



- Corrosion-resistant in harsh ambient conditions
- Easy-to-clean design
- Wide choice of variants
- Comprehensive range of accessories

Specified types in accordance with ATEX directive for potentially explosive atmospheres

→ www.festo.com/en/ex

Stainless steel cylinders

Key features



Their 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. Stainless steel 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.

Their strengths

Festo's stainless steel 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. These groups of materials are particularly resistant to uniform surface corrosion and offer increased protection against pitting and crevice corrosion.

Their advantages

Festo's worldwide service network ensures optimum availability of stainless steel 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 stainless steel cylinders are assembled with USDA-H1 lubricating grease and wiper seals in accordance with BGW (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 stainless steel 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 harsh environments. 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.

Stainless steel cylinders

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 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

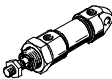
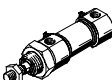
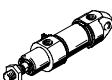
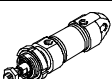
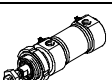
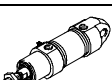
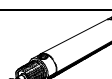

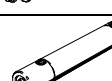
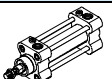
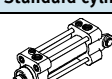


Foam cleaning

Stainless-steel cylinders

Product range overview

FESTO

Function	Version	Type	Piston Ø [mm]	Stroke [mm]	Piston rod				
					Through S2	Extended K8	Male thread		Female thread K3
							Extended K2	Special thread K5	
Double-acting	Standard cylinder to ISO 6432								
		CRDSNU Single-ended piston rod	12, 16	1 ... 200	■	■	■	■	■
			20	1 ... 320	■	■	■	above Ø 25	above Ø 20
			25	1 ... 500	■	■	■	above Ø 25	above Ø 20
		CRDSNU-MQ Short end cap without swivel mounting	12, 16	1 ... 200	-	■	■	■	■
			20	1 ... 320	-	■	■	above Ø 25	above Ø 20
			25	1 ... 500	-	■	■	above Ø 25	above Ø 20
		CRDSNU-MG Bearing cap without mounting thread	12, 16	1 ... 200	-	■	■	■	■
			20	1 ... 320	-	■	■	above Ø 25	above Ø 20
			25	1 ... 500	-	■	■	above Ø 25	above Ø 20
			25	10, 25, 40, 50, 80, 100, 125, 160, 200	-	-	-	-	-
	Round cylinder								
		CRDSNU Single-ended piston rod	32, 40, 50, 63	1 ... 500	■	■	■	■	■
			32, 40, 50, 63	1 ... 500	-	■	■	■	■
		CRDSNU-MQ Short end cap without swivel mounting	32, 40, 50, 63	1 ... 500	-	■	■	■	■
			32, 40, 50, 63	1 ... 500	-	■	■	■	■
		CRDSNU-MG Bearing cap without mounting thread	32, 40, 50, 63	1 ... 500	-	■	■	■	■
			32	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	-	-	-	-	-
	Standard cylinder to ISO 15552 (ISO 6431 and VDMA 24562)								
		CRDNG Single-ended piston rod	32, 40, 50, 63, 80, 100, 125	10 ... 2,000	■	-	-	-	-
Standard cylinder with swivel bearing at rear to ISO 15552 (ISO 6431 and VDMA 24562)									
	CRDNGS Single-ended piston rod	32, 40, 50, 63, 80, 100, 125	10 ... 2,000	-	-	-	-	-	

Stainless-steel cylinders

Product range overview

FESTO

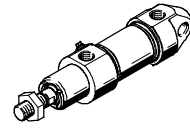
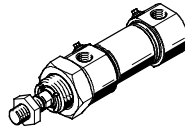
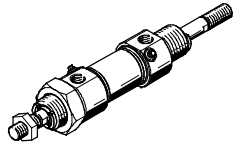
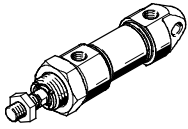
Type	Position sensing	Cushioning			Wiper seal variant			Heat-resistant seal	Low temperature	→ Page/ Internet
		Fixed	Adjustable	Self-adjusting	Increased chemical resistance	Hard wiper seal	Unlubricated operation			
A	P	PPV	PPS	A1	A2	A3	S6	TT		
Standard cylinder to ISO 6432										
CRDSNU Single-ended piston rod	■	■	■ above ∅ 20	■ above ∅ 16	■	■	■	■	■	6
CRDSNU-MQ Short end cap without swivel mounting	■	■	■ above ∅ 20	■ above ∅ 16	■	■	■	■	■	6
CRDSNU-MG Bearing cap without mounting thread	■	■	■ above ∅ 20	■ above ∅ 16	■	-	■	■	-	6
	■	-	-	■	■	-	-	-	-	
Round cylinder										
CRDSNU Single-ended piston rod	■	■	■	■	■	■	■	■	■	16
CRDSNU-MQ Short end cap without swivel mounting	■	■	■	■	■	■	■	■	■	16
CRDSNU-MG Bearing cap without mounting thread	■	■	■	■	■	-	■	■	-	16
	■	-	-	■	■	-	-	-	-	
CRHD-MQ Bearing cap with male thread	■	-	■	-	-	-	-	■	-	26
CRHD-MC End cap with clevis	■	-	■	-	-	-	-	■	-	26
CRHD-MS End cap with lug	■	-	■	-	-	-	-	■	-	26
Standard cylinder to ISO 15552 (ISO 6431 and VDMA 24562)										
CRDNG Single-ended piston rod	■	-	■	-	-	-	-	■	-	34
Standard cylinder with swivel bearing at rear to ISO 15552 (ISO 6431 and VDMA 24562)										
CRDNGS Single-ended piston rod	■	-	■	-	-	-	-	■	-	34

Standard cylinders CRDSNU to ISO 6432, stainless steel

FESTO

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



Additional variants		
Symbol	Key features	Description
	S2 Through piston rod	For working at both ends with the same force in the forward and return stroke, for attaching external stops
	S6 Heat-resistant seals	Temperature resistance up to max. 120 °C
	K2 Extended male piston rod thread	–
	K3 Female piston rod thread	–
	K5 Special piston rod thread	Metric standard thread to ISO
	K8 Extended piston rod	–
	A1 Wiper seal variant	Increased chemical resistance
	A2 Wiper seal variant	Hard wiper seal: Cylinder with hard wiper seal
	A3 Wiper seal 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	P cushioning	PPS cushioning	PPV cushioning
	Mode of operation <ul style="list-style-type: none"> The drive is equipped with polymer flexible end-position cushioning 	<ul style="list-style-type: none"> The drive is equipped with self-adjusting end-position cushioning 	<ul style="list-style-type: none"> The drive is equipped with adjustable end-position cushioning
Application <ul style="list-style-type: none"> Small loads Low speeds Low impact energies 	<ul style="list-style-type: none"> Small to medium loads Low to medium speeds Medium impact energies 	<ul style="list-style-type: none"> Medium to high loads High speeds High impact energies 	
Advantages <ul style="list-style-type: none"> No adjustment required Time-saving 	<ul style="list-style-type: none"> No adjustment required Time-saving Powerful 	<ul style="list-style-type: none"> Very powerful 	

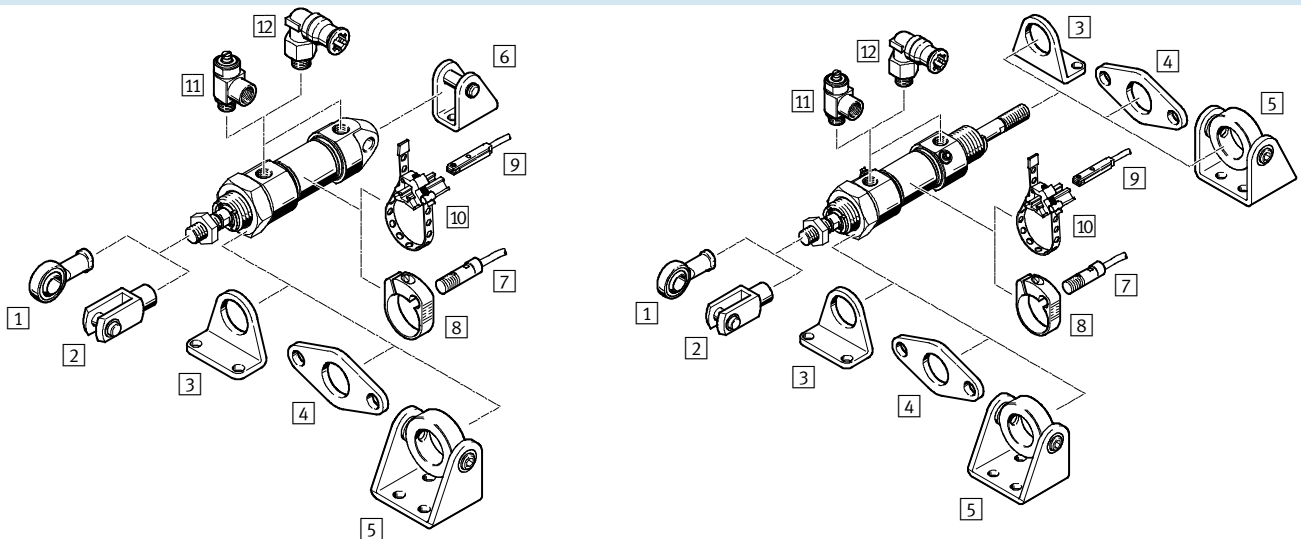
Mounting options		
Threaded mounting	Mounting via hex nut	Swivel mounting at the rear

Standard cylinders CRDSNU to ISO 6432, stainless steel

Peripherals overview

CRDSNU-...

CRDSNU-...-S2



Mounting attachments and accessories		Brief description	CRDSNU-				→ Page/ Internet
			Basic version	MQ	MG	S2	
1	Rod eye CRSGS	With spherical bearing	■	■	■	■	49
2	Rod clevis CRSG	Permits a swivelling movement of the cylinder in one plane	■	■	■	■	49
3	Foot mounting CRHBN	<ul style="list-style-type: none"> For bearing caps With CRDSNU-S2 for bearing and end caps 	■	■	-	■	42
4	Flange mounting CRFBN	<ul style="list-style-type: none"> For bearing caps With CRDSNU-S2 for bearing and end caps 	■	■	-	■	44
5	Swivel mounting CRSBN	<ul style="list-style-type: none"> For bearing caps With CRDSNU-S2 for bearing and end caps 	■	■	-	■	42
6	Clevis foot CRLBN	For end caps	■	-	■	-	47
7	Proximity sensor CRSMEO-4	<ul style="list-style-type: none"> Round design For position sensing 	■	■	■	■	49
8	Mounting kit CRSMBR	For proximity sensor CRSMEO-4	■	■	■	■	49
9	Proximity sensor CRSMT-8	<ul style="list-style-type: none"> Design for T-slot For position sensing 	■	■	■	■	49
10	Mounting kit SMBR	For proximity sensor CRSMT-8	■	■	■	■	49
11	One-way flow control valve CRGRLA	For regulating speed	■	■	■	■	50
12	Push-in fittings CRQS	For connecting compressed air tubing with standard outside diameter	■	■	■	■	quick star

Standard cylinders CRDSNU to ISO 6432, stainless steel

Type codes

CRDSNU – 25 – 80 – PPV – A – MQ

Type	
Double-acting	
CRDSNU	Standard cylinder
Piston Ø [mm]	
25	
Stroke [mm]	
80	
Cushioning	
P	Flexible cushioning rings/pads at both ends
PPV	Pneumatic cushioning, adjustable at both ends
PPS	Pneumatic cushioning, self-adjusting at both ends
Position sensing	
A	Via proximity sensor
Variant	
MQ	Short end cap without swivel mounting
MG	Bearing cap without mounting thread

Modular product system

Individually configurable

CRDSNU → 15

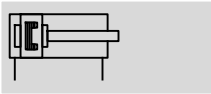
- A1 – Wiper seal variant: For increased chemical resistance
- A2 – Wiper seal variant: Hard wiper seal
- A3 – Wiper seal variant: For unlubricated operation
- S2 – Through piston rod
- K2 – Extended male piston rod thread
- K3 – Female piston rod thread
- K5 – Special piston rod thread
- K8 – Extended piston rod at the front
- S6 – Heat-resistant seals up to max. 120 °C (temperature resistance)
- TT – Low temperature –40 °C ... +80 °C

Standard cylinders CRDSNU to ISO 6432, stainless steel

FESTO

Technical data

Function



DIN



- Diameter
12 ... 25 mm
- Stroke length
1 ... 500 mm

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	
Constructional design	Piston							
	Piston rod							
	Cylinder barrel							
Cushioning	P	Flexible cushioning rings/pads at both ends						
	PPV	-			Adjustable cushioning at both ends			
	PPS	-			Self-adjusting cushioning at both ends			
Cushioning length	PPV	[mm]	-		15		17	
	PPS	[mm]	-		12		15	
Position sensing	Via proximity sensor							
Type of mounting	Via accessories							
	Via male thread							
Mounting position	Any							

Operating conditions	
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4]
Note on operating/pilot medium	Operation with lubricated medium possible (in which case lubricated operation will always be required)
Operating pressure ¹⁾	[bar] 1 ... 10
Suitability for use in the food industry	As per manufacturer's declaration (→ Support / Downloads)
ATEX	Specified types → www.festo.com

1) An increase in the minimum operating pressure is possible with variants

Ambient conditions				
Standard cylinder	Basic version	A1	S6	TT
Ambient temperature ¹⁾	[°C] -20 ... +80	0 ... +80	0 ... +120	-40 ... +80
Corrosion resistance class CRC ²⁾	3			

1) Note operating range of proximity sensors

2) Corrosion resistance class 3 as per Festo standard 940 070

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

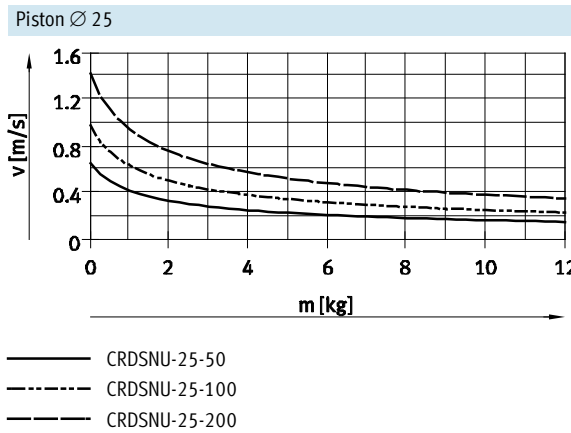
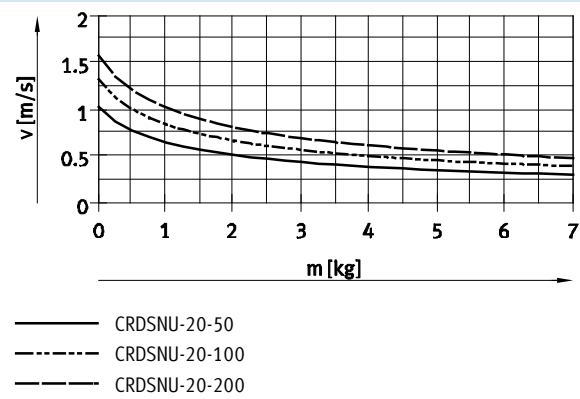
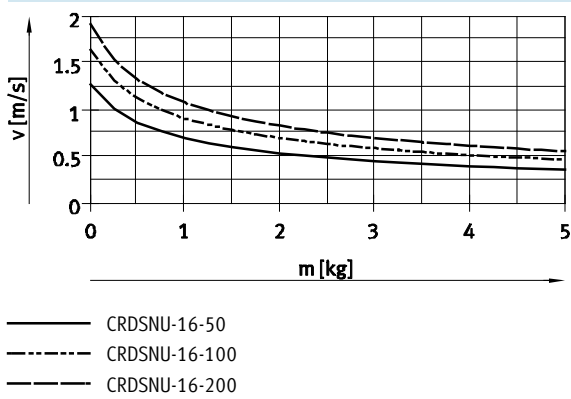
Standard cylinders CRDSNU to ISO 6432, stainless steel

Technical data

Force [N] and impact energy [J]				
Piston Ø	12	16	20	25
Theoretical force at 6 bar, advancing	68	121	188	295
Theoretical force at 6 bar, 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

Average piston speed v as a function of applied load m in combination with PPS cushionings



- - Note
Average piston speed = stroke/movement time

- - Note

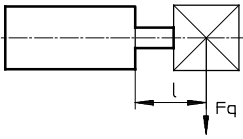
Design software for flexible cushioning elements → www.festo.com	Additional graphs for PPS cushioning → www.festo.com	Design software for PPV cushioning → www.festo.com
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Weight [g]				
Piston Ø	12	16	20	25
Basic weight with 0 mm stroke	101	130	310	410
Additional weight per 10 mm stroke	4	5	7	11
Moving load with 0 mm stroke	19	21	42	73
Additional load per 10 mm stroke	2	2	4	6

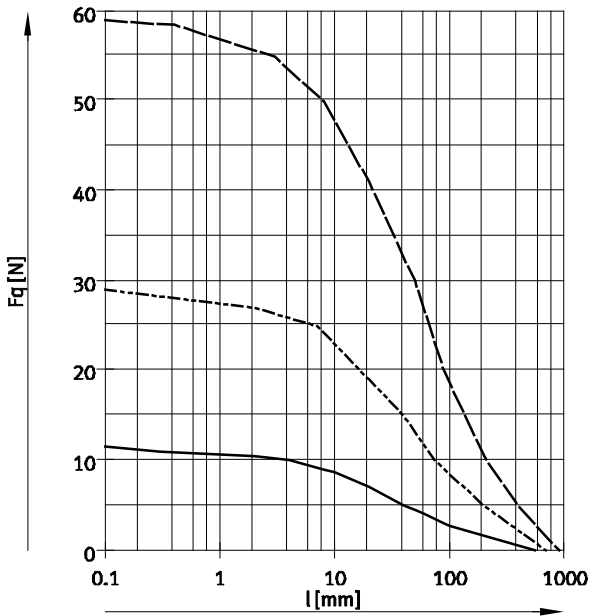
Standard cylinders CRDSNU to ISO 6432, stainless steel

Technical data

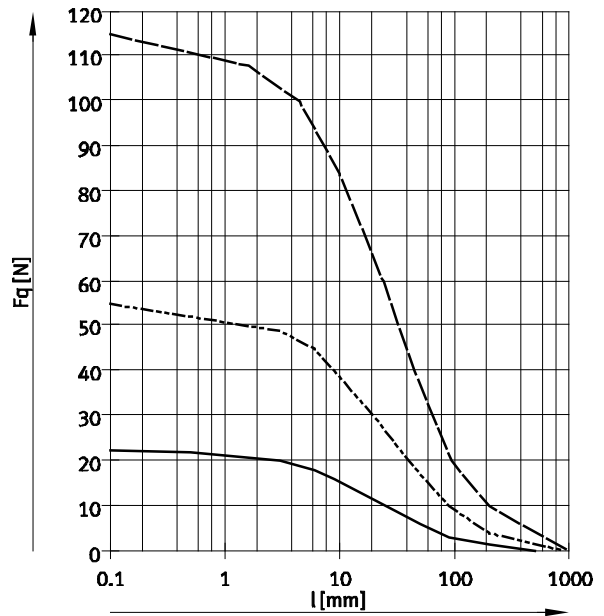
Max. lateral force F_q as a function of projection l



Basic version



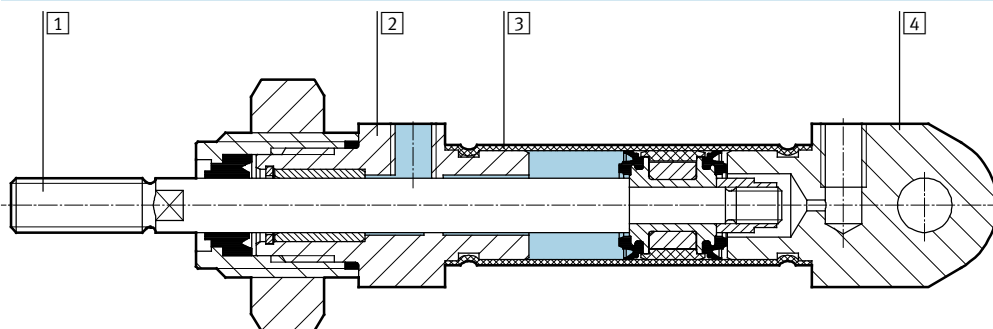
S2 – Through piston rod



- $\varnothing 12/16$
- - - $\varnothing 20$
- · - $\varnothing 25$

Materials

Sectional view



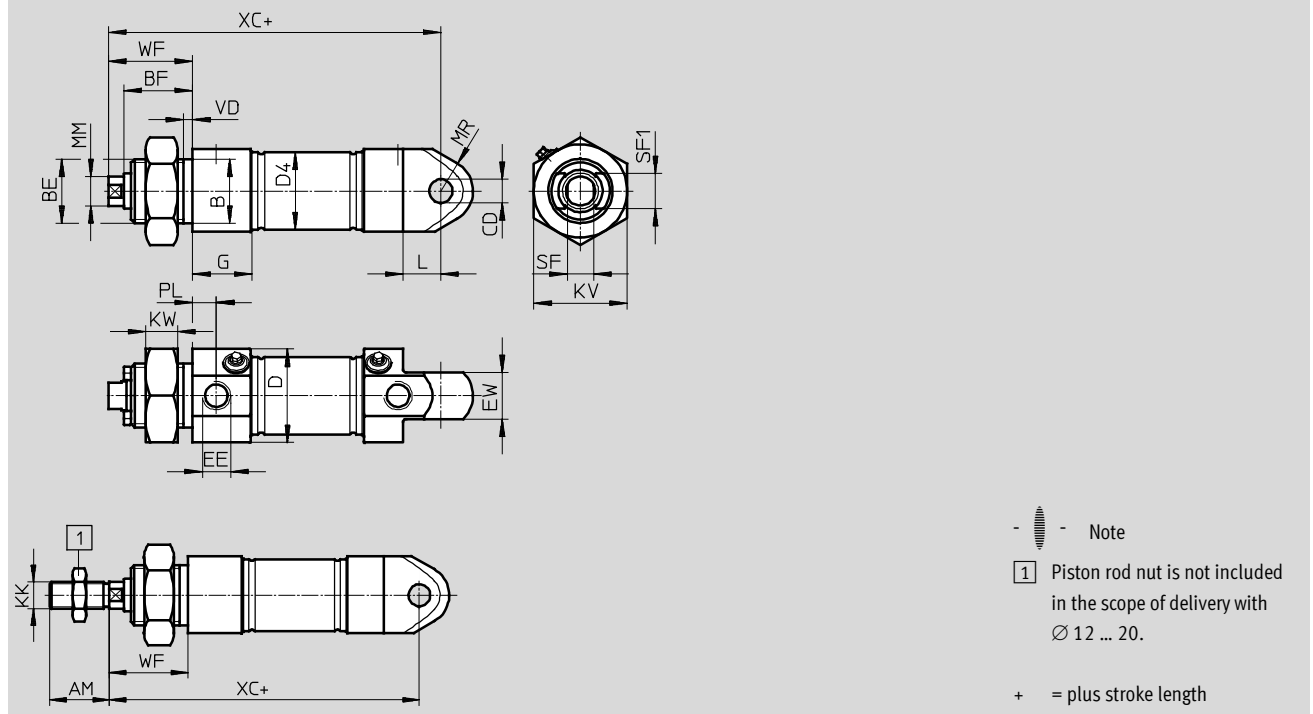
Standard cylinder	Basic version	S6
1 Piston rod	High-alloy stainless steel	
2 Bearing cap	High-alloy stainless steel	
3 Cylinder barrel	High-alloy stainless steel	
4 End cap	High-alloy stainless steel	
- Seals	Polyurethane	Fluoro elastomer
Note on materials	RoHS-compliant	
Certification	Germanischer Lloyd	

Standard cylinders CRDSNU to ISO 6432, stainless steel

Technical data

Dimensions Download CAD data → www.festo.com

Basic version



\varnothing	AM	B \varnothing h9	BE	BF	CD \varnothing H8	D \varnothing	D4 \varnothing
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

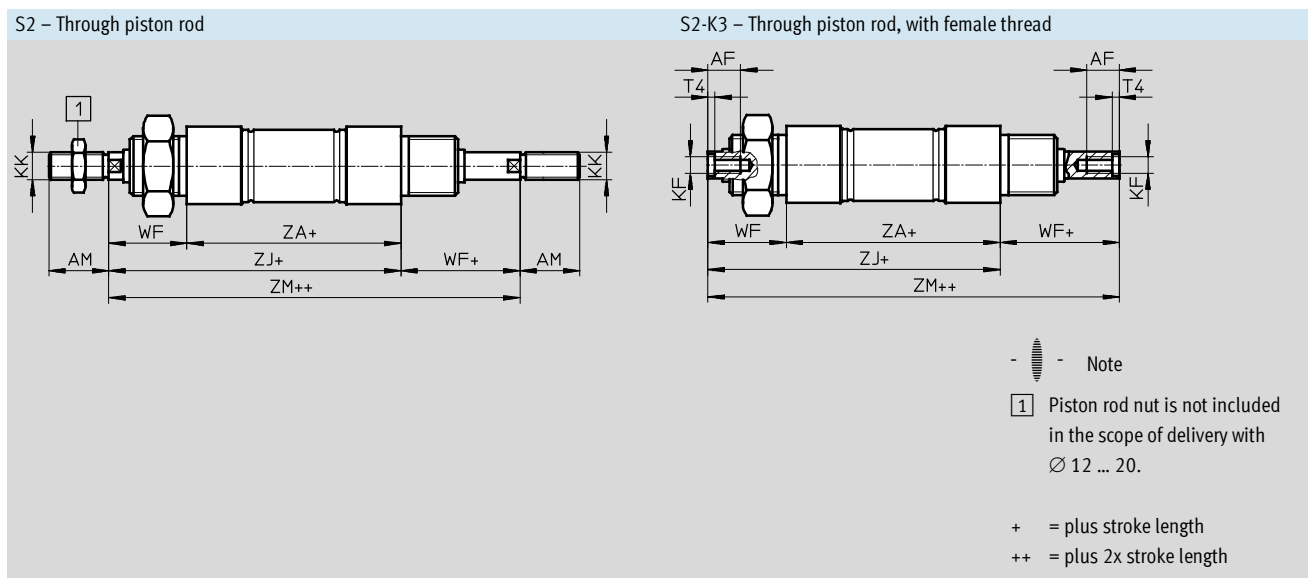
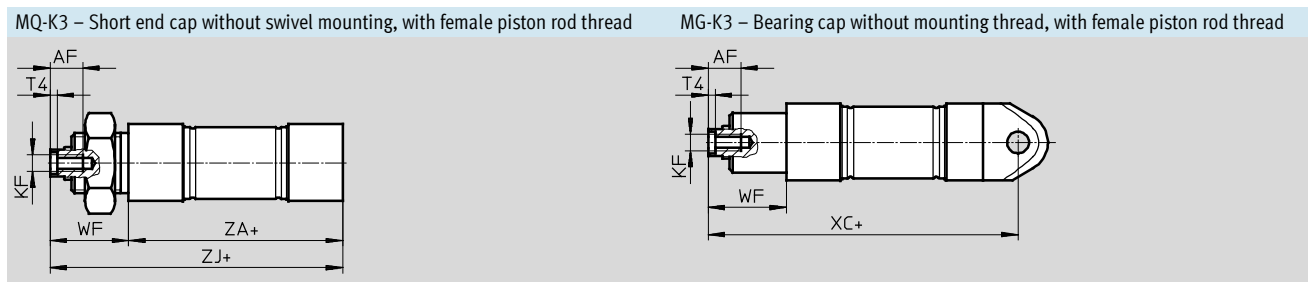
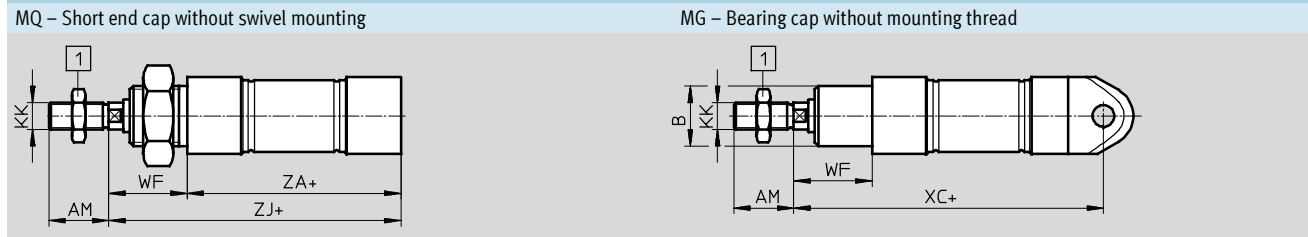
\varnothing	EE	EW	G	KK	KV	KW	L	MM \varnothing
12	M5	12	9.5	M6	24	8	10	6
16	M5	12	9.7	M6	24	8	10	6
20	G $\frac{1}{8}$	16	20.5	M8	32	11	13	8
25	G $\frac{1}{8}$	16	20.5	M10x1.25	32	11	13	10

\varnothing	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

Standard cylinders CRDSNU to ISO 6432, stainless steel

Technical data

Dimensions Download CAD data → www.festo.com



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

\varnothing	T4	WF	XC	ZA	ZJ	ZM
[mm]			± 1			
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

Standard cylinders CRDSNU to ISO 6432, stainless steel

Technical data

Dimensions Download CAD data → www.festo.com

K2 – Extended male piston rod thread

K3 – Female piston rod thread **K5 – Special piston rod thread**

K8 – Extended piston rod **K3-K8 – Extended piston rod, with female thread**

TT – Low temperature


- - Note
 1 Piston rod nut is not included in the scope of delivery with $\varnothing 12 \dots 20$.
 + = plus stroke length

\varnothing	AF	AM	AM1	AM2	BF1	KF
[mm]			max.	max.		
12	–	16	1 ... 20	1 ... 100	24	–
16	–	16	1 ... 20	1 ... 100	24	–
20	12	20	1 ... 25	1 ... 100	26.7	M4
25	12	22	1 ... 35	1 ... 100	29.5	M6

\varnothing	KK	KK5	T4	WF	WF1	XC	XC1
[mm]						± 1	± 1
12	M6	–	–	22	28	75	81
16	M6	–	–	22	28	82	88
20	M8	–	2	24	30	95	101
25	M10x1.25	M10	2.6	28	34	104	110

Standard cylinders CRDSNU to ISO 6432, stainless steel

Ordering data – Modular products

Ordering code			
Type	Piston Ø	Stroke	PPS – Pneumatic cushioning, self-adjusting at both ends A – Via proximity sensor MG – Bearing cap without mounting thread A1 – Wiper seal variant: For increased chemical resistance Part No. Type
	[mm]	[mm]	
	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

Ordering table							
Size	12	16	20	25	Condi- tions	Code	Enter code
M Module No.	552787	552788	552789	552790			
Version	Stainless steel					CR	CR
Function	Standard cylinder, double-acting, to ISO 6432					DSNU	DSNU
Piston Ø [mm]	12	16	20	25		-...	
Stroke [mm]	1 ... 200		1 ... 320	1 ... 500		-...	
Cushioning	Flexible cushioning rings/pads at both ends					-P	
	– Pneumatic cushioning, self-adjusting				1	-PPS	
	– Pneumatic cushioning, adjustable at both ends					-PPV	
O Position sensing	Via proximity sensor					-A	
Cylinder cap	Short end cap without swivel mounting					-MQ	
	Bearing cap without mounting thread					-MG	
Wiper seal variant	Increased chemical resistance				1	-A1	
	Hard wiper seal				2	-A2	
	Unlubricated operation				1	-A3	
Type of piston rod	Through piston rod				3	-S2	
Extended male thread [mm]	Piston rod with extended male thread 1 ... 20		1 ... 25	1 ... 35		-...K2	
Female thread	Piston rod with female thread – (M4)		(M6)		4	-K3	
Special thread	Special piston rod thread – M10					-“...”K5	
Extended piston rod [mm]	1 ... 100					-...K8	
Temperature resistance	Heat-resistant seals up to max. 120 °C					-S6	
Low temperature	Seals and lubricating grease from –40 °C ... +80 °C				5	-TT	

- 1** PPS, A1, A3 Not with S6, TT
- 2** A2 Not with MG, S2, K3, S6, TT
- 3** S2 Not with MQ, MG

- 4** K3 Not with K2, K5
- 5** TT Not with MG, S2, K3, S6

Transfer order code

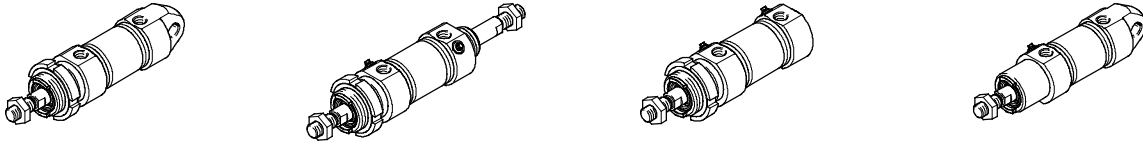
- **CR** **DSNU** - - - - - - - - - - - - -

Round cylinders CRDSNU, stainless steel

Key features

FESTO

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



Additional variants		
Symbol	Key features	Description
	S2 Through piston rod	For working at both ends with the same force in the forward and return stroke, for attaching external stops
	S6 Heat-resistant seals	Temperature resistance up to max. 120 °C
	K2 Extended male piston rod thread	–
	K3 Female piston rod thread	–
	K5 Special piston rod thread	Metric standard thread to ISO
	K8 Extended piston rod	–
	A1 Wiper seal variant	Increased chemical resistance
	A2 Wiper seal variant	Hard wiper seal: Cylinder with hard wiper seal
	A3 Wiper seal 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	<ul style="list-style-type: none"> The drive is equipped with polymer flexible end-position cushioning 	<ul style="list-style-type: none"> The drive is equipped with self-adjusting end-position cushioning 	<ul style="list-style-type: none"> The drive is equipped with adjustable end-position cushioning
Application	<ul style="list-style-type: none"> Small loads Low speeds Low impact energies 	<ul style="list-style-type: none"> Small to medium loads Low to medium speeds Medium impact energies 	<ul style="list-style-type: none"> Medium to high loads High speeds High impact energies
Advantages	<ul style="list-style-type: none"> No adjustment required Time-saving 	<ul style="list-style-type: none"> No adjustment required Time-saving Powerful 	<ul style="list-style-type: none"> Very powerful

Mounting options		
Threaded mounting	Mounting via hex nut	Swivel mounting at the rear

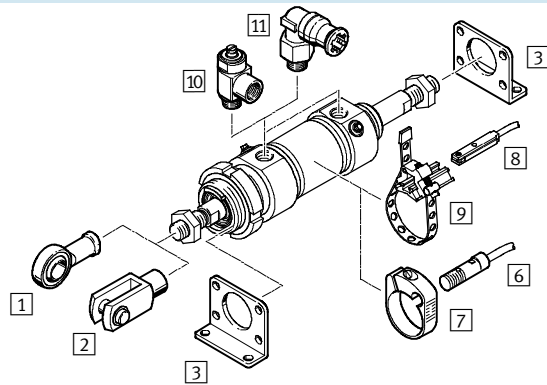
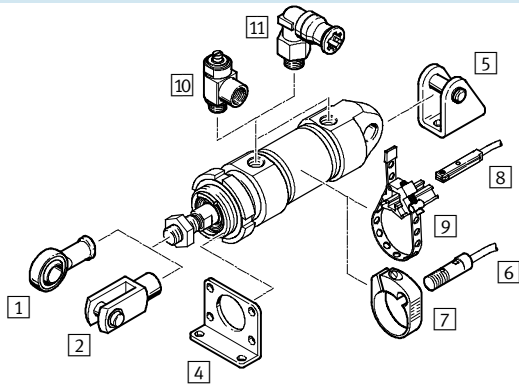
Round cylinders CRDSNU, stainless steel

Peripherals overview

FESTO

CRDSNU-...

CRDSNU-...-S2



Mounting attachments and accessories		CRDSNU-				→ Page/ Internet	
	Brief description	Basic version	MQ	MG	S2		
1	Rod eye CRSGS	With spherical bearing	■	■	■	■	49
2	Rod clevis CRSG	Permits a swivelling movement of the cylinder in one plane	■	■	■	■	49
3	Foot mounting CRH	<ul style="list-style-type: none"> • 2 included in the scope of delivery • With CRDSNU-S2 for bearing and end caps 	-	-	-	■	43
4	Flange mounting CRFV	<ul style="list-style-type: none"> • 1 included in the scope of delivery • For bearing caps 	■	■	-	-	44
5	Clevis foot CRLBN	For end caps	■	-	■	-	47
6	Proximity sensor CRSMEO-4	<ul style="list-style-type: none"> • Round design • For position sensing 	■	■	■	■	49
7	Mounting kit CRSMBR	For proximity sensor CRSMEO-4	■	■	■	■	49
8	Proximity sensor CRSMT-8	<ul style="list-style-type: none"> • Design for T-slot • For position sensing 	■	■	■	■	49
9	Mounting kit SMBR	For proximity sensor CRSMT-8	■	■	■	■	49
10	One-way flow control valve CRGRLA	For regulating speed	■	■	■	■	50
11	Push-in fitting CRQS	For connecting compressed air tubing with standard O.D.	■	■	■	■	quick star

Round cylinders CRDSNU, stainless steel

Type codes

FESTO

		CRDSNU	-	32	-	80	-	PPV	-	A	-	MQ
Type												
Double-acting												
CRDSNU	Round cylinder											
Piston Ø [mm]												
Stroke [mm]												
Cushioning												
P	Flexible cushioning rings/pads at both ends											
PPV	Pneumatic cushioning, adjustable at both ends											
PPS	Pneumatic cushioning, self-adjusting at both ends											
Position sensing												
A	Via proximity sensor											
Variant												
MQ	Short end cap without swivel mounting											
MG	Bearing cap without mounting thread											

Modular product system

Individually configurable

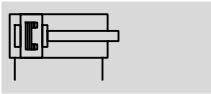
CRDSNU → 25

- A1 – Wiper seal variant: For increased chemical resistance
- A2 – Wiper seal variant: Hard wiper seal
- A3 – Wiper seal variant: For unlubricated operation
- S2 – Through piston rod
- K2 – Extended male piston rod thread
- K3 – Female piston rod thread
- K5 – Special piston rod thread
- K8 – Extended piston rod at front
- S6 – Heat-resistant seals up to max. 120 °C (temperature resistance)
- TT – Low temperature –40 °C ... +80 °C

Round cylinders CRDSNU, stainless steel

Technical data

Function



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



General technical data		32	40	50	63
Piston \varnothing		32	40	50	63
Pneumatic connection		G $\frac{3}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$
Piston rod thread		M10x1.25	M12x1.25	M16x1.5	M16x1.5
Design	Piston				
	Piston rod				
	Cylinder barrel				
Cushioning	P	Flexible cushioning rings/pads at both ends			
	PPV	Pneumatic cushioning, adjustable at both ends			
	PPS	Pneumatic cushioning, self-adjusting at both ends			
Cushioning length	PPV [mm]	14	18	20	21
	PPS [mm]	14	18	20	21
Position sensing		Via proximity sensor			
Type of mounting		Via accessories			
		With male thread			
Mounting position		Any			

Operating conditions	
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4]
Note on operating/pilot medium	Operation with lubricated medium possible (in which case lubricated operation will always be required)
Operating pressure ¹⁾ [bar]	1 ... 10
Suitability for use in the food industry	As per manufacturer's declaration (→ Support / Downloads)
ATEX	Specified types → www.festo.com

1) An increase in the minimum operating pressure is possible with variants

Ambient conditions		Basic version	A1	S6	TT
Standard cylinder					
Ambient temperature ¹⁾ [°C]		-20 ... +80	0 ... +80	0 ... +120	-40 ... +80
Corrosion resistance class CRC ²⁾		3			

1) Note operating range of proximity sensors

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

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

Round cylinders CRDSNU, stainless steel

Technical data

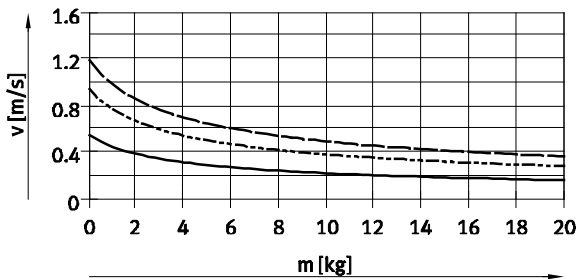
FESTO

Force [N] and impact energy [J]				
Piston Ø	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
Impact energy in the end positions for P cushioning ¹⁾	0.4	0.7	1.0	1.3

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

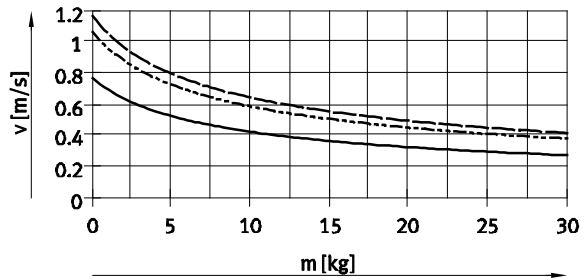
Average piston speed v as a function of applied load m in combination with PPS cushionings

Piston Ø 32



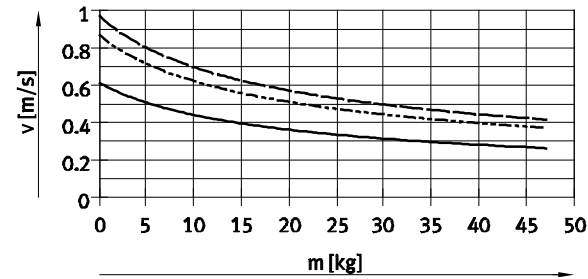
— CRDSNU-32-50
 - - - CRDSNU-32-100
 - · - CRDSNU-32-200

Piston Ø 40



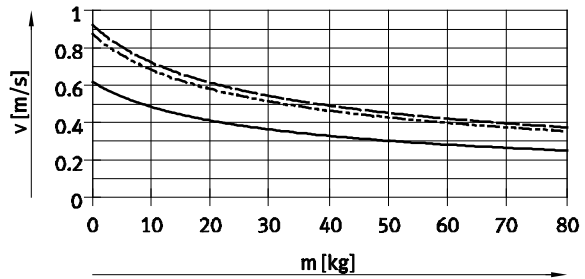
— CRDSNU-40-50
 - - - CRDSNU-40-100
 - · - CRDSNU-40-200

Piston Ø 50




— CRDSNU-50-50
 - - - CRDSNU-50-100
 - · - CRDSNU-50-200

Piston Ø 63



— CRDSNU-63-50
 - - - CRDSNU-63-100
 - · - CRDSNU-63-200

-  - Note
 Average piston speed
 = stroke/movement time

-  - Note

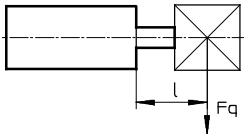
Design software for flexible cushioning elements → www.festo.com	Additional graphs for PPS cushioning → www.festo.com	Design software for PPV cushioning → www.festo.com
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Round cylinders CRDSNU, stainless steel

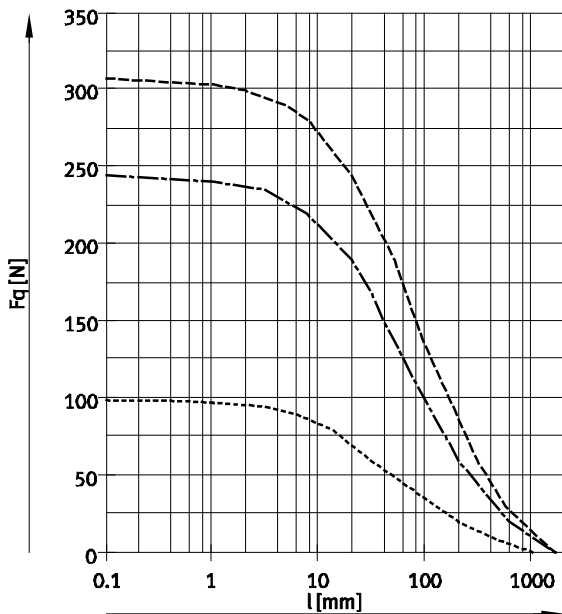
Technical data

Weight [g]				
Piston \varnothing	32	40	50	63
Basic weight with 0 mm stroke	670	1,327	2,020	2,943
Additional weight per 10 mm stroke	15	24	40	44
Moving load with 0 mm stroke	118	232	416	472
Additional load per 10 mm stroke	9	16	25	25

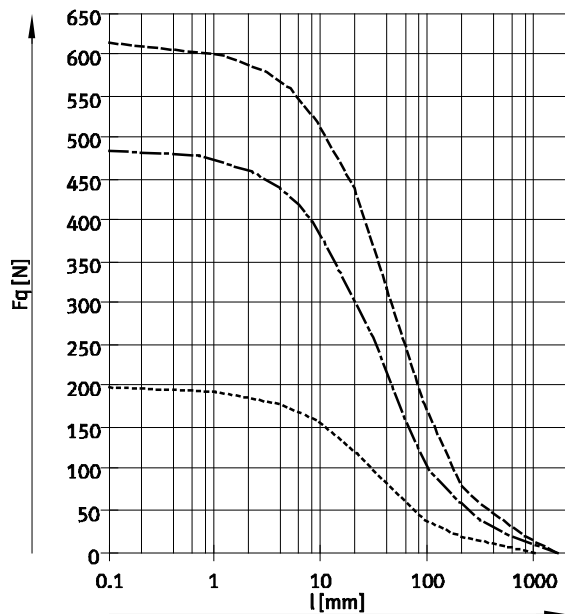
Max. lateral force F_q as a function of projection l



Basic version

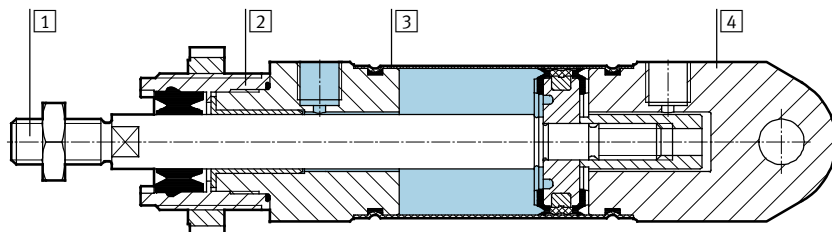


S2 – Through piston rod



- \varnothing 32
- \varnothing 40
- \varnothing 50/63

Materials

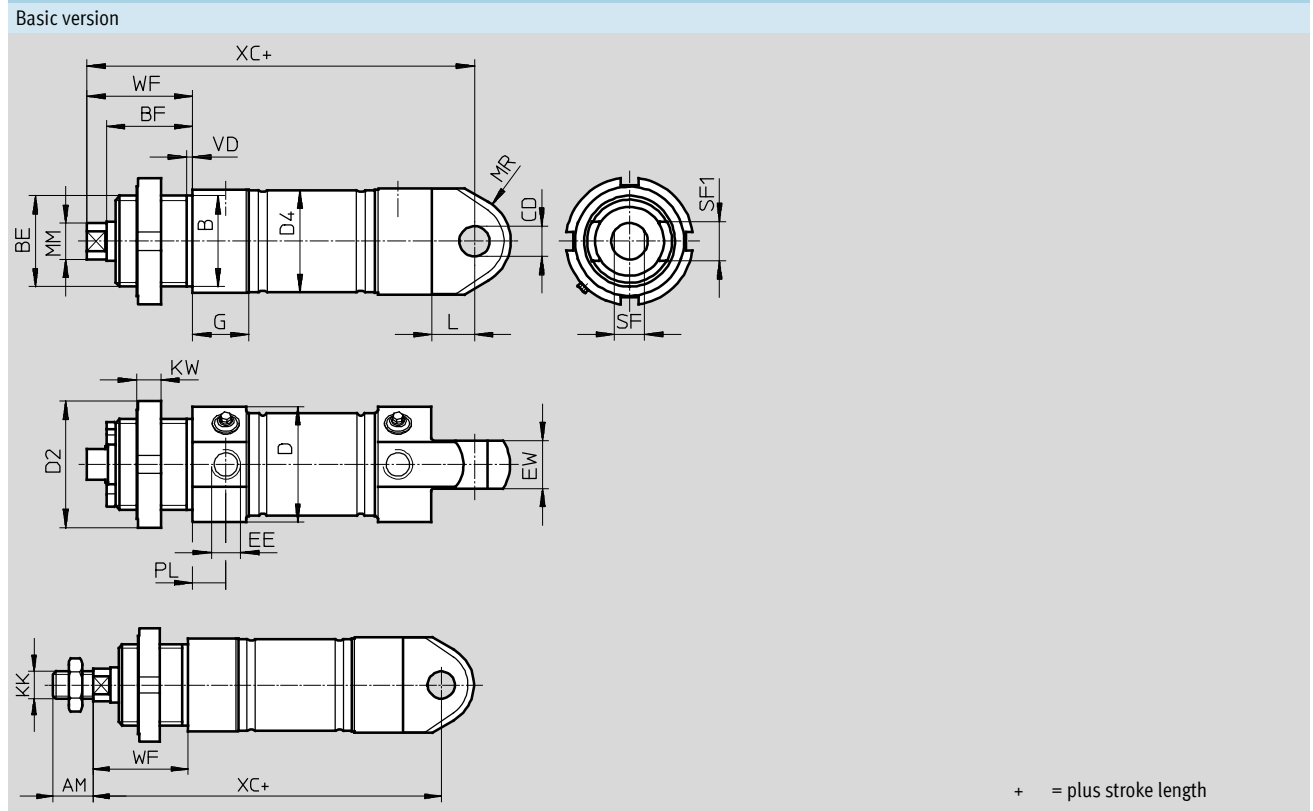


Standard cylinder	Basic version	S6	A3
1 Piston rod	High-alloy stainless steel		
2 Bearing cap	High-alloy stainless steel		
3 Cylinder barrel	High-alloy stainless steel		
4 End cap	High-alloy stainless steel		
- Seals	Polyurethane	Fluoro elastomer	Polyurethane
Note on materials	RoHS-compliant		
	-		Contains paint wetting impairment substances

Round cylinders CRDSNU, stainless steel

Technical data

Dimensions Download CAD data → www.festo.com



∅	AM	B	BE	BF	CD	D	D2	D4
[mm]		∅ h9			∅ H8	∅	∅	∅
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

∅	EE	EW	G	KK	KW	L	MM
[mm]							∅
32	G $\frac{1}{8}$	16	18.6	M10x1.25	8	14	12
40	G $\frac{1}{4}$	18	24.7	M12x1.25	10	16	16
50	G $\frac{1}{4}$	21	24.4	M16x1.5	10	17	20
63	G $\frac{3}{8}$	21	27.4	M16x1.5	10	17	20

∅	MR	PL	SF	SF1	VD	WF	XC
[mm]							±1
32	15	11	10	13	4.3	34	117.5
40	19	12	13	18	4.3	39	139.6
50	22.5	12	17	22	4.3	44	147.2
63	22.5	13	17	22	4.3	44	155.4

Round cylinders CRDSNU, stainless steel

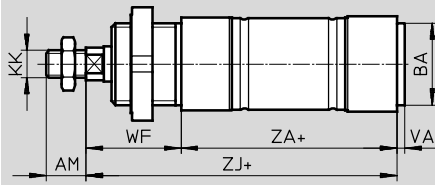
Technical data



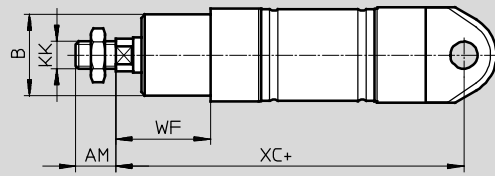
Dimensions

Download CAD data → www.festo.com

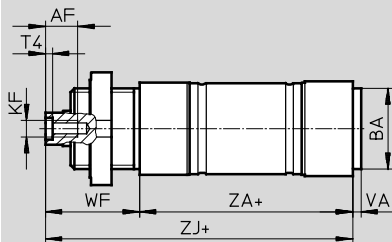
MQ – Short end cap without swivel mounting



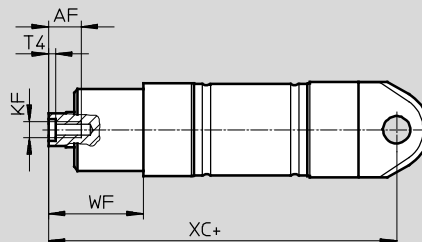
MG – Bearing cap without mounting thread



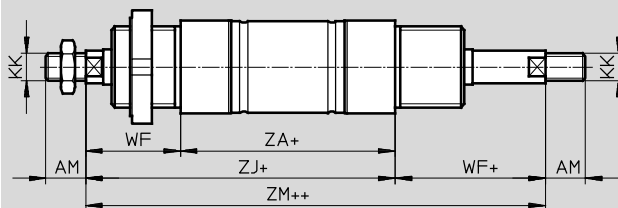
MQ-K3 – Short end cap without swivel mounting, with female piston rod thread



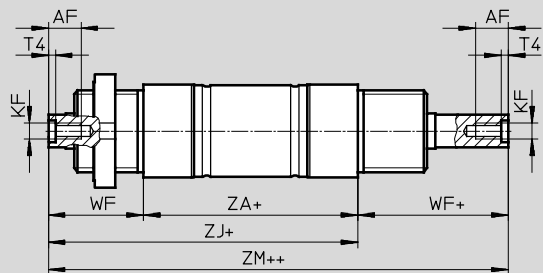
MG-K3 – Bearing cap without mounting thread, with female piston rod thread



S2 – Through piston rod



S2-K3 – Through piston rod, with female thread



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

∅	AF	AM	B	BA	KF	KK
[mm]			∅ h9	h9		
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

∅	T4	VA	WF	XC	ZA	ZJ	ZM
[mm]				±1			
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

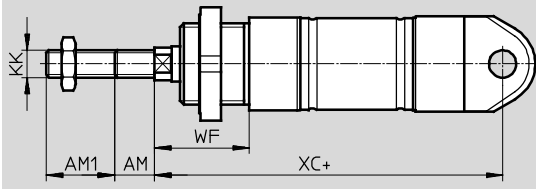
Round cylinders CRDSNU, stainless steel

Technical data

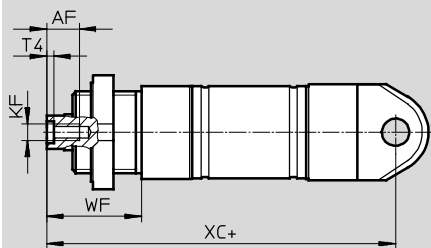
Dimensions

Download CAD data → www.festo.com

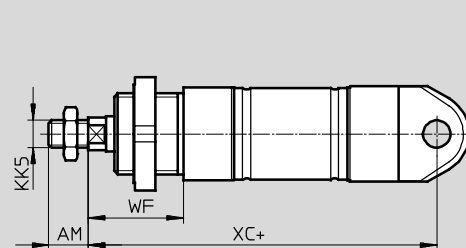
K2 – Extended male piston rod thread



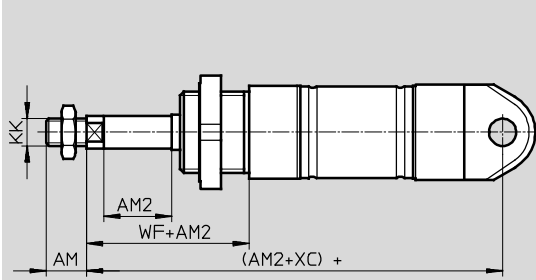
K3 – Female piston rod thread



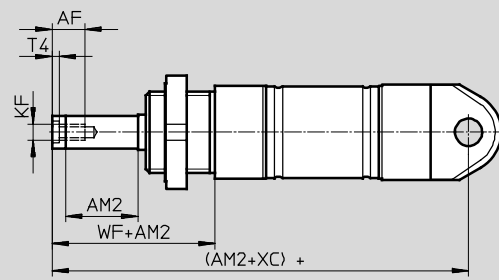
K5 – Special piston rod thread



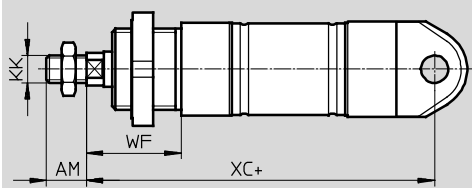
K8 – Extended piston rod



K3-K8 – Extended piston rod, with female thread



TT – Low temperature




+ = plus stroke length

∅	AF	AM	AM1	AM2	KF
[mm]			max.	max.	
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

∅	KK	KK5	T4	WF	XC
[mm]					±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

Round cylinders CRDSNU, stainless steel

Ordering data – Modular products

Ordering code			
Type	Piston Ø	Stroke	PPS – Pneumatic cushioning, self-adjusting at both ends A – Via proximity sensor MG – Bearing cap without mounting thread A1 – Wiper seal variant: For increased chemical resistance Part No. Type
	[mm]	[mm]	
	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

Ordering table								
Size	32	40	50	63	Condi- tions	Code	Enter code	
M Module No.	552791	552792	552793	552794				
Version	Stainless steel					CR		CR
Function	Round cylinder, double-acting					DSNU		DSNU
Piston Ø [mm]	32	40	50	63		-...		
Stroke [mm]	1 ... 500					-...		
Cushioning	Flexible cushioning rings/pads at both ends					-P		
	Pneumatic cushioning, self-adjusting				1	-PPS		
	Pneumatic cushioning, adjustable at both ends					-PPV		
O Position sensing	Via proximity sensor					-A		
Cylinder cap	Short end cap without swivel mounting					-MQ		
	Bearing cap without mounting thread					-MG		
Wiper seal variant	Increased chemical resistance				1	-A1		
	Hard wiper seal				2	-A2		
	Unlubricated operation				1	-A3		
Type of piston rod	Through piston rod				3	-S2		
Extended male thread [mm]	Piston rod with extended male thread 1 ... 35		1 ... 70			-...K2		
Female thread	Female piston rod thread							
	M6	M8	M10	M10	4	-K3		
Special thread	Piston rod with special thread							
	M10	M12	M16	M16		-“...”K5		
Extended piston rod [mm]	1 ... 500					-...K8		
Temperature resistance	Heat-resistant seals up to max. 120 °C					-S6		
Low temperature	Seals and lubricating grease from -40 °C ... +80 °C				5	-TT		

- 1 PPS, A1, A3 Not with S6, TT
- 2 A2 Not with MG, S6, TT
- 3 S2 Not with MQ, MG

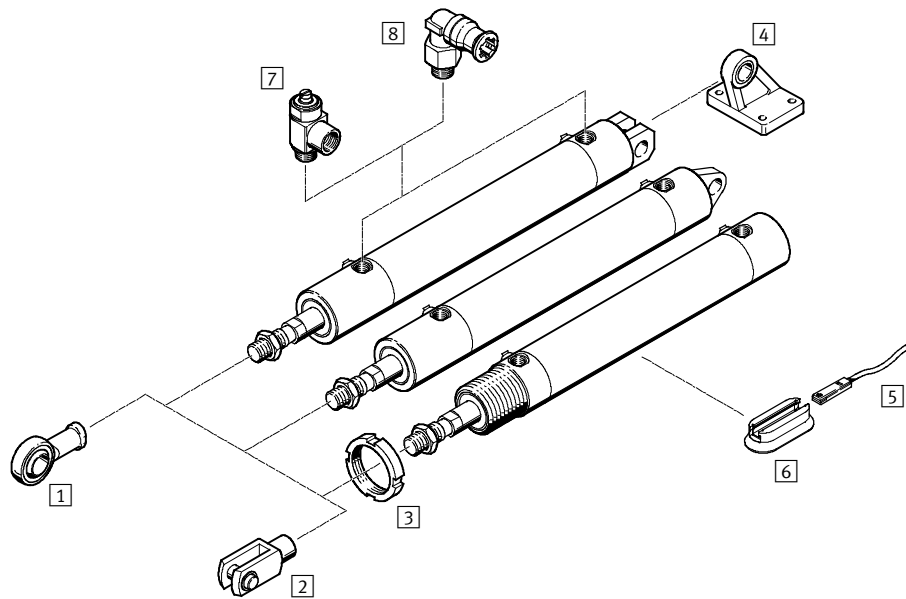
- 4 K3 Not with K2, K5
- 5 TT Not with MG, S6

Transfer order code

- - - - - - - - - - - - - -

Round cylinders CRHD, stainless steel

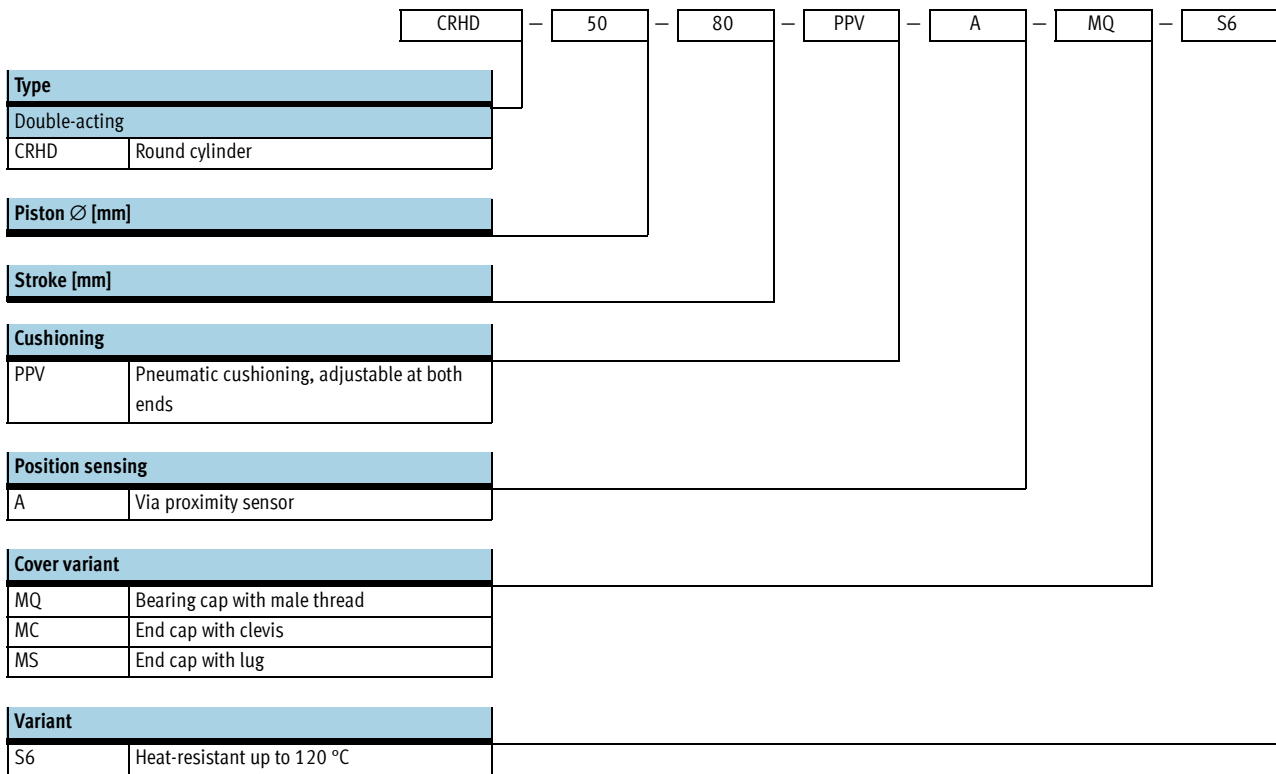
Peripherals overview



Mounting attachments and accessories						
	Brief description	CRHD-MQ	CRHD-MC	CRHD-MS	→ Page/Internet	
1	Rod eye CRSGS	With spherical bearing	■	■	■	49
2	Rod clevis CRSG	Permits a swivelling movement of the cylinder in one plane	■	■	■	49
3	Ring nut CR	For bearing caps	■	-	-	48
4	Clevis foot CRLMC	For end caps	-	■	-	48
5	Proximity sensor CRSMT	With LED for operating status indication	■	■	■	49
6	Mounting kit CRSMB-8-32/100	For proximity sensor CRSMT	■	■	■	49
7	One-way flow control valve CRGRLA	For regulating speed	■	■	■	50
8	Push-in fittings CRQS	For connecting compressed air tubing with standard outside diameter	■	■	■	quick star

Round cylinders CRHD, stainless steel

Type codes

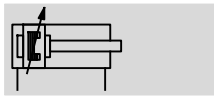




Round cylinders CRHD, stainless steel

FESTO

Technical data

Function



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

-  - www.festo.com

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 \varnothing	32	40	50	63	80	100
Pneumatic connection	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{3}{8}$	G $\frac{3}{8}$
Piston rod thread	M10x1.25	M12x1.25	M16x1.5	M16x1.5	M20x1.5	M20x1.5
Constructional 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 sensor					
Type of mounting	Via accessories					
Mounting position	Any					

Operating and environmental conditions	
Variant	CRHD S6
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4]
Note on operating/pilot medium	Operation with lubricated medium possible (in which case lubricated operation will always be required)
Operating pressure	1 ... 10 bar
Ambient temperature ¹⁾ [°C]	-20 ... +80 0 ... +120
Corrosion resistance class CRC ²⁾	4

1) Note operating range of proximity sensors

2) Corrosion resistance class 4 as per Festo standard 940 070

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

Force [N]						
Piston \varnothing	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

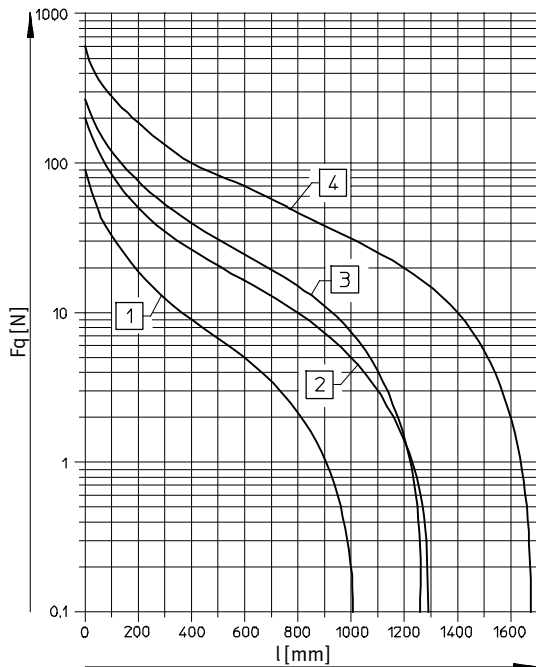
Weight [g]						
Piston \varnothing	32	40	50	63	80	100
Basic weight with 10 mm stroke	676	1,196	1,849	2,977	5,172	8,472
Additional weight per 10 mm stroke	26	42	57	65	100	115
Moving load with 10 mm stroke	106	198	340	398	717	968
Additional load per 10 mm stroke	9	16	25	25	38	38

Round cylinders CRHD, stainless steel

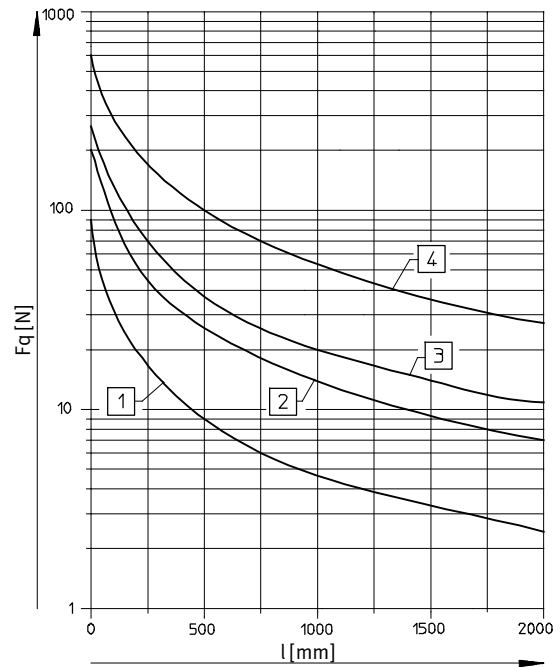
Technical data

Permissible lateral force F_q as a function of stroke length l

Horizontal mounting



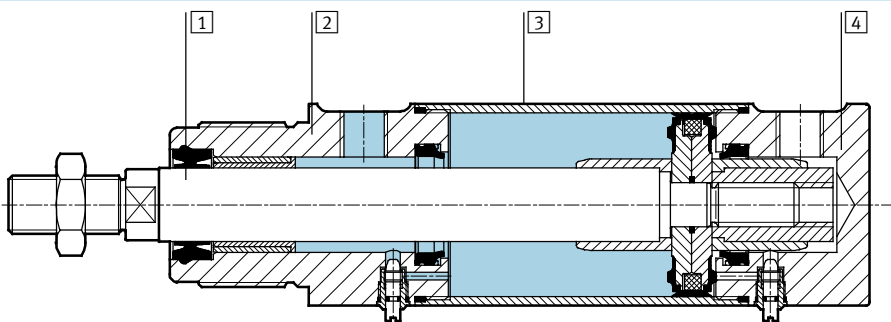
Vertical mounting



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

Materials

Sectional view



Round cylinder	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	Polyurethane, nitrile rubber	Fluoro elastomer

Round cylinders CRHD, stainless steel

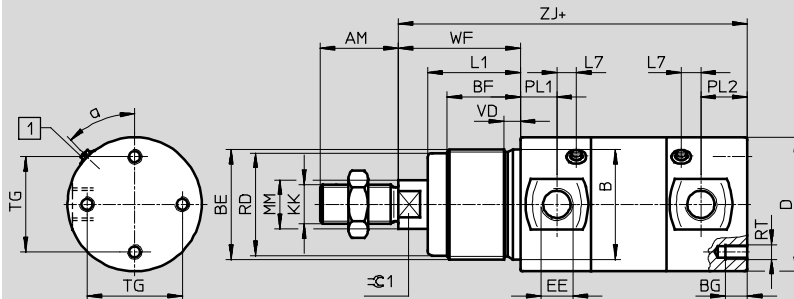
Technical data

FESTO

Dimensions CRHD- ... -MQ

Download CAD data → www.festo.com

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

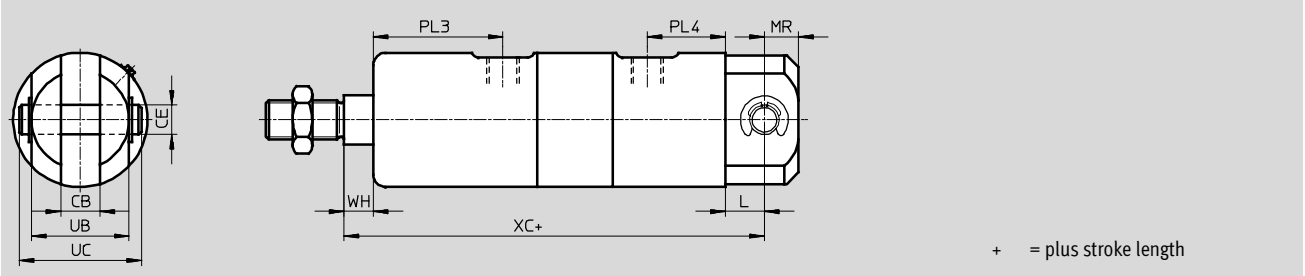
Round cylinders CRHD, stainless steel

Technical data

Dimensions CRHD- ... -MC

Download CAD data → www.festo.com

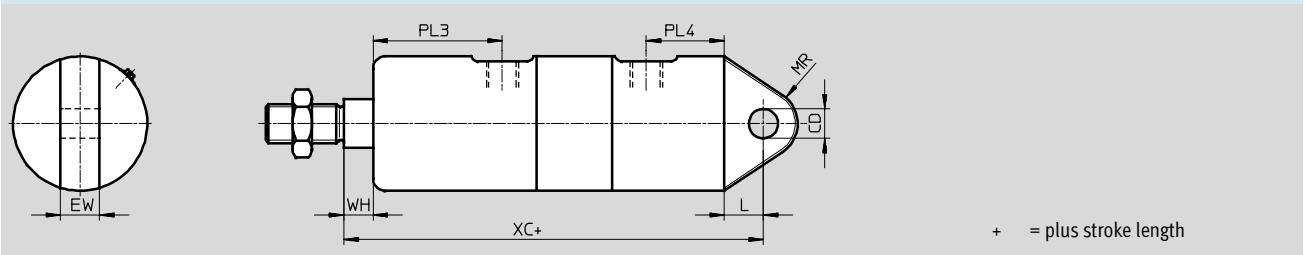
End cap with clevis



Dimensions CRHD- ... -MS

Download CAD data → www.festo.com




End cap with lug



∅	CB	CD	CE	EW	L	MR	PL3	PL4	UB	UC	WH	XC
[mm]	+0.2/+0.1	∅ H9	∅ e8	-0.1/-0.2					-0.1/-0.2			
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




Round cylinders CRHD, stainless steel

Technical data

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

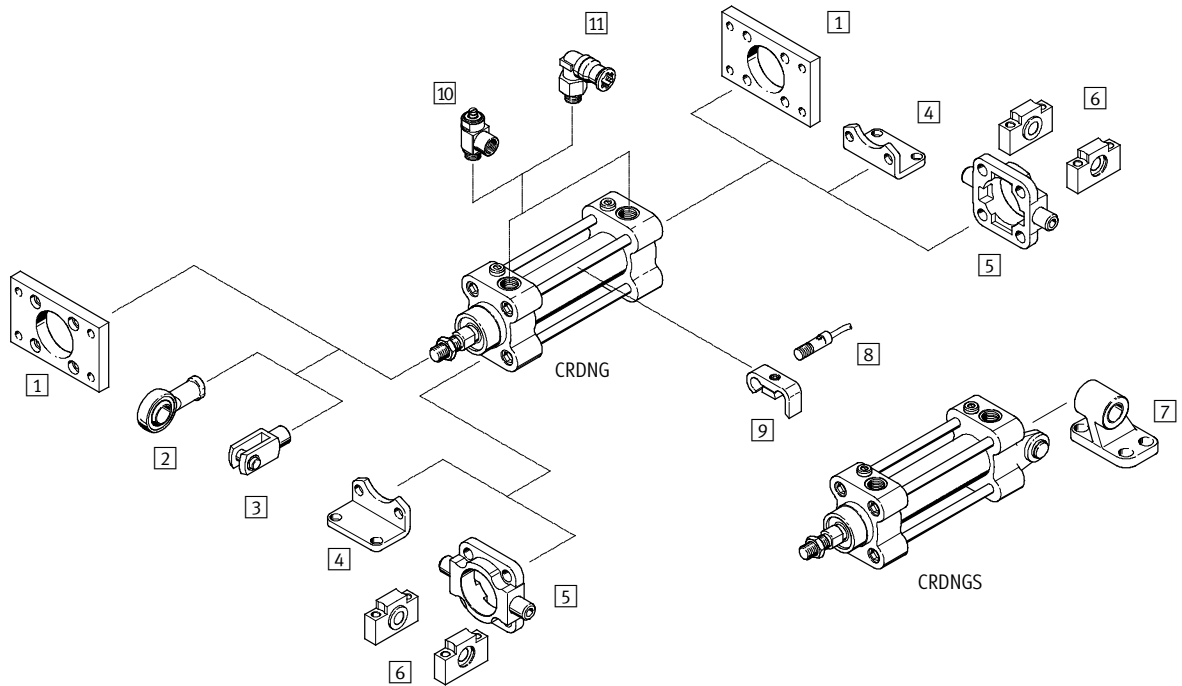
Round cylinders CRHD, stainless steel

Technical data

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

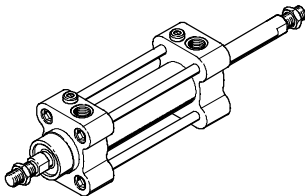
Standard cylinders CRDNG to ISO 1552, stainless steel

Peripherals overview



Variant

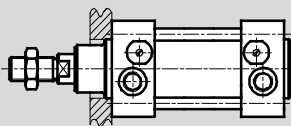
CRDNG-S2



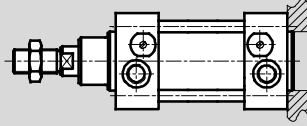
Mounting options

CRDNG

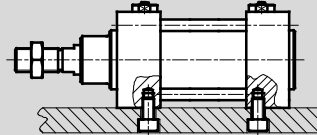
Mounting at front



Mounting at rear

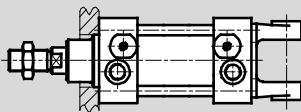


Mounting from below

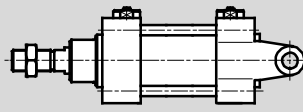


CRDNGS

Mounting at front



Mounting on swivel flange



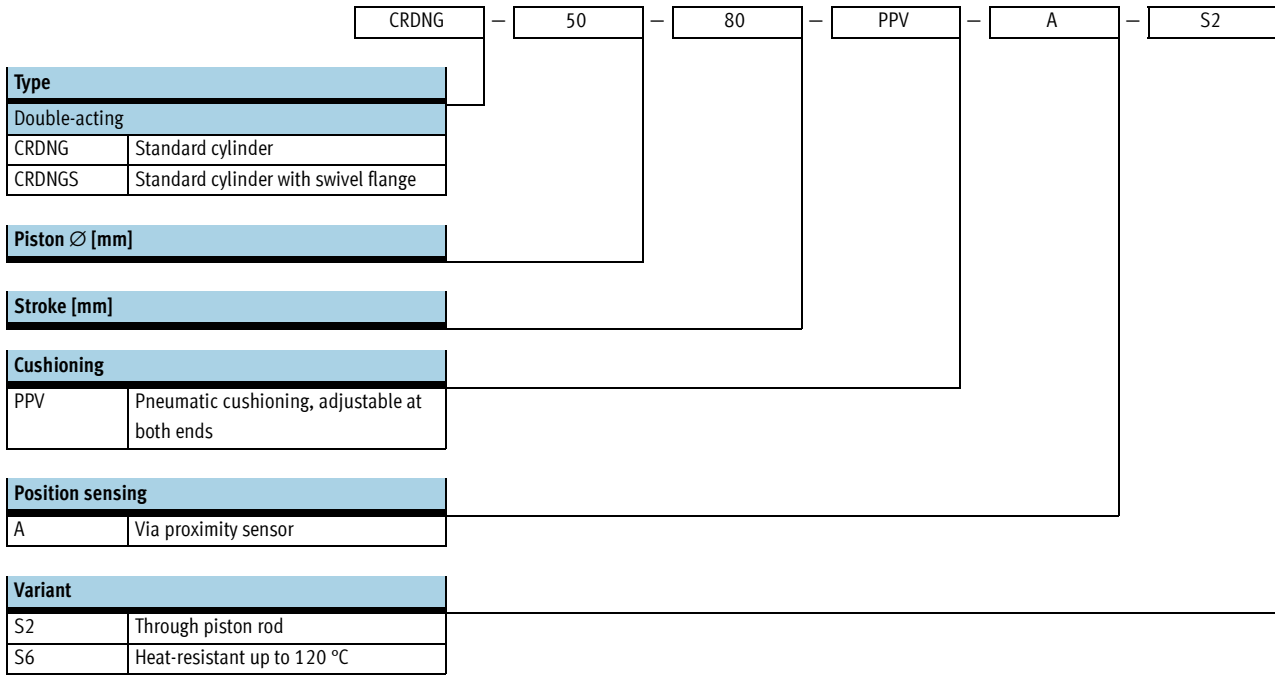
Standard cylinders CRDNG to ISO 15552, stainless steel

Peripherals overview

Mounting attachments and accessories				
	Brief description	CRDNG	CRDNGS	→ Page/Internet
1	Flange mounting CRFNG	■	–	45
2	Rod eye CRSGS	■	■	49
3	Rod clevis CRSG	■	■	49
4	Foot mounting CRHNC	■	–	43
5	Trunnion flange CRZNG	■	–	46
6	Trunnion support CRLNZG	■	–	46
7	Clevis foot CRLNG	–	■	47
8	Proximity sensor CRSMEO-4	■	■	49
9	Mounting kit CRSMB	■	■	49
10	One-way flow control valve CRGRLA	■	■	50
11	Push-in fittings CRQS	■	■	quick star

Standard cylinders CRDNG to ISO 15552, stainless steel

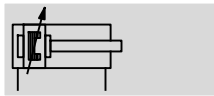
Type codes



Standard cylinders CRDNG to ISO 15552, stainless steel

Technical data

Function



- Diameter
32 ... 125 mm
- Stroke length
10 ... 2,000 mm

www.festo.com

Wearing parts kits
→ 41

Variants

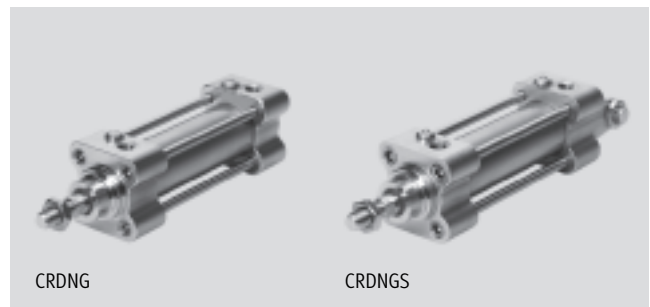


S2



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



DIN



General technical data							
Piston Ø	32	40	50	63	80	100	125
Pneumatic connection	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{2}$
Piston rod thread	M10x1.25	M12x1.25	M16x1.5	M16x1.5	M20x1.5	M20x1.5	M27x2
Constructional 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 sensor						
Type of mounting	Via accessories						
	Via female thread						
Mounting position	Any						

Operating and environmental conditions	
Variant	CRDNG/CRDNGS S6
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4]
Note on operating/pilot medium	Operation with lubricated medium possible (in which case lubricated operation will always be required)
Operating pressure	0.6 ... 10 bar
Ambient temperature ¹⁾ [°C]	-20 ... +80 0 ... +120
Corrosion resistance class CRC ²⁾	4

1) Note operating range of proximity sensors

2) Corrosion resistance class 4 as per Festo standard 940 070

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

Force [N]							
Piston Ø	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

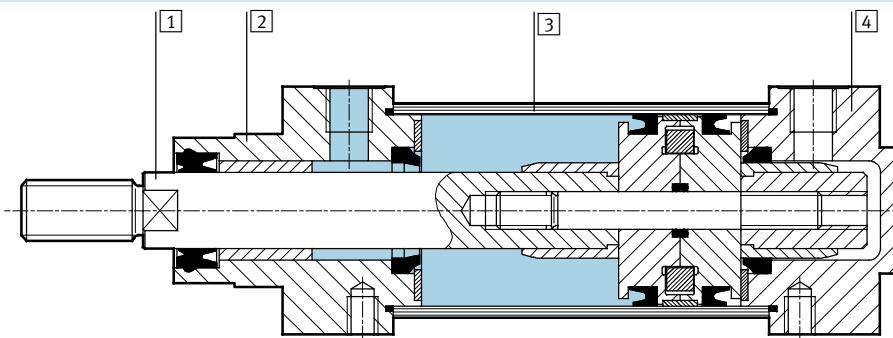
Standard cylinders CRDNG to ISO 1552, stainless steel

Technical data

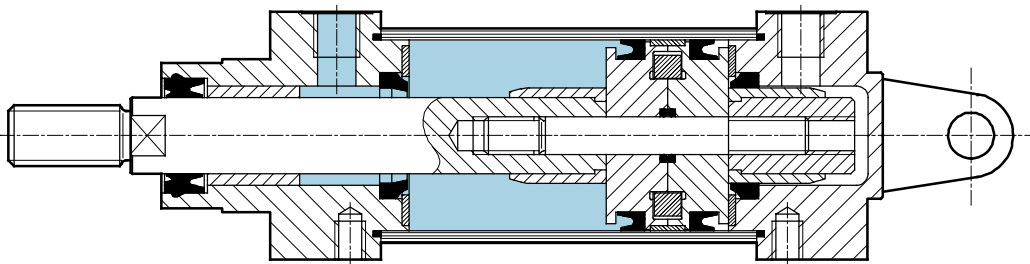
Weight [g]							
Piston Ø	32	40	50	63	80	100	125
CRDNG							
Basic weight with 0 mm stroke	1,045	1,360	2,160	3,455	5,935	8,070	
Additional weight per 10 mm stroke	20	30	60	60	100	110	
CRDNGS							
Basic weight with 0 mm stroke	1,070	1,460	2,330				
Additional weight per 10 mm stroke	20	30	60				

Materials

Sectional view CRDNG



Sectional view CRDNGS



Standard cylinder	Basic version	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	Fluoro elastomer

Standard cylinders CRDNG to ISO 1552, stainless steel

Technical data

Dimensions CRDNG Download CAD data → www.festo.com

Basic version

- 1 Socket head screw with female thread
- 2 Cover 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

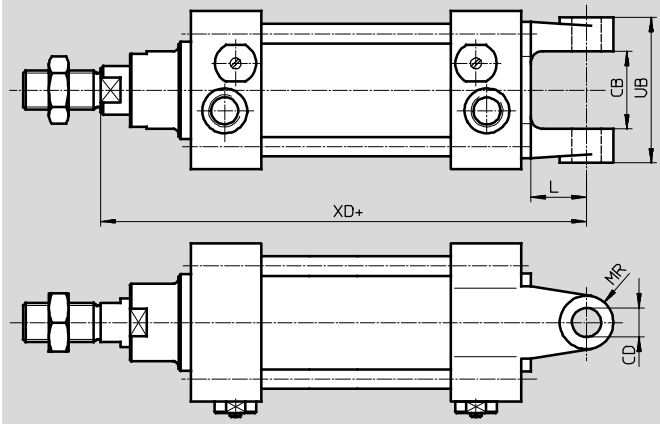
∅	A	B	BG	D1	D4	D5	E	EE	J2	J3	KK	L2	L3
[mm]		∅ e11			∅	∅							
32	22	30	16	M6	33.6	6	50	G ³ / ₈	7	5.7	M10x1.25	16	13
40	24	35	16	M6	41.6	6	55	G ¹ / ₄	10	6.5	M12x1.25	18	16.5
50	32	40	16	M8	52.4	8	65	G ¹ / ₄	11.5	8.6	M16x1.5	25	21
63	32	45	16	M10	65.4	8	75	G ³ / ₈	14.5	12	M16x1.5	25	22
80	40	45	23	M10	82.8	10	100	G ³ / ₈	15	13	M20x1.5	31	22.5
100	40	55	23	M12	102.8	10	120	G ¹ / ₂	23	14	M20x1.5	36	22.5
125	54	60	23	M12	128.6	12	145	G ¹ / ₂	28.5	8	M27x2	31	23.5

∅	L7	L8	MM	PL	RT	T1	TG	VA	VD	WH	ZJ	ZM	∅C1	∅C2	∅C3
[mm]			∅												
32	5.3	94 +0.4	12	13	M6	9	32.5	4	5	26	120	148	10	26	6
40	2.5	105 +0.4/-0.6	16	14	M6	9	38	4	5	30	135	167	13	30	6
50	4.5	106 +0.4/-0.6	20	14	M8	10	46.5	4	5	37	143	183	17	34	8
63	5	121 +0.4/-0.6	20	18	M8	12	56.5	4	5	37	158	199	17	36	8
80	6	128 +0.4/-0.6	25	17	M10	15	72	4	5	46	174	222	22	41	10
100	9	138 +0.4/-0.6	25	18	M10	18	89	4	5	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

Standard cylinders CRDNG to ISO 15552, stainless steel

Technical data

Dimensions – CRDNGS








+ = plus stroke length

∅	CB	CD	L	MR	UB	XD
[mm]	H14	∅ H9				
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, stainless steel

Technical data

Ordering data				
Variant	Piston Ø [mm]	Stroke [mm]	Part No.	Type
CRDNG				
	32	10 ... 2,000	160884	CRDNG-32-...-PPV-A
	40	10 ... 2,000	160885	CRDNG-40-...-PPV-A
	50	10 ... 2,000	160886	CRDNG-50-...-PPV-A
	63	10 ... 2,000	160887	CRDNG-63-...-PPV-A
	80	10 ... 2,000	160888	CRDNG-80-...-PPV-A
	100	10 ... 2,000	160889	CRDNG-100-...-PPV-A
	125	10 ... 2,000	185280	CRDNG-125-...-PPV-A
S6 – Heat-resistant up to 120 °C				
	32	10 ... 2,000	185293	CRDNG-32-...-PPV-A-S6
	40	10 ... 2,000	185294	CRDNG-40-...-PPV-A-S6
	50	10 ... 2,000	185295	CRDNG-50-...-PPV-A-S6
	63	10 ... 2,000	185296	CRDNG-63-...-PPV-A-S6
	80	10 ... 2,000	185297	CRDNG-80-...-PPV-A-S6
	100	10 ... 2,000	185298	CRDNG-100-...-PPV-A-S6
	125	10 ... 2,000	185299	CRDNG-125-...-PPV-A-S6
S2 – Through piston rod				
	32	10 ... 2,000	185282	CRDNG-32-...-PPV-A-S2
	40	10 ... 2,000	185283	CRDNG-40-...-PPV-A-S2
	50	10 ... 2,000	185284	CRDNG-50-...-PPV-A-S2
	63	10 ... 2,000	185285	CRDNG-63-...-PPV-A-S2
	80	10 ... 2,000	185286	CRDNG-80-...-PPV-A-S2
	100	10 ... 2,000	185287	CRDNG-100-...-PPV-A-S2
	125	10 ... 2,000	185288	CRDNG-125-...-PPV-A-S2
CRDNGS				
	32	10 ... 2,000	160890	CRDNGS-32-...-PPV-A
	40	10 ... 2,000	160891	CRDNGS-40-...-PPV-A
	50	10 ... 2,000	160892	CRDNGS-50-...-PPV-A
	63	10 ... 2,000	160893	CRDNGS-63-...-PPV-A
	80	10 ... 2,000	160894	CRDNGS-80-...-PPV-A
	100	10 ... 2,000	160895	CRDNGS-100-...-PPV-A
	125	10 ... 2,000	185281	CRDNGS-125-...-PPV-A
S6 – Heat-resistant up to 120 °C				
	32	10 ... 2,000	185300	CRDNGS-32-...-PPV-A-S6
	40	10 ... 2,000	185301	CRDNGS-40-...-PPV-A-S6
	50	10 ... 2,000	185302	CRDNGS-50-...-PPV-A-S6
	63	10 ... 2,000	185303	CRDNGS-63-...-PPV-A-S6
	80	10 ... 2,000	185304	CRDNGS-80-...-PPV-A-S6
	100	10 ... 2,000	185305	CRDNGS-100-...-PPV-A-S6
	125	10 ... 2,000	185306	CRDNGS-125-...-PPV-A-S6

Ordering data – Wearing parts kits					
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

Accessories for stainless steel cylinders

Technical data

Foot mounting CRHBN

Scope of delivery:

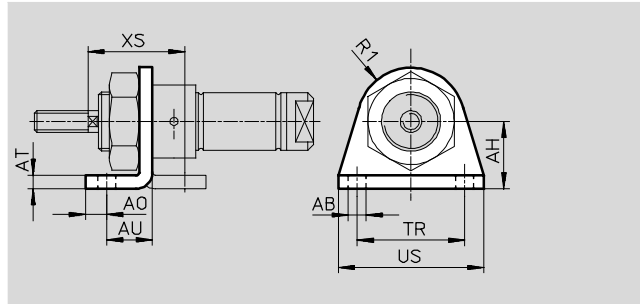
CRHBN-... x1: 1 foot

CRHBN-... x2: 2 feet, 1 nut

Material:

High-alloy steel

Free of copper, PTFE and silicone



Dimensions and ordering data													Part No.	Type
For \varnothing	AB	AH	AO	AT	AU	R1	TR	US	XS	CRC ¹⁾	Weight			
[mm]	\varnothing										[g]			
12	5.5	20	6	4	14	13	32	42	32	4	40	161866	CRHBN-12/16x1	
16	5.5	20	6	4	14	13	32	42	32	4	97	162999	CRHBN-12/16x2	
20	6.6	25	8	5	17	20	40	54	36	4	55	161867	CRHBN-20/25x1	
25	6.6	25	8	5	17	20	40	54	40	4	100	162998	CRHBN-20/25x2	

1) Corrosion resistance class 4 as per Festo standard 940 070

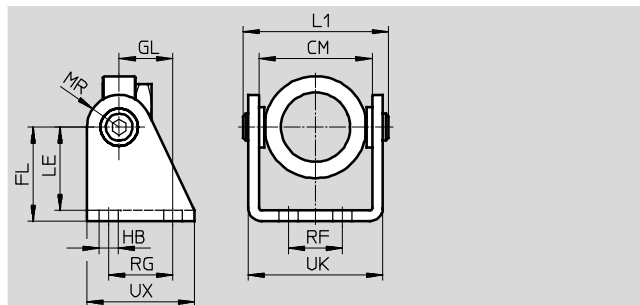
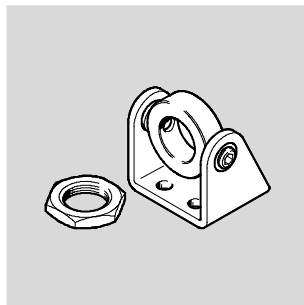
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Swivel mounting CRSBN

Material:

High-alloy steel

Free of copper, PTFE and silicone



Dimensions and ordering data													Part No.	Type	
For \varnothing	CM	FL	GL	HB	L1	LE	MR	RF	RG	UK	UX	CRC ¹⁾	Weight		
[mm]				\varnothing									[g]		
20	38.1	35	20	7	55	31	12	20	24	50.1	40	4	230	552904	CRSBN-20/25
25															

1) Corrosion resistance class 4 as per Festo standard 940 070

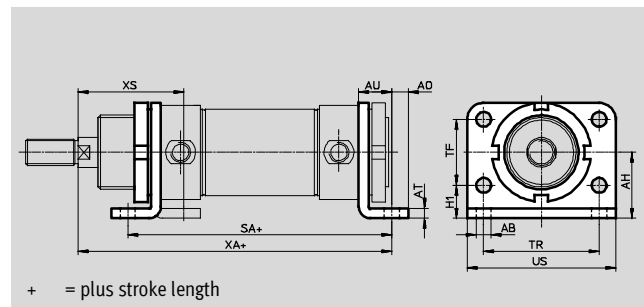
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Accessories for stainless steel cylinders

Technical data

Foot mounting CRH

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

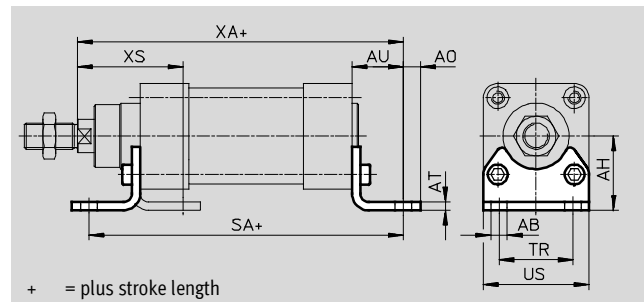


Dimensions and ordering data														Weight	Part No.	Type	
For \varnothing	AB	AH	AO	AT	AU	H1	SA	TF	TR	US	XA	XS	CRC ¹⁾				[g]
[mm]	\varnothing																
32	7	28	7	4	14	14	124	28	52	66	148	48	4	237	162951	CRH-32	
40	9	33	10	5	20	18	153	30	60	80	178	60	4	341	162952	CRH-40	
50	9	40	10	6	20	20	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 4 as per Festo standard 940 070
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Foot mounting CRHNC

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



Dimensions and ordering data														Weight	Part No.	Type
For \varnothing	AB	AH	AO	AT	AU	SA	TR	US	XA	XS	CRC ¹⁾	[g]				
[mm]	\varnothing															
32	7	32	6.5	4	24	142	32	45	144.7	45.7	4	135	176937	CRHNC-32		
40	10	36	9	4	28	160.8	36	54	163.6	53.8	4	180	176938	CRHNC-40		
50	10	45	9.5	5	31	167.9	45	64	175	63.1	4	325	176939	CRHNC-50		
63	10	50	12.5	5	32	184.9	50	75	191.5	64.6	4	405	176940	CRHNC-63		
80	12	63	15	6	41	209.9	63	93	215.5	81.6	4	820	176941	CRHNC-80		
100	14.5	71	17.5	6	41	220.1	75	110	229.6	85.5	4	1,000	176942	CRHNC-100		
125	16.5	90	22	8	45	250	90	131	270	102	4	1,840	176943	CRHNC-125		

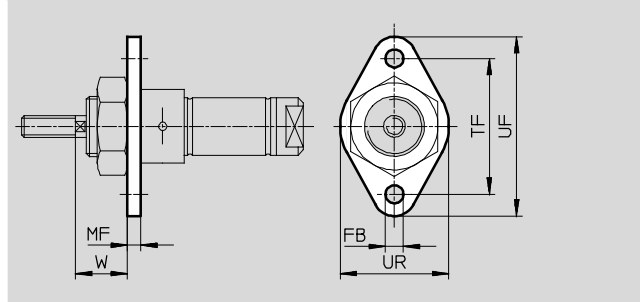
1) Corrosion resistance class 4 as per Festo standard 940 070
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Accessories for stainless steel cylinders

Technical data

Flange mounting CRFBN

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

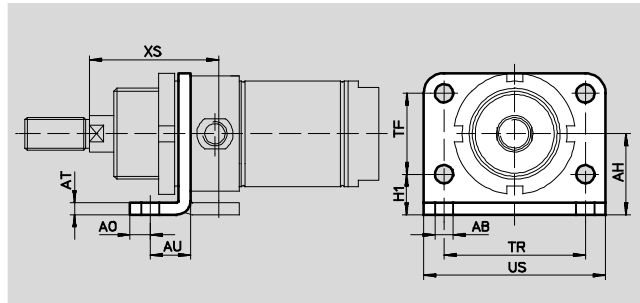


Dimensions and ordering data										
For \varnothing	FB	MF	TF	UF	UR	W	CRC ¹⁾	Weight	Part No.	Type
[mm]	\varnothing							[g]		
12, 16	5.5	4	40	53	30	18	4	25	161864	CRFBN-12/16
20	6.6	5	50	66	40	19	4	45	161865	CRFBN-20/25
25	6.6	5	50	66	40	23	4	45	161865	CRFBN-20/25

1) Corrosion resistance class 4 as per Festo standard 940 070
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Foot mounting CRFV

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



Dimensions and ordering data														
For \varnothing	AB	AH	AO	AT	AU	H1	TF	TR	US	XS	CRC ¹⁾	Weight	Part No.	Type
[mm]	\varnothing											[g]		
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

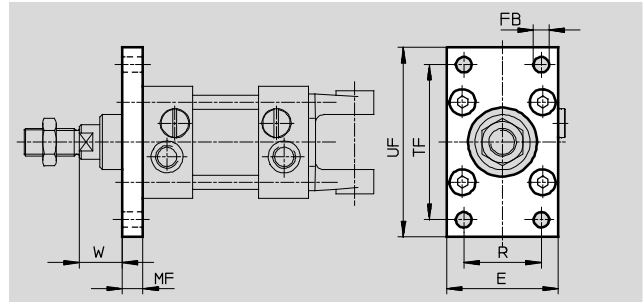
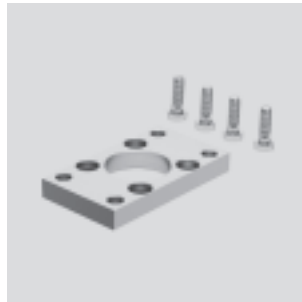
1) Corrosion resistance class 4 as per Festo standard 940 070
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Accessories for stainless steel cylinders

Technical data

Flange mounting CRFNG

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



Dimensions and ordering data											
For \varnothing	E	FB \varnothing	MF	R	TF	UF	W	CRC ¹⁾	Weight	Part No.	Type
[mm]									[g]		
32	45	7	10	32	64	80	16	4	225	161846	CRFNG-32
40	54	9	10	36	72	90	20	4	300	161847	CRFNG-40
50	65	9	12	45	90	110	25	4	540	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	1,500	161850	CRFNG-80
100	110	14	16	75	150	175	35	4	2,100	161851	CRFNG-100
125	132	16	20	90	180	210	45	4	3,780	185363	CRFNG-125

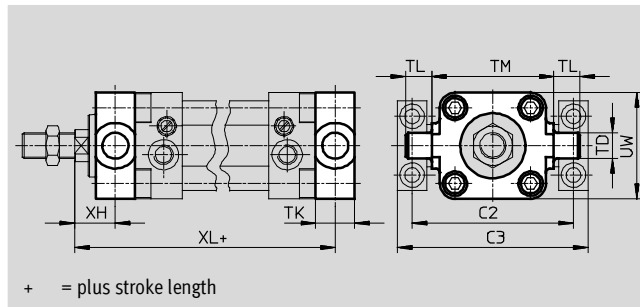
1) Corrosion resistance class 4 as per Festo standard 940 070
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Accessories for stainless steel cylinders

Technical data

Trunnion flange CRZNG

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

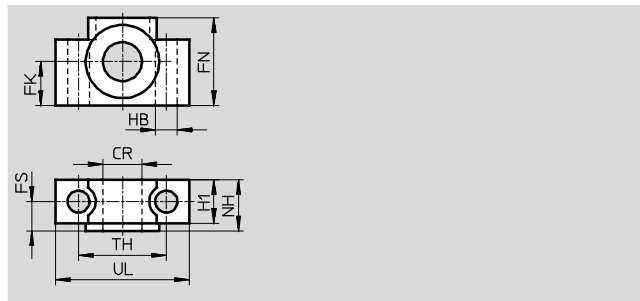
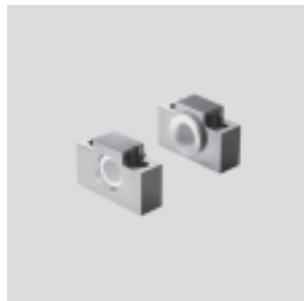


Dimensions and ordering data													
For Ø	C2	C3	TD	TK	TL	TM	UW	XH	XL	CRC ¹⁾	Weight	Part No.	Type
[mm]			Ø e9								[g]		
32	71	86	12	16	12	50	50	18	128	4	150	161852	CRZNG-32
40	87	105	16	20	16	63	55	20	145	4	285	161853	CRZNG-40
50	99	117	16	24	16	75	65	25	155	4	473	161854	CRZNG-50
63	116	136	20	24	20	90	75	25	170	4	687	161855	CRZNG-63
80	136	156	20	28	20	110	100	32	188	4	1,296	161856	CRZNG-80
100	164	189	25	38	25	132	120	32	208	4	2,254	161857	CRZNG-100
125	192	217	25	50	25	160	150	40	250	4	3,484	185362	CRZNG-125

1) Corrosion resistance class 4 as per Festo standard 940 070
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Trunnion supports CRLNZG

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



Dimensions and ordering data													
For Ø	CR	FK	FN	FS	H1	HB	NH	TH	UL	CRC ¹⁾	Weight	Part No.	Type
[mm]	Ø D11	Ø ±0.1				Ø H13		±0.2			[g]		
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
100/125	25	25	50	16	24.5	14	28.5	50	75	4	739	161877	CRLNZG-100/125

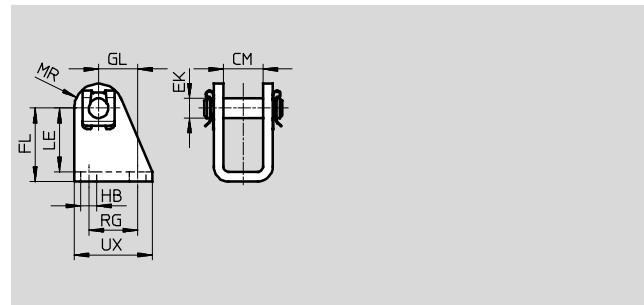
1) Corrosion resistance class 4 as per Festo standard 940 070
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Accessories for stainless steel cylinders

Technical data

Clevis foot CRLBN

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

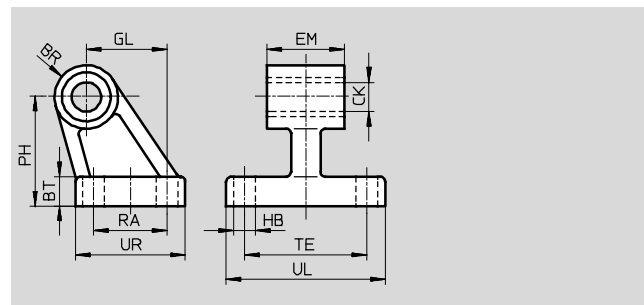


Dimensions and ordering data													
For Ø	CM	EK Ø	FL	GL	HB	LE	MR	RG	UX	CRC ¹⁾	Weight [g]	Part No.	Type
[mm]													
12, 16	12.1	6	27 +0.3/-0.2	13	5.5	24	7	15	25	4	55	161862	CRLBN-12/16
20, 25	16.1	8	30 +0.4/-0.2	16	6.6	26	10	20	32	4	62	161863	CRLBN-20/25
32	16.1	10	35 +0.4/-0.2	18.5	6.6	31	11	24	35	4	107	195866	CRLBN-32
40	18.1	12	40 +0.4/-0.2	24.5	9	35	13	30	45	4	184	195867	CRLBN-40
50, 63	21.1	16	45 +0.5/-0.2	28	9	39	14	34	50	4	289	195868	CRLBN-50/63

1) Corrosion resistance class 4 as per Festo standard 940 070
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Clevis foot CRLNG

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



Dimensions and ordering data																	
For Ø	BR	BT	CK Ø	EB Ø	EM	GL	HB Ø	OF	PH	RA	TE	UL	UR	CRC ¹⁾	Weight [g]	Part No.	Type
[mm]			D11	H13	-0.4		H13										
32	10	8	10	-	25.8	21	6.6	-	32	18	38	51	31	4	120	161840	CRLNG-32
40	11	10	12	-	27.8	24	6.6	-	36	22	41	54	35	4	160	161841	CRLNG-40
50	12	12	12	-	31.8	33	9	-	45	30	50	65	45	4	280	161842	CRLNG-50
63	15	12	16	15	39.8	37	9	10.8	50	35	52	67	50	4	375	161843	CRLNG-63
80	15	14	16	18	49.8	47	11	12.7	63	40	66	86	60	4	580	161844	CRLNG-80
100	19	15	20	18	59.8	55	11	13.7	71	50	76	96	70	4	935	161845	CRLNG-100
125	22	20	25	20	69.8	70	14	18.6	90	60	94	124	90	4	2,530	176951	CRLNG-125

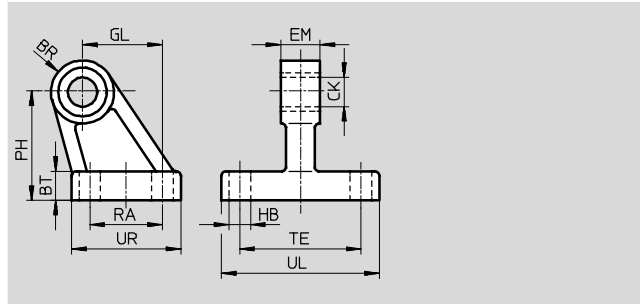
1) Corrosion resistance class 4 as per Festo standard 940 070
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Accessories for stainless steel cylinders

Technical data

Clevis foot CRLMC

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

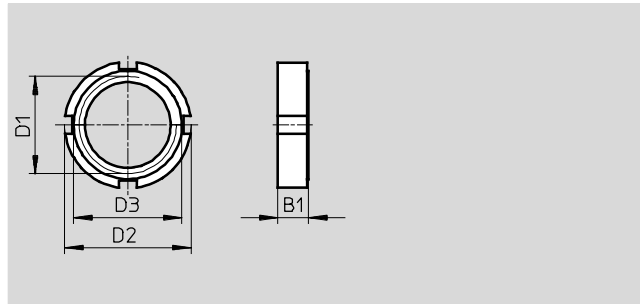
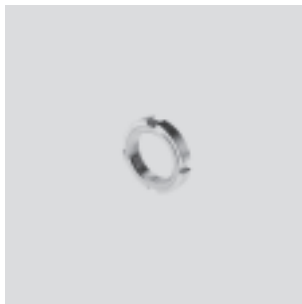


Dimensions and ordering data																	
For \varnothing	BR	BT	CK	EB	EM	GL	HB	OF	PH	RA	TE	UL	UR	CRC ¹⁾	Weight	Part No.	Type
[mm]			\varnothing D11	\varnothing H13	-0.4		\varnothing H13								[g]		
32	10	8	10	-	10	21	6.6	-	32	18	38	51	31	4	101	197320	CRLMC-32
40	11	10	12	-	12	24	6.6	-	36	22	41	54	35	4	139	197321	CRLMC-40
50	12	12	12	-	16	33	9	-	45	30	50	65	45	4	242	197322	CRLMC-50
63	15	12	16	15	16	37	9	10.8	50	35	52	67	50	4	303	197323	CRLMC-63
80	15	14	16	18	20	47	11	12.7	63	40	66	86	60	4	515	197324	CRLMC-80
100	19	15	20	18	20	55	11	13.7	71	50	76	96	70	4	761	197325	CRLMC-100

1) Corrosion resistance class 4 as per Festo standard 940 070
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Ring nut CR

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





Dimensions and ordering data							
For \varnothing	B1	D1	D2	D3	CRC ¹⁾	Weight	Part No. Type
[mm]						[g]	
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 4 as per Festo standard 940 070
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.



Accessories for stainless steel cylinders


FESTO


Technical data

Ordering data – Piston rod attachments				Technical data → Internet: crsg			
	For Ø	Part No.	Type		For Ø	Part No.	Type
Rod eye CRSGS				Rod clevis CRSG			
	12, 16	195580	CRSGS-M6		12, 16	13567	CRSG-M6
	20	195581	CRSGS-M8		20	13568	CRSG-M8
	32	195582	CRSGS-M10x1,25		32	13569	CRSG-M10x1,25
	40	195583	CRSGS-M12x1,25		40	13570	CRSG-M12x1,25
	50, 63	195584	CRSGS-M16x1,5		50, 63	13571	CRSG-M16x1,5
	80, 100	195585	CRSGS-M20x1,5		80, 100	13572	CRSG-M20x1,5
	125	195586	CRSGS-M27x2		125	185361	CRSG-M27x2

Ordering data – Proximity sensors, magnetic reed CRSME0				Technical data → Internet: crsme0	
	Electrical connection	Cable length	Part No.	Type	
	Cable	[m]			
	N/O contact				
	Corrosion resistant				
	3-wire	2.5	161 775	CRSME0-4-K-LED-24	

Ordering data – Mounting kits				Technical data → Internet: crsmb			
	For Ø	Part No.	Type		For Ø	Part No.	Type
Mounting kit CRSMBR				Mounting kit CRSMB			
	12	164581	CRSMBR-12		32	161763	CRSMB-32
	16	164582	CRSMBR-16		40	161764	CRSMB-40
	20	164583	CRSMBR-20		50	161765	CRSMB-50
	25	164584	CRSMBR-25		63	161766	CRSMB-63
	32	163888	CRSMBR-32		80	161767	CRSMB-80
	40	163889	CRSMBR-40		100	161768	CRSMB-100
	50	163890	CRSMBR-50		125	185365	CRSMB-125
	63	163891	CRSMBR-63				


Ordering data – Proximity sensors, magneto-resistive CRSMT				Technical data → Internet: crsmt	
	Switching output	Electrical connection	Cable length	Part No.	Type
		Cable	[m]		
	N/O contact				
	PNP	3-wire	2.5	525563	CRSMT-8-PS-K2,5-LED-24
			5.0	525564	CRSMT-8-PS-K5-LED-24


Ordering data – Mounting kit SMBR		Technical data → Internet: smbr	
		Part No.	Type
	For standard cylinder CRDSNU	538937	SMBR-8-8/100-S6


Ordering data – Mounting kit CRSMB		Technical data → Internet: crsmb	
		Part No.	Type
	For round cylinder CRHD	525565	CRSMB-8-32/100

Accessories for stainless steel cylinders

Technical data

Ordering data – One-way flow control valves CRGRLA				Technical data → Internet: crgrla	
	Connection		Material	Part No.	Type
	Thread	For push-in fitting			
	M5	CRQS/CRQSL/CRQST	Electrolytically polished 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				Technical data → Internet: crvzs		
	Connection		Volume [l]	Material	Part No.	Type
	Thread					
	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			Technical data → Internet: tubing	
	Standard outside diameter		PLN, PFAN	