Corrosion-resistant cylinders

FESTO

- Resistant to corrosion caused by harsh ambient conditions
- Easy to clean design
- Wide choice of variants
- Comprehensive range of accessories

Corrosion-resistant cylinders

Features

FESTO

Cylinder applications

Reliable components need to achieve 100% operational reliability, even in harsh operating conditions. The aim is to maximise availability of machinery while minimising downtimes. Corrosion-resistant cylinders are therefore used in applications where the surface finish of normal pneumatic drives would render them non-resistant to the surrounding media. However designing a corrosion-resistant system involves more than simply selecting a suitable steel – it also requires the selection of a tailored concept for mounting components and accessories.

Cylinder strengths

Festo's corrosion-resistant cylinders are made from highly 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 material surface caused by cleaning or detergents. The indicated groups of materials are particularly resistant to uniform surface corrosion and offer increased protection against pitting and crevice corrosion.

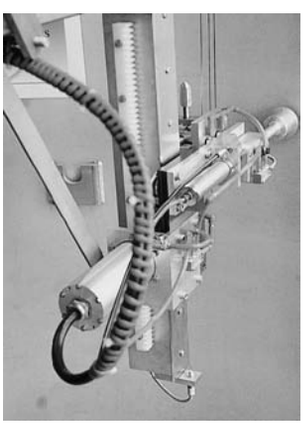
Cylinder advantages

Festo's worldwide service network ensures optimum availability of corrosion-resistant cylinders. As well as a comprehensive range of standard cylinders to DIN ISO 6431 and 6432, we also offer a range of tailored mounting components and accessories. The corrosion-resistant cylinders are assembled with USDA-H1 lubricating grease and wiper seals in accordance with BGVV (Federal Institute for Risk Assessment) guidelines. This means that they are suitable for use in the food industry and for direct contact with food products. We will be pleased to answer any inquiries you may have about future additions to our corrosion-resistant range. Just give us a call.

Good to know

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

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



An area subject to radiation of up to 4 sievert/h whilst immersed in fully desalinated water in a manipulator for dismantling nuclear reactor pressure reservoirs and thermal shields.

Corrosion-resistant cylinders

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
- Increasing 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 resistance to media 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 industrial sectors. The degree of cleaning required ranges from wiping the machinery to wet cleaning to foam cleaning with different exposure times and concentrations.

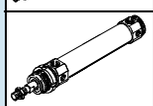
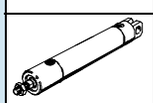
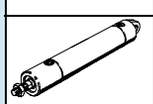
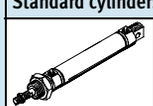
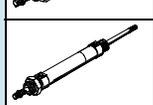
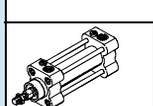
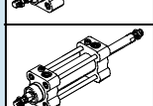
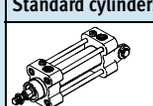
It is therefore impossible to make a general recommendation on compatibility.

Wet cleaning

Foam cleaning

Corrosion-resistant cylinders

Product range overview

Function	Design	Type	Conforms to	Piston ∅	Stroke
Double-acting	**Round cylinders**				
		**CRDG** Piston rod at one end	–	12, 16	1 … 200
				20	1 … 320
				25, 32, 40, 50, 63	1 … 500
		**CRDSW** Piston rod at one end	–	32, 40, 50, 63	1 … 500
		**CRHD … MQ** Bearing cap with male thread	–	32, 40, 50, 63, 80, 100	10 … 500 Special lengths on request
		**CRHD … MC** End cap with yoke	–	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
	Standard cylinders				
		**CRDSNU** Piston rod at one end	ISO 6432	12, 16	10 … 200
				20	10 … 320
				25	10 … 500
		**CRDSNU- … -S2** Through piston rod		12, 16	10 … 200
				20	10 … 320
				25	10 … 500
		**CRDNG** Piston rod at one end	ISO 15552 (ISO 6431 and VDMA 24562)	32, 40, 50, 63, 80, 100, 125	10 … 2000
		**CRDNG- … -S2** Through piston rod		32, 40, 50, 63, 80, 100, 125	10 … 2000
	Standard cylinders with swivel bearing at rear				
		**CRDNGS** Piston rod at one end	ISO 15552 (ISO 6431 and VDMA 24562)	32, 40, 50, 63, 80, 100, 125	10 … 2000

Corrosion-resistant cylinders

Product range overview

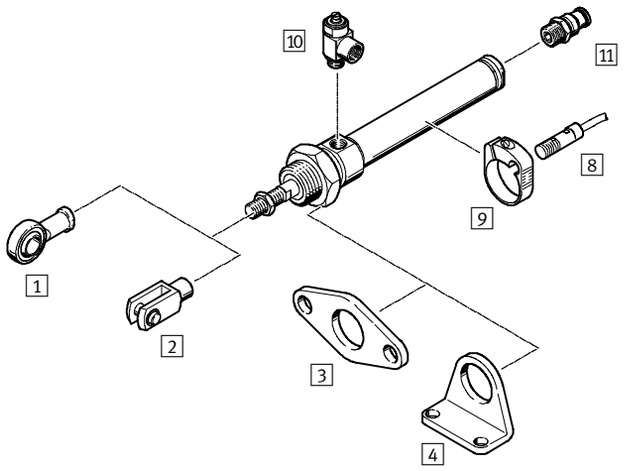
Type	Position sensing magnet	Cushioning		Heat resistant	→ Page
		Non-adjustable at both ends	Adjustable at both ends		
	A	P	PPV	S6	
Round cylinders					
CRDG Piston rod at one end	■	■	–	–	1 / 2.7-6
CRDSW Piston rod at one end	■	■	–	–	1 / 2.7-12
CRHD ... MQ Bearing cap with male thread	■	–	■	■	1 / 2.7-17
CRHD ... MC End cap with yoke	■	–	■	■	1 / 2.7-17
CRHD ... MS End cap with lug	■	–	■	■	1 / 2.7-17
Standard cylinders					
CRDSNU Piston rod at one end	■	■	–	–	1 / 2.7-24
CRDSNU- ... -S2 Through piston rod	■	■	–	–	1 / 2.7-24
CRDNG Piston rod at one end	■	–	■	■	1 / 2.7-30
CRDNG- ... -S2 Through piston rod	■	–	■	■	1 / 2.7-30
Standard cylinders with swivel bearing at rear					
CRDNGS Piston rod at one end	■	–	■	■	1 / 2.7-30

Round cylinders CRDG, corrosion-resistant

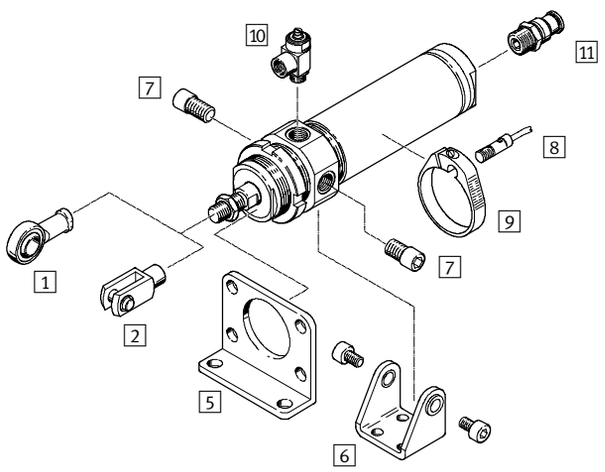
Peripherals overview

CRDG

Piston ∅ 12 ... 25 mm



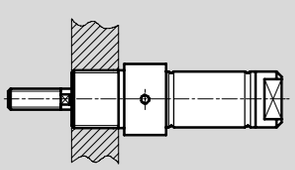
Piston ∅ 32 ... 63 mm



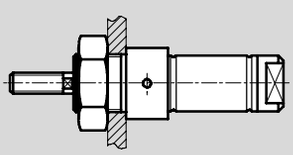
Mounting options

Piston ∅ 12 ... 25 mm

Threaded mounting

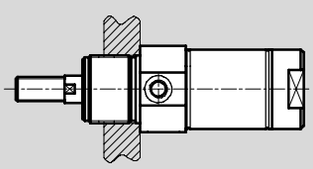


Mounting with hex nut

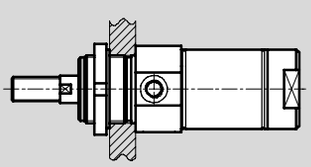


Piston ∅ 32 ... 63 mm

Threaded mounting



Mounting with slotted nut



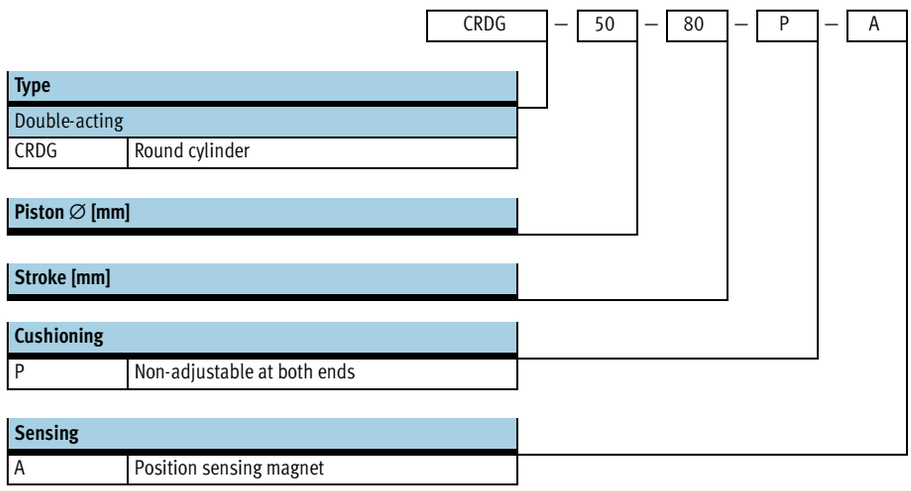
Round cylinders CRDG, corrosion-resistant

Peripherals overview

Mounting attachments and accessories				
	Brief description	Piston ∅ 12 … 25 mm	Piston ∅ 32 … 63 mm	➔ Page
1 Rod eye CRSGS	With spherical bearing	■	■	1 / 2.8-9
2 Rod clevis CRSG	Permits a swivelling movement of the cylinder in one plane	■	■	1 / 2.8-9
3 Flange mounting CRFBN	For bearing cap	■	–	1 / 2.8-3
4 Foot mounting CRHBN	For bearing cap	■	–	1 / 2.8-1
5 Flange mounting CRFV	For bearing cap	–	■	1 / 2.8-3
6 Clevis foot CRSBS	For bearing cap	–	■	1 / 2.8-7
7 Pivot bolt CRGBS	For bearing cap	–	■	1 / 2.8-7
8 Proximity sensor CRSMEO-4	With LED for operating status indication	■	■	1 / 2.8-9
9 Mounting kit CRSMBR	For proximity sensor CRSMEO-4	■	■	1 / 2.8-9
10 One-way flow control valve CRGRLA	For speed regulation	■	■	1 / 2.8-9
11 Push-in/threaded fitting CRQS	For connecting compressed air tubing with standard O.D.	■	■	–

Round cylinders CRDG, corrosion-resistant

Type code



Round cylinders CRDG, corrosion-resistant

Technical data

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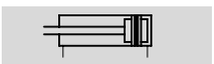
Function



- Ø - Diameter
  12 ... 63 mm
- I - Stroke length
  1 ... 500 mm

General technical data								
Piston ∅	12	16	20	25	32	40	50	63
Pneumatic connection	M5	M5	G1⁄8	G1⁄8	G1⁄8	G1⁄4	G1⁄4	G3⁄8
Piston rod thread	M6	M6	M8	M10x1.25	M10x1.25	M12x1.25	M16x1.5	M16x1.5
Constructional design	Piston							
	Piston rod							
	Cylinder barrel							
Cushioning	Non-adjustable at both ends							
Position sensing	Via proximity sensor							
Type of mounting	With accessories							
	With male thread							
Mounting position	Any							

Operating and environmental conditions								
Piston ∅	12	16	20	25	32	40	50	63
Operating medium	Filtered compressed air, lubricated or unlubricated							
Operating pressure	1 ... 10 bar							
Ambient temperature[1] [°C]	–20 ... +80							
Corrosion resistance class CRC[2]	4							

1) Note operating range of proximity sensors
2) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required

Forces [N]								
Piston ∅	12	16	20	25	32	40	50	63
Theoretical force at 6 bar, advancing	68	121	189	295	483	754	1 178	1 870
Theoretical force at 6 bar, retracting	51	104	158	247	415	633	990	1 682

Weights [g]								
Piston ∅	12	16	20	25	32	40	50	63
Basic weight at 0 mm stroke	80	120	270	360	560	1 160	1 950	2 964
Additional weight per 10 mm stroke	4	6	8	12	18	22	35	41

Round cylinders CRDG, corrosion-resistant

Technical data

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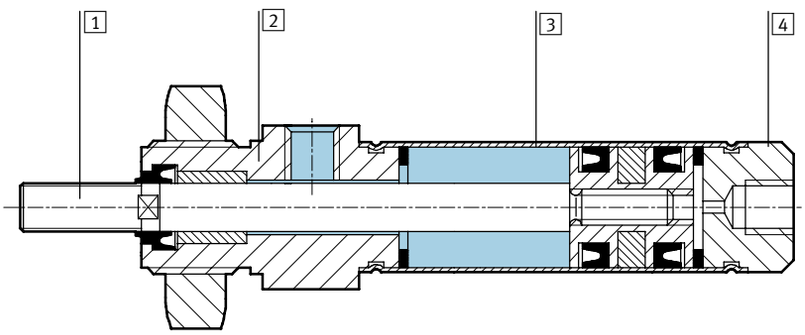
Materials

Sectional view

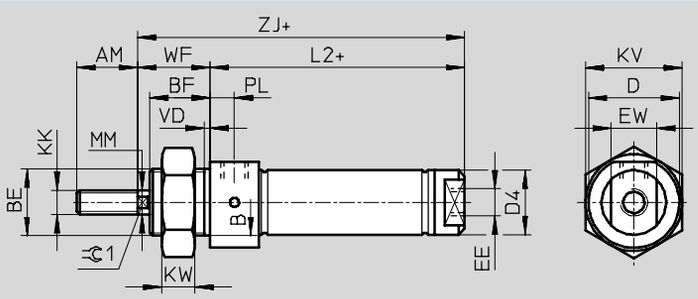


Cylinder		
1	Piston rod	High-alloy stainless steel
2	Bearing cap	High-alloy stainless steel
3	Cylinder barrel	High-alloy stainless steel
4	End cap	High-alloy stainless steel
–	Seals	Polyurethane

Dimensions

Download CAD data ➔ **www.festo.com/en/engineering**

Piston ∅ 12 ... 25mm



\+ plus stroke length

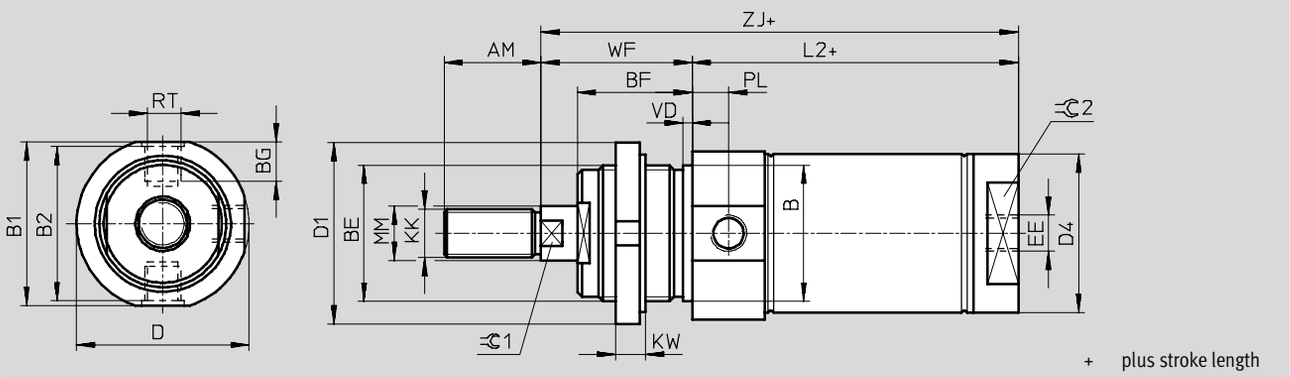
∅ [mm]	AM	B ∅ h9	BE	BF	D ∅	D4 ∅	EE	EW	KK	KV	KW	MM ∅ f8	L2	PL	VD	WF	ZJ	⫧1
12	16	16	M16x1.5	16	20	13.3	M5	11	M6	24	8	6	44	6	2	22	66	5
16	16	16	M16x1.5	16	20	17.3	M5	15	M6	24	8	6	51	6	2	22	73	5
20	20	22	M22x1.5	19	30	21.3	G1/8	18	M8	32	11	8	60	8.2	2	24	84	7
25	22	22	M22x1.5	21	30	26.5	G1/8	21	M10x1.25	32	11	10	61	8.2	2	28	89	9

Round cylinders CRDG, corrosion-resistant

Technical data

Dimensions Download CAD data ➔ **www.festo.com/en/engineering**

Piston ∅ 32 ... 63 mm



\+ plus stroke length

∅ [mm]	AM	B ∅ h9	B1	B2	BE	BF	BG	D ∅	D1 ∅	D4 ∅	EE
32	20	30	38	36.8	M30x1.5	30	6.6	40	42	33.6	G1⁄8
40	24	38	46	44.8	M38x1.5	35	9.6	49	50	41.6	G1⁄4
50	32	45	57	55.8	M45x1.5	38	12.6	59	60	52.4	G1⁄4
63	32	45	70	67	M45x1.5	38	15.5	70	60	65.4	G3⁄8

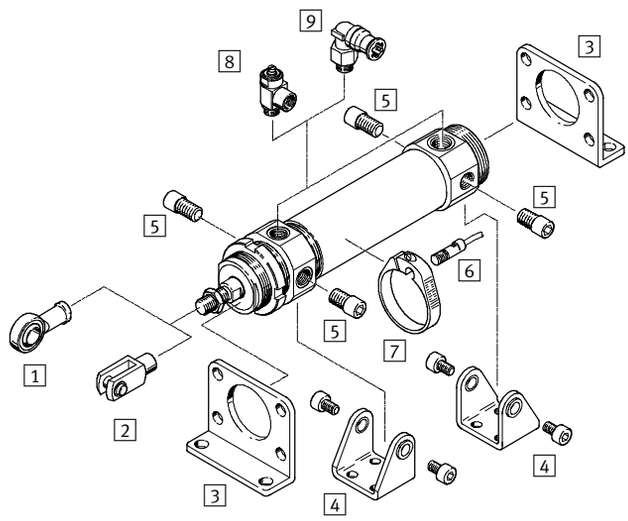
∅ [mm]	KK	KW	MM ∅	L2	RT	PL	VD	WF	ZJ	⫍C1	⫍C2
32	M10x1.25	8	12	85.7	M8x1	9	2	38.2	123.9	10	27
40	M12x1.25	10	16	100	M10x1	12	3	45.2	145.2	13	36
50	M16x1.5	10	20	107.6	M12x1.5	12	3	50.2	157.8	17	46
63	M16x1.5	10	20	107.8	M14x1.5	13	3	50.2	168	17	55

Ordering data

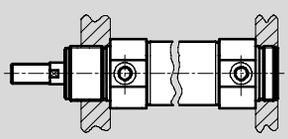
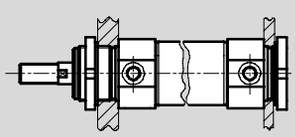
	Piston ∅ [mm]	Stroke [mm]	Part No.	Type
	12	1 ... 200	**160 980**	**CRDG-12-...-P-A**
	16		**160 981**	**CRDG-16-...-P-A**
	20	1 ... 320	**160 982**	**CRDG-20-...-P-A**
	25	1 ... 500	**160 983**	**CRDG-25-...-P-A**
	32		**160 984**	**CRDG-32-...-P-A**
	40		**160 985**	**CRDG-40-...-P-A**
	50		**160 986**	**CRDG-50-...-P-A**
	63		**160 987**	**CRDG-63-...-P-A**

Round cylinders CRDSW, corrosion-resistant

Peripherals overview



Mounting options

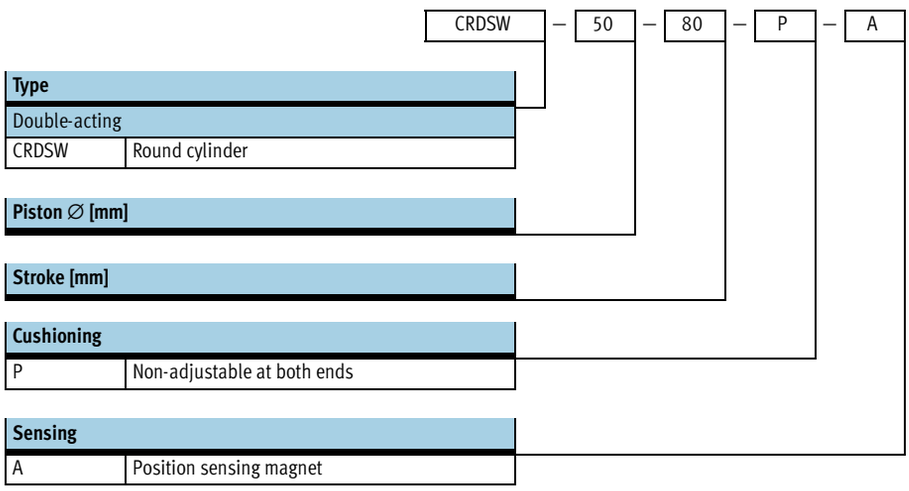
Threaded mounting	Mounting with slotted nut
	

Mounting attachments and accessories

	Brief description	➔ Page
1 Rod eye CRSGS	With spherical bearing	1 / 2.8-9
2 Rod clevis CRSG	Permits a swivelling movement of the cylinder in one plane	1 / 2.8-9
3 Foot mounting CRH (2 pieces)	For bearing and end cap	1 / 2.8-1
3 Flange mounting CRFV	For bearing and end cap	1 / 2.8-3
4 Clevis foot CRSBS	For bearing and end cap	1 / 2.8-7
5 Pivot bolt CRGBS	For bearing and end cap	1 / 2.8-7
6 Proximity sensor CRSMEO-4	With LED for operating status indication	1 / 2.8-9
7 Mounting kit CRSMBR	For proximity sensor CRSMEO-4	1 / 2.8-9
8 One-way flow control valve CRGRLA	For speed regulation	1 / 2.8-9
9 Push-in/threaded fitting CRQS	For connecting compressed air tubing with standard O.D.	–

Round cylinders CRDSW, corrosion-resistant

Type code



Round cylinders CRDSW, corrosion-resistant

Technical data

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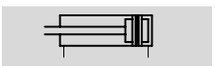
Function



- Ø - Diameter
  32 ... 63 mm
- I - Stroke length
  1 ... 500 mm

General technical data				
Piston ∅	32	40	50	63
Pneumatic connection	G1⁄8	G1⁄4	G1⁄4	G3⁄8
Piston rod thread	M10x1.25	M12x1.25	M16x1.5	M16x1.5
Constructional design	Piston			
	Piston rod			
	Cylinder barrel			
Cushioning	Non-adjustable at both ends			
Position sensing	Via proximity sensor			
Type of mounting	With accessories			
	With male thread			
Mounting position	Any			

Operating and environmental conditions				
Piston ∅	32	40	50	63
Operating medium	Filtered compressed air, lubricated or unlubricated			
Operating pressure	1 ... 10 bar			
Ambient temperature[1] [°C]	–20 ... +80			
Corrosion resistance class CRC[2]	4			

1) Note operating range of proximity sensors

2) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required

Forces [N]				
Piston ∅	32	40	50	63
Theoretical force at 6 bar, advancing	483	754	1 178	1 870
Theoretical force at 6 bar, retracting	415	633	990	1 682

Weights [g]				
Piston ∅	32	40	50	63
Basic weight at 0 mm stroke	670	1 460	1 960	3 325
Additional weight per 10 mm stroke	18	22	35	41

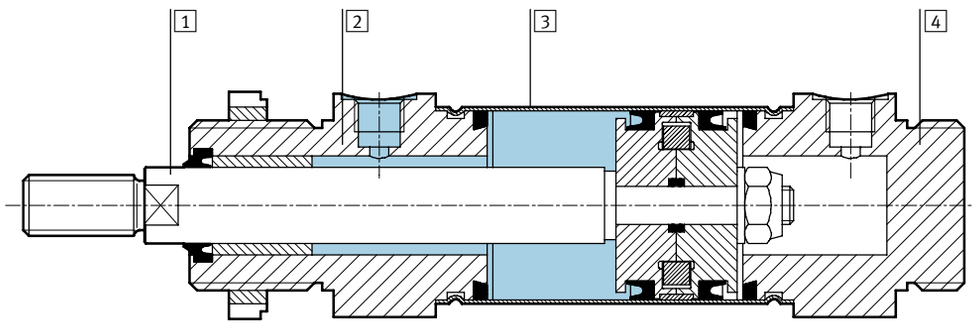
Pneumatic sizing using Pro Pneu
www.festo.com/en/engineering

Round cylinders CRDSW, corrosion-resistant

Technical data

Materials

Sectional view



Cylinder		
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	Polyurethane

Round cylinders CRDSW, corrosion-resistant

Technical data

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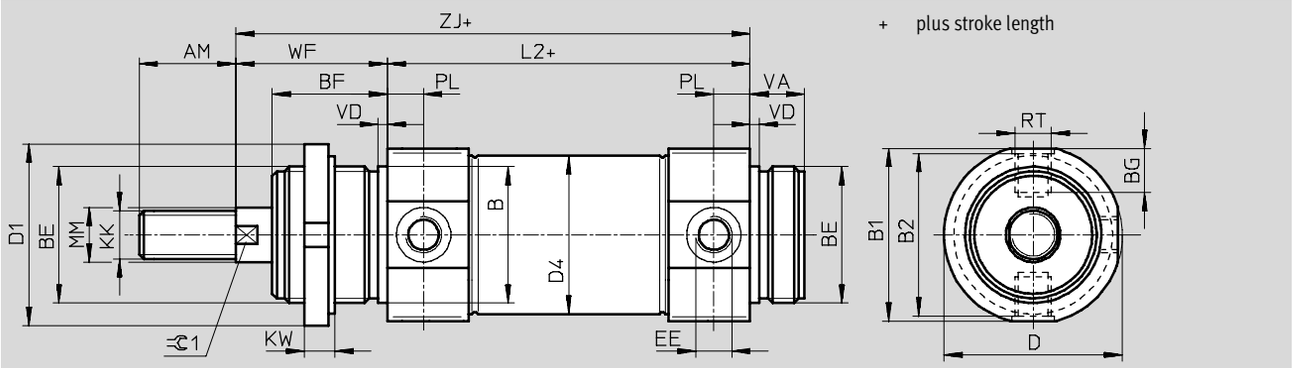
Dimensions Download CAD data ➔ **www.festo.com/en/engineering**



\+ plus stroke length

∅ [mm]	AM	B ∅ h9	B1	B2	BE	BF	BG	D ∅	D1 ∅	D4 ∅	EE
32	20	30	38	36.8	M30x1.5	30	6.6	40	42	33.6	G1⁄8
40	24	38	46	44.8	M38x1.5	35	9.6	49	50	41.6	G1⁄4
50	32	45	57	55.8	M45x1.5	38	12.6	59	60	52.4	G1⁄4
63	32	45	70	67	M45x1.5	38	15.5	70	60	65.4	G3⁄8

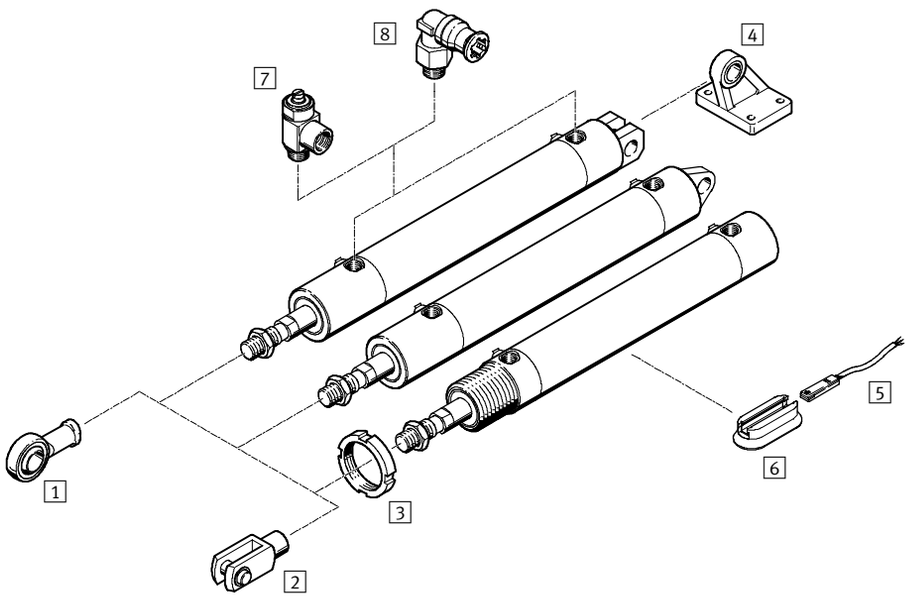
∅ [mm]	KK	KW	MM ∅	L2	RT	PL	VA	VD	WF	ZJ	⫧1
32	M10x1.25	8	12	96	M8x1	9	14	2	38.2	134	10
40	M12x1.25	10	16	113	M10x1	12	16	3	45.2	158	13
50	M16x1.5	10	20	120	M12x1.5	12	18	3	50.2	170	17
63	M16x1.5	10	20	124	M14x1.5	13	18	3	50.2	174	17

Ordering data

	Piston ∅ [mm]	Stroke [mm]	Part No.	Type
	32	1 ... 500	**160 676**	**CRDSW-32-...-P-A**
	40		**160 677**	**CRDSW-40-...-P-A**
	50		**160 678**	**CRDSW-50-...-P-A**
	63		**160 679**	**CRDSW-63-...-P-A**

Round cylinders CRHD, corrosion-resistant

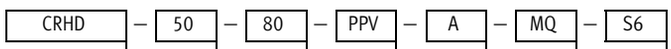
Peripherals overview



Mounting attachments and accessories					
	Brief description	**CRHD-MQ**	**CRHD-MC**	**CRHD-MS**	**➔ Page**
1 Rod eye CRSGS	With spherical bearing	■	■	■	1 / 2.8-9
2 Rod clevis CRSG	Permits a swivelling movement of the cylinder in one plane	■	■	■	1 / 2.8-9
3 Ring nut CR	For bearing cap	■	–	–	1 / 2.8-8
4 Clevis foot CRLMC	For end cap	–	■	–	1 / 2.8-8
5 Proximity sensor CRSMT	With LED for operating status indication	■	■	■	1 / 2.8-9
6 Mounting kit CRSMB-8-32/100	For proximity sensor CRSMT	■	■	■	1 / 2.8-9
7 One-way flow control valve CRGRLA	For speed regulation	■	■	■	1 / 2.8-9
8 Push-in/threaded fittings CRQS	For connecting compressed air tubing with standard O.D.	■	■	■	–

Round cylinders CRHD, corrosion-resistant

Type code



Type	
Double-acting	
CRHD	Round cylinder

Piston ∅ [mm]

Stroke [mm]

Cushioning	
PPV	Adjustable at both ends

Sensing	
A	Position sensing magnet

Cover variant	
MQ	Bearing cap with male thread
MC	End cap with yoke
MS	End cap with lug

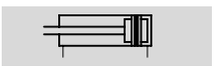
Variant	
S6	Heat resistant up to 150 °C

Round cylinders CRHD, corrosion-resistant

Technical data

FESTO

Function



- Ø - Diameter 32 ... 100 mm
- I - Stroke length 10 ... 500 mm

Variants

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 ∅	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
Constructional design	Piston					
	Piston rod					
	Cylinder barrel					
Cushioning	Adjustable at both ends					
Cushioning length	17	19.5	21	21	31	31
Position sensing	Via proximity sensor					
Type of mounting	With accessories					
Mounting position	Any					

Operating and environmental conditions		
Variant	CRHD	S6
Operating medium	Filtered compressed air, lubricated or unlubricated	
Operating pressure	1 ... 10 bar	
Ambient temperature[1] [°C]	–20 ... +80	–20 ... +150
Corrosion resistance class CRC[2]	4	

1) Note operating range of proximity sensors

2) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required

Forces [N]						
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

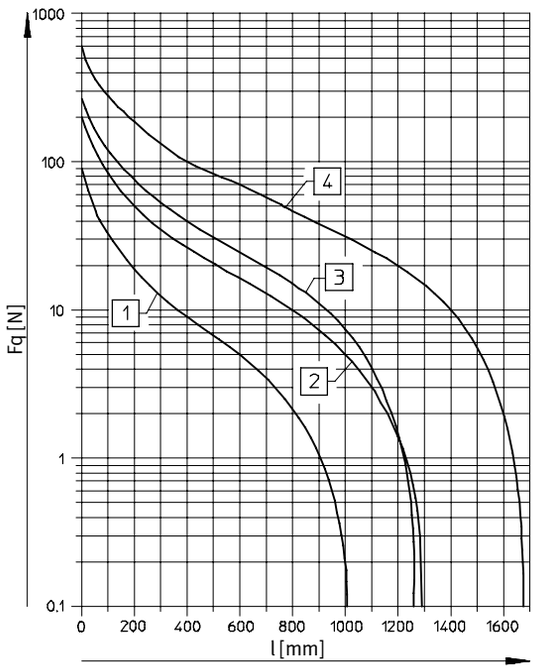
Weights [g]						
Piston ∅	32	40	50	63	80	100
Basic weight at 10 mm stroke	676	1 196	1 849	2 977	5 172	8 472
Additional weight per 10 mm stroke	26	42	57	65	100	115
Moving load at 10 mm stroke	106	198	340	398	717	968
Additional load per 10 mm stroke	9	16	25	25	38	38

Round cylinders CRHD, corrosion-resistant

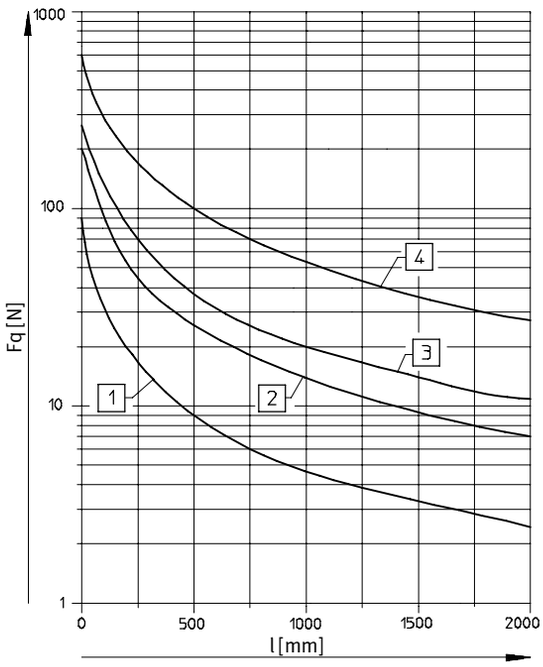
Technical data

Permissible lateral force Fq as a function of stroke length l

Horizontal mounting



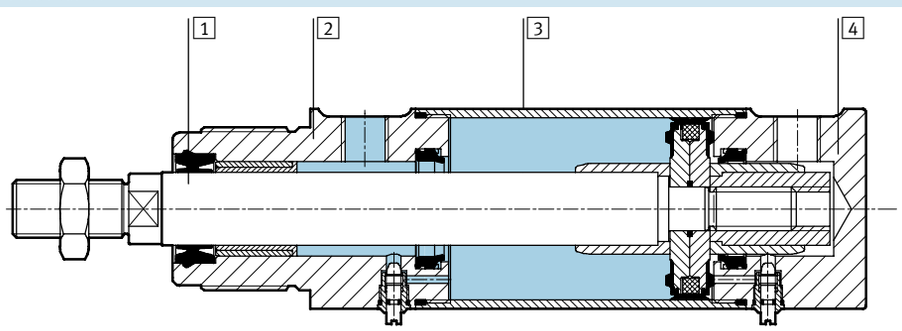
Vertical mounting



1 ∅ 32
2 ∅ 40
3 ∅ 50, 63
4 ∅ 80, 100

Materials

Sectional view



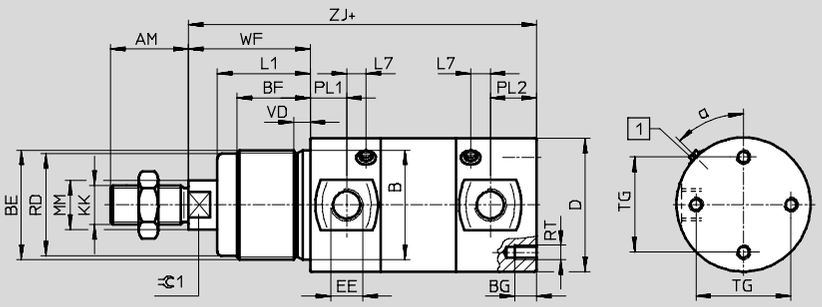
Cylinder		CRHD	S6
1	Piston rod	High-alloy stainless steel	
2	Bearing cap	High-alloy stainless steel	
3	Cylinder barrel	High-alloy stainless steel	
4	End cap	High-alloy stainless steel	
–	Seals	Polyurethane, nitrile rubber	Fluorocarbon rubber

Round cylinders CRHD, corrosion-resistant

Technical data

Dimensions – CRHD- ... -MQ Download CAD data ➔ **www.festo.com/en/engineering**

Bearing cap with male thread



1 Regulating screw for end-position cushioning

\+ = plus stroke length

∅ [mm]	α	AM	B ∅ h9	BE	BF	BG	D ∅	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

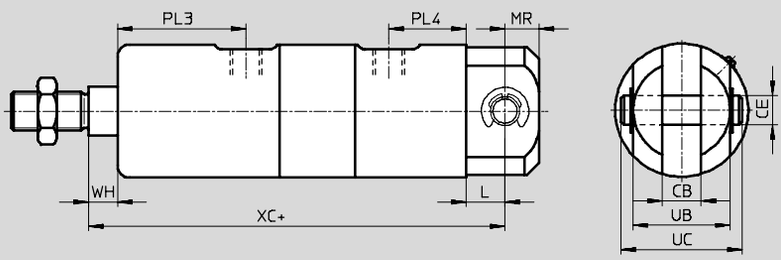
∅ [mm]	L7	MM ∅	RD ∅	RT	PL1	PL2	TG	VD	WF	ZJ	≂C1
32	5	12	27	M5	13	21	22	7	38	120	10
40	8	16	35	M6	15	18	30	7	45	135	13
50	5	20	42	M6	15	19	39	6.25	50	143	17
63	8	20	42	M8	17	24	49	6.25	50	158	17
80	9	25	47	M10	18	31	65	7.5	50	174	22
100	13	25	47	M10	22	30	82	7.5	50	189	22

Round cylinders CRHD, corrosion-resistant

Technical data

Dimensions – CRHD- ... -MC Download CAD data ➔ **www.festo.com/en/engineering**

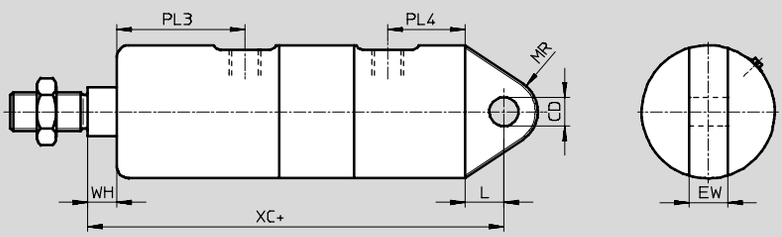
End cap with yoke



\+ plus stroke length

Dimensions – CRHD- ... -MS Download CAD data ➔ **www.festo.com/en/engineering**

End cap with lug



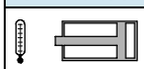
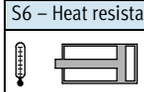
\+ plus stroke length

∅ [mm]	CB +0.2/+0.1	CD ∅ H9	CE ∅ 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	40	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

Round cylinders CRHD, corrosion-resistant

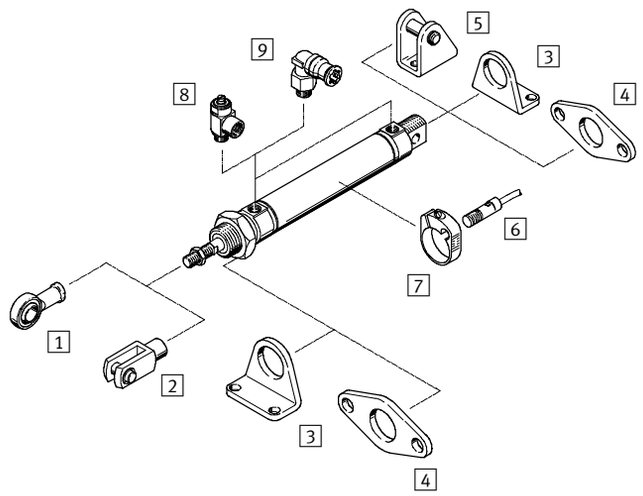
Technical data

FESTO

Ordering data				
Type	Piston ∅ [mm]	Stroke [mm]	Part No.	Type
MQ – Bearing cap with male thread				
	32	10 … 500	**195 507**	**CRHD-32-…-PPV-A-MQ**
	40		**195 508**	**CRHD-40-…-PPV-A-MQ**
	50		**195 509**	**CRHD-50-…-PPV-A-MQ**
	63		**195 510**	**CRHD-63-…-PPV-A-MQ**
	80		**195 511**	**CRHD-80-…-PPV-A-MQ**
	100		**195 512**	**CRHD-100-…-PPV-A-MQ**
S6 – Heat resistant up to 150 °C				
	32	10 … 500	**195 543**	**CRHD-32-…-PPV-A-MQ-S6**
	40		**195 544**	**CRHD-40-…-PPV-A-MQ-S6**
	50		**195 545**	**CRHD-50-…-PPV-A-MQ-S6**
	63		**195 546**	**CRHD-63-…-PPV-A-MQ-S6**
	80		**195 547**	**CRHD-80-…-PPV-A-MQ-S6**
	100		**195 548**	**CRHD-100-…-PPV-A-MQ-S6**
MC – End cap with yoke (pivot pin and lock included in the scope of delivery)				
	32	10 … 500	**195 513**	**CRHD-32-…-PPV-A-MC**
	40		**195 514**	**CRHD-40-…-PPV-A-MC**
	50		**195 515**	**CRHD-50-…-PPV-A-MC**
	63		**195 516**	**CRHD-63-…-PPV-A-MC**
	80		**195 517**	**CRHD-80-…-PPV-A-MC**
	100		**195 518**	**CRHD-100-…-PPV-A-MC**
S6 – Heat resistant up to 150 °C				
	32	10 … 500	**195 549**	**CRHD-32-…-PPV-A-MC-S6**
	40		**195 550**	**CRHD-40-…-PPV-A-MC-S6**
	50		**195 551**	**CRHD-50-…-PPV-A-MC-S6**
	63		**195 552**	**CRHD-63-…-PPV-A-MC-S6**
	80		**195 553**	**CRHD-80-…-PPV-A-MC-S6**
	100		**195 554**	**CRHD-100-…-PPV-A-MC-S6**
MS – End cap with lug				
	32	10 … 500	**195 519**	**CRHD-32-…-PPV-A-MS**
	40		**195 520**	**CRHD-40-…-PPV-A-MS**
	50		**195 521**	**CRHD-50-…-PPV-A-MS**
	63		**195 522**	**CRHD-63-…-PPV-A-MS**
	80		**195 523**	**CRHD-80-…-PPV-A-MS**
	100		**195 524**	**CRHD-100-…-PPV-A-MS**
S6 – Heat resistant up to 150 °C				
	32	10 … 500	**195 555**	**CRHD-32-…-PPV-A-MS-S6**
	40		**195 556**	**CRHD-40-…-PPV-A-MS-S6**
	50		**195 557**	**CRHD-50-…-PPV-A-MS-S6**
	63		**195 558**	**CRHD-63-…-PPV-A-MS-S6**
	80		**195 559**	**CRHD-80-…-PPV-A-MS-S6**
	100		**195 560**	**CRHD-100-…-PPV-A-MS-S6**

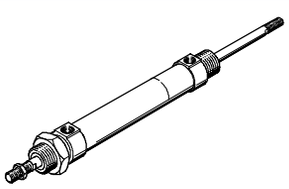
Standard cylinders CRDSNU to ISO 6432, corrosion-resistant

Peripherals overview

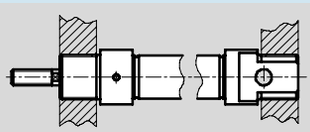
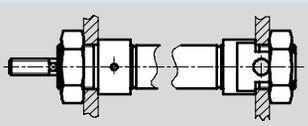
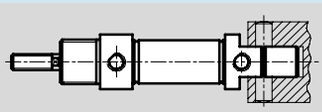


Variant

CRDSNU-S2



Mounting options

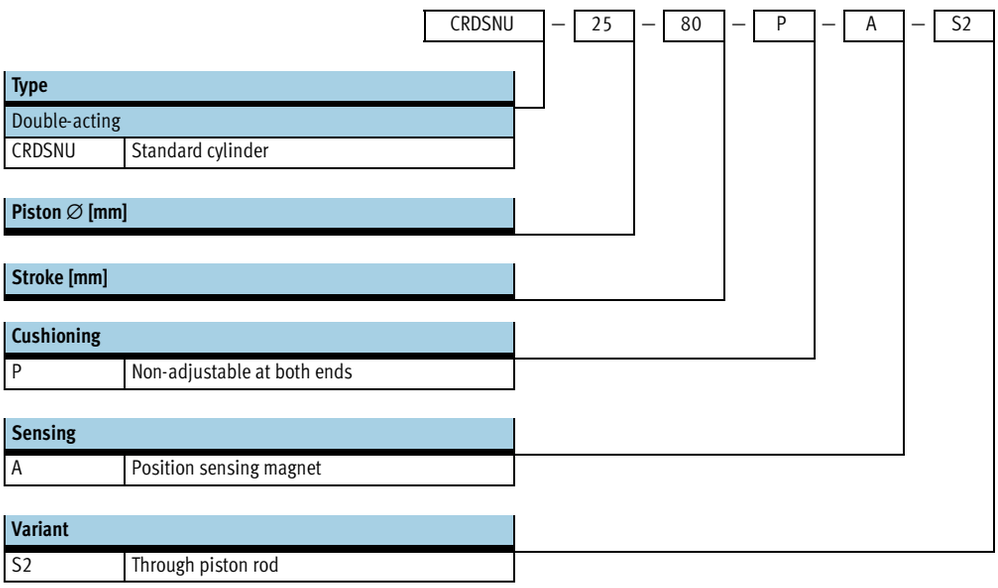
Threaded mounting	Mounting with hex nut	Swivel mounting at the rear
		

Mounting attachments and accessories

	Brief description	→Page
1 Rod eye CRSGS	With spherical bearing	1 / 2.8-9
2 Rod clevis CRSG	Permits a swivelling movement of the cylinder in one plane	1 / 2.8-9
3 Foot mounting CRHBN	For bearing and end cap	1 / 2.8-1
4 Flange mounting CRFBN	For bearing or end cap	1 / 2.8-3
5 Clevis foot CRLBN	For direct mounting on end cap	1 / 2.8-6
6 Proximity sensor CRSMEO-4	With LED for operating status indication	1 / 2.8-9
7 Mounting kit CRSMBR	For proximity sensor CRSMEO-4	1 / 2.8-9
8 One-way flow control valve CRGRLA	For speed regulation	1 / 2.8-9
9 Push-in/threaded fitting CRQS	For connecting compressed air tubing with standard O.D.	–

Standard cylinders CRDSNU to ISO 6432, corrosion-resistant

Type code

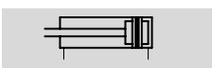


Standard cylinders CRDSNU to ISO 6432, corrosion-resistant

Technical data

FESTO

Function



Variants

S2

- Ø - Diameter
  12 ... 25

- I - Stroke length
  10 ... 500

ISO DIN

General technical data					
Piston ∅	12	16	20	25	
Pneumatic connection	M5	M5	G1⁄8	G1⁄8	
Piston rod thread	M6	M6	M8	M10x1.25	
Constructional design	Piston				
	Piston rod				
	Cylinder barrel				
Cushioning	Non-adjustable at both ends				
Position sensing	Via proximity sensor				
Type of mounting	With accessories				
	With male thread				
Mounting position	Any				

Operating and environmental conditions					
Piston ∅		12	16	20	25
Operating medium		Filtered compressed air, lubricated or unlubricated			
Operating pressure	[bar]	1 ... 10			
Ambient temperature[1]	[°C]	–20 ... +80			
Corrosion resistance class CRC[2]		4			

1) Note operating range of proximity sensors

2) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required

Forces [N] and impact energy [J]				
Piston ∅	12	16	20	25
Theoretical force at 6 bar, advancing	68	121	189	295
Theoretical force at 6 bar, retracting	51	104	158	247
Max. impact energy at end positions	0.07	0.15	0.20	0.30

Pneumatic sizing using Pro Pneu
www.festo.com/en/engineering

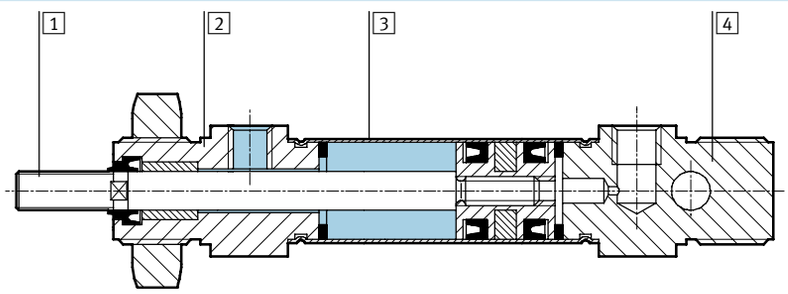
Standard cylinders CRDSNU to ISO 6432, corrosion-resistant

Technical data

Weights [g]				
Piston ∅	12	16	20	25
Basic weight at 0 mm stroke	120	150	320	450
Additional weight per 10 mm stroke	4.2	4.8	7.2	10

Materials

Sectional view



Cylinder		
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	Polyurethane

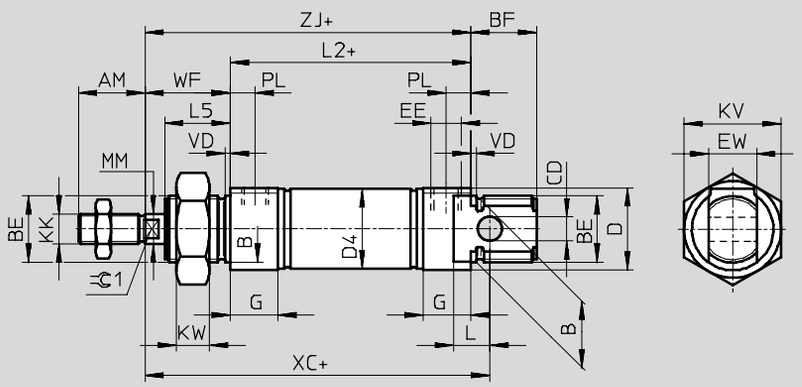
Standard cylinders CRDSNU to ISO 6432, corrosion-resistant

Technical data

FESTO

Dimensions Download CAD data ➔ **www.festo.com/en/engineering**

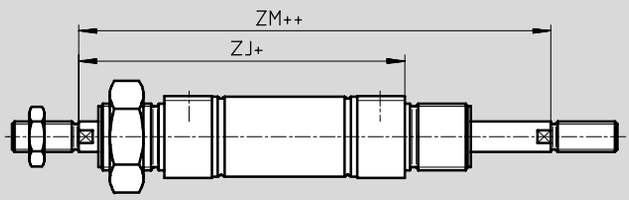
Basic version



\+ plus stroke length

Variant

S2 – Through piston rod



\+ plus stroke length
++ plus 2 stroke lengths

∅ [mm]	AM	B	BE	BF	CD	D	D4	EE	EW	G	KK	KV
12	16	16	M16x1.5	17	6	20	13.3	M5	12	10	M6	24
16	16	16	M16x1.5	17	6	20	17.3	M5	12	10	M6	24
20	20	22	M22x1.5	20	8	30	21.3	G⅛	16	16	M8	32
25	22	22	M22x1.5	22	8	30	26.5	G⅛	16	16	M10x1.25	32

∅ [mm]	KW	MM	L	L2	L5	PL	VD	WF	XC	ZJ	ZM	⊂1
12	8	6	9	50	16	6	2	22	75	72	94	5
16	8	6	9	56	16	6	2	22	82	78	100	5
20	11	8	12	68	19	8.2	2	24	95	92	116	7
25	11	10	12	69.5	21	8.2	2	28	104	97.5	125.4	9

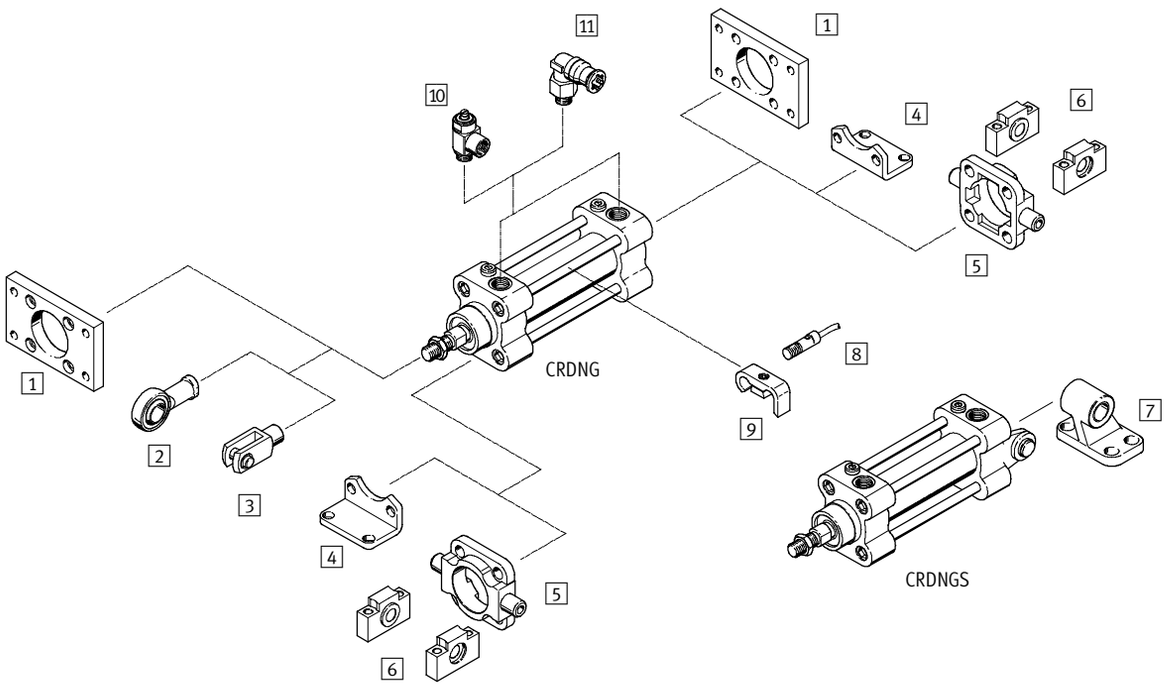
Standard cylinders CRDSNU to ISO 6432, corrosion-resistant

Technical data

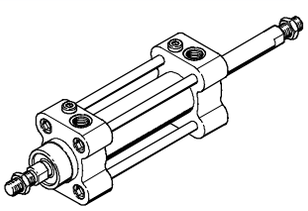
Ordering data				
Variant	Piston ∅ [mm]	Stroke [mm]	Part No.	Type
Basic version				
	12	10 … 200	**160 880**	**CRDSNU-12-…-P-A**
	16	10 … 200	**160 881**	**CRDSNU-16-…-P-A**
	20	10 … 320	**160 882**	**CRDSNU-20-…-P-A**
	25	10 … 500	**160 883**	**CRDSNU-25-…-P-A**
S2 – Through piston rod				
	12	10 … 200	**185 289**	**CRDSNU-12-…-P-A-S2**
	16	10 … 200	**185 290**	**CRDSNU-16-…-P-A-S2**
	20	10 … 320	**185 291**	**CRDSNU-20-…-P-A-S2**
	25	10 … 500	**185 292**	**CRDSNU-25-…-P-A-S2**

Standard cylinders CRDNG to ISO 15552, corrosion-resistant

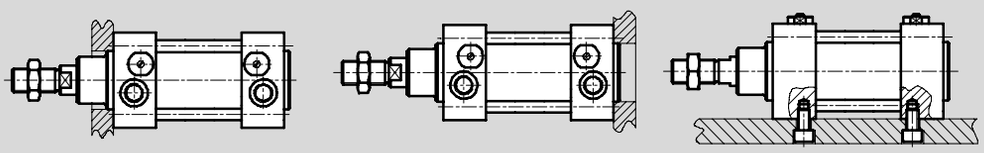
Peripherals overview



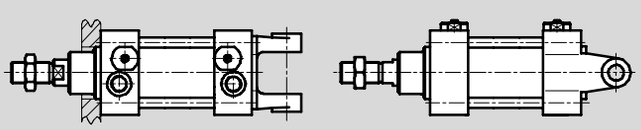
Variant
CRDNG-S2



Mounting options		
CRDNG		
Mounting at front	Mounting at rear	Mounting from below



CRDNGS	
Mounting at front	Mounting on swivel flange



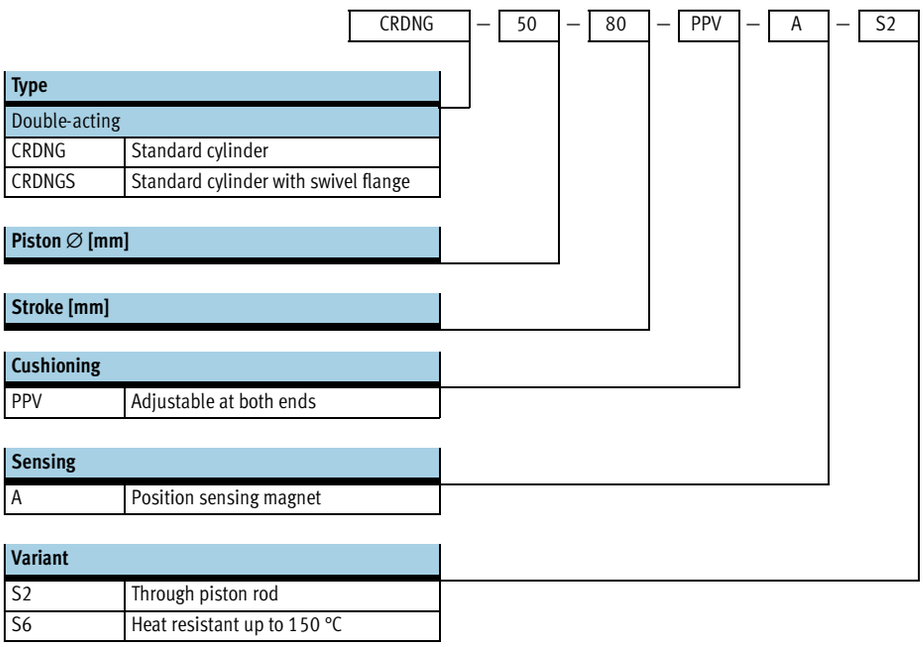
Standard cylinders CRDNG to ISO 15552, corrosion-resistant

Peripherals overview

Mounting attachments and accessories				
	Brief description	CRDNG	CRDNGS	→ Page
1 Flange mounting CRFNG	For bearing or end cap	■	–	1 / 2.8-4
2 Rod eye CRSGS	With spherical bearing	■	■	1 / 2.8-9
3 Rod clevis CRSG	Permits a swivelling movement of the cylinder in one plane	■	■	1 / 2.8-9
4 Foot mounting CRHNC	For bearing and end cap	■	–	1 / 2.8-2
5 Trunnion flange CRZNG	For bearing and end cap in combination with trunnion supports CRLNZG	■	–	1 / 2.8-5
6 Trunnion support CRLNZG	For supporting trunnion flange CRZNG	■	–	1 / 2.8-5
7 Clevis foot CRLNG	For variant with swivel flange	–	■	1 / 2.8-6
8 Proximity sensor CRSMEO-4	With LED for operating status indication	■	■	1 / 2.8-9
9 Mounting kit CRSMB	For proximity sensor CRSMEO-4	■	■	1 / 2.8-9
10 One-way flow control valve CRGRLA	For speed regulation	■	■	1 / 2.8-9
11 Push-in/threaded fittings CRQS	For connecting compressed air tubing with standard O.D.	■	■	–

Standard cylinders CRDNG to ISO 15552, corrosion-resistant

Type code



Type	
Double-acting	
CRDNG	Standard cylinder
CRDNGS	Standard cylinder with swivel flange

Piston ∅ [mm]

Stroke [mm]

Cushioning	
PPV	Adjustable at both ends

Sensing	
A	Position sensing magnet

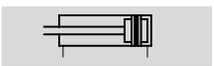
Variant	
S2	Through piston rod
S6	Heat resistant up to 150 °C

Standard cylinders CRDNG to ISO 15552, corrosion-resistant

Technical data

FESTO

Function



- Ø - Diameter
  32 ... 125
- I - Stroke length
  10 ... 2000

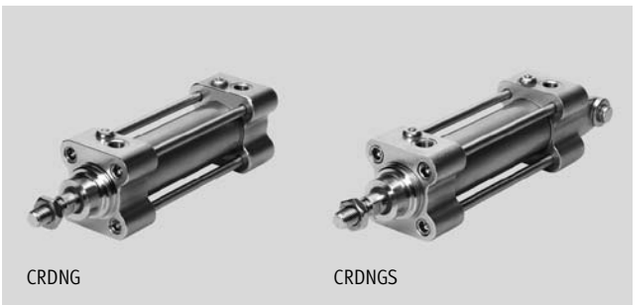
Wearing parts kits
➔ 1 / 2.7-37

Variants

S2

S6

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



CRDNG CRDNGS

Conforms to
- ISO 15552
- ISO 6431
- VDMA 24562
- NFE 49003.1
- UNI 10290

General technical data								
Piston ∅		32	40	50	63	80	100	125
Pneumatic connection		G⅛	G¼	G¼	G⅜	G⅜	G½	G½
Piston rod thread		M10x1.25	M12x1.25	M16x1.5	M16x1.5	M20x1.5	M20x1.5	M27x2
Constructional design		Piston						
		Piston rod						
		Cylinder barrel						
Cushioning		Adjustable at both ends						
Cushioning length	[mm]	20	20	23	23	30	30	40
Position sensing		Via proximity sensor						
Type of mounting		With accessories						
		With female thread						
Mounting position		Any						

Operating and environmental conditions			
Variant		CRDNG/CRDNGS	S6
Operating medium		Filtered compressed air, lubricated or unlubricated	
Operating pressure		0.6 ... 10 bar	
Ambient temperature[1]	[°C]	–20 ... +80	–20 ... +150
Corrosion resistance class CRC[2]		4	

1) Note operating range of proximity sensors
2) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required

Forces [N]							
Piston ∅	32	40	50	63	80	100	125
Theoretical force at 6 bar, advancing	482	753	1 178	1 870	3 015	4 712	7 360
Theoretical force at 6 bar, retracting	415	633	990	1 682	2 720	4 418	6 880

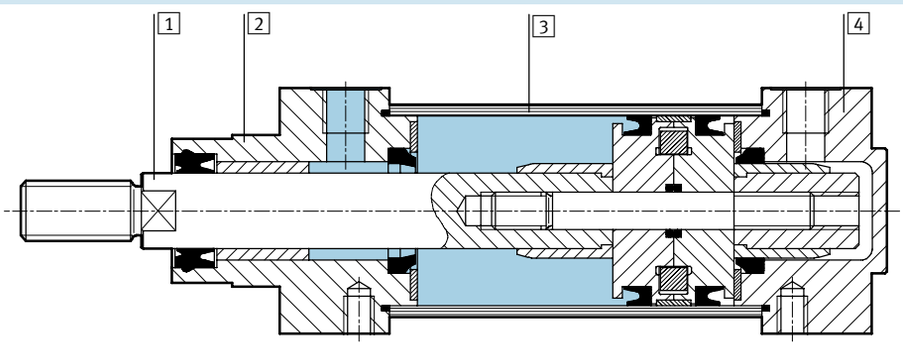
Standard cylinders CRDNG to ISO 15552, corrosion-resistant

Technical data

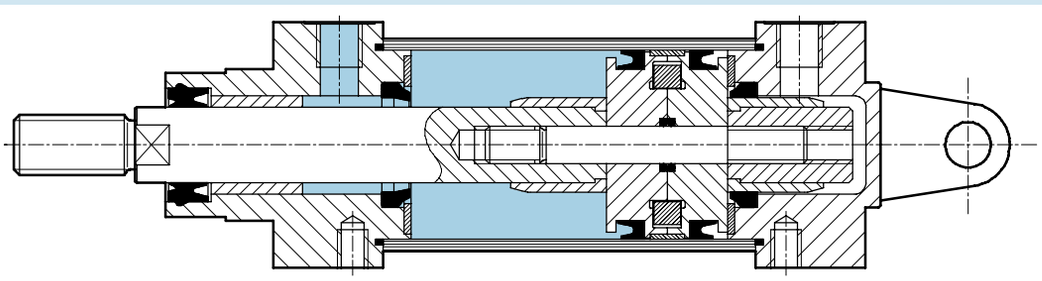
Weights [g]							
Piston ∅	32	40	50	63	80	100	125
CRDNG							
Basic weight at 0 mm stroke	1 045	1 360	2 160	3 455	5 935	8 070	
Additional weight per 10 mm stroke	20	30	60	60	100	110	
CRDNGS							
Basic weight at 0 mm stroke	1 070	1 460	2 330				
Additional weight per 10 mm stroke	20	30	60				

Materials

Sectional view CRDNG



Sectional view CRDNGS



Cylinder		CRDNG/CRDNGS	S6
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	Polyurethane, nitrile rubber	Fluorocarbon rubber

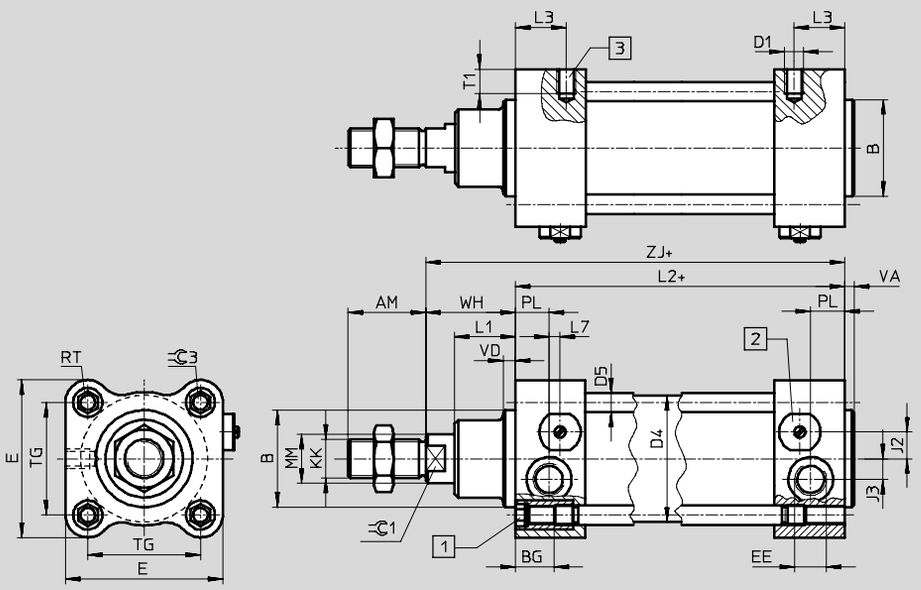
Standard cylinders CRDNG to ISO 15552, corrosion-resistant

Technical data

Dimensions

Download CAD data ➔ **www.festo.com/en/engineering**

CRDNG



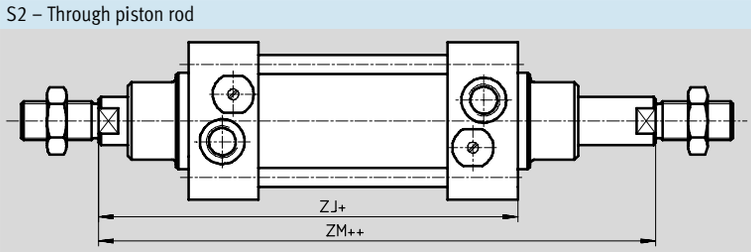
1 Socket head screw with female thread
2 Cover for adjustable end-position cushioning
3 Threaded hole for direct mounting

\+ plus stroke length

Variant

Download CAD data ➔ **www.festo.com/en/engineering**

S2 – Through piston rod



\+ plus stroke length
++ plus 2 stroke lengths

∅ [mm]	AM	B ∅ e11	BG	D1	D4 ∅	D5 ∅	E	EE	J2	J3	KK	L1	L2
32	22	30	16	M6	33.6	6	50	G⅛	7	5.7	M10x1.25	16	94 +0.4
40	24	35	16	M6	41.6	6	55	G¼	10	6.5	M12x1.25	18	105 +0.4/–0.6
50	32	40	16	M8	52.4	8	65	G¼	11.5	8.6	M16x1.5	25	106 +0.4/–0.6
63	32	45	16	M10	65.4	8	75	G⅜	14.5	12	M16x1.5	25	121 +0.4/–0.6
80	40	45	23	M10	82.8	10	100	G⅜	15	13	M20x1.5	31	128 +0.4/–0.6
100	40	55	23	M12	102.8	10	120	G½	23	14	M20x1.5	36	138 +0.4/–0.6
125	54	60	23	M12	128.6	12	145	G½	28.5	8	M27x2	31	160 +0.4/–0.6

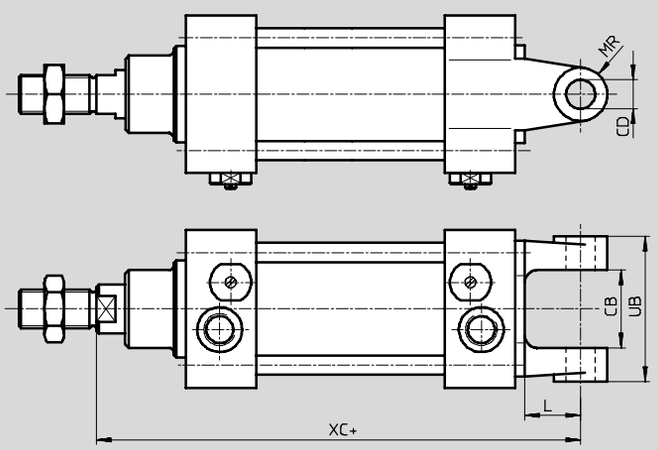
∅ [mm]	L3	L7	MM ∅	PL	RT	T1	TG	VA	VD	WH	ZJ	ZM	⫧1	⫧3
32	13	5.3	12	13	M6	9	32.5	4	5	26	120	148	10	6
40	16.5	2.5	16	14	M6	9	38	4	5	30	135	167	13	6
50	21	4.5	20	14	M8	10	46.5	4	5	37	143	183	17	8
63	22	5	20	18	M8	12	56.5	4	5	37	158	199	17	8
80	22.5	6	25	17	M10	15	72	4	5	46	174	222	22	10
100	22.5	9	25	18	M10	18	89	4	5	51	189	240	22	10
125	23.5	4.5	32	27	M12	18	110	6	6	66	226	292	27	12

Standard cylinders CRDNG to ISO 15552, corrosion-resistant

Technical data

Dimensions

CRDNGS



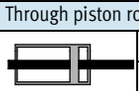
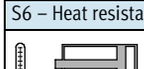
\+ plus stroke length

∅ [mm]	CB H14	CD ∅ H9	L	MR	UB	XC
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

Standard cylinders CRDNG to ISO 15552, corrosion-resistant

Technical data

FESTO

Ordering data				
Variant	Piston ∅ [mm]	Stroke [mm]	Part No.	Type
CRDNG				
	32	10 … 2000	**160 884**	**CRDNG-32-…-PPV-A**
	40	10 … 2000	**160 885**	**CRDNG-40-…-PPV-A**
	50	10 … 2000	**160 886**	**CRDNG-50-…-PPV-A**
	63	10 … 2000	**160 887**	**CRDNG-63-…-PPV-A**
	80	10 … 2000	**160 888**	**CRDNG-80-…-PPV-A**
	100	10 … 2000	**160 889**	**CRDNG-100-…-PPV-A**
	125	10 … 2000	**185 280**	**CRDNG-125-…-PPV-A**
S6 – Heat resistant up to 150 °C				
	32	10 … 2000	**185 293**	**CRDNG-32-…-PPV-A-S6**
	40	10 … 2000	**185 294**	**CRDNG-40-…-PPV-A-S6**
	50	10 … 2000	**185 295**	**CRDNG-50-…-PPV-A-S6**
	63	10 … 2000	**185 296**	**CRDNG-63-…-PPV-A-S6**
	80	10 … 2000	**185 297**	**CRDNG-80-…-PPV-A-S6**
	100	10 … 2000	**185 298**	**CRDNG-100-…-PPV-A-S6**
	125	10 … 2000	**185 299**	**CRDNG-125-…-PPV-A-S6**
S2 – Through piston rod				
	32	10 … 2000	**185 282**	**CRDNG-32-…-PPV-A-S2**
	40	10 … 2000	**185 283**	**CRDNG-40-…-PPV-A-S2**
	50	10 … 2000	**185 284**	**CRDNG-50-…-PPV-A-S2**
	63	10 … 2000	**185 285**	**CRDNG-63-…-PPV-A-S2**
	80	10 … 2000	**185 286**	**CRDNG-80-…-PPV-A-S2**
	100	10 … 2000	**185 287**	**CRDNG-100-…-PPV-A-S2**
	125	10 … 2000	**185 288**	**CRDNG-125-…-PPV-A-S2**
CRDNGS				
	32	10 … 2000	**160 890**	**CRDNGS-32-…-PPV-A**
	40	10 … 2000	**160 891**	**CRDNGS-40-…-PPV-A**
	50	10 … 2000	**160 892**	**CRDNGS-50-…-PPV-A**
	63	10 … 2000	**160 893**	**CRDNGS-63-…-PPV-A**
	80	10 … 2000	**160 894**	**CRDNGS-80-…-PPV-A**
	100	10 … 2000	**160 895**	**CRDNGS-100-…-PPV-A**
	125	10 … 2000	**185 281**	**CRDNGS-125-…-PPV-A**
S6 – Heat resistant up to 150 °C				
	32	10 … 2000	**185 300**	**CRDNGS-32-…-PPV-A-S6**
	40	10 … 2000	**185 301**	**CRDNGS-40-…-PPV-A-S6**
	50	10 … 2000	**185 302**	**CRDNGS-50-…-PPV-A-S6**
	63	10 … 2000	**185 303**	**CRDNGS-63-…-PPV-A-S6**
	80	10 … 2000	**185 304**	**CRDNGS-80-…-PPV-A-S6**
	100	10 … 2000	**185 305**	**CRDNGS-100-…-PPV-A-S6**
	125	10 … 2000	**185 306**	**CRDNGS-125-…-PPV-A-S6**

Ordering data – Wearing parts kits					
Piston ∅ [mm]	Part No.	Type	Piston ∅ [mm]	Part No.	Type
32	**125 713**	**CRDNG/S-32-…-PPV-A**[1)]	63	**125 716**	**CRDNG/S-63-…-PPV-A**[1)]
40	**125 714**	**CRDNG/S-40-…-PPV-A**[1)]	80	**125 717**	**CRDNG/S-80-…-PPV-A**[1)]
50	**125 715**	**CRDNG/S-50-…-PPV-A**[1)]	100	**125 718**	**CRDNG/S-100-…-PPV-A**[1)]

1) Assembly grease included in scope of delivery.

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Accessories for corrosion-resistant cylinders

Technical data

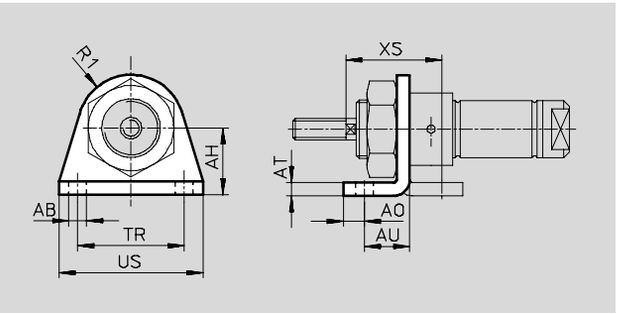
FESTO

Foot mounting CRHBN

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

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

CRHBN-... x2



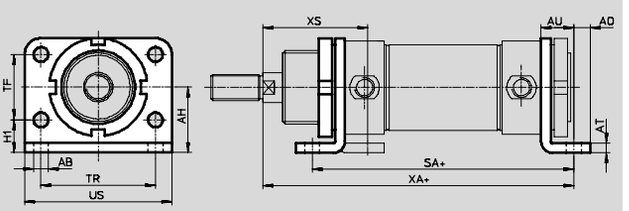
Dimensions and ordering data

For ∅ [mm]	AB ∅	AH	AO	AT	AU	R1	TR	US	XS	CRC[1]	Weight [g]	Part No.	Type
12	5.5	20	6	4	12.5	13	32	42	32	4	40	**161 866**	**CRHBN-12/16x1**
16	5.5	20	6	4	12.5	13	32	42	32	4	97	**162 999**	**CRHBN-12/16x2**
20	6.6	25	8	5	15	20	40	54	36	4	55	**161 867**	**CRHBN-20/25x1**
25	6.6	25	8	5	15	20	40	54	40	4	100	**162 998**	**CRHBN-20/25x2**

1) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

Foot mounting CRH

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



\+ = plus stroke length

Dimensions and ordering data

For ∅ [mm]	AB ∅	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	**162 951**	**CRH-32**
40	9	33	10	5	20	18	153	30	60	80	178	60	4	341	**162 952**	**CRH-40**
50	9	40	10	6	20	20	160	40	70	90	190	64	4	559	**162 953**	**CRH-50**
63	9	45	10	6	20	20	164	50	76	96	195	64	4	680	**162 954**	**CRH-63**

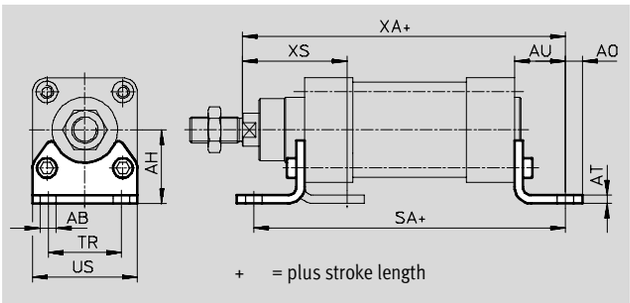
1) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

Accessories for corrosion-resistant cylinders

Technical data

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	144.7	45.7	4	135	**176 937**	**CRHNC-32**
40	10	36	9	4	28	160.8	36	54	163.6	53.8	4	180	**176 938**	**CRHNC-40**
50	10	45	9.5	5	31	167.9	45	64	175	63.1	4	325	**176 939**	**CRHNC-50**
63	10	50	12.5	5	32	184.9	50	75	191.5	64.6	4	405	**176 940**	**CRHNC-63**
80	12	63	15	6	41	209.9	63	93	215.5	81.6	4	820	**176 941**	**CRHNC-80**
100	14.5	71	17.5	6	41	220.1	75	110	229.6	85.5	4	1,000	**176 942**	**CRHNC-100**
125	16.5	90	22	8	45	250	90	131	270	102	4	1,840	**176 943**	**CRHNC-125**

1) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

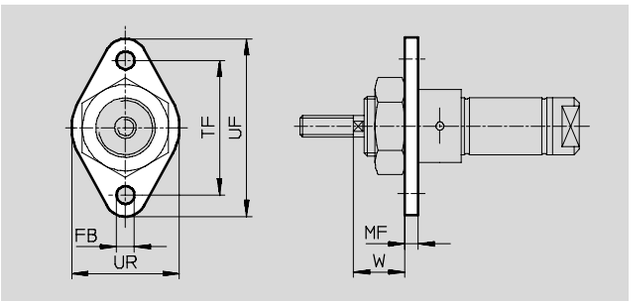
Accessories for corrosion-resistant cylinders

Technical data

FESTO

Flange mounting CRFBN

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



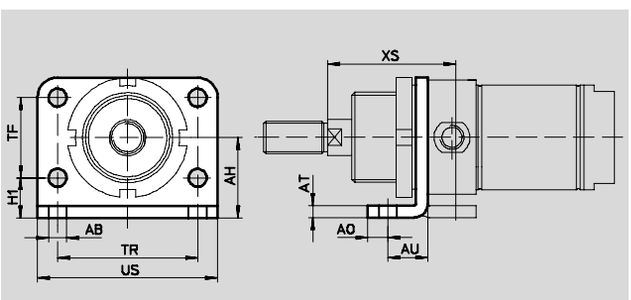
Dimensions and ordering data

For ∅ [mm]	FB ∅	MF	TF	UF	UR	W	CRC[1]	Weight [g]	Part No.	Type
12, 16	5.5	4	40	53	30	18	4	25	**161 864**	**CRFBN-12/16**
20, 25	6.6	5	50	66	40	19	4	45	**161 865**	**CRFBN-20/25**

1) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

Flange mounting CRFV

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



Dimensions and ordering data

For ∅ [mm]	AB ∅	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	**161 858**	**CRFV-32**
40	9	33	10	5	19	18	30	60	80	60	4	190	**161 859**	**CRFV-40**
50	9	40	10	6	19	20	40	70	90	64	4	290	**161 860**	**CRFV-50**
63	9	45	10	6	19	20	50	76	96	64	4	365	**161 861**	**CRFV-63**

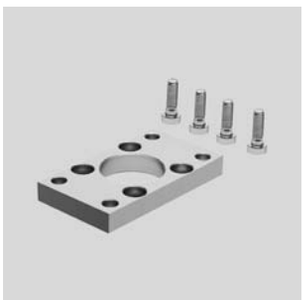
1) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

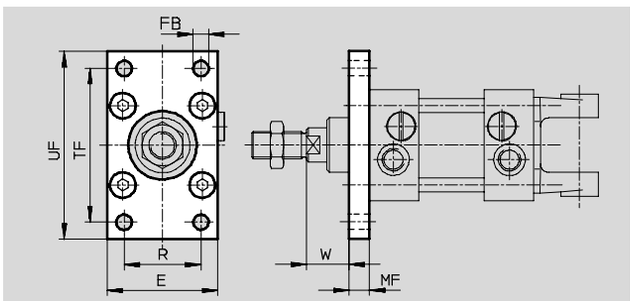
Accessories for corrosion-resistant cylinders

Technical data

Flange mounting CRFNG

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





Dimensions and ordering data

For ∅ [mm]	E	FB ∅	MF	R	TF	UF	W	CRC[1]	Weight [g]	Part No.	Type
32	45	7	10	32	64	80	16	4	240	**161 846**	**CRFNG-32**
40	54	9	10	36	72	90	20	4	300	**161 847**	**CRFNG-40**
50	65	9	12	45	90	110	25	4	550	**161 848**	**CRFNG-50**
63	75	9	12	50	100	120	25	4	710	**161 849**	**CRFNG-63**
80	93	12	16	63	126	150	30	4	1,680	**161 850**	**CRFNG-80**
100	110	14	16	75	150	175	35	4	2,450	**161 851**	**CRFNG-100**
125	132	16	20	90	180	210	45	4	3,660	**185 363**	**CRFNG-125**

1) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

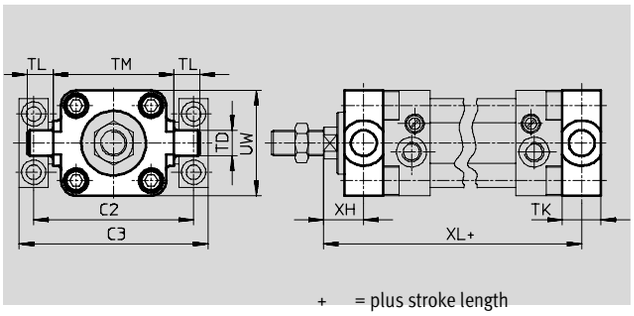
Accessories for corrosion-resistant cylinders

Technical data

FESTO

Trunnion flange CRZNG

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



\+ = plus stroke length

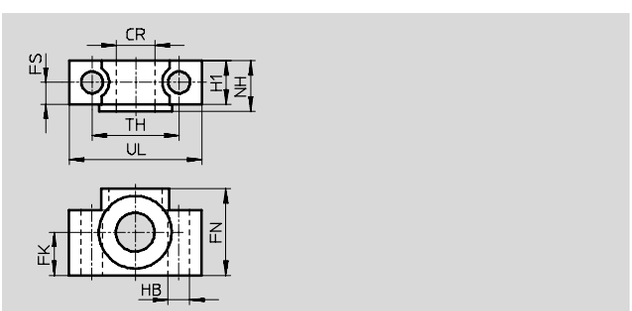
Dimensions and ordering data

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	128	4	150	**161 852**	**CRZNG-32**
40	87	105	16	20	16	63	55	20	145	4	260	**161 853**	**CRZNG-40**
50	99	117	16	24	16	75	65	25	155	4	430	**161 854**	**CRZNG-50**
63	116	136	20	24	20	90	75	25	170	4	640	**161 855**	**CRZNG-63**
80	136	156	20	28	20	110	100	32	188	4	1,300	**161 856**	**CRZNG-80**
100	164	189	25	38	25	132	120	32	208	4	2,400	**161 857**	**CRZNG-100**
125	192	217	25	50	25	160	150	40	250	4	3,600	**185 362**	**CRZNG-125**

1) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

Trunnion support 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	**161 874**	**CRLNZG-32**
40, 50	16	18	36	12	18	9	21	36	55	4	330	**161 875**	**CRLNZG-40/50**
63, 80	20	20	40	13	20	11	23	42	65	4	440	**161 876**	**CRLNZG-63/80**
100/125	25	25	50	16	24.5	14	28.5	50	75	4	740	**161 877**	**CRLNZG-100/125**

1) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required

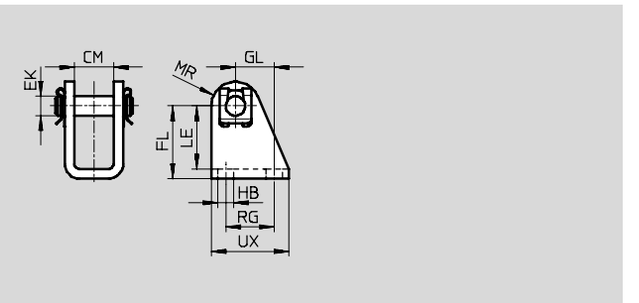
Accessories for corrosion-resistant cylinders

Technical data

FESTO

Clevis foot CRLBN

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



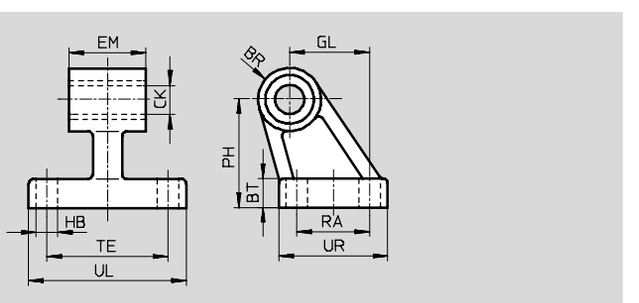
Dimensions and ordering data

For ∅ [mm]	CM	EK ∅	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	55	**161 862**	**CRLBN-12/16**
20, 25	16.1	8	30 +0.4/–0.2	16	6.6	26	10	20	32	4	62	**161 863**	**CRLBN-20/25**
32	16.1	10	35 +0.4/–0.2	18.5	6.6	31	11	24	35	4	107	**195 866**	**CRLBN-32**
40	18.1	12	40 +0.4/–0.2	24.5	9	35	13	30	45	4	184	**195 867**	**CRLBN-40**
50, 63	21.1	16	45 +0.5/–0.2	28	9	39	14	34	50	4	289	**195 868**	**CRLBN-50/63**

1) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

Clevis foot mounting CRLNG

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



Dimensions and ordering data

For ∅ [mm]	BR	BT	CK ∅ D11	EB ∅ H13	EM –0.4	GL	HB ∅ 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	120	**161 840**	**CRLNG-32**
40	11	10	12	–	27.8	24	6.6	–	36	22	41	54	35	4	160	**161 841**	**CRLNG-40**
50	12	12	12	–	31.8	33	9	–	45	30	50	65	45	4	280	**161 842**	**CRLNG-50**
63	15	12	16	15	39.8	37	9	10.8	50	35	52	67	50	4	375	**161 843**	**CRLNG-63**
80	15	14	16	18	49.8	47	11	12.7	63	40	66	86	60	4	580	**161 844**	**CRLNG-80**
100	19	15	20	18	59.8	55	11	13.7	71	50	76	96	70	4	935	**161 845**	**CRLNG-100**
125	22	20	25	20	69.8	70	14	18.6	90	60	94	124	90	4	2,530	**176 951**	**CRLNG-125**

1) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

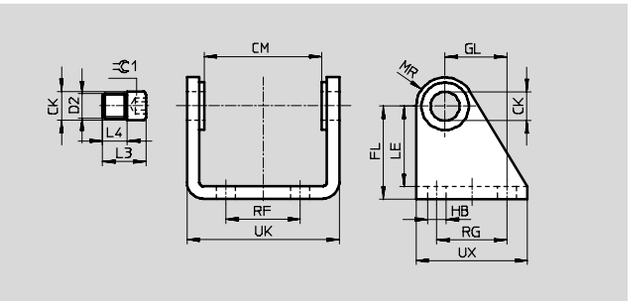
Accessories for corrosion-resistant cylinders

Technical data

FESTO

Clevis foot CRSBS

Material:
High-alloy steel



Dimensions and ordering data											
For ∅ [mm]	CK ∅ H8/f7	CM	D1 ∅	D2	FL	GL	H1	HB ∅	L3	L4	LE
32	10	38.1	15	M8x1	35	20	4	7	14.5	6.5	31
40	12	46.1	20	M10x1	40	27	5	9	18.5	9	36
50	14	57.1	23	M12x1.5	45	30	6	9	23	12	39
63	16	70.4	23	M14x1.5	50	34	6	9	29	16	44

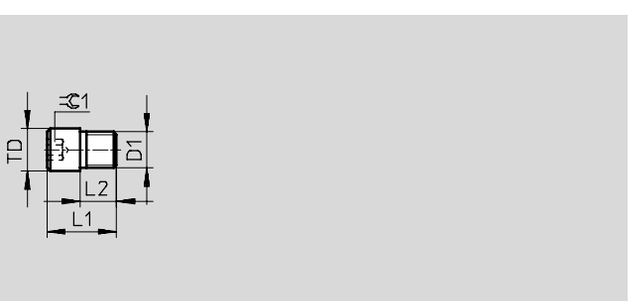
For ∅ [mm]	MR	RF	RG	UK	UX	⌀1	CRC[1]	Weight [g]	Part No.	Type
32	12	20	24	50.1	40	5	4	130	**162 955**	**CRSBS-32**
40	13	28	30	60.1	50	6	4	200	**162 956**	**CRSBS-40**
50	14	36	34	74.1	54	6	4	310	**162 957**	**CRSBS-50**
63	15	42	35	88.1	65	8	4	440	**162 958**	**CRSBS-63**

1) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required

Pivot bolt CRGBS

For swivel mounting

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



Dimensions and ordering data									
For ∅ [mm]	D1	L1	L2	TD ∅ f8	⌀1	CRC[1]	Weight [g]	Part No.	Type
32	M8x1	14.5	6.5 ±0.1	10	5	4	10	**163 132**	**CRGBS-32**
40	M10x1	18.5	9 ±0.1	12	6	4	20	**163 133**	**CRGBS-40**
50	M12x1.5	23	12 ±0.2	14	6	4	40	**163 134**	**CRGBS-50**
63	M14x1.5	29	16 ±0.2	16	8	4	65	**163 135**	**CRGBS-63**

1) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required

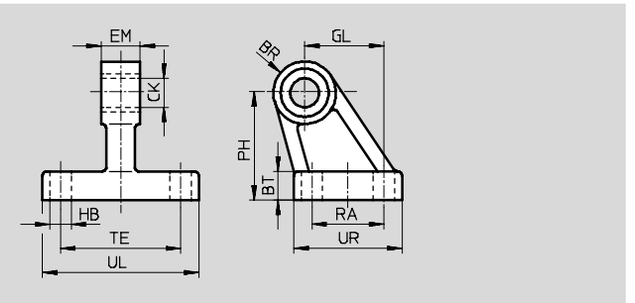
Accessories for corrosion-resistant cylinders

Technical data

FESTO

Clevis foot CRLMC

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



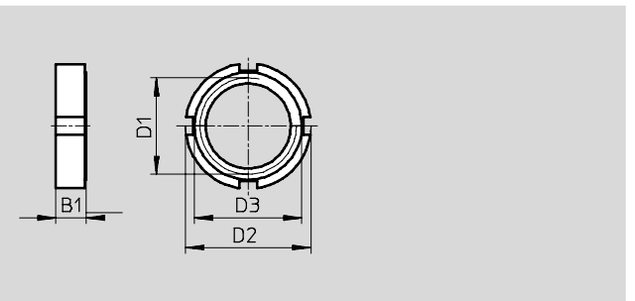
Dimensions and ordering data

For ∅ [mm]	BR	BT	CK ∅ D11	EB ∅ H13	EM –0.4	GL	HB ∅ 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	101	**197 320**	**CRLMC-32**
40	11	10	12	–	12	24	6.6	–	36	22	41	54	35	4	139	**197 321**	**CRLMC-40**
50	12	12	12	–	16	33	9	–	45	30	50	65	45	4	242	**197 322**	**CRLMC-50**
63	15	12	16	15	16	37	9	10.8	50	35	52	67	50	4	303	**197 323**	**CRLMC-63**
80	15	14	16	18	20	47	11	12.7	63	40	66	86	60	4	515	**197 324**	**CRLMC-80**
100	19	15	20	18	20	55	11	13.7	71	50	76	96	70	4	761	**197 325**	**CRLMC-100**

1) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required

Ring nut CR

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



Dimensions and ordering data

For ∅ [mm]	B1	D1	D2	D3	CRC[1]	Weight [g]	Part No.	Type
32	8	M30x1.5	42	36	4	40	**197 326**	**CR-M30x1,5**
40	10	M38x1.5	50	48	4	61	**197 327**	**CR-M38x1,5**
50, 63	10	M45x1.5	60	56	4	89	**197 328**	**CR-M45x1,5**
80, 100	13	M50x2	75	67	4	228	**197 329**	**CR-M50x2**

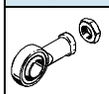
1) Corrosion resistance class 4 according to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required.

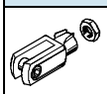
Accessories for corrosion-resistant cylinders

Technical data

FESTO

Ordering data – Piston rod attachments

	For ∅	Part No.	Type
Rod eye CRSGS			
	12, 16	**195 580**	**CRSGS-M6**
	20	**195 581**	**CRSGS-M8**
	32	**195 582**	**CRSGS-M10x1,25**
	40	**195 583**	**CRSGS-M12x1,25**
	50, 63	**195 584**	**CRSGS-M16x1,5**
	80, 100	**195 585**	**CRSGS-M20x1,5**
	125	**195 586**	**CRSGS-M27x2**

	For ∅	Part No.	Type
Rod clevis CRSG			
	12, 16	**13 567**	**CRSG-M6**
	20	**13 568**	**CRSG-M8**
	32	**13 569**	**CRSG-M10x1,25**
	40	**13 570**	**CRSG-M12x1,25**
	50, 63	**13 571**	**CRSG-M16x1,5**
	80, 100	**13 572**	**CRSG-M20x1,5**
	125	**185 361**	**CRSG-M27x2**

Ordering data – Proximity sensor, magnetic reed

	Electrical connection Cable	Cable length [m]	Part No.	Type
	NO contact			
	Resistant to corrosion			
	3-wire	2.5	**161 775**	**CRSMEO-4-K-LED-24**

Ordering data – Mounting kit

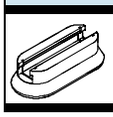
	For ∅	Part No.	Type
Mounting kit CRSMBR			
	12	**164 581**	**CRSMBR-12**
	16	**164 582**	**CRSMBR-16**
	20	**164 583**	**CRSMBR-20**
	25	**164 584**	**CRSMBR-25**
	32	**163 888**	**CRSMBR-32**
	40	**163 889**	**CRSMBR-40**
	50	**163 890**	**CRSMBR-50**
	63	**163 891**	**CRSMBR-63**

	For ∅	Part No.	Type
Mounting kit CRSMB			
	32	**161 763**	**CRSMB-32**
	40	**161 764**	**CRSMB-40**
	50	**161 765**	**CRSMB-50**
	63	**161 766**	**CRSMB-63**
	80	**161 767**	**CRSMB-80**
	100	**161 768**	**CRSMB-100**
	125	**185 365**	**CRSMB-125**

Ordering data – Proximity sensor, magneto-resistive

	Switch output	Electrical connection Cable	Cable length [m]	Part No.	Type
	NO contact				
	PNP	3-wire	2.5	**525 563**	**CRSMT-8-PS-K2,5-LED-24**
			5.0	**525 564**	**CRSMT-8-PS-K5-LED-24**

Ordering data – Mounting kit

		Part No.	Type
		**525 565**	**CRSMB-8-32/100**

Ordering data – One-way flow control valves

	Connection Thread	For push-in fitting	Material	Part No.	Type
	M5	CRQS/CRQSL/CRQST	Electrolytically polished stainless steel casting	**161 403**	**CRGRLA-M5-B**
	G⅛			**161 404**	**CRGRLA-⅛-B**
	G¼			**161 405**	**CRGRLA-¼-B**
	G⅜			**161 406**	**CRGRLA-⅜-B**
	G½			**161 407**	**CRGRLA-½-B**

Accessories for corrosion-resistant cylinders

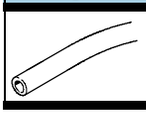
Technical data

FESTO

Ordering data – Air reservoir

	Connection Thread	Volume [l]	Material	Part No.	Type
	G1⁄8	0.1	High-alloy stainless steel	**160 233**	**CRVZS-0.1**
	G1⁄4	0.4		**160 234**	**CRVZS-0.4**
	G1⁄4	0.75		**160 235**	**CRVZS-0,75**
	G1⁄2	2		**160 236**	**CRVZS-2**
	G1, G3⁄8	5		**192 159**	**CRVZS-5**
	G1, G3⁄8	10		**160 237**	**CRVZS-10**

Ordering data – Compressed air tubing

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