

Multi-position cylinders

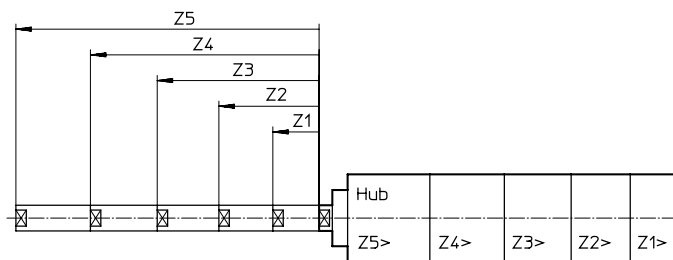
FESTO



Product range overview

Functional principle

By connecting 2 to 5 cylinders in series with the same piston diameter and different stroke lengths, up to 5 positions Z1 ... Z5 can be approached.



- 0 Initial position
- Z1 Position 1
- Z2 Position 2
- Z3 Position 3
- Z4 Position 4
- Z5 Position 5

The following rules must be observed to ensure the functionality of the cylinder:

Rules	Example: ADN-25-...-50Z1-100Z2-150Z3-200Z4-300Z5, with 5 positions		
[1] The subsequent position (e.g.: Z4) must be greater than the sum of the preceding position (Z3) plus the positional tolerance T (→ table below) $Z_n > Z_{n-1} + T_{n-1}$	Pos. Z2 (100 mm) > Pos. Z1 (50 mm) + 6.3 mm Pos. Z3 (150 mm) > Pos. Z2: (100 mm) + 4.8 mm Pos. Z4 (200 mm) > Pos. Z3: (150 mm) + 3.3 mm Pos. Z5 (300 mm) > Pos. Z4: (200 mm) + 1.8 mm		
[2] The sum of all the positions must not exceed the following values: ø 25: 1000 mm ø 40, 63, 100: 2000 mm	$Z5 + Z4 + Z3 + Z2 + Z1 \leq 1000$	Pos. Z1: 50 mm Pos. Z2: 100 mm Pos. Z3: 150 mm	Pos. Z4: 200 mm Pos. Z5: 300 mm Sum: 800 mm ≤ 1000 mm
[3] Each position of the internal cylinders must not exceed the following values: ø 25: 200 mm ø 40, 63: 300 mm ø 100: 400 mm	Pos. Z1: 50 mm ≤ 200 mm Pos. Z2: 100 mm ≤ 200 mm Pos. Z3: 150 mm ≤ 200 mm Pos. Z4: 200 mm ≤ 200 mm		
[4] The position of the last cylinder must not exceed the following values: ø 25: 300 mm ø 40, 63, 100: 1000 mm	Pos. Z5: 300 mm ≤ 300 mm		

Positional tolerance T [mm]

The subsequent position must be greater than the sum of the preceding position plus the positional tolerance T.

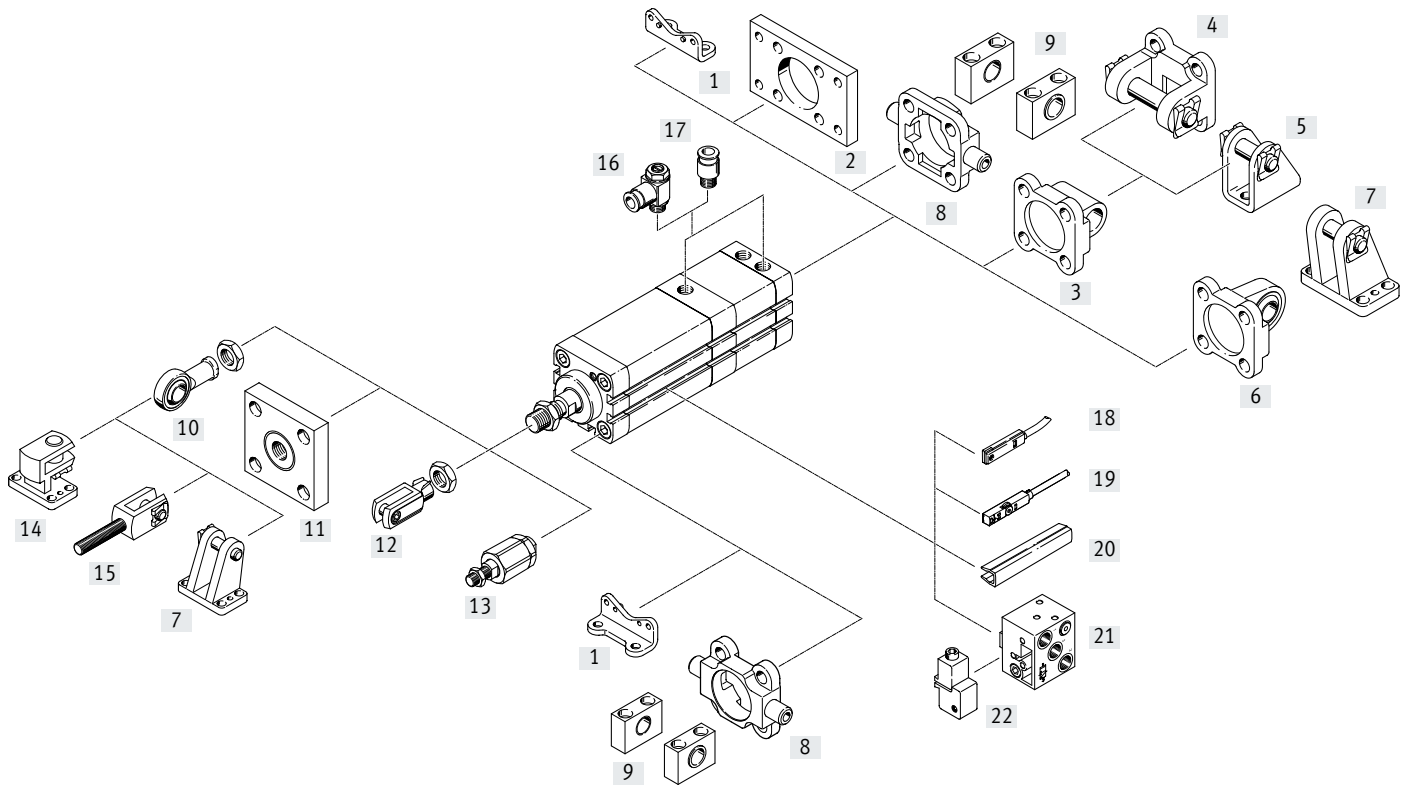
The positional tolerance depends on the number of positions.

Position	Z1	Z2	Z3	Z4	Z5
Piston ø 25					
Cylinder with 2 positions	1.8	0.8	-	-	-
Cylinder with 3 positions	3.3	1.8	0.8	-	-
Cylinder with 4 positions	4.8	3.3	1.8	0.8	-
Cylinder with 5 positions	6.3	4.8	3.3	1.8	0.8
Piston ø 40, 63, 100					
Cylinder with 2 positions	1.8	0.8	-	-	-
Cylinder with 3 positions	3.4	1.8	0.8	-	-
Cylinder with 4 positions	5	3.4	1.8	0.8	-
Cylinder with 5 positions	6.6	5	3.4	1.8	0.8

Type codes

001	Series	
ADNM	Multi-position cylinder, double-acting, standard hole pattern	
002	Piston diameter	
25	25	
40	40	
63	63	
100	100	
003	Piston rod thread type	
A	Male thread	
I	Female thread	
004	Cushioning	
P	Elastic cushioning rings/plates on both sides	
005	Position sensing	
A	For proximity sensor	
006	Position Z	
...Z1	1 ... 400 mm	
007	Z2 - 2nd position mm	
...Z2	1 ... 1000 mm	
008	Z3 - 3rd position	
...Z3	1 ... 1000 mm	
009	Z4 - 4th position	
...Z4	1 ... 1000 mm	
010	Z5 - 5th position	
...Z5	1 ... 1000 mm	
011	Piston rod thread extension	
	None	
...K2	1 ... 30 mm	
012	Custom thread	
"M5"K5	M5	
"M8"K5	M8	
"M10"K5	M10	
"M10x-1,25"K5	M10x1.25	
"M12"K5	M12	
"M12x1,25"K5	M12x1.25	
"M16"K5	M16	
"M16x-1,5"K5	M16x1.5	
"M20"K5	M20	
013	Piston rod extension	
	None	
...K8	1 ... 500 mm	
014	Temperature resistance	
	Standard	
S6	Heat-resistant seals max. 120 °C	
015	Captive rating plate	
	Rating plate, glued	
TL	Laser etched rating plate	

Peripherals overview

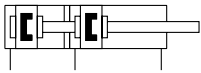




Peripherals overview

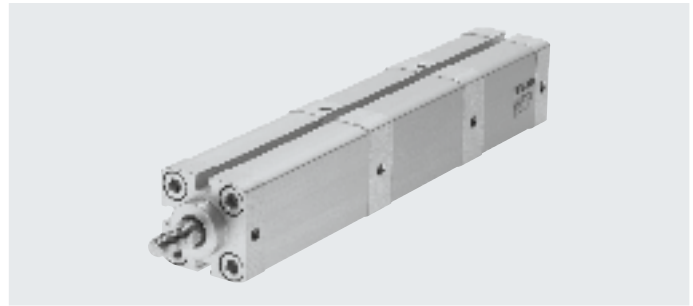
Mounting components and accessories		Description	∅ 25	∅ 40, 63, 100	→ Page/Internet
[1]	Foot mounting HNA	For bearing and end caps	■	■	14
[2]	Flange mounting FNC	For end caps	■	■	15
[3]	Swivel flange SNCL/SNCL-...-R3	For end caps	■	■	16
[4]	Swivel flange SNCB/SNCB-...-R3	For swivel flange SNCL	–	■	19
[5]	Clevis foot LBN/CRLBN	For swivel flange SNCL	■	–	18
[6]	Swivel flange SNCS/CRSNCS/SNCS-...-R3	For end caps	–	■	17
[7]	Clevis foot LBG/LBG-...-R3	For swivel flange SNCS	–	■	18
[8]	Trunnion flange ZNCF/CRZNG	For bearing caps	–	■	20
[9]	Trunnion support LNZG	For trunnion flange ZNCF/CRZNG	–	■	20
[10]	Rod eye SGS/CRSGS	With spherical bearing	■	■	21
[11]	Coupling piece KSG	To compensate for radial deviations	■	■	21
[12]	Rod clevis SG/CRSG	Permits a swivelling movement of the cylinder in one plane	■	■	21
[13]	Self-aligning rod coupler FK/CRFK	To compensate for radial and angular deviations	■	■	21
[14]	Right-angle clevis foot LQG	For rod eye SGS	–	■	18
[15]	Rod clevis SGA	With male thread	–	■	21
[16]	One-way flow control valve GRLA	For regulating speed	■	■	22
[17]	Push-in fitting QS	For connecting tubing with standard O.D.	■	■	qs
[18]	Proximity switch SME-8	Can be integrated in the cylinder profile barrel	■	■	22
[19]	Proximity switch SME/SMT-8M	Can be integrated in the cylinder profile barrel	■	■	22
[20]	Slot cover ABP-5-S	For protecting the sensor cables and the sensor slots from contamination	■	■	23
[21]	Proximity switch SMPO-8E	Pneumatic output signal	■	■	23
[22]	Mounting kit SMB-8E	For proximity switch SMPO-8E	■	■	23

Multi-position cylinders ADN, standard hole pattern

Data sheet



-  - Diameter
25 ... 100 mm
-  - Stroke length
1 ... 1000 mm



General technical data				
Piston \varnothing	25	40	63	100
Pneumatic connection	M5	M5	G1/8	G1/8
Piston rod thread				
Female	M6	M10	M12	M16
Male	M8	M12x1.25	M16x1.5	M20x1.5
Design				
	Piston			
	Piston rod			
	Cylinder barrel			
Cushioning	Elastic cushioning rings/plates at both ends			
Position sensing	Via proximity switch			
Type of mounting				
	With female thread			
	Via accessories			
Mounting position	Any			

Operating and environmental conditions				
Piston \varnothing	25	40	63	100
Operating medium				
	Compressed air to ISO 8573-1:2010 [7:4:4]			
Note on the operating/pilot medium				
	Lubricated operation possible (in which case lubricated operation will always be required)			
Operating pressure				
in [MPa]				
With 2 positions	[MPa]	0.08 ... 1	0.06 ... 1	
With 3 positions	[MPa]	0.11 ... 1	0.09 ... 1	
With 4 positions	[MPa]	0.14 ... 1	0.12 ... 1	
With 5 positions	[MPa]	0.17 ... 1	0.15 ... 1	
in [bar]				
With 2 positions	[bar]	0.8 ... 10	0.6 ... 10	
With 3 positions	[bar]	1.1 ... 10	0.9 ... 10	
With 4 positions	[bar]	1.4 ... 10	1.2 ... 10	
With 5 positions	[bar]	1.7 ... 10	1.5 ... 10	
Ambient temperature ¹⁾				
	[°C]	-20 ... +80		
	S6 [°C]	0 ... +120		
Corrosion resistance class CRC ²⁾				
		2		

1) Note operating range of proximity switches

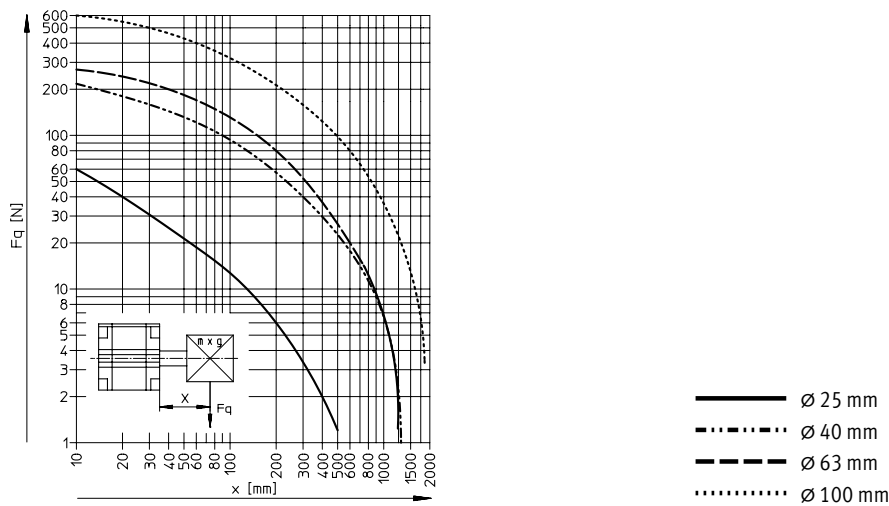
2) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Data sheet

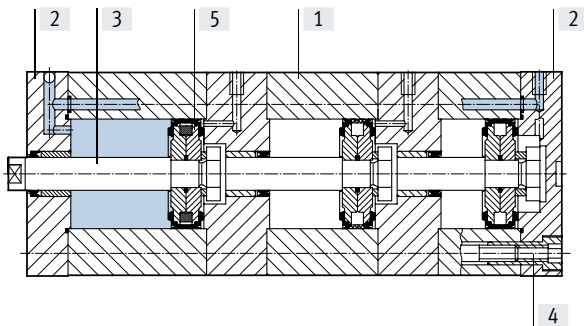
Forces [N] and impact energy [J]				
Piston \varnothing	25	40	63	100
Theoretical force at 6 bar, advancing	295	754	1870	4712
Theoretical force at 6 bar, retracting	247	633	1681	4417
Max. impact energy at the end positions	0.3	0.7	1.3	2.5
S6	0.15	0.35	0.65	1.25

Max. lateral force F_q as a function of the projection x



Materials

Sectional view



Note
 [5] Position sensing possible:
 \varnothing 25: in all positions
 \varnothing 40, 63, 100: in last position

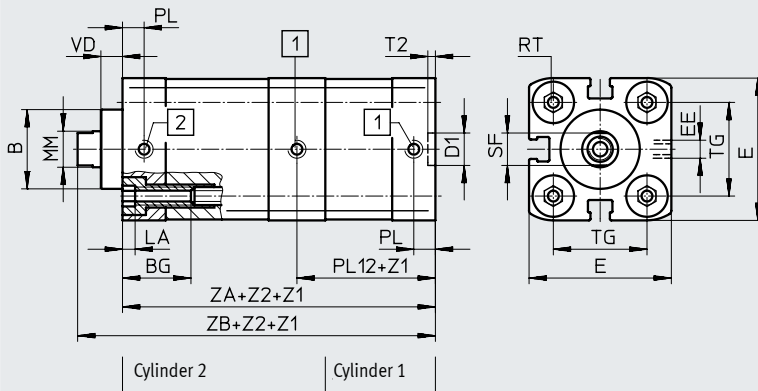
Multi-position cylinder	Basic version	S6
[1] Cylinder barrel	Anodised aluminium	Anodised aluminium
[2] Cover	Anodised aluminium	Anodised aluminium
[3] Piston rod	High-alloy steel	High-alloy steel
[4] Flange screws	Galvanised steel	Galvanised steel
- Seals	Polyurethane	Fluoro rubber
Note on materials	RoHS-compliant	

Data sheet

Dimensions – Basic version

Download CAD data → www.festo.com

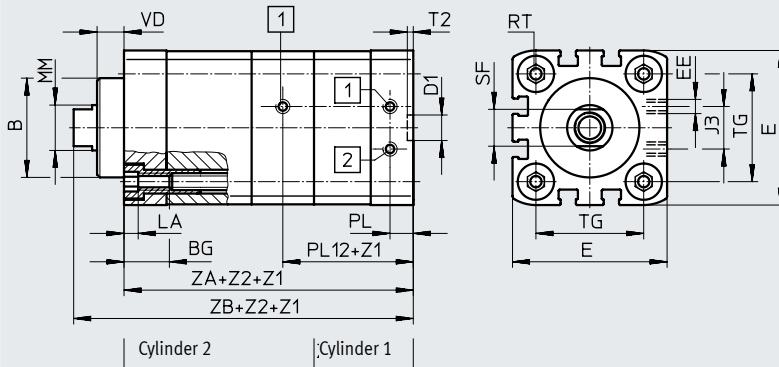
∅ 25/Z2 – 2 positions



- [1] Cylinder advancing
- [2] Cylinder retracting

Z1 = Position 1
Z2 = Position 2

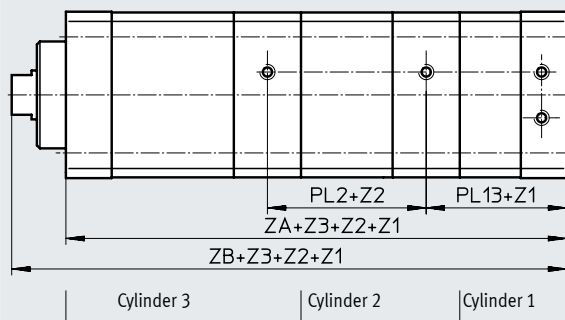
∅ 40 ... 100/Z2 – 2 positions



- [1] Cylinder advancing
- [2] Cylinder retracting

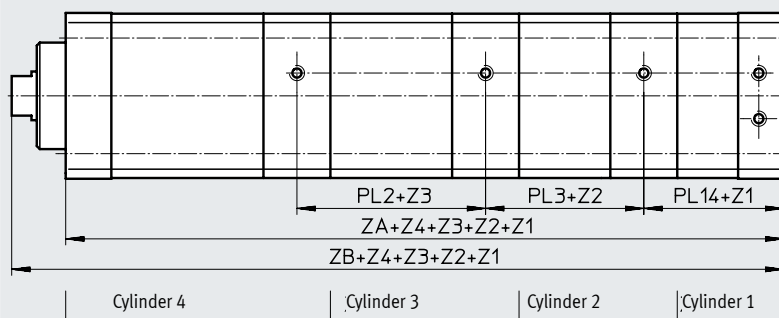
Z1 = Position 1
Z2 = Position 2

Z3 – 3 positions



Z1 = Position 1
Z2 = Position 2
Z3 = Position 3

Z4 – 4 positions



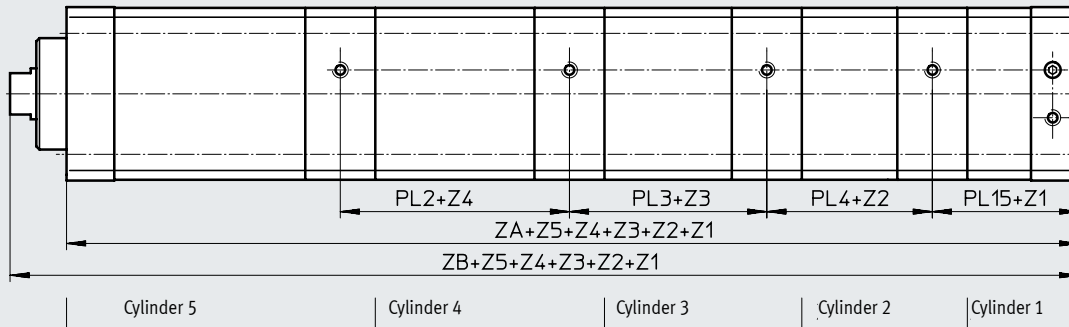
Z1 = Position 1
Z2 = Position 2
Z3 = Position 3
Z4 = Position 4

Data sheet

Dimensions – Basic version

Download CAD data → www.festo.com

Z5 – 5 positions



Z1 = Position 1
Z2 = Position 2
Z3 = Position 3

Z4 = Position 4
Z5 = Position 5

∅	B ∅	BG min.	D1 ∅ H9	E	EE	J3	LA +0.2	MM ∅ h8	PL +0.2	PL2 ±0.3
25	22	15	9	39.5 ^{+0.3}	M5	–	5	10	6	32.1
40	35	16		54.5 ^{+0.3}	G1/8	15		16	8.2	38.3
63	42	17	12	75.5 ^{+0.3}		23		20	8.2	41.4
100	55			113.5 ^{+0.6}		40		25	10.5	50.8

∅	PL3 ±0.3	PL4 ±0.3	PL12 ±0.3	PL13 ±0.3	PL14 ±0.3	PL15 ±0.3	RT	SF	T2 +0.1	TG ±0.2	VD
25	33.6	35.1	41.9	44.4	45.3	44.8	M5	9	2.1	26	6
40	39.9	41.5	45.7	47.0	48.8	50.6	M6	13	2.1	38	9.5
63	43.0	44.6	49.3	50.6	52.4	54.2	M8	17	2.6	56.5	12
100	52.4	54.0	63.2	64.6	66.7	68.8	M10	21	2.6	89	15.5

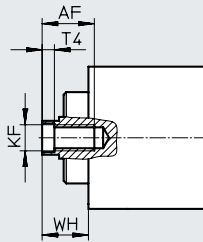
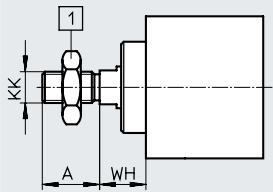
∅	ZA Number of positions				ZB Number of positions			
	2	3	4	5	2	3	4	5
25	76.3 ^{+1.2}	110.5 ^{+1.8}	144.7 ^{+2.4}	178.9 ⁺³	88.5 ^{+1.6}	122.7 ^{+2.2}	156.9 ^{+2.8}	191.1 ^{+3.5}
40	86.2 ^{+1.2}	125.5 ^{+1.8}	166.9 ^{+2.4}	209.9 ⁺³	104.6 ^{+1.6}	143.9 ^{+2.2}	185.2 ^{+2.8}	228.2 ^{+3.5}
63	93.3 ^{+1.2}	135.7 ^{+1.8}	180.2 ^{+2.4}	226.3 ⁺³	114.6 ^{+1.6}	157 ^{+2.2}	201.4 ^{+2.8}	247.5 ^{+3.5}
100	120.9 ^{+1.2}	172.8 ^{+1.8}	227 ^{+2.4}	282.8 ⁺³	147.9 ^{+1.6}	199.8 ^{+2.2}	253.9 ^{+2.8}	309.7 ^{+3.5}

Data sheet

Dimensions – Variants

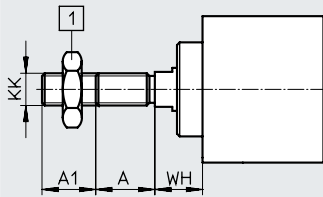
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Basic version



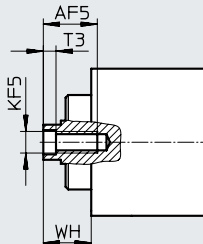
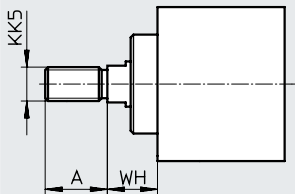
[1] Hex nut DIN 439-B
for \varnothing 40 ... 100 only

K2 – Extended male piston rod thread

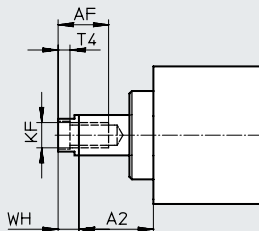
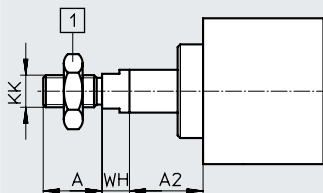


[1] Hex nut DIN 439-B
for \varnothing 40 ... 100 only

K5 – Special piston rod thread



K8 – Extended piston rod



[1] Hex nut DIN 439-B
for \varnothing 40 ... 100 only

Data sheet

∅ [mm]	A -0.5	A1	A2	AF min.	AF5 min.	KF	KF5	KK	KK5	T3	T4	WH +1.3
25	16	1 ... 20	1 ... 150	14	12	M6	M5	M8	M10x1.25 M10	2	2.6	11.8
40	22			20	16	M10	M8	M12x1.25	M10x1.25 M12	3.3	4.7	18
63	28			20	M12	M10	M16x1.5	M12x1.25 M16	4.7	6.1	21	
100	40	1 ... 30		25	-	M16	-	M20x1.5	M16x1.5 M20	-	7	26.5

Ordering data – Modular product system

Ordering table							
Size	25	40	63	100	Conditions	Code	Enter code
Module no.	539695	539696	539697	539698			
Function	Multi-position cylinder, standard hole pattern					ADNM	ADNM
Size [mm]	25	40	63	100		-...	
Thread type	Male thread					-A	
	Female thread					-I	
Cushioning	Elastic cushioning rings/plates at both ends					-P	-P
Position sensing	Via proximity switch					-A	-A
1st position [mm]	1 ... 200	1 ... 300	1 ... 300	1 ... 400		-...Z1	- ... Z1
2nd position [mm]	1 ... 300	1 ... 1000	1 ... 1000	1 ... 1000	[1] [2] [3] [4]	-...Z2	- ... Z2
3rd position [mm]	1 ... 300	1 ... 1000	1 ... 1000	1 ... 1000	[1] [2] [3] [4]	-...Z3	
4th position [mm]	1 ... 300	1 ... 1000	1 ... 1000	1 ... 1000	[1] [2] [3] [4]	-...Z4	
5th position [mm]	1 ... 300	1 ... 1000	1 ... 1000	1 ... 1000	[1] [2] [3] [4]	-...Z5	

The retracted piston rod serves as a reference point for all positions.

- [1] Z2 ... Z5 The subsequent position (e.g.: Z4) must be greater than the sum of the preceding position (Z3) plus the positional tolerance T.
- [2] Z2 ... Z5 The sum of all the positions must not exceed the following values:
 ø25: 1000 mm
 ø40, 63, 100: 2000 mm
- [3] Z2 ... Z5 Each position of the internal cylinders must not exceed the following values:
 ø25: 200 mm
 ø40, 63: 300 mm
 ø100: 400 mm
- [4] Z2 ... Z5 The position of the last cylinder must not exceed the following values:
 ø25: 300 mm
 ø40, 63, 100: 1000 mm

Ordering data – Modular product system

Ordering table							
Size	25	40	63	100	Conditions	Code	Enter code
Extended male thread	Extended male piston rod thread						
[mm]	1 ... 20	1 ... 20	1 ... 20	1 ... 30		-...K2	
Special thread on the piston rod	M10x1.25	M10x1.25	M12x1.25	M16x1.5	[5]	-“...”K5	
	M10	M12	M16	M20			
	M5	M8	M10	-	[6]		
Extended piston rod	Extended piston rod						
[mm]	1 ... 300	1 ... 400	1 ... 400	1 ... 500	[7]	-...K8	
Temperature resistance	Heat-resistant seals max. 120°C						
Captive rating plate	Laser-etched rating plate						
						-S6	
						-TL	

[5] K5 Only with piston rod thread A (male thread)

[6] K5 Only with piston rod thread I (female thread)

[7] K8 The sum of the length of the last position and the piston rod extension must not exceed the maximum permissible length of the last position

Accessories

Foot mounting HNA

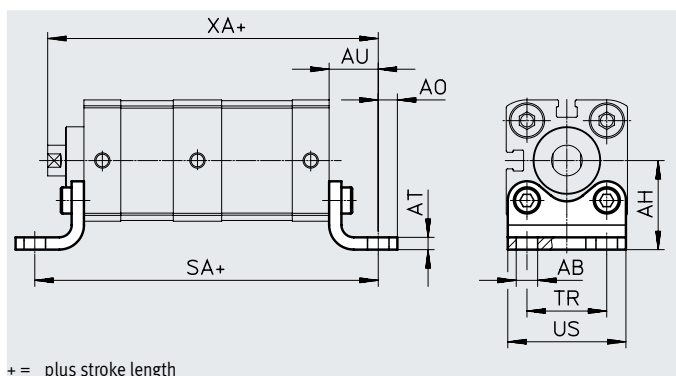
Material:

HNA: Galvanised steel

HNA-...-R3: Steel with protective coating

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data

For \varnothing [mm]	AB \varnothing H14	AH	AO	AT	AU	SA ¹⁾			
						2	3	4	5
25	7	29	6.3	4	16	108.3	142.5	176.7	210.9
40	10	38	9		18	122.2	161.5	202.9	245.9
63	14.5	50	8	5	21	135.3	177.7	222.2	268.3
100		74	12.5	6	27	174.9	226.8	281.0	336.8

For \varnothing [mm]	TR	US	XA ¹⁾			
			2	3	4	5
25	26	38.5	104.5	138.7	172.9	207.1
40	36	54	122.6	161.9	203.2	246.2
63	50	75	135.6	178.0	222.4	268.5
100	75	110	174.9	226.8	280.9	336.7

For \varnothing [mm]	Basic version				R3 – High corrosion protection			
	CRC ²⁾	Weight [g]	Part no.	Type	CRC ²⁾	Weight [g]	Part no.	Type
25	1	90	537240	HNA-25	3	90	537255	HNA-25-R3
40	1	157	537242	HNA-40	3	157	537257	HNA-40-R3
63	1	328	537244	HNA-63	3	328	537259	HNA-63-R3
100	1	814	537250	HNA-100	3	814	537261	HNA-100-R3

1) Number of positions

- 2 = + Pos. Z1 + Pos. Z2
- 3 = + Pos. Z1 + Pos. Z2 + Pos. Z3
- 4 = + Pos. Z1 + Pos. Z2 + Pos. Z3 + Pos. Z4
- 5 = + Pos. Z1 + Pos. Z2 + Pos. Z3 + Pos. Z4 + Pos. Z5

2) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

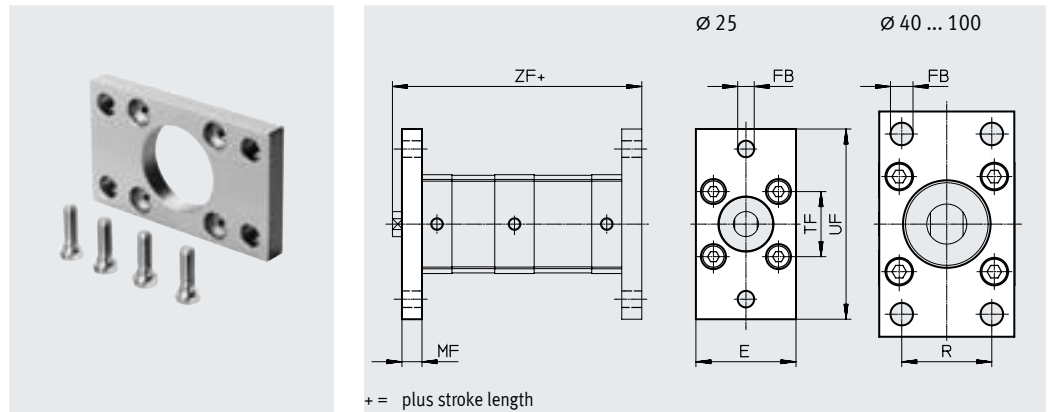
Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

Accessories

Flange mounting FNC

Material:
Galvanised steel
Free of copper and PTFE
RoHS-compliant



Dimensions and ordering data

For \varnothing	E	FB \varnothing	MF	R	TF	UF
[mm]						
25	40	6.6	8	–	60	76
40	54	9	10	36	72	90
63	75		12	50	100	120
100	110	14	16	75	150	175

For \varnothing	ZF ¹⁾				CRC ²⁾	Weight	Part no.	Type
	2	3	4	5				
[mm]						[g]		
25	96.5	130.7	164.9	199.1	1	165	537248	FNC-25
40	114.6	153.9	195.2	238.2	1	291	174377	FNC-40
63	126.6	169.0	213.4	259.5	1	679	174379	FNC-63
100	163.9	215.8	269.9	325.7	1	2041	174381	FNC-100

1) Number of positions

- 2 = + Pos. Z1 + Pos. Z2
- 3 = + Pos. Z1 + Pos. Z2 + Pos. Z3
- 4 = + Pos. Z1 + Pos. Z2 + Pos. Z3 + Pos. Z4
- 5 = + Pos. Z1 + Pos. Z2 + Pos. Z3 + Pos. Z4 + Pos. Z5

2) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

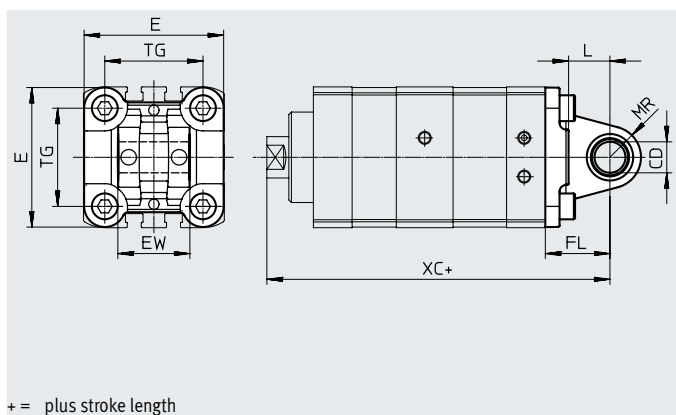
- - Note

Screws with a special length are required to mount \varnothing 100 mm.
 \varnothing 100: M10x25

Accessories

Swivel flange
SNCL/SNCL...-R3

Material:
SNCL 25:
Wrought aluminium alloy
SNCL 40 ... 63:
Die-cast aluminium
SNCL...-R3: Wrought aluminium alloy
with protective coating
Free of copper and PTFE
RoHS-compliant



+ = plus stroke length

Dimensions and ordering data

For \varnothing [mm]	CD \varnothing H9	E	EW	FL ± 0.2	L	MR	TG	XC ¹⁾			
								2	3	4	5
25	8	38.5 _{-0.6}	16 h12	20	14	8	26	108.5	142.7	176.9	211.1
40	12	54 _{-0.5}	28 _{-0.2/-0.6}	25	16	12	38	129.6	168.9	210.2	253.2
63	16	75 _{-0.6}	40 _{-0.2/-0.6}	32	21	16	56.5	146.6	189.0	233.4	279.5
100	20	110 _{+0.3/-0.8}	60 _{-0.2/-0.6}	41	27	20	89	188.9	240.8	294.9	350.7

For \varnothing [mm]	Basic version				R3 – High corrosion protection			
	CRC ²⁾	Weight [g]	Part no.	Type	CRC ²⁾	Weight [g]	Part no.	Type
25	2	41	537793	SNCL-25	3	41	537797	SNCL-25-R3
40	1	95	174405	SNCL-40	–	–	–	–
63	1	225	174407	SNCL-63	–	–	–	–
100	1	606	174409	SNCL-100	–	–	–	–

1) Number of positions

- 2 = + Pos. Z1 + Pos. Z2
- 3 = + Pos. Z1 + Pos. Z2 + Pos. Z3
- 4 = + Pos. Z1 + Pos. Z2 + Pos. Z3 + Pos. Z4
- 5 = + Pos. Z1 + Pos. Z2 + Pos. Z3 + Pos. Z4 + Pos. Z5

2) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

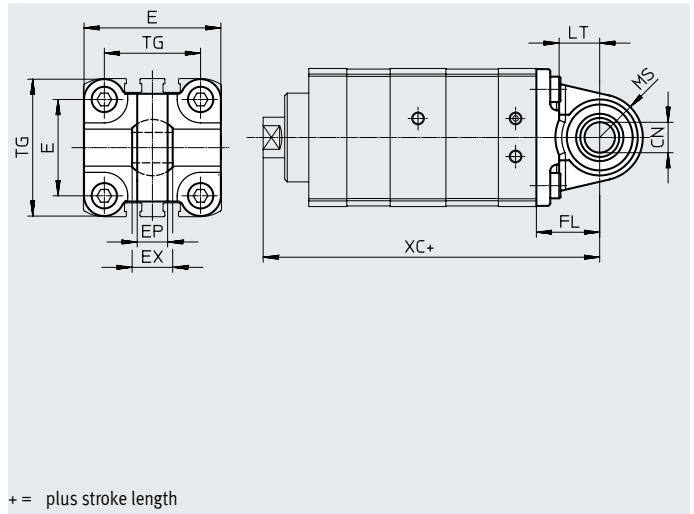
Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

Accessories

Swivel flange
SNCS/CRSNCS/SNCS-...-R3

Material:
SNCS 40:
Die-cast aluminium
SNCS 63 ... 100:
Wrought aluminium alloy
CRSNCS 40 ... 63:
High-alloy stainless steel
SNCS-...-R3 100:
Wrought aluminium alloy with
protective coating
Free of copper and PTFE
RoHS-compliant



+ = plus stroke length

Dimensions and ordering data

For \varnothing [mm]	CN \varnothing		E		EP ± 0.2	EX	FL ± 0.2	LT
	ADNM-...	ADNM-...-R3	ADNM-...	ADNM-...-R3				
40	12 ^{+0.015}	12+0.018/-0.04	54 _{-0.5}	54 _{-0.5}	12	16	25	16
63	16 ^{+0.015}	16+0.018/-0.04	74.5 ± 0.5	75 _{-0.6}	15	21	32	21
100	20 ^{+0.018}	20+0.021/-0.04	109+1/-0.7	109+1/-0.7	18	25	41	27

For \varnothing [mm]	MS		TG	XC ¹⁾			
	ADNM-...	ADNM-...-R3		2	3	4	5
40	17 ^{+0.5}	17 ^{+0.5}	38	129.6	168.9	210.2	253.2
63	23 _{-0.5}	22 ^{+0.5}	56.5	146.6	189.0	233.4	279.5
100	30 ± 0.5	30 ± 0.5	89	188.9	240.8	294.9	350.7

For \varnothing [mm]	Basic version				High corrosion protection			
	CRC ²⁾	Weight [g]	Part no.	Type	CRC ²⁾	Weight [g]	Part no.	Type
40	1	122	174398	SNCS-40	4	239	2895921	CRSNCS-40
63	2	281	174400	SNCS-63	4	576	2895923	CRSNCS-63
100	2	683	174402	SNCS-100	3	684	2895925	SNCS-100-R3

1) Number of positions

- 2 = + Pos. Z1 + Pos. Z2
- 3 = + Pos. Z1 + Pos. Z2 + Pos. Z3
- 4 = + Pos. Z1 + Pos. Z2 + Pos. Z3 + Pos. Z4
- 5 = + Pos. Z1 + Pos. Z2 + Pos. Z3 + Pos. Z4 + Pos. Z5

2) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

Corrosion resistance class CRC 4 to Festo standard FN 940070

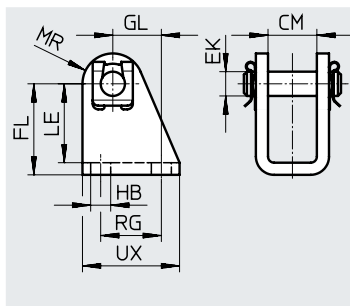
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Multi-position cylinders ADN, standard hole pattern

Accessories

Clevis foot LBN

Material:
Galvanised steel
Free of copper and PTFE
RoHS-compliant



Dimensions and ordering data

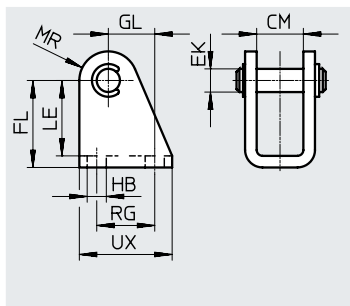
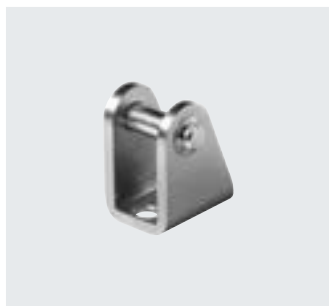
For \varnothing	CM	EK \varnothing	FL	GL	HB \varnothing	LE	MR	RG	UX	CRC ¹⁾	Weight [g]	Part no.	Type
25	16.1	8	30 +0.4/-0.2	16	6.6	26	10	20	32	1	84	6059	LBN-20/25

1) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Clevis foot CRLBN, stainless steel

Material:
High-alloy steel
Free of copper and PTFE
RoHS-compliant



Dimensions and ordering data

For \varnothing	CM	EK \varnothing	FL	GL	HB \varnothing	LE	MR	RG	UX	CRC ¹⁾	Weight [g]	Part no.	Type
25	16.1	8	30 +0.4/-0.2	16	6.6	26	10	20	32	4	82	161863	CRLBN-20/25

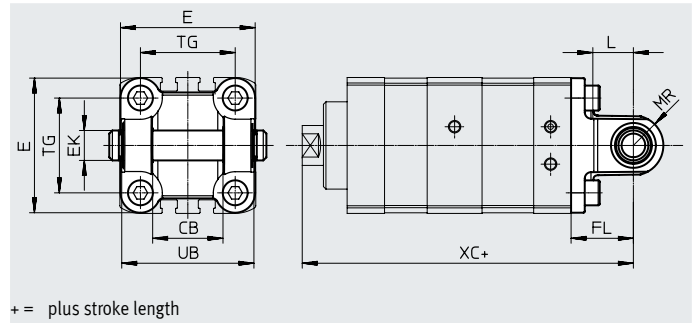
1) Corrosion resistance class CRC 4 to Festo standard FN 940070

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

Accessories

Swivel flange
SNCB/SNCB-...-R3

Material:
SNCB: Die-cast aluminium
SNCB-...-R3: Die-cast aluminium with protective coating
Free of copper and PTFE
RoHS-compliant



+ = plus stroke length

Dimensions and ordering data

For \varnothing [mm]	CB	E	EK \varnothing H9/e8	FL ± 0.2	L	MR -0.5	TG	UB h14	XC ¹⁾			
									2	3	4	5
40	28	54	12	25	16	12	38	52	129.6	168.9	210.2	253.2
63	40	75	16	32	21	16	56.5	70	146.6	189.0	233.4	279.5
100	60	110	20	41	27	20	89	110	188.9	240.8	294.9	350.7

For \varnothing [mm]	Basic version				R3 – High corrosion protection			
	CRC ²⁾	Weight [g]	Part no.	Type	CRC ²⁾	Weight [g]	Part no.	Type
40	1	155	174391	SNCB-40	3	151	176945	SNCB-40-R3
63	1	375	174393	SNCB-63	3	371	176947	SNCB-63-R3
100	1	1035	174395	SNCB-100	3	986	176949	SNCB-100-R3

1) Number of positions

- 2 = + Pos. Z1 + Pos. Z2
- 3 = + Pos. Z1 + Pos. Z2 + Pos. Z3
- 4 = + Pos. Z1 + Pos. Z2 + Pos. Z3 + Pos. Z4
- 5 = + Pos. Z1 + Pos. Z2 + Pos. Z3 + Pos. Z4 + Pos. Z5

2) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

Accessories

Trunnion flange ZNCF/CRZNG

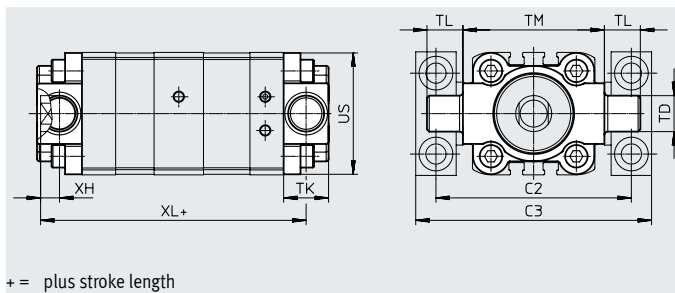
Material:

ZNCF: Stainless steel casting

CRZNG: Electropolished stainless steel casting

Free of copper and PTFE

RoHS-compliant



+ = plus stroke length

Dimensions and ordering data

For \varnothing [mm]	C2	C3	TD \varnothing e9	TK max.	TL	TM	US	XH	XL ¹⁾			
									2	3	4	5
40	87	105	16	20	16 h14	63	54	8.4±1	114.6	153.9	195.2	238.2
63	116	136	20	24	20 h14	90	75	9.3±1.2	126.6	169.0	213.4	259.5
100	164	189	25	38	24.5 +0.5/-0.7	132	110	8±1.2	166.9	218.8	272.9	328.7

For \varnothing [mm]	Basic version				R3 – High corrosion protection			
	CRC ²⁾	Weight [g]	Part no.	Type	CRC ²⁾	Weight [g]	Part no.	Type
40	2	285	174412	ZNCF-40	4	285	161853	CRZNG-40
63	2	687	174414	ZNCF-63	4	687	161855	CRZNG-63
100	2	2254	174416	ZNCF-100	4	2254	161857	CRZNG-100

1) Number of positions

- 2 = + Pos. Z1 + Pos. Z2
- 3 = + Pos. Z1 + Pos. Z2 + Pos. Z3
- 4 = + Pos. Z1 + Pos. Z2 + Pos. Z3 + Pos. Z4
- 5 = + Pos. Z1 + Pos. Z2 + Pos. Z3 + Pos. Z4 + Pos. Z5

2) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Corrosion resistance class CRC 4 to Festo standard FN 940070

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

Trunnion support LNZG

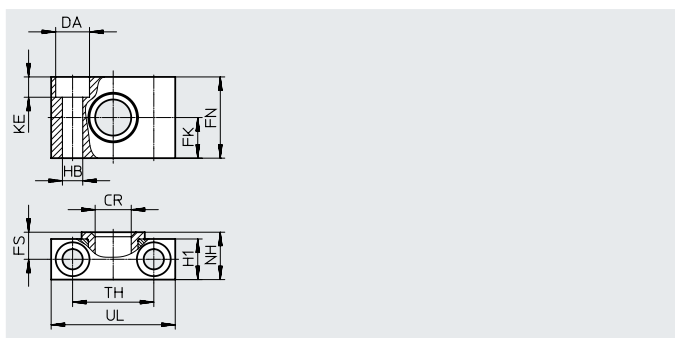
Material:

Trunnion support: Anodised aluminium

Plain bearing: Polymer

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data




For \varnothing [mm]	CR \varnothing D11	DA \varnothing H13	FK \varnothing ±0.1	FN	FS	H1	HB \varnothing H13	KE	NH	TH ±0.2	UL	CRC ¹⁾	Weight [g]	Part no.	Type
63	20	18	20	40	13	20	11	11	23	42	65	2	178	32961	LNZG-63/80
100	25	20	25	50	16	24.5	14	13	28.5	50	75	2	306	32962	LNZG-100/125

1) Corrosion resistance class CRC 2 to Festo standard FN 940070



Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Accessories



Ordering data – Piston rod attachments

Designation	For ø	Part no.	Type
Rod eye SGS			
	25	9255	SGS-M8
	40	9262	SGS-M12x1.25
	63	9263	SGS-M16x1.5
	100	9264	SGS-M20x1.5
Rod clevis SG			
	25	3111	SG-M8
	40	6145	SG-M12x1.25
	63	6146	SG-M16x1.5
	100	6147	SG-M20x1.5
Coupling piece KSG			
	25	–	
	40	32964	KSG-M12x1.25
	63	32965	KSG-M16x1.5
	100	32966	KSG-M20x1.5


Data sheets → Internet: piston rod attachment


Designation	For ø	Part no.	Type
Rod clevis SGA for rod eye SGS			
	25	–	
	40	10767	SGA-M12x1.25
	63	10768	SGA-M16x1.5
	100	10769	SGA-M20x1.5
Self-aligning rod coupler FK			
	25	2062	FK-M8
	40	6141	FK-M12x1.25
	63	6142	FK-M16x1.5
	100	6143	FK-M20x1.5

Ordering data – Piston rod attachments, corrosion-resistant

Designation	For ø	Part no.	Type
Rod eye CRSGS			
	25	195581	CRSGS-M8
	40	195583	CRSGS-M12x1.25
	63	195584	CRSGS-M16x1.5
	100	195585	CRSGS-M20x1.5
Self-aligning rod coupler CRFK			
	40	2305779	CRFK-M12x1.25
	63	2490673	CRFK-M16x1.5
	100	2545677	CRFK-M20x1.5


Data sheets → Internet: piston rod attachment

Designation	For ø	Part no.	Type
Rod clevis CRSG			
	25	13568	CRSG-M8
	40	13570	CRSG-M12x1.25
	63	13571	CRSG-M16x1.5
	100	13572	CRSG-M20x1.5


-  - Note

Piston rod attachments for cylinders with special piston rod thread (variant K5) → www.festo.com


Ordering data – Mounting components

Designation	For ø	Part no.	Type
Clevis foot LBG for rod eye SGS			
	25	–	
	40	31762	LBG-40
	63	31764	LBG-63
	100	31766	LBG-100

Data sheets → Internet: clevis foot


Designation	For ø	Part no.	Type
Right-angle clevis foot LQG for rod eye SGS			
	25	–	
	40	31769	LQG-40
	63	31771	LQG-63
	100	31773	LQG-100

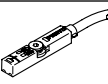
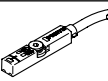
Ordering data – Mounting components, high corrosion protection

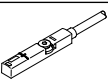
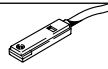
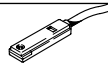
Designation	For ø	Part no.	Type
Clevis foot LBG-R3 for rod eye SGS			
	40	2078792	LBG-40-R3
	63	2078795	LBG-63-R3
	100	2078799	LBG-100-R3

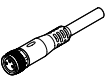
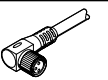
Data sheets → Internet: clevis foot

Accessories




Ordering data – One-way flow control valves				Data sheets → Internet: grla	
	Connection		Material	Part no.	Type
	For Ø	For tubing O.D.			
For exhaust air					
	25, 40	3	Metal design	193137	GRLA-M5-QS-3-D
		4		193138	GRLA-M5-QS-4-D
	63, 100	4		193143	GRLA-1/8-QS-4-D
		6		193144	GRLA-1/8-QS-6-D
		8		193145	GRLA-1/8-QS-8-D

Ordering data – Proximity switch for T-slot, magneto-resistive						Data sheets → Internet: smt
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type
N/O contact						
	Inserted in the slot from above, flush with the cylinder profile, short design	PNP	Cable, 3-wire	2.5	574335	SMT-8M-A-PS-24V-E-2.5-OE
			Plug M8x1, 3-pin	0.3	574334	SMT-8M-A-PS-24V-E-0.3-M8D
			Plug M12x1, 3-pin	0.3	574337	SMT-8M-A-PS-24V-E-0.3-M12
		NPN	Cable, 3-wire	2.5	574338	SMT-8M-A-NS-24V-E-2.5-OE
			Plug M8x1, 3-pin	0.3	574339	SMT-8M-A-NS-24V-E-0.3-M8D
N/C contact						
	Inserted in the slot from above, flush with the cylinder profile, short design	PNP	Cable, 3-wire	7.5	574340	SMT-8M-A-PO-24V-E-7.5-OE

Ordering data – Proximity switch for T-slot, magnetic reed						Data sheets → Internet: sme
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type
N/O contact						
	Inserted in the slot from above, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	543862	SME-8M-DS-24V-K-2.5-OE
				5.0	543863	SME-8M-DS-24V-K-5.0-OE
			Cable, 2-wire	2.5	543872	SME-8M-ZS-24V-K-2.5-OE
			Plug M8x1, 3-pin	0.3	543861	SME-8M-DS-24V-K-0.3-M8D
	Inserted in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	150855	SME-8-K-LED-24
			Plug M8x1, 3-pin	0.3	150857	SME-8-S-LED-24
N/C contact						
	Inserted in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	7.5	160251	SME-8-O-K-LED-24

Ordering data – Connecting cables					Data sheets → Internet: nebu
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part no.	Type
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541333	NEBU-M8G3-K-2.5-LE3
			5	541334	NEBU-M8G3-K-5-LE3
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541363	NEBU-M12G5-K-2.5-LE3
			5	541364	NEBU-M12G5-K-5-LE3
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541338	NEBU-M8W3-K-2.5-LE3
			5	541341	NEBU-M8W3-K-5-LE3
	Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541367	NEBU-M12W5-K-2.5-LE3
			5	541370	NEBU-M12W5-K-5-LE3

Accessories

Ordering data – Proximity switch, cuboid shape, pneumatic			Data sheets → Internet: smpo	
	Pneumatic connection		Part no.	Type
3/2-way valve, normally closed				
	Female thread M5		178563	SMPO-8E
Ordering data – Mounting kit for proximity switch SMPO-8E			Data sheets → Internet: smb	
	Mounting		Part no.	Type
	Clamped in T-slot		178230	SMB-8E
Ordering data – Slot cover for T-slot				
	Mounting	Length	Part no.	Type
	Insertable	2x 0.5 m	151680	ABP-5-S