51	189	240	22	41	10
125	4.5	160 +0.4/–0.6	32	27	M12	18	110	6	6	66	226	292	27	50	12

Data sheet

Dimensions

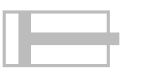


\+ = plus stroke length

ø [mm]	CB H14	CD ø H9	L	MR	UB	XD
32	26	10	18	9	45	142
40	28	12	21	10	52	160
50	32	12	23	11	60	170
63	40	16	28	13	70	190
80	50	16	32	13	90	210
100	60	20	37	17	110	230
125	70	25	44	23	130	276

Data sheet

Ordering data

Variant	Piston ø [mm]	Stroke [mm]	Part no.	Type
CRDNG				
	32	10 ... 2000	**160884**	**CRDNG-32-...-PPV-A**
	40	10 ... 2000	**160885**	**CRDNG-40-...-PPV-A**
	50	10 ... 2000	**160886**	**CRDNG-50-...-PPV-A**
	63	10 ... 2000	**160887**	**CRDNG-63-...-PPV-A**
	80	10 ... 2000	**160888**	**CRDNG-80-...-PPV-A**
	100	10 ... 2000	**160889**	**CRDNG-100-...-PPV-A**
	125	10 ... 2000	**185280**	**CRDNG-125-...-PPV-A**
S6 – Heat-resistant up to 120°C				
	32	10 ... 2000	**185293**	**CRDNG-32-...-PPV-A-S6**
	40	10 ... 2000	**185294**	**CRDNG-40-...-PPV-A-S6**
	50	10 ... 2000	**185295**	**CRDNG-50-...-PPV-A-S6**
	63	10 ... 2000	**185296**	**CRDNG-63-...-PPV-A-S6**
	80	10 ... 2000	**185297**	**CRDNG-80-...-PPV-A-S6**
	100	10 ... 2000	**185298**	**CRDNG-100-...-PPV-A-S6**
	125	10 ... 2000	**185299**	**CRDNG-125-...-PPV-A-S6**
S2 – Through piston rod				
	32	10 ... 2000	**185282**	**CRDNG-32-...-PPV-A-S2**
	40	10 ... 2000	**185283**	**CRDNG-40-...-PPV-A-S2**
	50	10 ... 2000	**185284**	**CRDNG-50-...-PPV-A-S2**
	63	10 ... 2000	**185285**	**CRDNG-63-...-PPV-A-S2**
	80	10 ... 2000	**185286**	**CRDNG-80-...-PPV-A-S2**
	100	10 ... 2000	**185287**	**CRDNG-100-...-PPV-A-S2**
	125	10 ... 2000	**185288**	**CRDNG-125-...-PPV-A-S2**
CRDNGS				
	32	10 ... 2000	**160890**	**CRDNGS-32-...-PPV-A**
	40	10 ... 2000	**160891**	**CRDNGS-40-...-PPV-A**
	50	10 ... 2000	**160892**	**CRDNGS-50-...-PPV-A**
	63	10 ... 2000	**160893**	**CRDNGS-63-...-PPV-A**
	80	10 ... 2000	**160894**	**CRDNGS-80-...-PPV-A**
	100	10 ... 2000	**160895**	**CRDNGS-100-...-PPV-A**
	125	10 ... 2000	**185281**	**CRDNGS-125-...-PPV-A**
S6 – Heat-resistant up to 120°C				
	32	10 ... 2000	**185300**	**CRDNGS-32-...-PPV-A-S6**
	40	10 ... 2000	**185301**	**CRDNGS-40-...-PPV-A-S6**
	50	10 ... 2000	**185302**	**CRDNGS-50-...-PPV-A-S6**
	63	10 ... 2000	**185303**	**CRDNGS-63-...-PPV-A-S6**
	80	10 ... 2000	**185304**	**CRDNGS-80-...-PPV-A-S6**
	100	10 ... 2000	**185305**	**CRDNGS-100-...-PPV-A-S6**
	125	10 ... 2000	**185306**	**CRDNGS-125-...-PPV-A-S6**

Ordering data – Sets of wearing parts

Piston ø [mm]	Part no.	Type	Piston ø [mm]	Part no.	Type
32	**125713**	**CRDNG/S-32-...-PPV-A**[1)]	63	**125716**	**CRDNG/S-63-...-PPV-A**[1)]
40	**125714**	**CRDNG/S-40-...-PPV-A**[1)]	80	**125717**	**CRDNG/S-80-...-PPV-A**[1)]
50	**125715**	**CRDNG/S-50-...-PPV-A**[1)]	100	**125718**	**CRDNG/S-100-...-PPV-A**[1)]

1) Assembly grease included in the scope of delivery

Data sheet

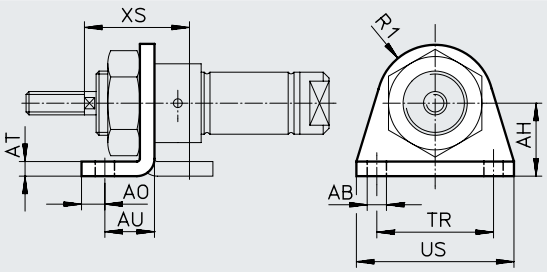
Foot mounting CRHBN

Scope of delivery:
CRHBN-... x1: 1 foot
CRHBN-... x2: 2 feet, 1 nut

Material:
High-alloy steel



CRHBN-...x2



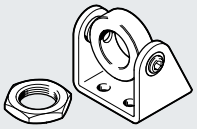
Dimensions and ordering data

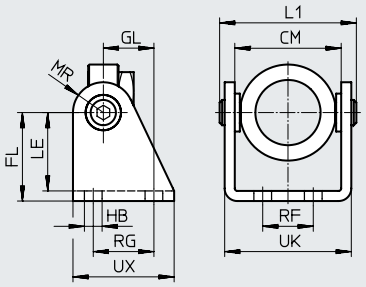
For ø [mm]	AB ø	AH	AO	AT	AU	R1	TR	US	XS	CRC[1]	Weight [g]	Part no.	Type
12	5.5	20	6	4	14	13	32	42	32	4	43	**161866**	**CRHBN-12/16x1**
16	5.5	20	6	4	14	13	32	42	32	4	107	**162999**	**CRHBN-12/16x2**
20	6.6	25	8	5	17	20	40	54	36	4	94	**161867**	**CRHBN-20/25x1**
25	6.6	25	8	5	17	20	40	54	40	4	236	**162998**	**CRHBN-20/25x2**

1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Swivel mounting CRSBN

Material:
High-alloy steel





Dimensions and ordering data

For ø [mm]	CM	FL	GL	HB ø	L1	LE	MR	RF	RG	UK	UX	CRC[1]	Weight [g]	Part no.	Type
20	38.1	35	20	7	55	31	12	20	24	50.1	40	4	230	**552904**	**CRSBN-2 0/25**
25															

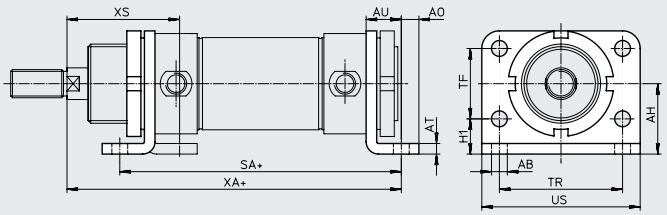
1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Data sheet

Foot mounting CRH

Material:
High-alloy steel





\+ = plus stroke length

Dimensions and ordering data

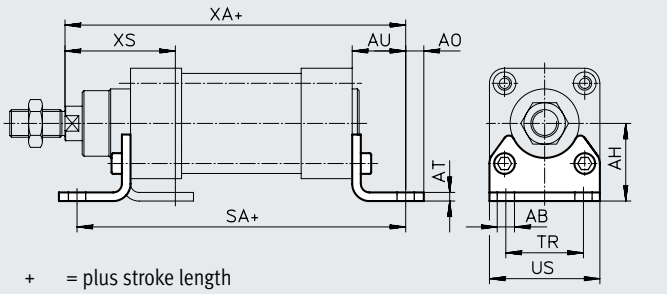
For Ø [mm]	AB Ø	AH	AO	AT	AU	H1	SA	TF	TR	US	XA	XS	CRC[1]	Weight [g]	Part no.	Type
32	7	28	7	4	14	14	124	28	52	66	148	48	4	237	**162951**	**CRH-32**
40	9	33	10	5	20	18	153	30	60	80	178	60	4	341	**162952**	**CRH-40**
50	9	40	10	6	20	20	160	40	70	90	190	64	4	559	**162953**	**CRH-50**
63	9	45	10	6	20	20	164	50	76	96	195	64	4	680	**162954**	**CRH-63**

1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Foot mounting CRHNC

Material:
High-alloy steel





\+ = plus stroke length

Dimensions and ordering data

For Ø [mm]	AB Ø	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	144.7	45.7	4	139	**176937**	**CRHNC-32**
40	10	36	9	4	28	160.8	36	54	163.6	53.8	4	188	**176938**	**CRHNC-40**
50	10	45	9.5	5	31	167.9	45	64	175	63.1	4	341	**176939**	**CRHNC-50**
63	10	50	12.5	5	32	184.9	50	75	191.5	64.6	4	424	**176940**	**CRHNC-63**
80	12	63	15	6	41	209.9	63	93	215.5	81.6	4	810	**176941**	**CRHNC-80**
100	14.5	71	17.5	6	41	220.1	75	110	229.6	85.5	4	990	**176942**	**CRHNC-100**
125	16.5	90	22	8	45	250	90	131	270	102	4	1920	**176943**	**CRHNC-125**

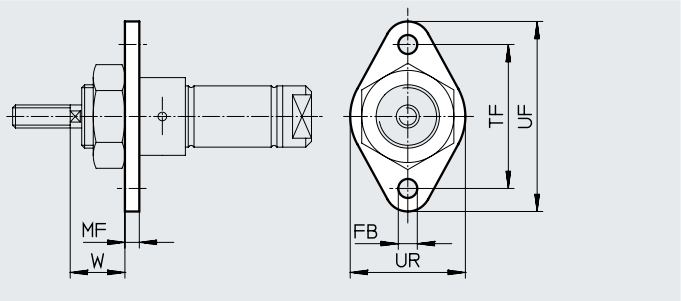
1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Data sheet

Flange mounting CRFBN

Material:
High-alloy steel





Dimensions and ordering data

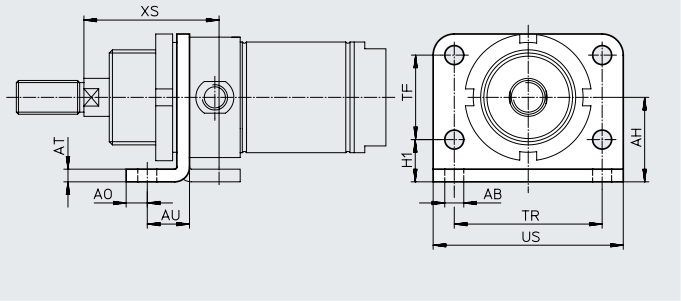
For ø [mm]	FB ø	MF	TF	UF	UR	W	CRC[1)]	Weight [g]	Part no.	Type
12, 16	5.5	4	40	53	30	18	4	26	**161864**	**CRFBN-12/16**
20	6.6	5	50	66	40	19	4	52	**161865**	**CRFBN-20/25**
25	6.6	5	50	66	40	23	4	52	**161865**	**CRFBN-20/25**

1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Flange mounting CRFV

Material:
High-alloy steel





Dimensions and ordering data

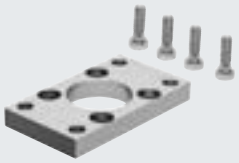
For ø [mm]	AB ø	AH	AO	AT	AU	H1	TF	TR	US	XS	CRC[1)]	Weight [g]	Part no.	Type
32	7	28	7	4	14	14	28	52	66	48	4	102	**161858**	**CRFV-32**
40	9	33	10	5	20	18	30	60	80	60	4	190	**161859**	**CRFV-40**
50	9	40	10	6	20	20	40	70	90	64	4	290	**161860**	**CRFV-50**
63	9	45	10	6	20	20	50	76	96	64	4	365	**161861**	**CRFV-63**

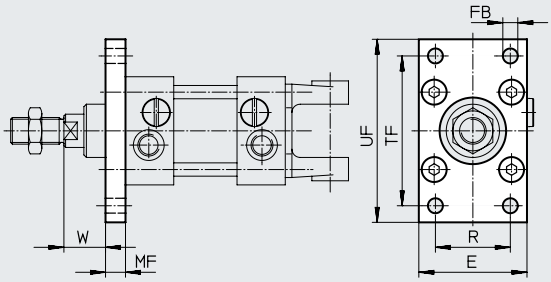
1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Data sheet

Flange mounting CRFNG

Material:
High-alloy steel





Dimensions and ordering data

For ø [mm]	E	FB ø	MF	R	TF	UF	W	CRC[1)]	Weight [g]	Part no.	Type
32	45	7	10	32	64	80	16	4	220	**161846**	**CRFNG-32**
40	54	9	10	36	72	90	20	4	291	**161847**	**CRFNG-40**
50	65	9	12	45	90	110	25	4	526	**161848**	**CRFNG-50**
63	75	9	12	50	100	120	25	4	680	**161849**	**CRFNG-63**
80	93	12	16	63	126	150	30	4	1508	**161850**	**CRFNG-80**
100	110	14	16	75	150	175	35	4	2054	**161851**	**CRFNG-100**
125	132	16	20	90	180	210	45	4	3787	**185363**	**CRFNG-125**

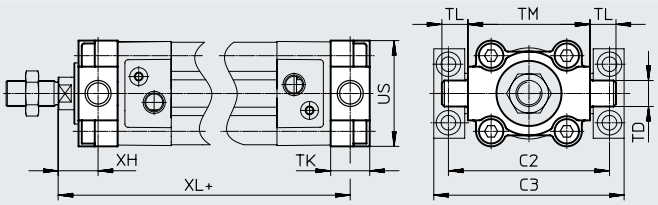
1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Data sheet

Trunnion flange CRZNG

Material:
High-alloy steel





Dimensions and ordering data

For ø [mm]	C2	C3	TD ø e9	TK	TL	TM	UW	XH	XL	CRC[1]	Weight [g]	Part no.	Type
32	71	86	12	16	12	50	50	18	128	4	150	**161852**	**CRZNG-32**
40	87	105	16	20	16	63	55	20	145	4	285	**161853**	**CRZNG-40**
50	99	117	16	24	16	75	65	25	155	4	473	**161854**	**CRZNG-50**
63	116	136	20	24	20	90	75	25	170	4	687	**161855**	**CRZNG-63**
80	136	156	20	28	20	110	100	32	188	4	1296	**161856**	**CRZNG-80**
100	164	189	25	38	25	132	120	32	208	4	2254	**161857**	**CRZNG-100**
125	192	217	25	50	25	160	150	40	250	4	3484	**185362**	**CRZNG-125**

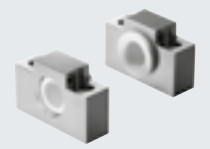
1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

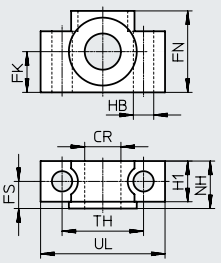
Note

Screws with a special length are required to mount diameter 125 mm.
→ Page 57

Trunnion supports CRLNZG

Material:
High-alloy steel





Dimensions and ordering data

For ø [mm]	CR ø D11	FK ø ±0.1	FN	FS	H1	HB ø 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	205	**161874**	**CRLNZG-32**
40, 50	16	18	36	12	18	9	21	36	55	4	323	**161875**	**CRLNZG-40/50**
63, 80	20	20	40	13	20	11	23	42	65	4	435	**161876**	**CRLNZG-63/80**
10 0/125	25	25	50	16	24.5	14	28.5	50	75	4	739	**161877**	**CRLNZG-100/125**

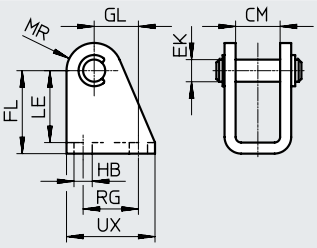
1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Data sheet

Clevis foot CRLBN

Material:
High-alloy steel





Dimensions and ordering data

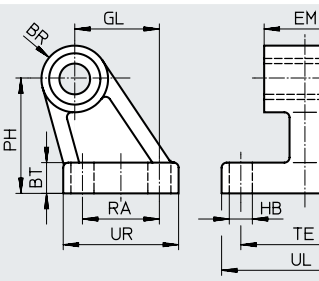
For ø [mm]	CM	EK ø	FL	GL	HB	LE	MR	RG	UX	CRC[1]	Weight [g]	Part no.	Type
12, 16	12.1	6	27 +0.3/–0.2	13	5.5	24	7	15	25	4	39	**161862**	**CRLBN-12/16**
20, 25	16.1	8	30 +0.4/–0.2	16	6.6	26	10	20	32	4	82	**161863**	**CRLBN-20/25**
32	16.1	10	35 +0.4/–0.2	18.5	6.6	31	11	24	35	4	106	**195866**	**CRLBN-32**
40	18.1	12	40 +0.4/–0.2	24.5	9	35	13	30	45	4	185	**195867**	**CRLBN-40**
50, 63	21.1	16	45 +0.5/–0.2	28	9	39	14	34	50	4	293	**195868**	**CRLBN-50/63**

1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Clevis foot CRLNG

Material:
High-alloy steel





Dimensions and ordering data

For ø [mm]	BR	BT	CK ø D11	EB ø H13	EM –0.4	GL	HB ø H13	OF	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	133	**161840**	**CRLNG-32**
40	11	10	12	–	27.8	24	6.6	–	36	22	41	54	35	4	161	**161841**	**CRLNG-40**
50	12	12	12	–	31.8	33	9	–	45	30	50	65	45	4	281	**161842**	**CRLNG-50**
63	15	12	16	15	39.8	37	9	10.8	50	35	52	67	50	4	370	**161843**	**CRLNG-63**
80	15	14	16	18	49.8	47	11	12.7	63	40	66	86	60	4	562	**161844**	**CRLNG-80**
100	19	15	20	18	59.8	55	11	13.7	71	50	76	96	70	4	915	**161845**	**CRLNG-100**
125	22	20	25	20	69.8	70	14	18.6	90	60	94	124	90	4	2539	**176951**	**CRLNG-125**

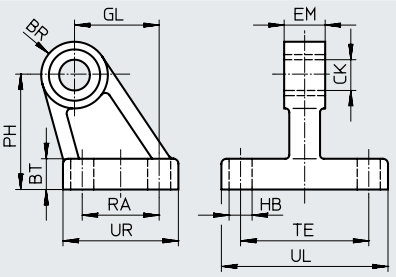
1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Data sheet

Clevis foot CRLMC

Material:
High-alloy steel





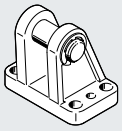
Dimensions and ordering data

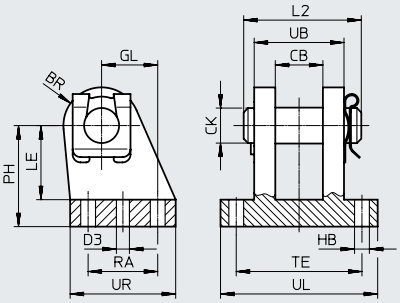
For ø [mm]	BR	BT	CK ø D11	EB ø H13	EM –0.4	GL	HB ø H13	OF	PH	RA	TE	UL	UR	CRC[1]	Weight [g]	Part no.	Type
32	10	8	10	–	10	21	6.6	–	32	18	38	51	31	4	112	**197320**	**CRLMC-32**
40	11	10	12	–	12	24	6.6	–	36	22	41	54	35	4	144	**197321**	**CRLMC-40**
50	12	12	12	–	16	33	9	–	45	30	50	65	45	4	254	**197322**	**CRLMC-50**
63	15	12	16	15	16	37	9	10.8	50	35	52	67	50	4	306	**197323**	**CRLMC-63**
80	15	14	16	18	20	47	11	12.7	63	40	66	86	60	4	482	**197324**	**CRLMC-80**
100	19	15	20	18	20	55	11	13.7	71	50	76	96	70	4	722	**197325**	**CRLMC-100**

1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Clevis foot LBG-...-R3
The pivot pin is secured against rotation with a spring pin.

Material: High-alloy stainless steel
RoHS-compliant





Dimensions and ordering data

For ø [mm]	CL	CM	EK ø	FL	GL	HB ø	L2	LE	MR
80	50	25.1	20	63	30	11	60	49	18
100	50	25.1	20	71	41	11	60	56	22

For ø [mm]	RF	RG	S1 ø	UK	UX	CRC[1]	Weight [g]	Part no.	Type
80	70	36	7.8	89	55	3	1050	**2078797**	**LBG-80-R3**
100	70	46	9.8	89	65	3	1375	**2078799**	**LBG-100-R3**

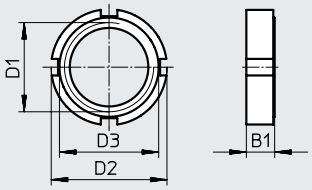
1) Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

Data sheet

Nut CR

Material:
High-alloy steel





Dimensions and ordering data

For Ø [mm]	B1	D1	D2	D3	CRC[1]	Weight [g]	Part no.	Type
32	8	M30x1.5	42	36	4	40	**197326**	**CR-M30x1.5**
40	10	M38x1.5	50	48	4	61	**197327**	**CR-M38x1.5**
50, 63	10	M45x1.5	60	56	4	89	**197328**	**CR-M45x1.5**
80, 100	13	M50x2	75	67	4	228	**197329**	**CR-M50x2**

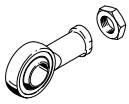
1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Data sheet

Ordering data – Piston rod attachments, corrosion-resistant

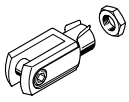
Data sheets → Internet: piston rod attachment

Rod eye CRSGS



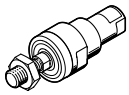
For ø	Part no.	Type
12, 16	**195580**	**CRSGS-M6**
20	**195581**	**CRSGS-M8**
25, 32	**195582**	**CRSGS-M10x1.25**
40	**195583**	**CRSGS-M12x1.25**
50, 63	**195584**	**CRSGS-M16x1.5**
80, 100	**195585**	**CRSGS-M20x1.5**
125	**195586**	**CRSGS-M27x2**

Rod clevis CRSG



For ø	Part no.	Type
12, 16	**13567**	**CRSG-M6**
20	**13568**	**CRSG-M8**
25, 32	**13569**	**CRSG-M10x1.25**
40	**13570**	**CRSG-M12x1.25**
50, 63	**13571**	**CRSG-M16x1.5**
80, 100	**13572**	**CRSG-M20x1.5**
125	**185361**	**CRSG-M27x2**

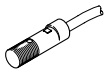
Self-aligning rod coupler CRFK



For ø	Part no.	Type
25, 32	**2305778**	**CRFK-M10x1.25**
40	**2305779**	**CRFK-M12x1.25**
50, 63	**2490673**	**CRFK-M16x1.5**
80, 100	**2545677**	**CRFK-M20x1.5**

Ordering data – Proximity switches, magnetic reed CRSMEO

Data sheets → Internet: crsmeo



Electrical connection Cable	Cable length [m]	Part no.	Type
N/O contact			
Corrosion-resistant			
3-wire	2.5	**161775**	**CRSMEO-4-K-LED-24**

Ordering data – Mounting kits

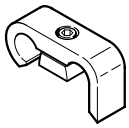
Data sheets → Internet: crsmb

Mounting kit CRSMBR



For ø	Part no.	Type
12	**164581**	**CRSMBR-12**
16	**164582**	**CRSMBR-16**
20	**164583**	**CRSMBR-20**
25	**164584**	**CRSMBR-25**
32	**163888**	**CRSMBR-32**
40	**163889**	**CRSMBR-40**
50	**163890**	**CRSMBR-50**
63	**163891**	**CRSMBR-63**

Mounting kit CRSMB

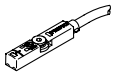


For ø	Part no.	Type
32	**161763**	**CRSMB-32**
40	**161764**	**CRSMB-40**
50	**161765**	**CRSMB-50**
63	**161766**	**CRSMB-63**
80	**161767**	**CRSMB-80**
100	**161768**	**CRSMB-100**
125	**185365**	**CRSMB-125**

Ordering data – Proximity switches for T-slot, magneto-resistive, CRSMT-8M

Data sheets → Internet: crsmt

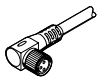
N/O contact



Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type
Inserted in the slot from above, flush with the cylinder profile	PNP	Cable, 3-wire	5.0	**574380**	**CRSMT-8M-PS-24V-K-5.0-OE**
		Cable, 3-wire	10.0	**574381**	**CRSMT-8M-PS-24V-K-10.0-OE**
		Plug M8x1, 3-pin	0.3	**574383**	**CRSMT-8M-PS-24V-K-0.3-M8D**
		Plug M12x1, 3-pin	0.3	**574382**	**CRSMT-8M-PS-24V-K-0.3-M12**

Data sheet

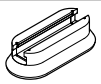
Ordering data – Connecting cables Data sheets ➔ Internet: nebu

	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**

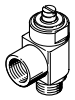
Ordering data – Mounting kit SMBR Data sheets ➔ Internet: smbr

		Part no.	Type
	For standards-based cylinder CRDSNU	**538937**	**SMBR-8-8/100-S6**

Ordering data – Mounting kit CRSMB Data sheets ➔ Internet: crsmb

		Part no.	Type
	For round cylinders CRHD	**525565**	**CRSMB-8-32/100**

Ordering data – One-way flow control valves CRGRLA Data sheets ➔ Internet: crgrla

	Connection Thread	For push-in fitting	Material	Part no.	Type
	M5	CRQS/CRQSL/CRQST	Electropolished stainless steel casting	**161403**	**CRGRLA-M5-B**
	G1/8			**161404**	**CRGRLA-1/8-B**
	G1/4			**161405**	**CRGRLA-1/4-B**
	G3/8			**161406**	**CRGRLA-3/8-B**
	G1/2			**161407**	**CRGRLA-1/2-B**

Ordering data – Air reservoirs CRVZS Data sheets ➔ Internet: crvzs

	Connection Thread	Volume [l]	Material	Part no.	Type
	G1/8	0.1	High-alloy stainless steel	**160233**	**CRVZS-0.1**
	G1/4	0.4		**160234**	**CRVZS-0.4**
	G1/4	0.75		**160235**	**CRVZS-0.75**
	G1/2	2		**160236**	**CRVZS-2**
	G1, G3/8	5		**192159**	**CRVZS-5**
	G1, G3/8	10		**160237**	**CRVZS-10**

Ordering data – Tubing Data sheets ➔ Internet: tubing

	Standard O.D. tubing	**PLN, PFAN**

Ordering data – Screws

	For ø	For accessories	Part no.	Type	PU[1]
	125	CRZNG	**8081899**	**DIN 912-M12X55-A4-70**	1

1) Packaging unit