

Compact cylinders ADNGF, standard hole pattern

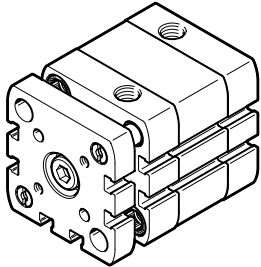
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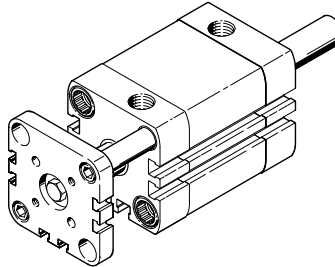
Characteristics and type codes

At a glance

With guide rod and yoke plate
ADNGF-...



With guide rod, yoke plate and through piston rod
ADNGF-...S2



Cushioning types

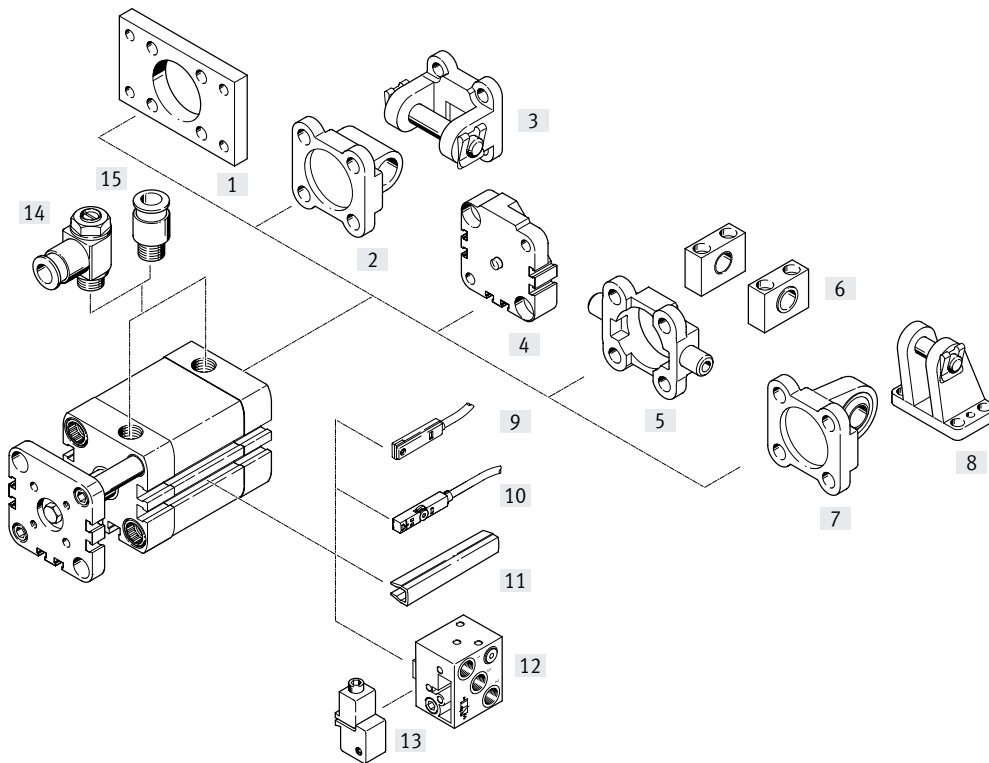
	Cushioning P	Cushioning PPS
Mode of operation	<ul style="list-style-type: none"> The drive has elastic polymer flexible end-position cushioning 	<ul style="list-style-type: none"> The drive has self-adjusting, pneumatic end-position cushioning
Application	<ul style="list-style-type: none"> Small loads Low speeds Small cushioning capacity 	<ul style="list-style-type: none"> Larger loads Higher speeds Larger cushioning capacity
Advantages	<ul style="list-style-type: none"> No adjustment required Time-saving 	<ul style="list-style-type: none"> No adjustment required Up to 4 times bigger cushioning capacity than ADNGF-...-P Time-saving Reduced noise

Type codes

001	Series
ADNGF	Compact cylinder, double-acting, standard hole pattern
002	Piston diameter
12	12
16	16
20	20
25	25
32	32
40	40
50	50
63	63
80	80
100	100
003	Stroke
...	1 ... 400

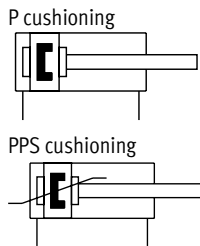
004	Cushioning
P	Elastic cushioning rings/plates on both sides
PPS	Pneumatic cushioning, self-adjusting at both ends
005	Position sensing
A	For proximity sensor
006	Piston rod type
	At one end
S2	Through piston rod
007	Temperature range
	Standard
S6	Heat-resistant seals max. 120 °C
008	Captive rating plate
	Rating plate, glued
TL	Laser etched rating plate

Peripherals overview



Mounting components and accessories		Description	→ Page/Internet
[1]	Flange mounting FNC	For end caps	11
[2]	Swivel flange SNCL/SNCL-...-R3	For end caps	12
[3]	Swivel flange SNCB/SNCB-...-R3	For end caps	16
[4]	Multi-position kit DPNA	For connecting two cylinders with identical piston diameters to form a multi-position cylinder	15
[5]	Trunnion flange ZNCF/CRZNG	For end caps	17
[6]	Trunnion support LNZG	For trunnion flange ZNCF/CRZNG	18
[7]	Swivel flange SNCS/CRSNCS/SNCS-...-R3	For end caps	13
[8]	Clevis foot LBG/LBG-...-R3	For swivel flange SNCS	14
[9]	Proximity switch SME-8	Can be integrated in the cylinder profile barrel	20
[10]	Proximity switch SME/SMT-8M	Can be integrated in the cylinder profile barrel	20
[11]	Slot cover ABP-5-S	For protecting the sensor cables and the sensor slots from contamination	21
[12]	Proximity switch SMPO-8E	Pneumatic output signal	21
[13]	Mounting kit SMB-8E	For proximity switch SMPO-8E	21
[14]	One-way flow control valve GRLA/GRLZ	For regulating speed	19
[15]	Push-in fitting QS	For connecting tubing with standard O.D.	qs

Data sheet



- - Diameter
12 ... 100 mm
- - Stroke length
1 ... 400 mm
- - www.festo.com



General technical data										
Piston ø	12	16	20	25	32	40	50	63	80	100
Pneumatic connection	M5	M5	M5	M5	G1/8	G1/8	G1/8	G1/8	G1/8	G1/8
Design	Piston									
	Piston rod									
	Cylinder barrel									
Mode of operation	Double-acting									
Cushioning										
P	Elastic cushioning rings/pads at both ends									
PPS	Pneumatic cushioning, self-adjusting at both ends									
Cushioning length										
PPS	[mm]	-	3	3.5	4	5	6	7	7.5	10
Position sensing	Via proximity switch									
Type of mounting	With through-hole / female thread / accessories									
Mounting position	Any									

Operating and environmental conditions										
Piston ø	12	16	20	25	32	40	50	63	80	100
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]									
Note on operating/pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)									
Operating pressure										
in [MPa]										
-	0.15 ... 1		0.1 ... 1							
PPS	-		0.19 ... 1		0.14 ... 1					
S2	0.15 ... 1		0.1 ... 1							
in [bar]										
-	1.5 ... 10		1 ... 10							
PPS	-		1.9 ... 10		1.4 ... 10					
S2	1.5 ... 10		1 ... 10							
Ambient temperature ¹⁾ [°C]										
-	-20 ... +80									
S6	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.

Weight [g]										
Piston ø	12	16	20	25	32	40	50	63	80	100
Product weight with 0 mm stroke	90	93	161	191	327	430	687	915	1678	2673
Additional weight per 10 mm stroke	14	16	26	28	38	45	64	72	97	116
Moving mass with 0 mm stroke	22	29	60	85	122	164	287	373	778	1089
Moving mass per 10 mm stroke	4	6	11	11	17	17	29	29	43	43

Data sheet

Forces [N] and impact energy [J]										
Piston \varnothing	12	16	20	25	32	40	50	63	80	100
Theoretical force at 6 bar, advancing										
–	68	121	188	295	483	754	1178	1870	3016	4712
S2	51	90	141	247	415	686	1057	1750	2827	4524
Theoretical force at 6 bar, retracting										
–	51	90	141	247	415	686	1057	1750	2827	4524
S2	51	90	141	247	415	686	1057	1750	2827	4524
Max. impact energy at the end positions										
–	0.07	0.15	0.2	0.3	0.4	0.7	1.0	1.3	1.8	2.5
S6	0.035	0.075	0.1	0.15	0.2	0.35	0.5	0.65	0.9	1.25



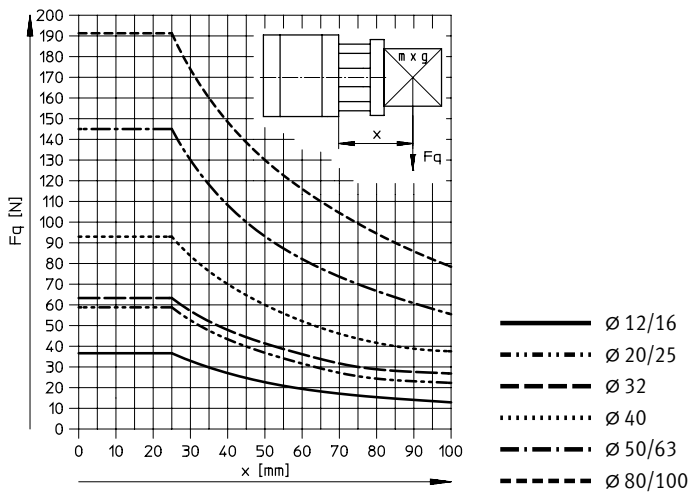
Note

In combination with the self-adjusting cushioning (PPS), the maximum impact energy is still obtained.

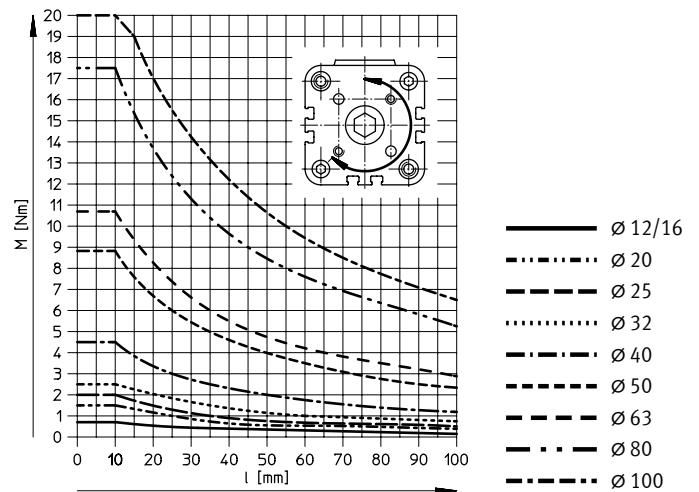
Max. energy conversion capacity [J]

Piston \varnothing	20	25	32	40	50	63	80	100
For self-adjusting cushioning (PPS)	0.65	0.8	1	1.7	2.8	4.8	8	12

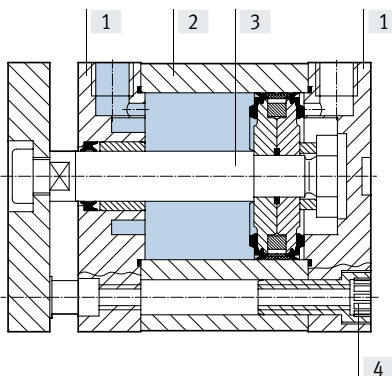
Max. lateral force F_q as a function of the projection x



Torque M as a function of stroke length l



Materials



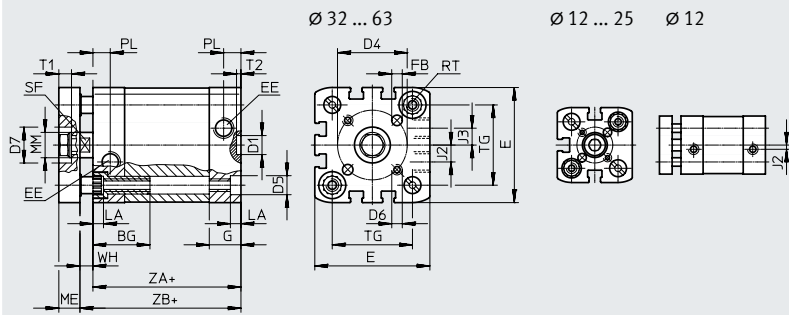
Compact cylinder	Basic version	S6
[1] Cover		
	\varnothing 12 ... 80	Anodised aluminium
	\varnothing 100	Coated die-cast aluminium
[2] Cylinder barrel		Anodised aluminium
[3] Piston rod		High-alloy steel
[4] Flange screws		
	\varnothing 12 ... 16	High-alloy steel
	\varnothing 20 ... 63	Galvanised steel
	\varnothing 80 ... 100	Standard screws, galvanised steel
– Seals	Polyurethane	Fluoro rubber

Data sheet

Dimensions – Basic version

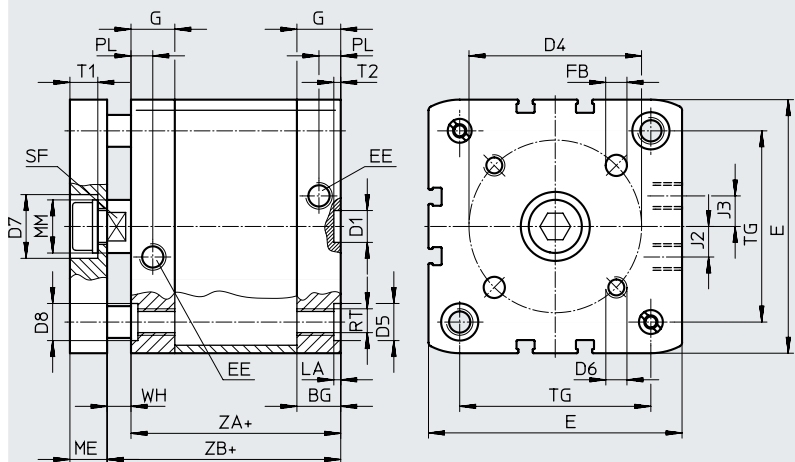
Download CAD data → www.festo.com

∅ 12 ... 63



+ = plus stroke length

∅ 80 ... 100



+ = plus stroke length

∅ [mm]	BG min.	D1 ∅ H9	D4 ±0.1	D5 ∅	D6	D7 ∅ H9	D8	E	EE	FB ∅ H8	G	J2	J3
12	17	9	12	6 ^{F9}	M3	-	-	27.5 ^{+0.3}	M5	3	10.5	2	-
16	19.5		14					29 ^{+0.3}			11		
20		26	12	17	9 ^{F9}	M4	14	35.5 ^{+0.3}	G1/8	4	12	6	8
25	22			39.5 ^{+0.3}				5					
32	27	12	28	12 ^{F9}	M6	22	47 ^{+0.3}	6	6	15	11.5	11.5	
40			33				65.5 ^{+0.3}						
50	17	12	42	15	M8	24	15	75.5 ^{+0.3}	8	16.5	20	20	
63			50					95.5 ^{+0.6}					
80	21.5	12	65	15	M10	24	15	113.5 ^{+0.6}	10	21.5	20	20	
100			80										

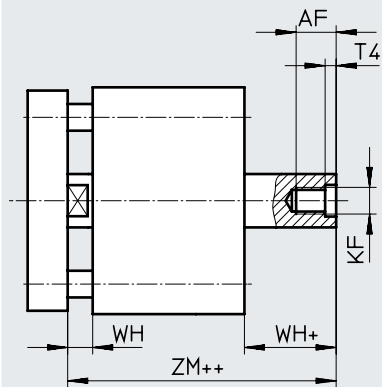
∅ [mm]	LA +0.2	ME	MM ∅ H8	PL +0.2	RT	ST H13	T1	T2 +0.1	TG ±0.2	WH +1.3	PPS +1.4	ZA ±0.6	ZB +1.2	PPS +1.3
12	3.5	6	6	6	M4	5	-	2.1	16	4.2	-	35	39.2	-
16			8						18	4.7	39.7			
20	5	8	10	8.2	M5	9	5	2.6	22	5.5	5.5	37	42.5	42.5
25			12						26	6	6.5	44	50	50.6
32	10	12	12	8.2	M6	10	6	2.6	32.5	6	6.5	44	50	50.6
40									38	6.1	6.6	45	51.1	51.7
50	12	16	16	8.2	M8	13	7.5	2.6	46.5	7.7	8.2	49	56.5	57
63									56.5	7.5	8	54	62.9	63.4
80	2.6	14	20	10.5	M10	17	10.5	2.6	72	8.9	9.4	54	62.9	63.4
100									89	9	9.8	67	76	76.8

Data sheet

Dimensions – Variants

Download CAD data → www.festo.com

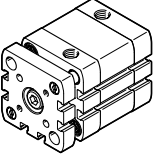
S2 – Through piston rod



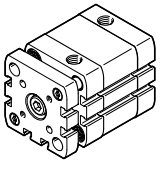
+ = plus stroke length
++ = plus 2x stroke length

∅ [mm]	AF min.	KF	T4	WH		ZM	
				+1.3	PPS +1.4		PPS
12	8	M3	1.5	4.2	–	44.5 ^{+0.5}	–
16	10	M4		4.7		45.7 ^{+0.5}	
20	14	M6	2.6	5.5	5.5	49.5 ^{+0.5}	49.5 ^{+0.5}
25					5.5	51.5 ^{+0.5}	51.5 ^{+0.5}
32	16	M8	3.3	6	6.5	57.5 ^{+0.5}	58.6 ^{+0.6}
40				6.1	6.6	58.6 ^{+0.6}	59.7 ^{+0.7}
50	20	M10	4.7	8.2	8.2	62.0 ^{+0.6}	63.1 ^{+0.7}
63				8.1	8	65.4 ^{+0.6}	66.5 ^{+0.7}
80				8.9	9.4	73.2 ^{+0.6}	74.3 ^{+0.7}
100				9	9.8	86.4 ^{+0.6}	88 ^{+0.7}

Data sheet

Ordering data		Piston ø		Stroke [mm]		P – Elastic cushioning rings/plates at both ends		PPS – Pneumatic cushioning, self-adjusting at both ends	
Type	[mm]	[mm]	Part no.	Type	Part no.	Type	Part no.	Type	
	12	5	554205	ADNGF-12-5-P-A	–				
		10	554206	ADNGF-12-10-P-A					
		15	554207	ADNGF-12-15-P-A					
		20	554208	ADNGF-12-20-P-A					
		25	554209	ADNGF-12-25-P-A					
		30	554210	ADNGF-12-30-P-A					
		40	554211	ADNGF-12-40-P-A					
	16	5	554212	ADNGF-16-5-P-A	–				
		10	554213	ADNGF-16-10-P-A					
		15	554214	ADNGF-16-15-P-A					
		20	554215	ADNGF-16-20-P-A					
		25	554216	ADNGF-16-25-P-A					
		30	554217	ADNGF-16-30-P-A					
		40	554218	ADNGF-16-40-P-A					
	20	5	554220	ADNGF-20-5-P-A	–				
		10	554221	ADNGF-20-10-P-A					
		15	554222	ADNGF-20-15-P-A					
		20	554223	ADNGF-20-20-P-A					
		25	554224	ADNGF-20-25-P-A					
		30	554225	ADNGF-20-30-P-A					
		40	554226	ADNGF-20-40-P-A					
		50	554227	ADNGF-20-50-P-A					
		60	554228	ADNGF-20-60-P-A					
		25	5	554229					ADNGF-25-5-P-A
	10		554230	ADNGF-25-10-P-A					
	15		554231	ADNGF-25-15-P-A					
	20		554232	ADNGF-25-20-P-A					
	25		554233	ADNGF-25-25-P-A					
30	554234		ADNGF-25-30-P-A						
40	554235		ADNGF-25-40-P-A						
50	554236		ADNGF-25-50-P-A						
60	554237		ADNGF-25-60-P-A						
32	5		554238	ADNGF-32-5-P-A	–				
	10	554239	ADNGF-32-10-P-A						
	15	554240	ADNGF-32-15-P-A						
	20	554241	ADNGF-32-20-P-A						
	25	554242	ADNGF-32-25-P-A						
	30	554243	ADNGF-32-30-P-A						
	40	554244	ADNGF-32-40-P-A						
	50	554245	ADNGF-32-50-P-A						
	60	554246	ADNGF-32-60-P-A						
	80	554247	ADNGF-32-80-P-A						
						577209	ADNGF-20-15-PPS-A		
						577210	ADNGF-20-20-PPS-A		
						577211	ADNGF-20-25-PPS-A		
						577212	ADNGF-20-30-PPS-A		
						577213	ADNGF-20-40-PPS-A		
						577214	ADNGF-20-50-PPS-A		
						577215	ADNGF-20-60-PPS-A		
						577216	ADNGF-25-10-PPS-A		
						577217	ADNGF-25-15-PPS-A		
						577218	ADNGF-25-20-PPS-A		
						577219	ADNGF-25-25-PPS-A		
						577220	ADNGF-25-30-PPS-A		
						577221	ADNGF-25-40-PPS-A		
						577222	ADNGF-25-50-PPS-A		
						577223	ADNGF-25-60-PPS-A		
						574022	ADNGF-32-10-PPS-A		
						574023	ADNGF-32-15-PPS-A		
						574024	ADNGF-32-20-PPS-A		
						574025	ADNGF-32-25-PPS-A		
						574026	ADNGF-32-30-PPS-A		
						574027	ADNGF-32-40-PPS-A		
						574028	ADNGF-32-50-PPS-A		
						574029	ADNGF-32-60-PPS-A		
						574030	ADNGF-32-80-PPS-A		

Data sheet

Ordering data		Piston ø		Stroke [mm]		P – Elastic cushioning rings/plates at both ends		PPS – Pneumatic cushioning, self-adjusting at both ends	
Type	[mm]	[mm]	Part no.	Type	Part no.	Type	Part no.	Type	
	40	5	554248	ADNGF-40-5-P-A	–	–	–	–	
		10	554249	ADNGF-40-10-P-A	574031	ADNGF-40-10-PPS-A			
		15	554250	ADNGF-40-15-P-A	574032	ADNGF-40-15-PPS-A			
		20	554251	ADNGF-40-20-P-A	574033	ADNGF-40-20-PPS-A			
		25	554252	ADNGF-40-25-P-A	574034	ADNGF-40-25-PPS-A			
		30	554253	ADNGF-40-30-P-A	574035	ADNGF-40-30-PPS-A			
		40	554254	ADNGF-40-40-P-A	574036	ADNGF-40-40-PPS-A			
		50	554255	ADNGF-40-50-P-A	574037	ADNGF-40-50-PPS-A			
		60	554256	ADNGF-40-60-P-A	574038	ADNGF-40-60-PPS-A			
		80	554257	ADNGF-40-80-P-A	574039	ADNGF-40-80-PPS-A			
	50	5	554258	ADNGF-50-5-P-A	–	–			
		10	554259	ADNGF-50-10-P-A	574040	ADNGF-50-10-PPS-A			
		15	554260	ADNGF-50-15-P-A	574041	ADNGF-50-15-PPS-A			
		20	554261	ADNGF-50-20-P-A	574042	ADNGF-50-20-PPS-A			
		25	554262	ADNGF-50-25-P-A	574043	ADNGF-50-25-PPS-A			
		30	554263	ADNGF-50-30-P-A	574044	ADNGF-50-30-PPS-A			
		40	554264	ADNGF-50-40-P-A	574045	ADNGF-50-40-PPS-A			
		50	554265	ADNGF-50-50-P-A	574046	ADNGF-50-50-PPS-A			
		60	554266	ADNGF-50-60-P-A	574047	ADNGF-50-60-PPS-A			
		80	554267	ADNGF-50-80-P-A	574048	ADNGF-50-80-PPS-A			
	63	10	554268	ADNGF-63-10-P-A	574049	ADNGF-63-10-PPS-A			
		15	554269	ADNGF-63-15-P-A	574050	ADNGF-63-15-PPS-A			
		20	554270	ADNGF-63-20-P-A	574051	ADNGF-63-20-PPS-A			
		25	554271	ADNGF-63-25-P-A	574052	ADNGF-63-25-PPS-A			
		30	554272	ADNGF-63-30-P-A	574053	ADNGF-63-30-PPS-A			
		40	554273	ADNGF-63-40-P-A	574054	ADNGF-63-40-PPS-A			
		50	554274	ADNGF-63-50-P-A	574055	ADNGF-63-50-PPS-A			
		60	554275	ADNGF-63-60-P-A	574056	ADNGF-63-60-PPS-A			
	80	10	554277	ADNGF-80-10-P-A	574058	ADNGF-80-10-PPS-A			
		15	554278	ADNGF-80-15-P-A	574059	ADNGF-80-15-PPS-A			
		20	554279	ADNGF-80-20-P-A	574060	ADNGF-80-20-PPS-A			
		25	554280	ADNGF-80-25-P-A	574061	ADNGF-80-25-PPS-A			
		30	554281	ADNGF-80-30-P-A	574062	ADNGF-80-30-PPS-A			
		40	554282	ADNGF-80-40-P-A	574063	ADNGF-80-40-PPS-A			
		50	554283	ADNGF-80-50-P-A	574064	ADNGF-80-50-PPS-A			
		60	554284	ADNGF-80-60-P-A	574065	ADNGF-80-60-PPS-A			
	100	10	554286	ADNGF-100-10-P-A	–	–			
		15	554287	ADNGF-100-15-P-A	577225	ADNGF-100-15-PPS-A			
		20	554288	ADNGF-100-20-P-A	577226	ADNGF-100-20-PPS-A			
		25	554289	ADNGF-100-25-P-A	577227	ADNGF-100-25-PPS-A			
		30	554290	ADNGF-100-30-P-A	577228	ADNGF-100-30-PPS-A			
		40	554291	ADNGF-100-40-P-A	577229	ADNGF-100-40-PPS-A			
		50	554292	ADNGF-100-50-P-A	577230	ADNGF-100-50-PPS-A			
		60	554293	ADNGF-100-60-P-A	577231	ADNGF-100-60-PPS-A			
80	554294	ADNGF-100-80-P-A	577232	ADNGF-100-80-PPS-A					

Ordering data – Modular product system

Ordering table													
Size	12	16	20	25	32	40	50	63	80	100	Condi- tions	Code	Enter code
Module no.	537123	537124	537125	537126	537127	537128	537129	537130	537131	537132			
Function	Compact cylinder, double-acting, standard hole pattern											ADNGF	ADNGF
Size [mm]	12	16	20	25	32	40	50	63	80	100		-...	
Stroke [mm]	1 ... 200		3 ... 200		5 ... 300			5 ... 400				-...	
Cushioning	Elastic cushioning rings/pads at both ends											-P	
	-		Pneumatic cushioning, self-adjusting at both ends								[1]	-PPS	
Position sensing	Via proximity switch											-A	-A
Piston rod type	Through piston rod											-S2	
Temperature resistance	Heat-resistant seals max. 120°C										[2]	-S6	
Captive rating plate	Laser-etched rating plate											-TL	

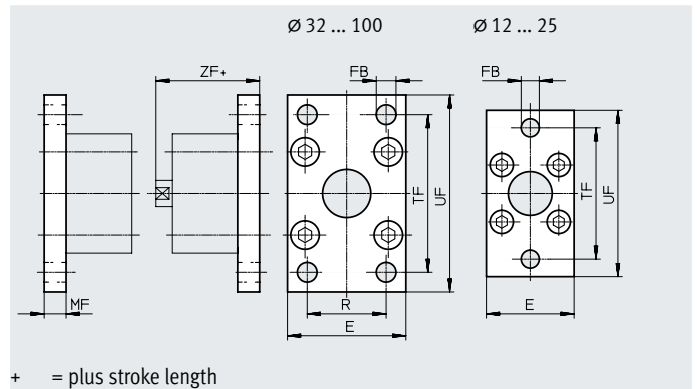
[1] PPS Not with temperature resistance S6
Minimum stroke 5 mm

[2] S6 Max. stroke 250 mm

Accessories

Flange mounting FNC

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



Dimensions and ordering data

For \varnothing [mm]	E	FB \varnothing	MF	R	TF	UF ± 1	ZF	CRC ¹⁾	Weight [g]	Part no.	Type
12	28	5.5	8	-	40	50	48	1	79	537245	FNC-12
16	29				43	55	1	88	537246	FNC-16	
20	36	55			70	51	1	141	537247	FNC-20	
25	40	6.6			60	76	53	1	165	537248	FNC-25
32	45	7	10	32	64	80	60	1	221	174376	FNC-32
40	54	9		36	72	90	61	1	291	174377	FNC-40
50	65	9	12	45	90	110	65	1	536	174378	FNC-50
63	75			50	100	120	69	1	679	174379	FNC-63
80	93	12	16	63	126	150	79	1	1495	174380	FNC-80
100	110	14		75	150	175	92	1	2041	174381	FNC-100

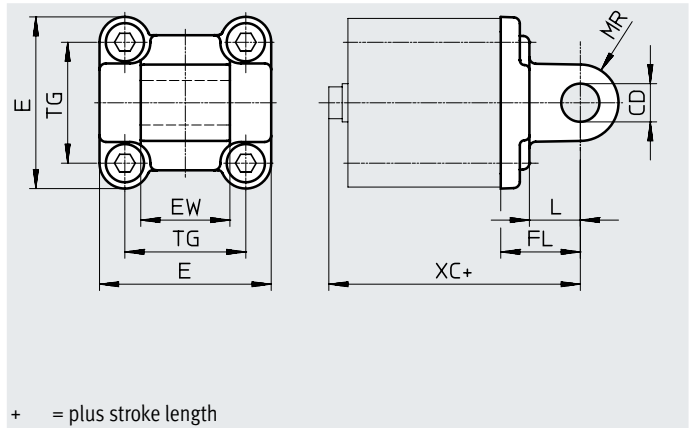
1) Corrosion resistance class CRC 1 to Festo standard FN 940070

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).

Accessories

Swivel flange
SNCL/SNCL-...-R3

Material:
SNCL 12 ... 25:
Wrought aluminium alloy
SNCL 32 ... 100:
Die-cast aluminium
SNCL-...-R3:
Wrought aluminium alloy with
protective coating
Free of copper and PTFE
RoHS-compliant



Dimensions and ordering data								
For \varnothing	CD	E	EW	FL	L	MR	TG	XC
[mm]	\varnothing H9			± 0.2				
12	6	25 _{-0.6}	12 _{H12}	16	10	6	16	56
16		27.5 _{-0.6}					18	
20	8	34.5 _{-0.6}	16 _{H12}	20	14	8	22	63
25		38.5 _{-0.6}					26	
32	10	45 _{+0.2/-0.5}	26 _{-0.2/-0.6}	22	13	10	32.5	72
40	12	54 _{-0.5}	28 _{-0.2/-0.6}	25	16	12	38	76
50		64 _{-0.6}	32 _{-0.2/-0.6}	27			46.5	
63	16	75 _{-0.6}	40 _{-0.2/-0.6}	32	21	16	56.5	89
80		93 _{-0.8}	50 _{-0.2/-0.6}	36			72	
100	20	110 _{+0.3/-0.8}	60 _{-0.2/-0.6}	41	27	20	89	117

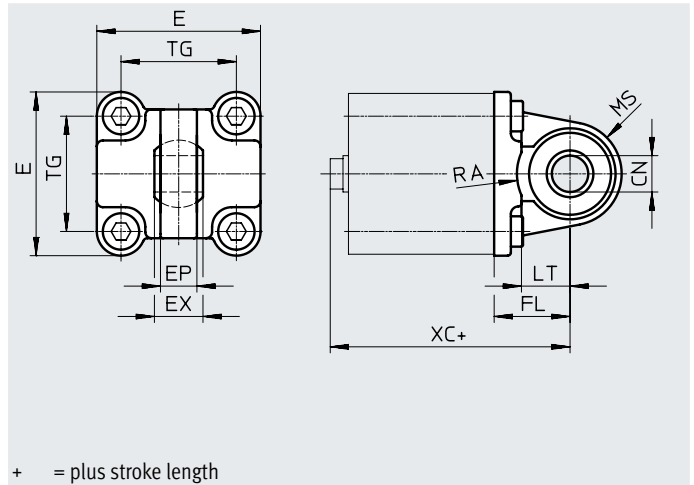
For \varnothing	Basic version				R3 – High corrosion protection			
	CRC ¹⁾	Weight [g]	Part no.	Type	CRC ¹⁾	Weight [g]	Part no.	Type
[mm]								
12	2	20	537790	SNCL-12	3	20	537794	SNCL-12-R3
16	2	21	537791	SNCL-16	3	21	537795	SNCL-16-R3
20	2	38	537792	SNCL-20	3	38	537796	SNCL-20-R3
25	2	41	537793	SNCL-25	3	41	537797	SNCL-25-R3
32	1	71	174404	SNCL-32	–	–	–	–
40	1	95	174405	SNCL-40	–	–	–	–
50	1	158	174406	SNCL-50	–	–	–	–
63	1	225	174407	SNCL-63	–	–	–	–
80	1	436	174408	SNCL-80	–	–	–	–
100	1	606	174409	SNCL-100	–	–	–	–

- 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).
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 32 ... 50:
Die-cast aluminium
SNCS 63 ... 100:
Wrought aluminium alloy
CRSNCS 32 ... 80:
High-alloy stainless steel
SNCS-...-R3 100:
Wrought aluminium alloy with
protective coating
RoHS-compliant



Dimensions and ordering data

For \varnothing [mm]	CN \varnothing		E		EP ± 0.2	EX	FL ± 0.2
	ADNGF-...	ADNGF-...-R3	ADNGF-...	ADNGF-...-R3			
32	10 ^{+0.013}	10+0.015/-0.04	45+0.2/-0.5	45 _{-0.5}	10.5	14	22
40	12 ^{+0.015}	12+0.018/-0.04	54 _{-0.5}	54 _{-0.5}	12	16	25
50	16 ^{+0.015}	16+0.018/-0.04	64 _{-0.6}	64 _{-0.6}	15	21	27
63	16 ^{+0.015}	16+0.018/-0.04	74.5+0.5	75 _{-0.6}	15	21	32
80	20 ^{+0.018}	20+0.021/-0.04	92.2+0.8	93 _{-0.8}	18	25	36
100	20 ^{+0.018}	20+0.021/-0.04	109+1/-0.7	109+1/-0.7	18	25	41

For \varnothing [mm]	LT	MS		RA		TG	XC
		ADNGF-...	ADNGF-...-R3	ADNGF-... +1	ADNGF-...-R3 +1		
32	13	15 ^{+0.5}	15 ^{+0.5}	14.5	14.5	32.5	72.2
40	16	17 ^{+0.5}	17 ^{+0.5}	17.5	17.5	38	75.2
50	16	20 ^{+0.5}	20 ^{+0.5}	18.5	19	46.5	80.2
63	21	23 _{-0.5}	22 ^{+0.5}	23	23	56.5	89.2
80	22	28 _{-0.5}	27 ^{+0.5}	25	25	72	99
100	27	30 ± 0.5	30 ± 0.5	95	100	89	117

For \varnothing [mm]	Basic version				High corrosion protection			
	CRC ¹⁾	Weight [g]	Part no.	Type	CRC ¹⁾	Weight [g]	Part no.	Type
32	1	86	174397	SNCS-32	4	161	2895920	CRSNCS-32
40	1	122	174398	SNCS-40	4	239	2895921	CRSNCS-40
50	1	216	174399	SNCS-50	4	403	2895922	CRSNCS-50
63	2	281	174400	SNCS-63	4	576	2895923	CRSNCS-63
80	2	557	174401	SNCS-80	4	1173	2895924	CRSNCS-80
100	2	683	174402	SNCS-100	3	684	2895925	SNCS-100-R3

- 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).
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 special tests
(→ also FN 940082), using appropriate media.

Accessories

Clevis foot LBG/LBG-...-R3

The pivot pin is secured against rotation with a spring pin.

Material:

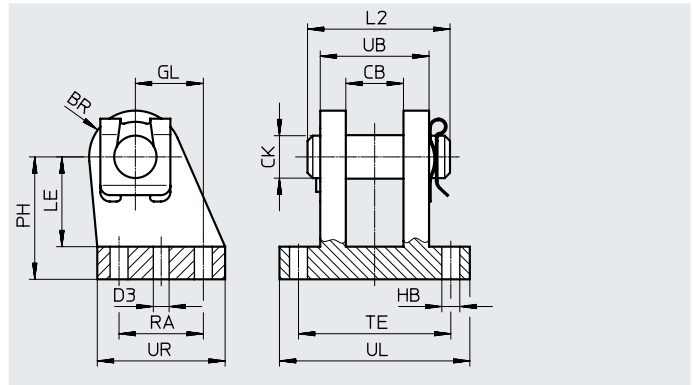
LBG 32 ... 63: Stainless steel casting

LBG 80 ... 100: Spheroidal graphite cast iron

LBG-...-R3: High-alloy stainless steel

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data

For \varnothing [mm]	CL	CM	EK \varnothing	FL	GL	HB \varnothing	L2	LE	MR	RF	RG	S1 \varnothing	UK	UX
32	28	14.1	10	32	16	6.8	35	24	12	42	20	4.8	56	36
40	30	16.1	12	36	20	6.8	39	26	14	44	26	5.8	58	41.5
50	40	21.1	16	45	25	9.2	50	33	15	56	31	5.8	70	47
63	40	21.1	16	50	25	9.2	50	38	17	56	31	7.8	70	49
80	50	25.1	20	63	30	11	60	49	17	70	36	7.8	89	55
100	50	25.1	20	71	41	11	60	56	20	70	46	9.8	89	65

For \varnothing [mm]	Basic version				R3 – High corrosion protection			
	CRC ¹⁾	Weight [g]	Part no.	Type	CRC ¹⁾	Weight [g]	Part no.	Type
32	2	220	31761	LBG-32	3	220	2078790	LBG-32-R3
40	2	300	31762	LBG-40	3	300	2078792	LBG-40-R3
50	2	540	31763	LBG-50	3	540	2078794	LBG-50-R3
63	2	580	31764	LBG-63	3	580	2078795	LBG-63-R3
80	1	1050	31765	LBG-80	3	1050	2078797	LBG-80-R3
100	1	1375	31766	LBG-100	3	1375	2078799	LBG-100-R3

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).

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

Multi-position kit DPNA

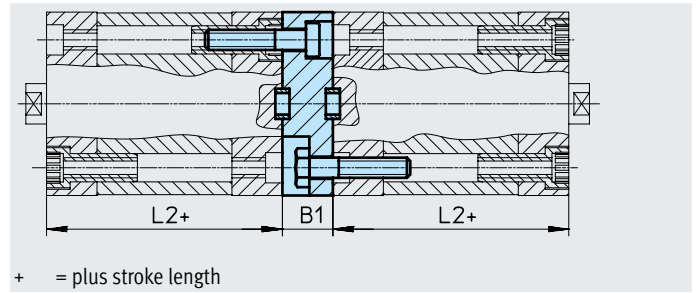
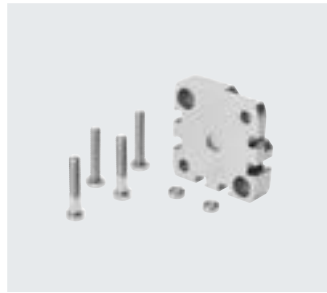
Material:

Flange: Wrought aluminium alloy

Screws: Galvanised steel

Free of copper and PTFE


RoHS-compliant



Dimensions and ordering data							
For \varnothing [mm]	L2	B1	Max. overall stroke length [mm]	CRC ¹⁾	Weight [g]	Part no.	Type
12	35	13	600	2	28	537263	DPNA-12
16	35				33	537264	DPNA-16
20	37				50	537265	DPNA-20
25	39				60	537266	DPNA-25
32	44	15	800		99	537267	DPNA-32
40	45				129	537268	DPNA-40
50	45				196	537269	DPNA-50
63	49				249	537270	DPNA-63
80	54				474	537271	DPNA-80
100	67				712	537272	DPNA-100
		17	1000				
		19.5					

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.

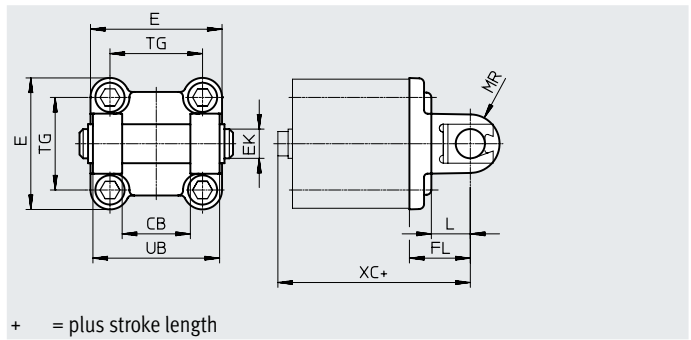
 **Note**

The maximum overall stroke length must not be exceeded when combining cylinders and multi-position kits.

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



Dimensions and ordering data

For \varnothing	CB	E	EK \varnothing	FL	L	MR	TG	UB	XC
[mm]	H14		H9/e8	± 0.2		-0.5		h14	
32	26	45 $+0.2/-0.5$	10	22	13	8.5	32.5	45	72
40	28	54 $_{-0.5}$	12	25	16	12	38	52	76
50	32	64 $_{-0.6}$	12	27	16	12	46.5	60	80
63	40	75 $_{-0.6}$	16	32	21	16	56.5	70	89
80	50	93 $_{-0.8}$	16	36	22	16	72	90	99
100	60	110 $+0.3/-0.8$	20	41	27	20	89	110	117

For \varnothing	Basic version				R3 – High corrosion protection			
	CRC ¹⁾	Weight [g]	Part no.	Type	CRC ¹⁾	Weight [g]	Part no.	Type
[mm]								
32	1	103	174390	SNCB-32	3	100	176944	SNCB-32-R3
40	1	155	174391	SNCB-40	3	151	176945	SNCB-40-R3
50	1	233	174392	SNCB-50	3	228	176946	SNCB-50-R3
63	1	375	174393	SNCB-63	3	371	176947	SNCB-63-R3
80	1	636	174394	SNCB-80	3	632	176948	SNCB-80-R3
100	1	1035	174395	SNCB-100	3	986	176949	SNCB-100-R3

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).

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

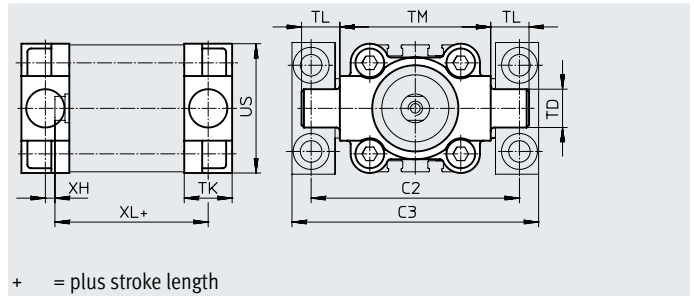
Material:

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	TL	TM	US	XH	XL
32	71	86	12	16	12	50	45	2	52
40	87	105	16	20	16	63	54	4	55
50	99	117	16	24	16	75	64	4	57
63	116	136	20	24	20	90	75	4	61
80	136	156	20	28	20	110	93	5	81
100	164	189	25	38	25	132	110	10	86

For \varnothing [mm]	Basic version				R3 – High corrosion protection			
	CRC ¹⁾	Weight [g]	Part no.	Type	CRC ¹⁾	Weight [g]	Part no.	Type
32	2	150	174411	ZNCF-32	4	150	161852	CRZNG-32
40	2	285	174412	ZNCF-40	4	285	161853	CRZNG-40
50	2	473	174413	ZNCF-50	4	473	161854	CRZNG-50
63	2	687	174414	ZNCF-63	4	687	161855	CRZNG-63
80	2	1296	174415	ZNCF-80	4	1296	161856	CRZNG-80
100	2	2254	174416	ZNCF-100	4	2254	161857	CRZNG-100

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.

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 special tests

(→ also FN 940082), using appropriate media.

Accessories

Trunnion support LNZZ

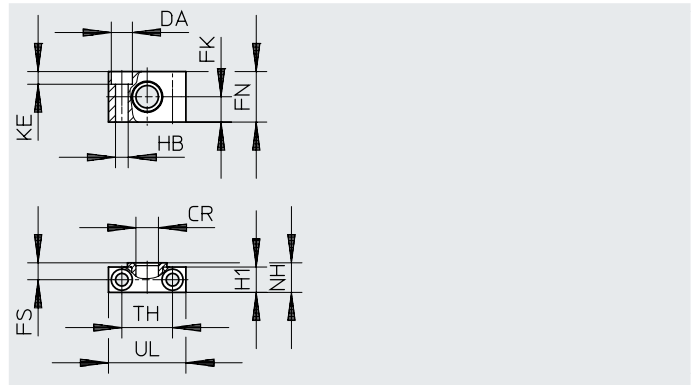
Material:

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
32	12	11	15	30	10.5	15	6.6	6.8	18	32	46	2	83	32959	LNZZ-32
40, 50	16	15	18	36	12	18	9	9	21	36	55	2	129	32960	LNZZ-40/50
63, 80	20	18	20	40	13	20	11	11	23	42	65	2	178	32961	LNZZ-63/80
100	25	20	25	50	16	24.5	14	13	28.5	50	75	2	306	32962	LNZZ-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 – One-way flow control valves				Data sheets → Internet: grl				
	Connection		Material	Part no.	Type			
	For ø	For tubing O.D.						
For exhaust air								
	12, 16, 20, 25	3	Metal design	193137	GRLA-M5-QS-3-D			
		4		193138	GRLA-M5-QS-4-D			
		6		193139	GRLA-M5-QS-6-D			
	32, 40, 50, 63, 80, 100	3		193142	GRLA-1/8-QS-3-D			
		4		193143	GRLA-1/8-QS-4-D			
		6		193144	GRLA-1/8-QS-6-D			
		8		193145	GRLA-1/8-QS-8-D			
		For supply air						
				12, 16, 20, 25	3	Metal design	193153	GRLZ-M5-QS-3-D
					4		193154	GRLZ-M5-QS-4-D
6	193155		GRLZ-M5-QS-6-D					
32, 40, 50, 63, 80, 100	3		193156	GRLZ-1/8-QS-3-D				
	4		193157	GRLZ-1/8-QS-4-D				
	6		193158	GRLZ-1/8-QS-6-D				
	8		193159	GRLZ-1/8-QS-8-D				



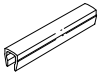
Accessories

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 in block design, pneumatic			Data sheets → Internet: smpo	
	Pneumatic connection		Part no.	Type
3/2-way valve, normally closed				
	M5 female thread		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