

Compact cylinders ADNGF, standard port pattern



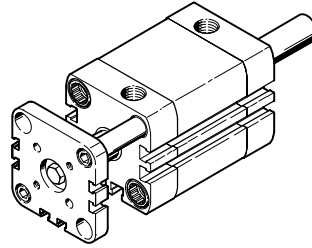
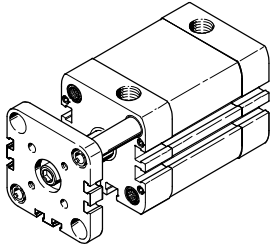
Compact cylinders ADNGF, standard port pattern

Key features 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

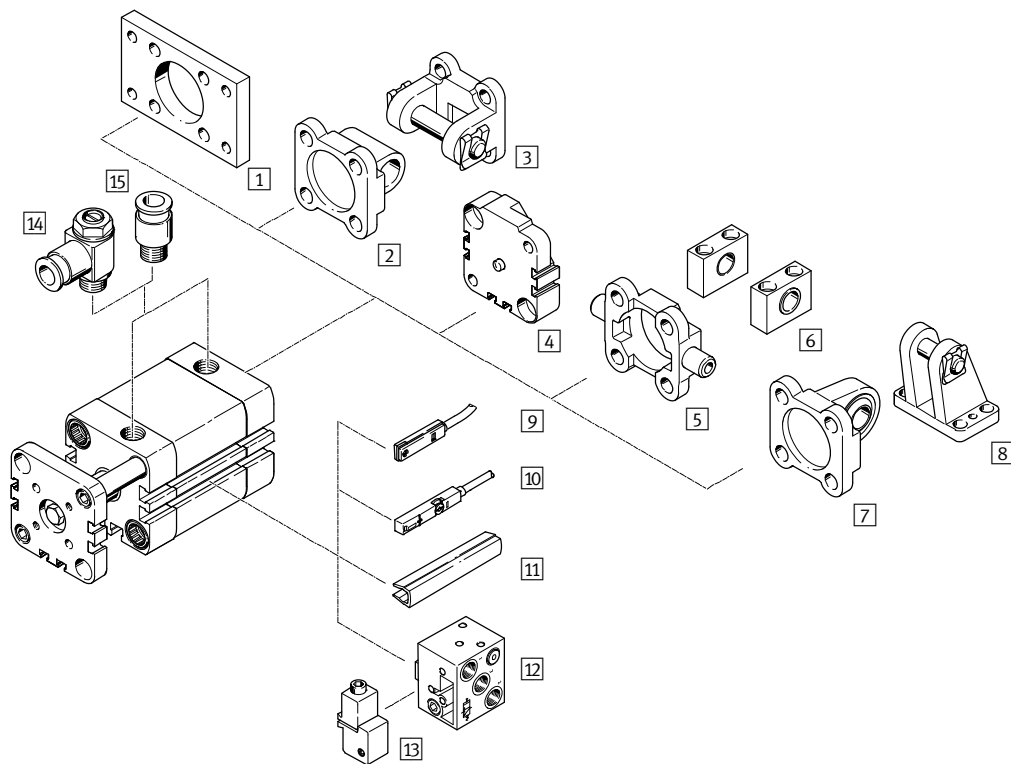
	Cushioning P	Cushioning PPS
Mode of operation	<ul style="list-style-type: none"> The drive is equipped with polymer flexible end-position cushioning 	<ul style="list-style-type: none"> The drive is equipped with self-adjusting, pneumatic end-position cushioning
Application	<ul style="list-style-type: 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 four times greater cushioning capacity than ADNGF-...-P Time-saving Noise reduction

Type codes

		ADNGF	-	50	-	25	-	P	-	A	-	S6
Type												
Double-acting												
ADNGF	Compact cylinder											
Piston Ø [mm]												
Stroke [mm]												
Cushioning												
P	Flexible cushioning rings/pads at both ends											
PPS	Pneumatic cushioning, self-adjusting at both ends											
Position sensing												
A	Via proximity sensor											
Variant												
S2	Through piston rod											
S6	Heat-resistant seals up to max. 120 °C											
TL	Captive rating plate											

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Peripherals overview



Mounting attachments 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 sensor SME/SMT-8	Can be integrated in the cylinder profile barrel 20
10	Proximity sensor SME/SMT-8M	Can be integrated in the cylinder profile barrel 20
11	Slot cover ABP-5-S	For protecting the sensor cable and keeping dirt out of the sensor slots 20
12	Proximity sensor SMPO-8E	Pneumatic output signal 21
13	Mounting kit SMB-8E	For proximity sensor SMPO-8E 21
14	One-way flow control valve GRLA/GRLZ	For regulating speed 19
15	Push-in fitting QS	For connecting compressed air tubing with standard O.D. qs

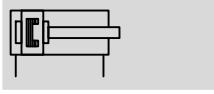
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Technical data

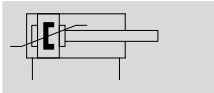
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Function

P cushioning



PPS cushioning



Variants



S2



S6



⌀ - Diameter
12 ... 100 mm

— - Stroke length
1 ... 400 mm

General technical data										
Piston ⌀	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	Flexible 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 sensor									
Type of mounting	Via through-hole / via female thread / via accessories									
Mounting position	Any									

Operating and environmental conditions										
Piston ⌀	12	16	20	25	32	40	50	63	80	100
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 [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 sensors

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


Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Weight [g]										
Piston ⌀	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 load with 0 mm stroke	22	29	60	85	122	164	287	373	778	1089
Additional load per 10 mm stroke	4	6	11	11	17	17	29	29	43	43

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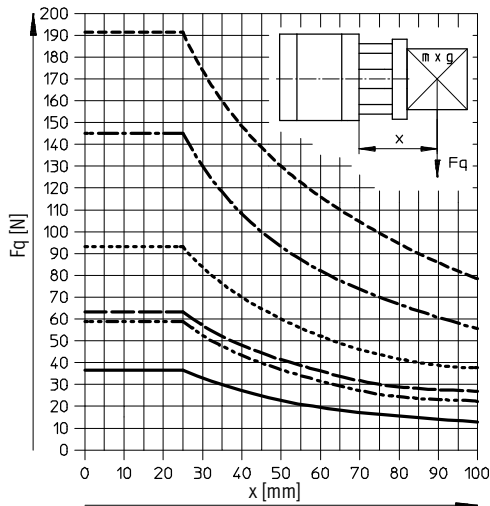
Technical data

Forces [N] and impact energy [J]										
Piston Ø	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 in 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 PPS cushioning, the maximum impact energy is still obtained.

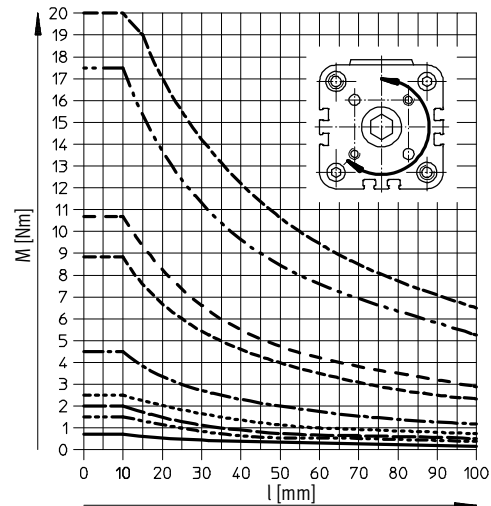
Max. energy conversion capacity [J]								
Piston Ø	20	25	32	40	50	63	80	100
For PPS cushioning	0.65	0.8	1	1.7	2.8	4.8	8	12

Max. lateral force F_q as a function of projection x



- Ø 12/16
- - - - - Ø 20/25
- · - · - Ø 32
- · - · - Ø 40
- - - - - Ø 50/63
- · - · - Ø 80/100

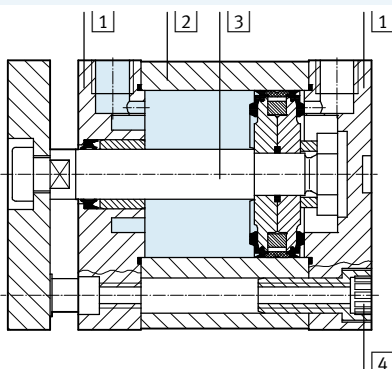
Torque M as a function of stroke length l



- Ø 12/16
- - - - - Ø 20
- · - · - Ø 32
- · - · - Ø 40
- - - - - Ø 50
- - - - - Ø 63
- · - · - Ø 80
- - - - - Ø 100

Materials

Sectional view



Compact cylinder	Basic version	S6
1 Cap		
Ø 12 ... 80	Anodised aluminium	
Ø 100	Die-cast aluminium, coated	
2 Cylinder barrel	Anodised aluminium	
3 Piston rod	High-alloy steel	
4 Flange screws		
Ø 12 ... 16	High-alloy steel	
Ø 20 ... 63	Galvanised steel	
Ø 80 ... 100	Standard screws, galvanised steel	
– Seals	Polyurethane	Fluoro elastomer

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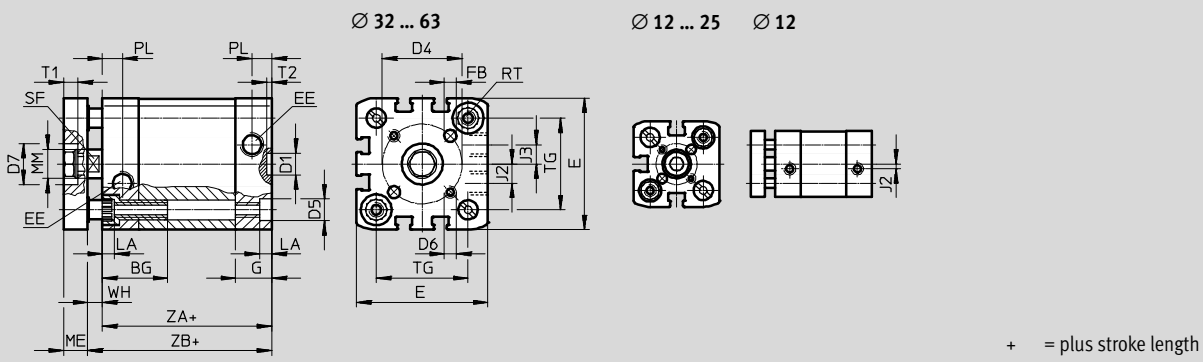
Technical data

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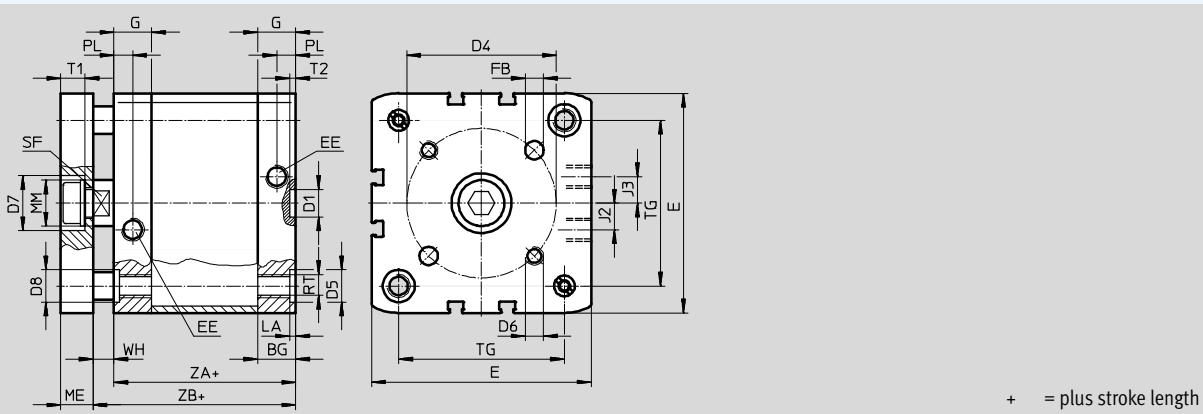
Dimensions – Basic version

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Ø 12 ... 63



Ø 80 ... 100



Ø	BG	D1	D4	D5	D6	D7	D8	E	EE	FB	G	J2	J3
[mm]	min.	Ø H9	±0,1	Ø		Ø H9				Ø H8			
12	17	9	12	6 ^{F9}	M3	-	-	27.5 ^{+0.3}	M5	3	10.5	2	-
16	19.5		14		M4			29 ^{+0.3}			11		
20			17	M5	35.5 ^{+0.3}	12		2.6					
25	22		14		39.5 ^{+0.3}								
32	26	12	28	9 ^{F9}	M5	17	47 ^{+0.3}	5	5	15	6		
40			33				54.5 ^{+0.3}						
50	27	12	42	12 ^{F9}	M6	22	65.5 ^{+0.3}	6	6	15	8		
63			50				75.5 ^{+0.3}						
80			17				65					M8	24
100	21.5	80	M10	113.5 ^{+0.6}	10	21.5	20						

Ø	LA	ME	MM	PL	RT	SF	T1	T2	TG	WH		ZA	ZB	
[mm]	+0.2		Ø h8	+0.2		h13		+0.1	±0.2	+1.3	PPS +1.4	±0.3	+1.2	PPS +1.3
12	3.5	6	6	6	M4	5	-	2.1	16	4.2	-	35	39.2	-
16			8			7			18	4.7			39.7	
20	5	8	10		M5	9	5		22	5.5	5.5	37	42.5	42.5
25			12			10			9	5	26	5.5	5.5	39
32	5	10	12	M6	10	6	32.5	6	6.5	44	50	50.6		
40			16		8.2		13	7.5	38	6.1	6.6	45	51.1	51.7
50	2.6	14	16	M8	13	7.5	46.5	7.7	8.2	49	52.7	53.2		
63			20		10.5		17	10.5	2.6	56.5	7.5	8	54	56.5
80	2.6	14	20	M10	17	10.5	72	8.9	9.4	54	62.9	63.4		
100			10.5		17		10.5	2.6	89	9	9.8	67	76	76.8

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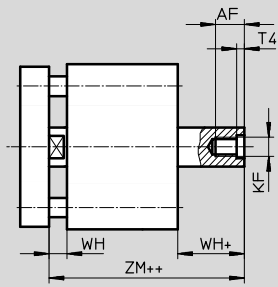
Technical data



Dimensions – Variant

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S2 – Through piston rod



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

Ø [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		49.5 ^{+0.5}	
20	14	M6	2.6	5.5	–	51.5 ^{+0.5}	49.5 ^{+0.5}
25				57.5 ^{+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	–	86.4 ^{+0.6}	88 ^{+0.7}		

Compact cylinders ADNGF, standard port pattern




Technical data

Ordering data						
Type	Piston Ø [mm]	Stroke [mm] [mm]	P – Flexible cushioning rings/pads at both ends		PPS – Pneumatic cushioning, self-adjusting at both ends	
			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		577208 ADNGF-20-10-PPS-A
		15	554222	ADNGF-20-15-P-A		577209 ADNGF-20-15-PPS-A
		20	554223	ADNGF-20-20-P-A		577210 ADNGF-20-20-PPS-A
		25	554224	ADNGF-20-25-P-A		577211 ADNGF-20-25-PPS-A
		30	554225	ADNGF-20-30-P-A		577212 ADNGF-20-30-PPS-A
		40	554226	ADNGF-20-40-P-A		577213 ADNGF-20-40-PPS-A
		50	554227	ADNGF-20-50-P-A		577214 ADNGF-20-50-PPS-A
		60	554228	ADNGF-20-60-P-A		577215 ADNGF-20-60-PPS-A
	25	5	554229	ADNGF-25-5-P-A		–
		10	554230	ADNGF-25-10-P-A		577216 ADNGF-25-10-PPS-A
		15	554231	ADNGF-25-15-P-A		577217 ADNGF-25-15-PPS-A
		20	554232	ADNGF-25-20-P-A		577218 ADNGF-25-20-PPS-A
		25	554233	ADNGF-25-25-P-A		577219 ADNGF-25-25-PPS-A
30		554234	ADNGF-25-30-P-A		577220 ADNGF-25-30-PPS-A	
40		554235	ADNGF-25-40-P-A		577221 ADNGF-25-40-PPS-A	
50		554236	ADNGF-25-50-P-A		577222 ADNGF-25-50-PPS-A	
60		554237	ADNGF-25-60-P-A		577223 ADNGF-25-60-PPS-A	
32	5	554238	ADNGF-32-5-P-A		–	
	10	554239	ADNGF-32-10-P-A		574022 ADNGF-32-10-PPS-A	
	15	554240	ADNGF-32-15-P-A		574023 ADNGF-32-15-PPS-A	
	20	554241	ADNGF-32-20-P-A		574024 ADNGF-32-20-PPS-A	
	25	554242	ADNGF-32-25-P-A		574025 ADNGF-32-25-PPS-A	
	30	554243	ADNGF-32-30-P-A		574026 ADNGF-32-30-PPS-A	
	40	554244	ADNGF-32-40-P-A		574027 ADNGF-32-40-PPS-A	
	50	554245	ADNGF-32-50-P-A		574028 ADNGF-32-50-PPS-A	
	60	554246	ADNGF-32-60-P-A		574029 ADNGF-32-60-PPS-A	
	80	554247	ADNGF-32-80-P-A		574030 ADNGF-32-80-PPS-A	

Compact cylinders ADNGF, standard port pattern

Technical data

Ordering data						
Type	Piston Ø [mm]	Stroke [mm] [mm]	P – Flexible cushioning rings/pads at both ends		PPS – Pneumatic cushioning, self-adjusting at both ends	
			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
	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	554276	ADNGF-63-80-P-A	574057	ADNGF-63-80-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	
80		554285	ADNGF-80-80-P-A	574066	ADNGF-80-80-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	

Compact cylinders ADNGF, standard port pattern

Ordering data – Modular products

M Mandatory data						O Options		
Module No.	Function	Size	Stroke	Cushioning	Position sensing	Piston rod type	Temperature resistance	Captive rating plate
537123	ADNGF	12	1 ... 400	P	A	S2		
537124		16						
537125		20						
537126		25						
537127		32						
537128		40						
537129		50						
537130		63						
537131		80						
537132		100						
Ordering example								
537128	ADNGF	- 40	- 250	- P	- A	- S2	- S6	- TL

Ordering table														
Size	12	16	20	25	32	40	50	63	80	100	Condi- tions	Code	Enter code	
M 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	Flexible cushioning rings/pads at both ends											-P		
	-										Pneumatic cushioning, self-adjusting at both ends		[1]	-PPS
Position sensing	Via proximity sensor											-A	-A	
O Piston rod type	Through piston rod											-S2		
Temperature resistance	Heat-resistant seals up to 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

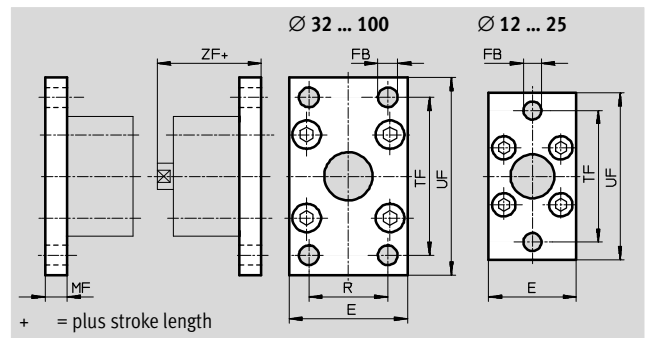
Transfer order code

Compact cylinders ADNGF, standard port pattern

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 ± 1	ZF	CRC ¹⁾	Weight [g]	Part No.	Type
[mm]											
12	28	5.5	8	-	40	50	48	1	79	537245	FNC-12
16	29				43	55		1	88	537246	FNC-16
20	36	6.6			55	70	51	1	141	537247	FNC-20
25	40				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. For dry indoor applications 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).

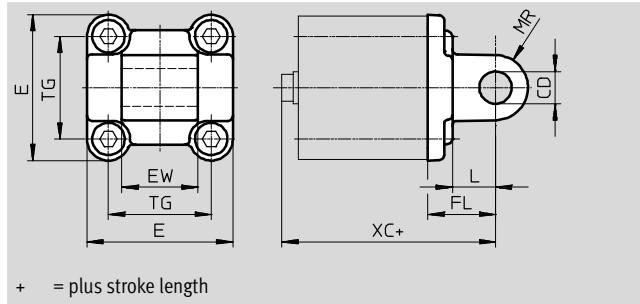
Compact cylinders ADNGF, standard port pattern

Accessories



Swivel flange SNCL/SNCL-...-R3

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



Dimensions and ordering data								
For Ø	CD	E	EW	FL	L	MR	TG	XC
[mm]	Ø 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	80
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			22	72
100	20	110 _{+0.3/-0.8}	60 _{-0.2/-0.6}	41	27	20	89	117

For Ø	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	2	71	174404	SNCL-32	–	–	–	–
40	2	95	174405	SNCL-40	–	–	–	–
50	2	158	174406	SNCL-50	–	–	–	–
63	2	225	174407	SNCL-63	–	–	–	–
80	2	436	174408	SNCL-80	–	–	–	–
100	2	606	174409	SNCL-100	–	–	–	–

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
 Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.
 Corrosion resistance class CRC 3 to Festo standard FN 940070
 High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and which are in direct contact with a normal industrial environment.

Compact cylinders ADNGF, standard port pattern

Accessories

Swivel flange

SNCS/CRSNCS/SNCS-...-R3

Materials:

SNCS 32 ... 50: Die-cast aluminium

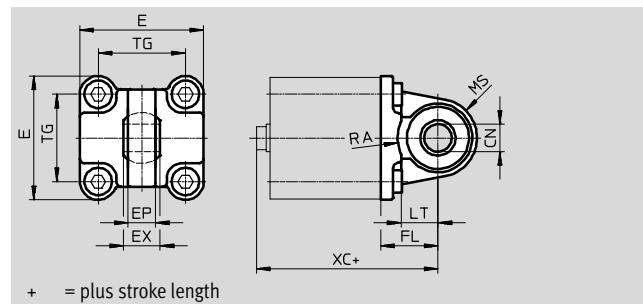
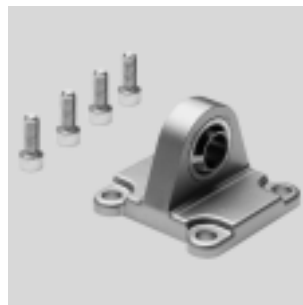
SNCS 63 ... 100: Wrought aluminium alloy

CRSNCS 32 ... 80:

High-alloy stainless steel

SNCS-...-R3 100: Wrought aluminium alloy with protective coating

RoHS-compliant



Dimensions and ordering data							
For Ø	CN		E		EP	EX	FL
[mm]	ADNGF-...	ADNGF-...-R3	ADNGF-...	ADNGF-...-R3	±0.2		±0.2
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 Ø	LT	MS		RA		TG	XC
		ADNGF-...	ADNGF-...-R3	ADNGF-...+1	ADNGF-...-R3+1		
[mm]							
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 Ø	Basic version				High corrosion protection			
	CRC ¹⁾	Weight [g]	Part No.	Type	CRC ¹⁾	Weight [g]	Part No.	Type
[mm]								
32	2	86	174397	SNCS-32	4	161	2895920	CRSNCS-32
40	2	122	174398	SNCS-40	4	239	2895921	CRSNCS-40
50	2	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 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and 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, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.

Compact cylinders ADNGF, standard port pattern



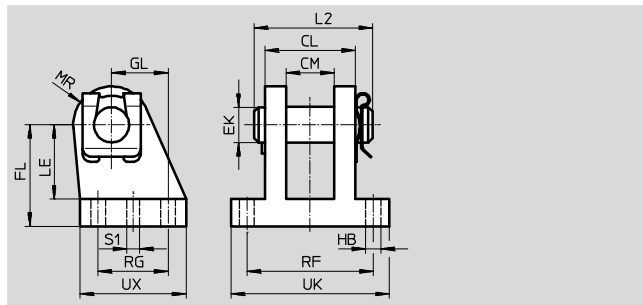
Accessories

Clevis foot LBG/LBG-...-R3

The clevis foot is secured against rotation with a dowel pin.

Material:

- LBG 32 ... 63: Special steel casting
- LBG 80 ... 100: Nodular graphite cast iron
- LBG-...-R3: High-alloy stainless steel
- Free of copper and PTFE
- RoHS-compliant



Dimensions and ordering data														
For Ø	CL	CM	EK Ø	FL	GL	HB Ø	L2	LE	MR	RF	RG	S1 Ø	UK	UX
[mm]														
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	50	38	17	56	31	7.8	70	49
80	50	25.1	20	63	30	11	60	49	18	70	36	7.8	89	55
100	50	25.1	20	71	41	11	60	56	22	70	46	9.8	89	65

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

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
 Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.
 Corrosion resistance class CRC 3 to Festo standard FN 940070
 High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and which are in direct contact with a normal industrial environment.

Compact cylinders ADNGF, standard port pattern

Accessories

Multi-position kit DPNA

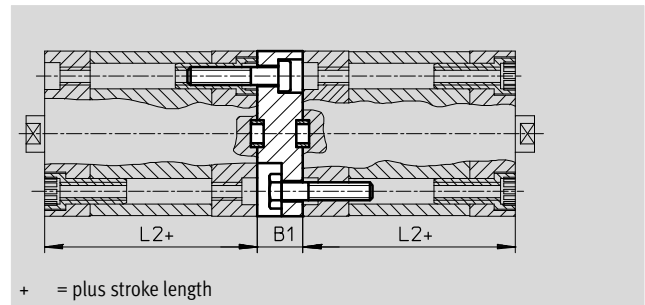
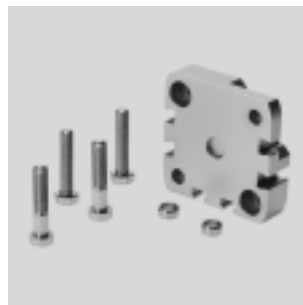
Material:


Flange: Wrought aluminium alloy

Screws: Galvanised steel

Free of copper and PTFE

RoHS-compliant



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

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

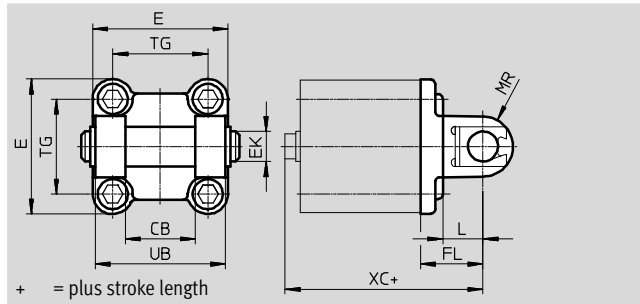
1) Corrosion resistance class CRC 2 to Festo standard FN 940070
Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Compact cylinders ADNGF, standard port pattern

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	FL	L	MR	TG	UB	XC
[mm]	H14		\varnothing 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	2	103	174390	SNCB-32	3	100	176944	SNCB-32-R3
40	2	155	174391	SNCB-40	3	151	176945	SNCB-40-R3
50	2	232	174392	SNCB-50	3	228	176946	SNCB-50-R3
63	2	375	174393	SNCB-63	3	371	176947	SNCB-63-R3
80	2	636	174394	SNCB-80	3	632	176948	SNCB-80-R3
100	2	1035	174395	SNCB-100	3	986	176949	SNCB-100-R3

1) Corrosion resistance class CRC 2 to Festo standard FN 940070
 Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.
 Corrosion resistance class CRC 3 to Festo standard FN 940070
 High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and which are in direct contact with a normal industrial environment.

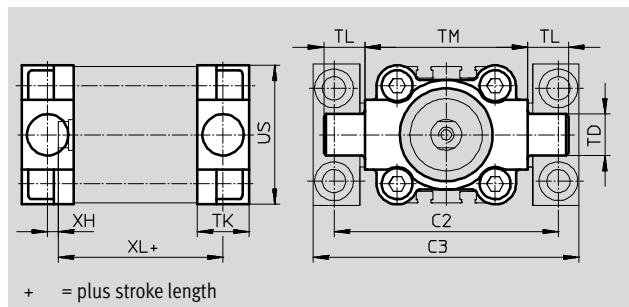
Compact cylinders ADNGF, standard port pattern

Accessories

Trunnion flange ZNCF/CRZNG

Material:

- ZNCF: Special steel casting
- CRZNG: Electrolytically polished special steel casting
- Free of copper and PTFE
- RoHS-compliant



Dimensions and ordering data									
For Ø	C2	C3	TD	TK	TL	TM	US	XH	XL
[mm]			Ø e9						
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 Ø	Basic version				R3 – High corrosion protection			
	CRC ¹⁾	Weight [g]	Part No.	Type	CRC ¹⁾	Weight [g]	Part No.	Type
[mm]								
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 may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.
 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, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.

Compact cylinders ADNGF, standard port pattern



Accessories

Trunnion support LNZG

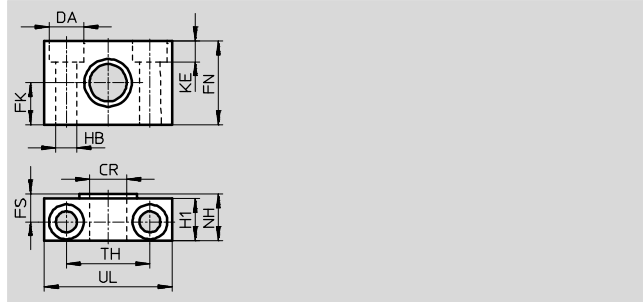
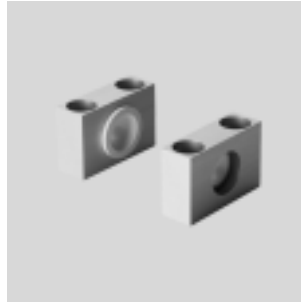
Material:

Trunnion support: Anodised aluminium

Plain bearing: Plastic

Free of copper and PTFE

RoHS-compliant





Dimensions and ordering data															
For \varnothing	CR	DA	FK	FN	FS	H1	HB	KE	NH	TH	UL	CRC ¹⁾	Weight	Part No.	Type
[mm]	\varnothing	\varnothing	\varnothing				\varnothing			± 0.2			[g]		
32	12	11	15	30	10.5	15	6.6	6.8	18	32	46	2	83	32959	LNZG-32
40, 50	16	15	18	36	12	18	9	9	21	36	55	2	129	32960	LNZG-40/50
63, 80	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 may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Compact cylinders ADNGF, standard port pattern

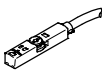
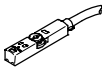
Accessories

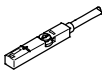


Ordering data – One-way flow control valves				Technical data → Internet: grl			
	Connection		Material	Part No.	Type		
	For Ø	For tubing O.D.					
For exhaust air							
	12, 16, 20, 25	3	Metal design	193137	GRLA-M5-QS-3-D		
		4		193138	GRLA-M5-QS-4-D		
		6		193139	GRLA-M5-QS-6-D		
	32, 40, 50, 63, 80, 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			



Compact cylinders ADNGF, standard port pattern

Accessories

FESTO


Ordering data – Proximity sensors for T-slot, magneto-resistive						Technical data → Internet: smt
	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with 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						
	Insertable in the slot from above, flush with cylinder profile, short design	PNP	Cable, 3-wire	7.5	574340	SMT-8M-A-PO-24V-E-7,5-OE


Ordering data – Proximity sensors for T-slot, magnetic reed						Technical data → Internet: sme
	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with 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
	Insertable 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						
	Insertable 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					Technical data → 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

Compact cylinders ADNGF, standard port pattern

Accessories

Ordering data – Rectangular proximity sensors, pneumatic		Technical data → Internet: smpo	
Assembly	Pneumatic connection	Part No.	Type
3/2-way valve, normally closed			
	Female thread M5	178563	SMPO-8E

Ordering data – Mounting kit for proximity sensors SMPO-8E		Technical data → Internet: smb	
Assembly		Part No.	Type
	Clamped in T-slot	178230	SMB-8E

Ordering data – Slot cover for T-slot			
Assembly	Length	Part No.	Type
	Insertable from above 2x 0.5 m	151680	ABP-5-S