

Compact cylinders ADN/AEN, to ISO 21287

FESTO



Compact cylinders ADN/AEN, to ISO 21287

Key features

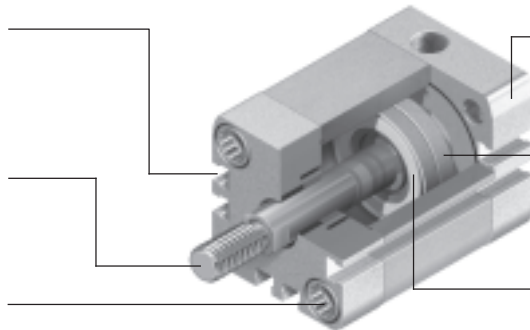
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At a glance

Sensor slots on three sides for flush mounting of proximity sensors

Piston rod with choice of male or female thread

Mounting option:
Female thread and through-hole



Centring hole in the end cap matches centring pins ZBS

Magnet for contactless position sensing

Integrated cushioning rings for absorbing residual energy at high speeds and machine cycles

More than the standard

- The compact cylinder series ADN/AEN complies with the standard ISO 21287
- The ADN/AEN is distinguished by its compact design and broad area of application thanks to the large number of variants
- The variants can be configured according to individual needs thanks to the modular product system

Powerful

- Flexible cushioning rings as standard for absorbing the residual energy facilitate high speeds and machine cycles
- Long service life thanks to exceptional cushioning characteristics and minimal friction factors
- The ADNP with bearing and end caps made of polymer is distinguished by its low weight

Convenient

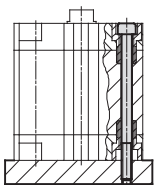
- Easy to mount with a comprehensive range of mounting accessories for just about every type of installation
- Highly flexible thanks to the wide range of variants
- Contactless position sensing using proximity sensors

Reliable

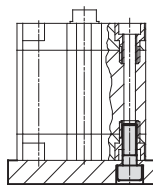
- Optimised manufacturing methods, patented technology and more than 40 years of experience in the field of cylinders make Festo and ADN/AEN a great team

Mounting options

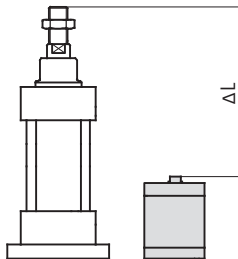
With through screw



Direct mounting



Size comparison between ISO 21287 and ISO 15552



- Space savings of up to 50% compared with the standard ISO 15552

Cushioning types

Cushioning P

Mode of operation

- The drive is equipped with polymer flexible end-position cushioning

Application

- Small loads
- Low speeds
- Small cushioning capacity

Advantages

- No adjustment required
- Time-saving

Cushioning PPS

Mode of operation

- The drive is equipped with self-adjusting, pneumatic end-position cushioning

Application

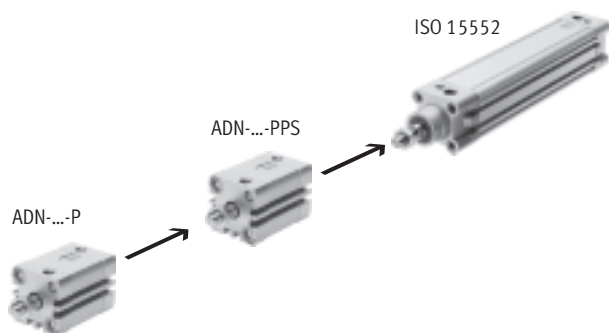
- Larger loads
- Higher speeds
- Larger cushioning capacity

Advantages

- No adjustment required
- Up to four times greater cushioning capacity than ADN-...-P
- Time-saving
- Noise reduction

Cushioning capacity of ISO 21287 and ISO 15552

In terms of cushioning capacity, the compact cylinder ADN-...-PPS fills the gap between ADN-...-P and standard cylinders with ISO 15552.



Compact cylinders ADN, to ISO 21287

Key features

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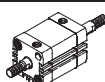
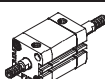
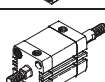
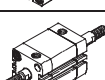
Variants from the modular product system		
Symbol	Key features	Description
	S1 Reinforced piston rod	Increased lateral forces. Absorbs many times more lateral force than a basic cylinder
	S2 Through piston rod	For working at both ends with the same force in the forward and return stroke, for attaching external stops
	S6 Heat-resistant seals	Temperature resistance up to max. 120 °C
	S10 Constant motion (slow speed) at low piston speeds	Suitable for slow stroke movements at a constant, judder-free speed over the full stroke of the cylinder. Seal contains silicone grease (not free of paint-wetting impairment substances)
	S11 Low friction	The special seals considerably reduce system wear. This corresponds to a considerably lower response pressure. Seal contains silicone grease (not free of paint-wetting impairment substances)
	S20 Through, hollow piston rod	For supplying vacuum, small parts, media, etc.
	K2 Extended male piston rod thread	–
	K5 Special piston rod thread	Metric standard thread to ISO
	K8 Extended piston rod	–
	K10 Smooth anodised aluminium piston rod	Ideal for use in welding environments: – Protection against welding spatter – Small working loads – Harder surface compared to steel – Long service life
	KP With clamping unit	Integrated clamping unit on the piston rod
	EL With end-position locking	Positive locking in the end position as a drop guard. If there is a drop in pressure, the piston rod is secured in its end position to prevent it from dropping
	Q Square piston rod	Protection against rotation. For correctly oriented feeding
	R3 High corrosion protection	All external cylinder surfaces comply with corrosion resistance class 3 to Festo standard 940 070. The piston rod is made from corrosion and acid resistant steel
	R8 Dust protection (wiper seal)	The cylinder is equipped with a hard-chrome plated piston rod and a rigid wiper seal, which protects against dry, dusty media
	TL Captive rating plate	Laser etched rating plate. For easy identification of components when it comes to replacement, even after years in a harsh environment
	TT Low temperature	Temperature resistance down to max. –40 °C

Software tools and configuration of
Festo modular products
→ www.festo.com

Compact cylinders ADN, to ISO 21287

Product range overview

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Function	Version	Type	Piston Ø	Stroke	Position sensing	Cushioning		
						Fixed	Self-adjusting	
			[mm]	[mm]	A	P	PPS	
Double-acting	Basic version							
		ADN	12	5, 10, 15, 20, 25, 30, 40	1 ... 300	■	■	■ Ø 32 ... 80
			16	5, 10, 15, 20, 25, 30, 40, 50	1 ... 300			
			20, 25	5, 10, 15, 20, 25, 30, 40, 50, 60	1 ... 300			
			32, 40, 50	5, 10, 15, 20, 25, 30, 40, 50, 60, 80	1 ... 400			
			63	10, 15, 20, 25, 30, 40, 50, 60, 80	1 ... 400			
			80, 100	10, 15, 20, 25, 30, 40, 50, 60, 80	1 ... 500			
			125	–	1 ... 500			
		ADN-...-S2 Through piston rod	12, 16, 20, 25	–	1 ... 300	■	■	■ Ø 32 ... 80
			32, 40, 50, 63	–	1 ... 400			
			80, 100, 125	–	1 ... 500			
		ADN-...-S20 Through, hollow piston rod	16, 20, 25	–	1 ... 300	■	■	■ Ø 32 ... 80
			32, 40, 50, 63	–	1 ... 400			
			80, 100, 125	–	1 ... 500			
	Reinforced piston rod							
		ADN-...-S1	25	–	5 ... 300	■	■	–
			40, 63	–	10 ... 400			
			100	–	10 ... 500			
	Non-rotating with square piston rod							
		ADN-...-Q	12, 16, 20, 25	–	1 ... 300	■	■	–
			32, 40, 50, 63	–	1 ... 400			
			80, 100, 125	–	1 ... 500			
		ADN-...-Q-S2 Through piston rod	12, 16, 20, 25	–	1 ... 300	■	■	–
			32, 40, 50, 63	–	1 ... 400			
			80, 100, 125	–	1 ... 500			
		ADN-...-Q-S20 Through, hollow piston rod	16, 20, 25	–	1 ... 200	■	■	–
			32, 40, 50, 63, 80	–	1 ... 300			
			100, 125	–	1 ... 400			
	Standard hole pattern, with clamping unit							
		ADN-...-KP	20, 25	–	10 ... 300	■	■	–
			32, 40, 50, 63	–	10 ... 400			
			80, 100	–	10 ... 500			
	Standard hole pattern, with end-position locking							
		ADN-...-EL	20, 25	–	10 ... 300	■	■	–
			32, 40, 50, 63	–	10 ... 400			
			80, 100	–	10 ... 500			
	With polymer end caps							
		ADNP	20, 25	5, 10, 15, 20, 25, 30, 40, 50, 60	–	■	■	–
			32, 40, 50	10, 15, 20, 25, 30, 40, 50, 60, 80				

Compact cylinders ADN, to ISO 21287

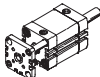
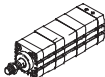
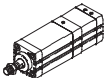
Product range overview

Type	Male piston rod thread	Female piston rod thread	Extended male piston rod thread	Special piston rod thread	Extended piston rod	Smooth anodised piston rod	Heat-resistant seals max. 120 °C	Slow speed (constant motion)	Low friction	High corrosion protection	Dust protection	Low temperature	→ Page/Internet
	A	I	K2	K5	K8	K10	S6	S10	S11	R3	R8	TT	
Basic version													
ADN	■	■	■	■	■	■ Ø 20 and above	■	■	■	■	■ Ø 20 and above	■ Ø 20 ... 100	13
ADN-...-S2 Through piston rod	■	■	■	■	■	-	■	-	-	-	-	■ Ø 20 ... 100	13
ADN-...-S20 Through, hollow piston rod	■	-	■	■	■	-	■	-	-	-	-	-	13
Reinforced piston rod													
ADN-...-S1	■	■	■	■	■	-	■	-	-	■	-	-	13
Non-rotating with square piston rod													
ADN-...-Q	■	■	■	■	■	-	■	-	-	-	-	-	13
ADN-...-Q-S2 Through piston rod	■	■	■	■	■	-	■	-	-	-	-	-	13
ADN-...-Q-S20 Through, hollow piston rod	■	-	■	■	■	-	■	-	-	-	-	-	13
Standard hole pattern, with clamping unit													
ADN-...-KP	■	■	■	■	■	-	-	-	-	-	-	-	40
Standard hole pattern, with end-position locking													
ADN-...-EL	■	■	■	■	■	-	-	-	-	-	-	-	49
With polymer end caps													
ADNP	■	■	-	-	-	-	-	-	-	-	-	-	75

Compact cylinders ADN, to ISO 21287

Product range overview

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Function	Version	Type	Piston Ø	Stroke	Position sensing	Cushioning		
						Fixed	Self-adjusting	
			[mm]	[mm]	A	P	PPS	
Double-acting	Standard hole pattern, non-rotating with yoke							
		ADNGF	12	5, 10, 15, 20, 25, 30, 40	1 ... 200	■	■	■ Ø 32 ... 80
			16	5, 10, 15, 20, 25, 30, 40, 50	1 ... 200			
			20, 25	5, 10, 15, 20, 25, 30, 40, 50, 60	3 ... 200			
			32, 40, 50	5, 10, 15, 20, 25, 30, 40, 50, 60, 80	5 ... 300			
			63, 80	10, 15, 20, 25, 30, 40, 50, 60, 80	5 ... 300			
			100	10, 15, 20, 25, 30, 40, 50, 60, 80	5 ... 400			
		ADNGF-...-S2 Through piston rod	12, 16	–	1 ... 200	■	■	■ Ø 32 ... 80
			20, 25		3 ... 200			
			32, 40, 50, 63, 80, 100		5 ... 250			
	Standard hole pattern, high-force cylinder							
		ADNH	25	–	1 ... 150	■	■	–
			40					
			63					
			100					
	Standard hole pattern, multi-position cylinder							
		ADNM	25	–	1 ... 2,000	■	■	–
			40					
			63					
100								

Compact cylinders ADN, to ISO 21287

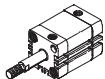
Product range overview

Type	Male piston rod thread	Female piston rod thread	Extended male piston rod thread	Special piston rod thread	Extended piston rod	Heat-resistant seals max. 120 °C	→ Page/Internet
	A	I	K2	K5	K8	S6	
Standard hole pattern, non-rotating with yoke							
ADNGF	—	—	—	—	—	■	adngf
ADNGF-...-S2 Through piston rod	—	—	—	—	—	■	adngf
Standard hole pattern, high-force cylinder							
ADNH	■	■	■	■	■	■	adnh
Standard hole pattern, multi-position cylinder							
ADNM	■	■	■	■	■	■	adnh

Compact cylinders AEN, to ISO 21287

Product overview

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Function	Version	Type	Piston Ø	Stroke	Position sensing	Cushioning
			[mm]	[mm]	A	P
Single-acting g	Basic version					
		AEN	12	1 ... 10		
			16, 20, 25, 32, 40, 50, 63, 80, 100	1 ... 25		
		AEN-...-Z pulling	12	1 ... 10		
			16, 20, 25, 32, 40, 50, 63, 80, 100	1 ... 25		
	Non-rotating with square piston rod					
		AEN-...-Q	16	1 ... 25		
			20, 25, 32, 40, 50, 63, 80, 100	1 ... 25		

Compact cylinders AEN, to ISO 21287

Product overview

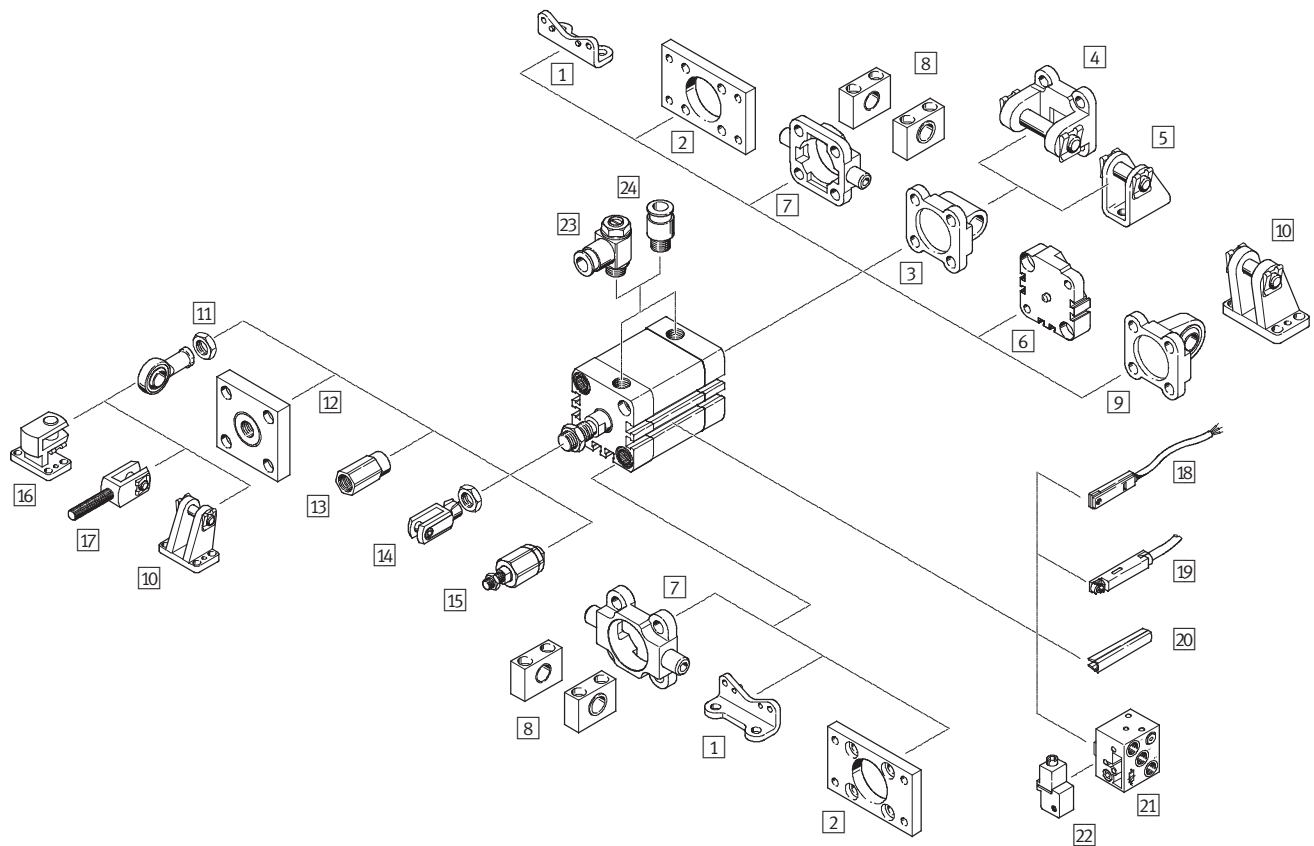
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Type	Male piston rod thread	Female piston rod thread	Extended male piston rod thread	Special piston rod thread	Extended piston rod	Smooth anodised piston rod	Heat-resistant seals up to max. 120 °C	→ Page/Internet
	A	I	K2	K5	K8	K10	S6	
Basic version								
AEN	■	■	■	■	■	■ Ø 20 and above	■	59
AEN-...-Z pulling	■	■	■	■	■	■ Ø 20 and above	■	59
Non-rotating with square piston rod								
AEN-...-Q	■	■	■	■	■	—	■	59

Compact cylinders ADN/AEN, to ISO 21287

Peripherals overview

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Compact cylinders ADN/AEN, to ISO 21287

Peripherals overview

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Mounting attachments and accessories			
	Brief description		→ Page/Internet
1	Foot mounting HNA	For bearing or end caps	79
2	Flange mounting FNC	For bearing or end caps	80
3	Swivel flange SNCL	For end caps	81
4	Swivel flange SNCB	For swivel flange SNCL	85
5	Clevis foot LBN/CRLBN	For swivel flange SNCL	84
6	Multi-position kit DPNA	For connecting two cylinders with identical piston $\varnothing$ to form a multi-position cylinder	83
7	Trunnion flange ZNCF/CRZNG	For bearing caps	86
8	Trunnion support LNZG	For trunnion flange ZNCF/CRZNG	87
9	Swivel flange SNCS	For end caps	82
10	Clevis foot LBG	For swivel flange SNCS	82
11	Rod eye SGS/CRSGS	With spherical bearing	88
12	Coupling piece KSG/KSZ	For compensating radial deviations	88
13	Adapter AD	For mounting a vacuum suction cup on a hollow cylinder piston rod	88
14	Rod clevis SG/CRSG	Permits a swivelling movement of the cylinder in one plane	88
15	Self-aligning rod coupler FK	For compensating radial and angular deviations	88
16	Right-angle clevis foot LQG	For rod eye SGS	89
17	Rod clevis SGA	With male thread	88
18	Proximity sensor SME/SMT-8	Can be integrated in the sensor slot of the cylinder profile barrel	91
19	Proximity sensor SME/SMT-8M	Can be integrated in the sensor slot of the cylinder profile barrel	91
20	Slot cover ABP-5-S	For protecting the sensor cable and keeping dirt out of the sensor slots	91
21	Proximity sensor SMPO-8E	Pneumatic output signal	91
22	Mounting kit SMB-8E	For proximity sensor SMPO-8E	91
23	One-way flow control valve GRLA/GRLZ	For speed regulation	89
24	Push-in fitting QS	For connecting compressed air tubing with standard external diameters	quick star

Compact cylinders ADN, to ISO 21287

Type codes

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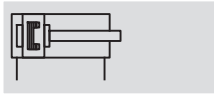
		ADN	–	50	–	50	–	A	–	P	–	A	–	S2
Type														
Double-acting														
ADN	Compact cylinder													
Piston Ø [mm]														
Stroke [mm]														
Piston rod thread														
A	Male thread													
I	Female thread													
Cushioning														
P	Flexible cushioning rings/pads at both ends													
PPS	Pneumatic cushioning, self-adjusting at both ends													
Position sensing														
A	Via proximity sensor													
Variant														
Q	Square piston rod													
S1	Reinforced piston rod													
S2	Through piston rod													
S20	Through, hollow piston rod													
K2	Piston rod with extended male thread													
K5	Piston rod with special thread													
K8	Extended piston rod													
K10	Smooth anodised piston rod													
S6	Heat-resistant seals up to max. 120 °C													
S10	Slow speed (constant motion)													
S11	Low friction													
R3	High corrosion protection													
R8	Dust protection													
TL	Captive rating plate													
TT	Low temperature													

Compact cylinders ADN, to ISO 21287

Technical data

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Function



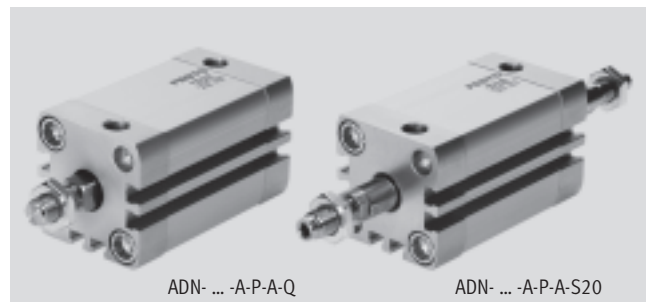
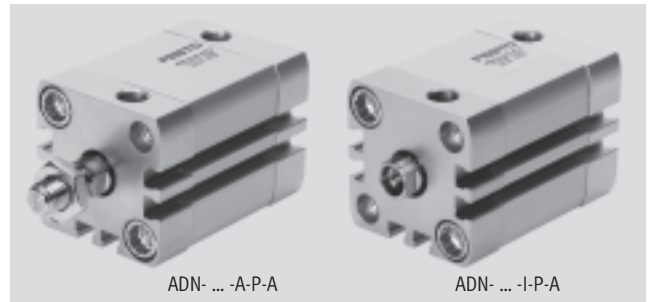
Variants → 3



-N- Diameter
12 ... 125 mm

-T- Stroke length
1 ... 500 mm

www.festo.com/en/
Spare_parts_service



General technical data											
Piston Ø	12	16	20	25	32	40	50	63	80	100	125
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] –				4	5	6	7	7.5	–	
Position sensing	Via proximity sensor										
Type of mounting	Via through-hole										
	Via female thread										
	Via accessories										
Mounting position	Any										

Technical data – Basic version and variants						
Piston Ø	12	16	20	25	32	40
Pneumatic connection	M5	M5	M5	M5	G1/8	G1/8
Female piston rod thread						
–	M3	M4	M6	M6	M8	M8
K5	–	–	M5	M5	M6	M6
S1	–	–	–	M6	–	M10
K5-S1	–	–	–	M5	–	M8
Male piston rod thread						
–	M5	M6	M8	M8	M10x1.25	M10x1.25
K5	M6	M8	M10, M10x1.25	M10, M10x1.25	M10, M12	M10, M12
S1	–	–	–	M8	–	M12x1.25
K5-S1	–	–	–	M10, M10x1.25	–	M10x1.25, M12
Max. torsional backlash of piston rod [°]						
Q	2	1.8	1.6	1.6	1.2	1.2

Compact cylinders ADN, to ISO 21287

Technical data

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Technical data – Basic version and variants					
Piston Ø	50	63	80	100	125
Pneumatic connection	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{4}$
Female piston rod thread					
–	M10	M10	M12	M12	M16
K5	M8	M8	M10	M10	–
S1	–	M12	–	M16	–
K5-S1	–	M10	–	–	–
Male piston rod thread					
–	M12x1.25	M12x1.25	M16x1.5	M16x1.5	M20x1.5
K5	M12, M16	M12, M16	M16, M20	M16, M20, M20x1.5	M20
S1	–	M16x1.5	–	M20x1.5	–
K5-S1	–	M12x1.25, M16	–	M16x1.5, M20	–
Max. torsional backlash of piston rod [°]					
Q	1	1	0.8	0.8	0.8

Operating and environmental conditions												
Piston Ø	12	16	20	25	32	40	50	63	80	100	125	
Operating medium	Filtered compressed air, lubricated or unlubricated											
Operating pressure [bar]												
–	1 ... 10		0.6 ... 10									
PPS	–				1.5 ... 10	1 ... 10				–		
Q	1.3 ... 10		1 ... 10		0.8 ... 10			0.6 ... 10				
S1	–			1 ... 10	–	1 ... 10	–	1 ... 10	–	1 ... 10	–	
S2, S20	1.5 ... 10	1.3 ... 10	1.2 ... 10		1 ... 10			0.8 ... 10				
S6	1 ... 10		0.6 ... 10									
S11	0.45 ... 10				0.25 ... 10							
R8, TT	–		1.5 ... 10			1 ... 10				–		
Ambient temperature ¹⁾ [°C]												
–	–20 ... +80											
S6	0 ... +120											
R3	–20 ... +80											
TT	–		–40 ... +80								–	
Corrosion resistance class CRC ²⁾												
–	2											
R3	3											
ATEX	Specified types → www.festo.com											

1) Note operating range of proximity sensors

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

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Corrosion resistance class 3 according to Festo standard 940 070

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

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Technical data

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Forces [N] and impact energy [J]											
Piston Ø	12	16	20	25	32	40	50	63	80	100	125
Theoretical force at 6 bar, advancing											
–	68	121	188	295	483	754	1,178	1,870	3,016	4,712	7,363
S1	–	–	–	295	–	754	–	1,870	–	4,712	–
S2	51	90	141	247	415	686	1,057	1,750	2,827	4,524	7,069
Theoretical force at 6 bar, retracting											
–	51	90	141	247	415	686	1,057	1,750	2,827	4,524	7,069
S1	–	–	–	247	–	633	–	1,681	–	4,417	–
S2	51	90	141	247	415	686	1,057	1,750	2,827	4,524	7,069
Max. impact energy in the end positions											
–	0.07	0.15	0.2	0.3	0.4	0.7	1	1.3	1.8	2.5	3.3
S1	–	–	–	0.3	–	0.7	–	1.3	–	2.5	–
S6	0.035	0.075	0.1	0.15	0.2	0.35	0.5	0.65	0.9	1.25	1.75
K10	–	–	0.16	0.24	0.32	0.56	0.8	1	1.4	2	2.6
S20	–	0.016	0.024	0.083	0.15	0.39	0.48	0.62	0.8	0.9	0.95

Note

This data represents the maximum values that can be achieved. The maximum permissible impact energy must be observed.

Permissible impact velocity:

$$v_{\text{perm.}} = \sqrt{\frac{2 \times E_{\text{perm.}}}{m_{\text{dead}} + m_{\text{load}}}}$$

$v_{\text{perm.}}$ Permissible impact velocity
 $E_{\text{perm.}}$ Max. impact energy
 m_{dead} Moving load (drive)
 m_{load} Moving effective load

Maximum permissible load:

$$m_{\text{load}} = \frac{2 \times E_{\text{perm.}}}{v^2} - m_{\text{dead}}$$

Note

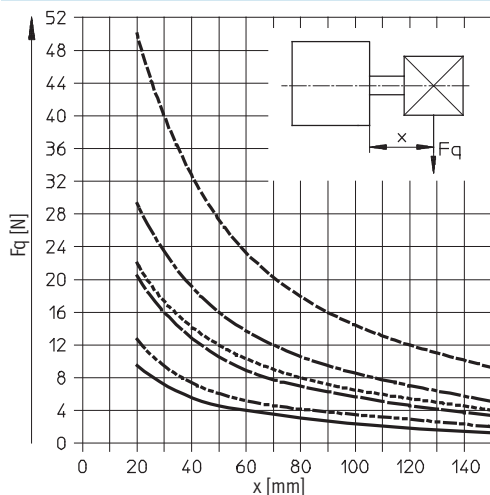
In combination with PPS cushioning, the maximum impact energy is still obtained.

Max. energy conversion capacity [J]

Piston Ø	32	40	50	63	80
For PPS cushioning	1	1.7	2.8	4.8	8

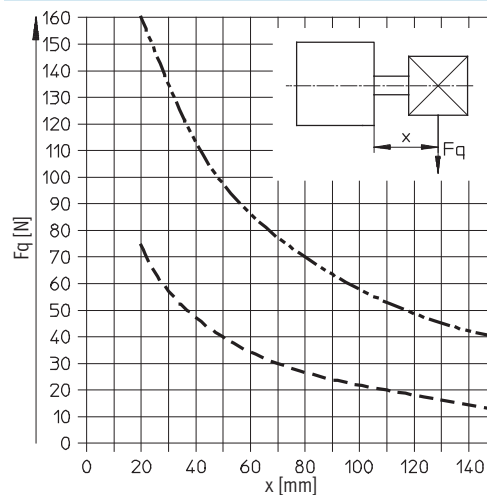
Max. lateral force F_q as a function of the projection x

Ø 12 ... 63



— Ø 12
 - - - - - Ø 16
 — Ø 20
 - - - - - Ø 25
 — Ø 32/40
 - - - - - Ø 50/63

Ø 80 ... 125



- - - - - Ø 80/100
 - - - - - Ø 125

Compact cylinders ADN, to ISO 21287

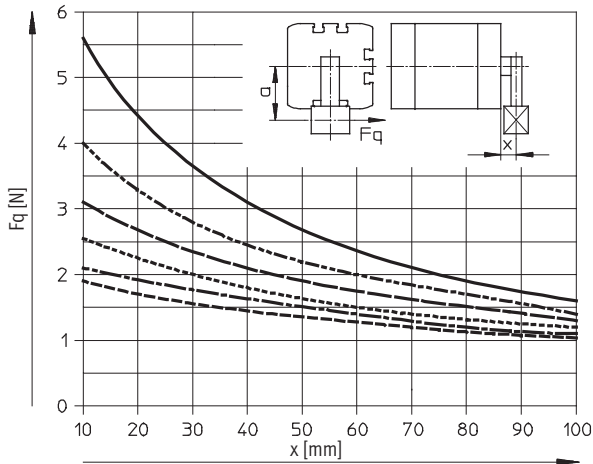
Technical data

FESTO

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

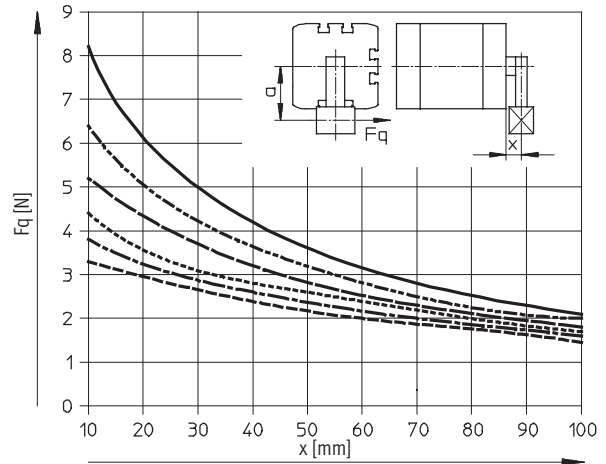
Q – Square piston rod

Ø 12



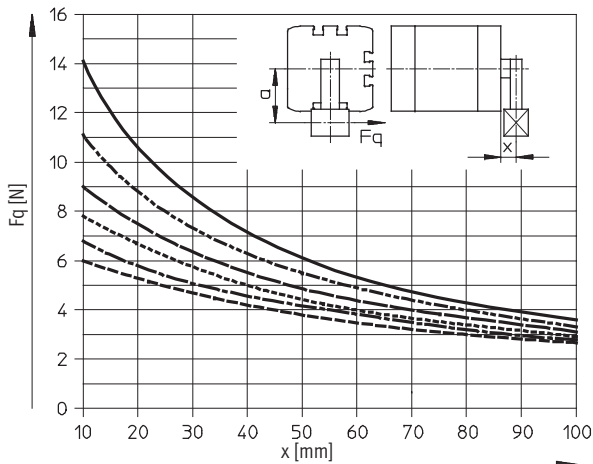
— $a = 5$ mm
 - - - $a = 10$ mm
 - · - $a = 15$ mm
 · · · $a = 20$ mm
 - - - $a = 25$ mm
 - · - $a = 30$ mm

Ø 16



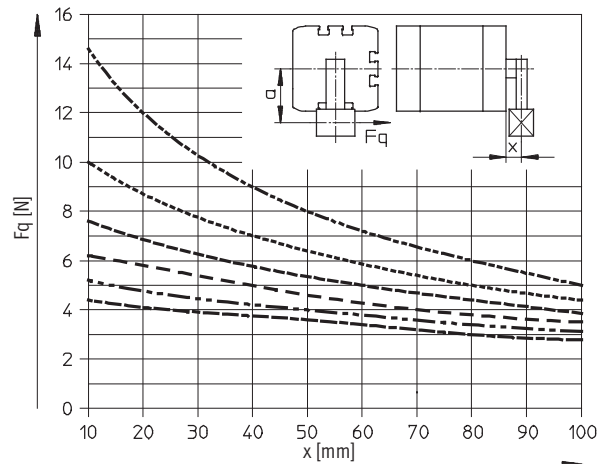
— $a = 5$ mm
 - - - $a = 10$ mm
 - · - $a = 15$ mm
 · · · $a = 20$ mm
 - - - $a = 25$ mm
 - · - $a = 30$ mm

Ø 20/25



— $a = 5$ mm
 - - - $a = 10$ mm
 - · - $a = 15$ mm
 · · · $a = 20$ mm
 - - - $a = 25$ mm
 - · - $a = 30$ mm

Ø 32/40



— $a = 10$ mm
 - - - $a = 20$ mm
 - · - $a = 30$ mm
 · · · $a = 40$ mm
 - - - $a = 50$ mm
 - · - $a = 60$ mm

Note

- Torques on the piston rod are to be excluded with projections greater than those shown in the graphs.
- If $a = 0$, the corresponding lateral load line of the basic ADN version can be used (→ 15).

Compact cylinders ADN, to ISO 21287

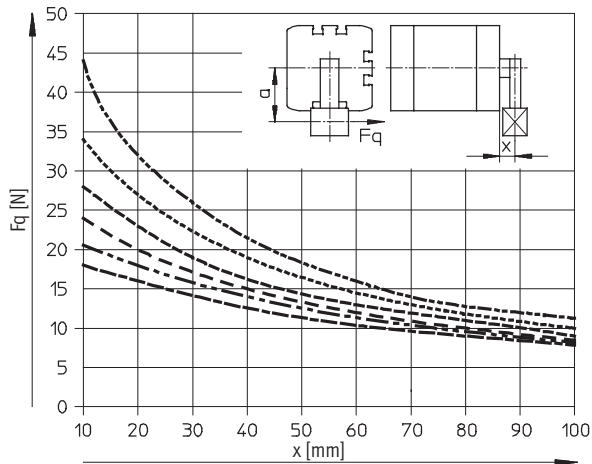
Technical data

FESTO

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

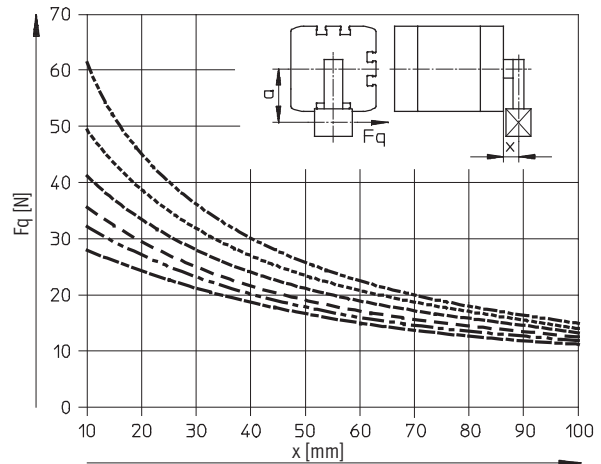
Q – Square piston rod

Ø 50/63



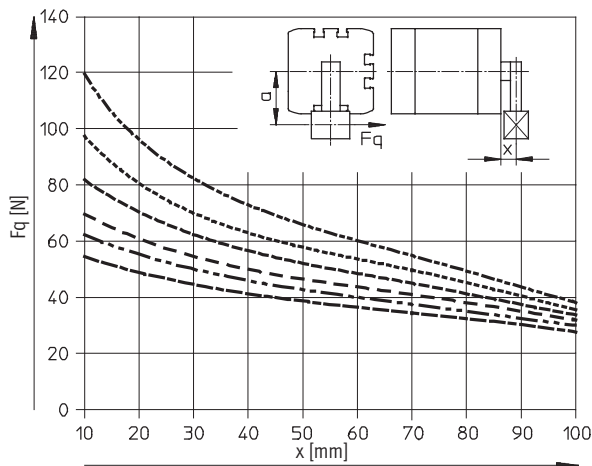
----- $a = 10$ mm
 ----- $a = 20$ mm
 ----- $a = 30$ mm
 ----- $a = 40$ mm
 ----- $a = 50$ mm
 ----- $a = 60$ mm

Ø 80/100



----- $a = 10$ mm
 ----- $a = 20$ mm
 ----- $a = 30$ mm
 ----- $a = 40$ mm
 ----- $a = 50$ mm
 ----- $a = 60$ mm

Ø 125



----- $a = 10$ mm
 ----- $a = 20$ mm
 ----- $a = 30$ mm
 ----- $a = 40$ mm
 ----- $a = 50$ mm
 ----- $a = 60$ mm

Note

- Torques on the piston rod are to be excluded with projections greater than those shown in the graphs.
- If $a = 0$, the corresponding lateral load line of the basic ADN version can be used (→ 15).

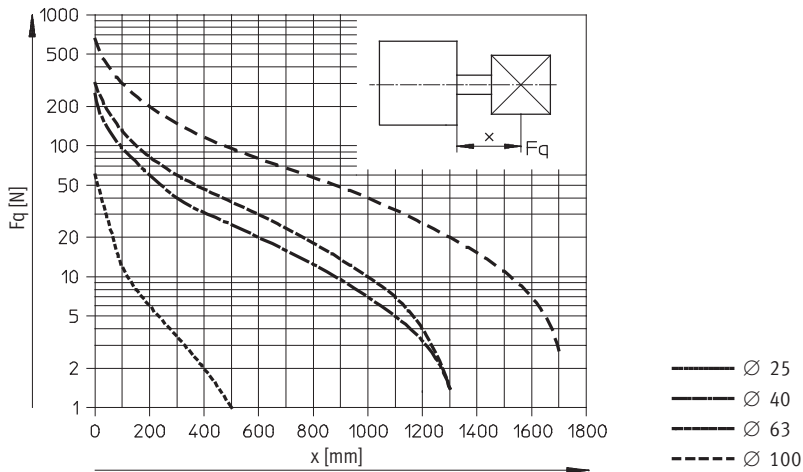
Compact cylinders ADN, to ISO 21287

Technical data

FESTO

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

S1 – Reinforced piston rod

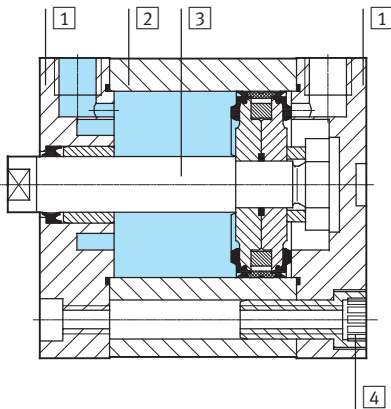


Weight [g]

Piston Ø	12	16	20	25	32	40	50	63	80	100	125
Product weight with 0 mm stroke	77	79	131	156	265	346	540	722	1,300	2,154	2,880
Additional weight per 10 mm stroke	12	14	21	23	30	37	51	59	79	98	117
Moving load with 0 mm stroke	9	15	30	50	60	80	140	180	400	570	1,080
Additional load per 10 mm stroke	2	4	6	6	9	9	16	16	25	25	39

Materials

Sectional view



Compact cylinder	Basic version, Q	R8	S6, S10, S11	R3	K10
1 Bearing and end cap	Anodised aluminium				
2 Cylinder barrel	Anodised aluminium				
3 Piston rod	High-alloy steel	Hard-chromium plated tempered steel	High-alloy steel		Anodised aluminium
4 Flange screws					
Ø 12 ... 16	High-alloy steel			High-alloy steel	–
Ø 20 ... 25	Galvanised steel			High-alloy steel	Galvanised steel
Ø 32 ... 63	Galvanised steel			Steel, zinc flake coating	Galvanised steel
Ø 80 ... 125	Standard screws, galvanised steel			Standard screws, high-alloy steel	Standard screws, galvanised steel
– Seals	Polyurethane		Fluoro elastomer	Polyurethane	
Note on materials	RoHS-compliant				

Compact cylinders ADN, to ISO 21287

Technical data

FESTO

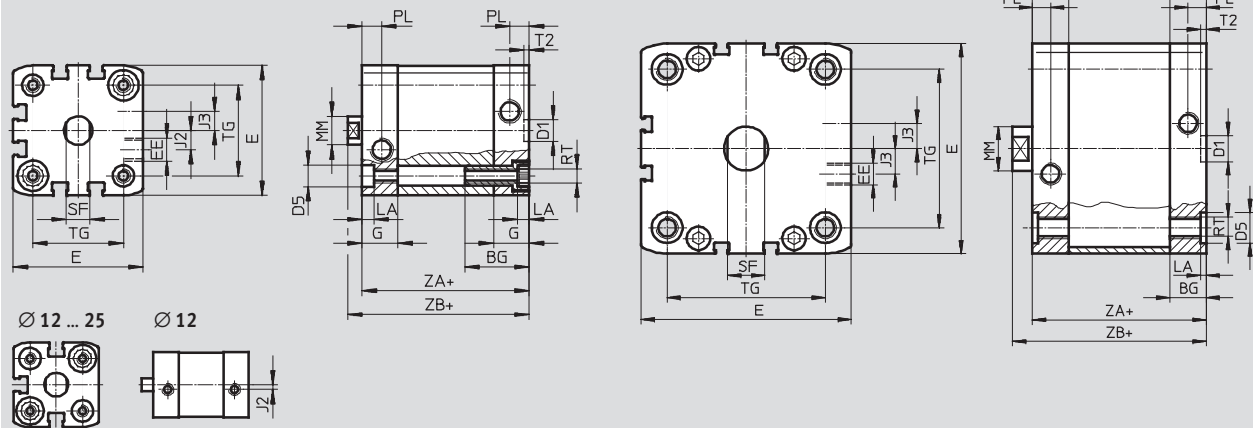
Dimensions – Basic version

Download CAD Data → www.festo.com/us/cad

Ø 12 ... 63

Ø 80 ... 125

Ø 32 ... 63



+ = plus stroke length

Ø [mm]	BG min.	D1 Ø H9	D5 Ø F9	E	EE	G	J2	J3	LA +0.2
12	17	9	6	27.5 ^{+0.3}	M5	10.5	2	–	3.5
16				29 ^{+0.3}		11	2.6		
20	9		35.5 ^{+0.3}	12		5			
25			39.5 ^{+0.3}						
32			26	47 ^{+0.3}	G1/8		15	6	
40	54.5 ^{+0.3}			8					
50	27	12	65.5 ^{+0.3}	16.5				11.5	2.6
63			75.5 ^{+0.3}						
80	17	15	95.5 ^{+0.6}		21.5	20	21.15		
100	21.5		113.5 ^{+0.6}	20					
125	20		–	134.6 ^{+0.3}	G1/4				

Ø [mm]	MM Ø h8	PL +0.2	RT	SF h13	T2 +0.1	TG ±0.2	ZA ±0.3	ZB	
								+1.2	PPS +1.3
12	6	6	M4	5	2.1	16	35	39.2	-
16	8			7		18		39.7	
20	10		M5	9		22	37	42.5	
25						26	39	44.5	
32	12	8.2	M6	10	2.6	32.5	44	50	50.6
40						38	45	51.1	51.7
50	16		M8	13		46.5		49	52.7
63						56.5	56.5	57	
80	20	10.5	M10	17		72	54	62.9	63.4
100						89	67	76	-
125	25		M12	21		110	81	92	

Compact cylinders ADN, to ISO 21287

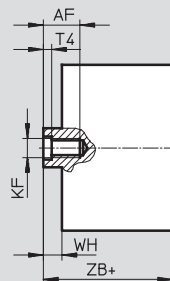
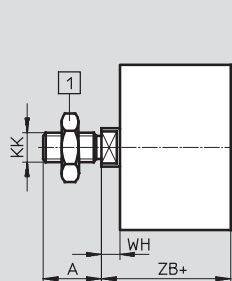
Technical data

FESTO

Dimensions – Variants

Download CAD Data → www.festo.com/us/cad

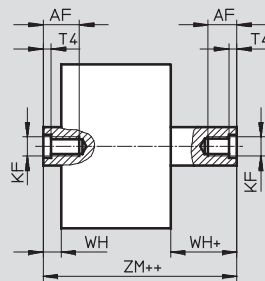
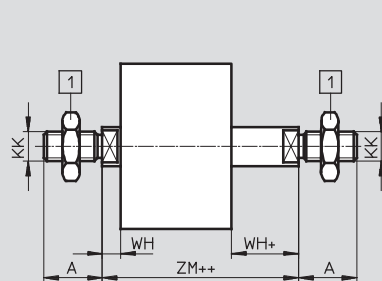
Basic version



1 Hex nut DIN 439-B
only with $\varnothing 32 \dots 125$

+ = plus stroke length

S2 – Through piston rod

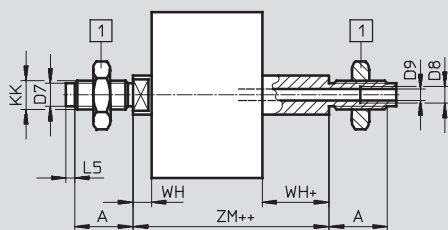


1 Hex nut DIN 439-B
only with $\varnothing 32 \dots 125$

+ = plus stroke length

++ = plus 2x stroke length

S20 – Through, hollow piston rod



Note

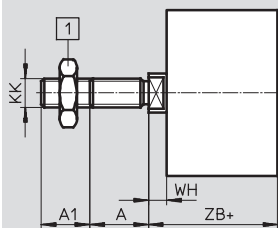
In combination with variants
S2/S20, the piston rod is extended
at one end.

1 Hex nut DIN 439-B
only with $\varnothing 32 \dots 125$

+ = plus stroke length

++ = plus 2x stroke length

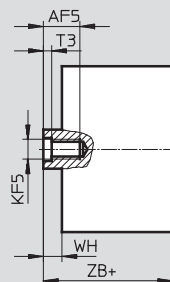
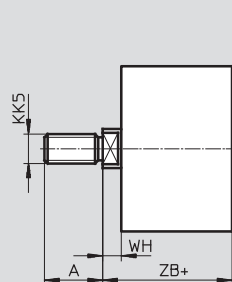
K2 – Extended male piston rod thread



1 Hex nut DIN 439-B
only with $\varnothing 32 \dots 125$

+ = plus stroke length

K5 – Special piston rod thread



+ = plus stroke length

Compact cylinders ADN, to ISO 21287

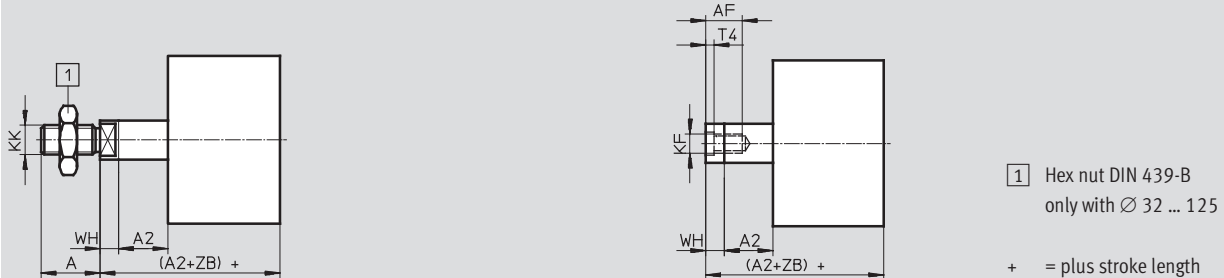
Technical data

FESTO

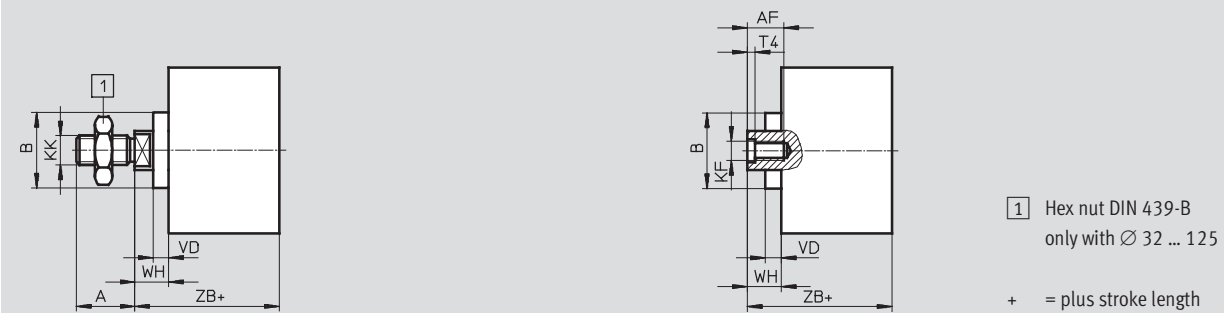
Dimensions – Variants

Download CAD Data → www.festo.com/us/cad

K8 – Extended piston rod



R8 – Dust protection / TT – Low temperature



Ø	A	A1	A2	AF	AF5	B Ø	D7 Ø	D8	D9 Ø	L5	KF	KF5	KK									
[mm]	-0.5			min.	min.																	
12	10	1 ... 10	1 ... 300	8	-	-	-	-	-	-	M3	-	M5									
16	12			10			4.5		3.2	3	M4		M6									
20	16	1 ... 20		14	12	18	6		3.8	2	M6	M5	M8									
25			1 ... 400	16	14	27	8		4.5	3	M8	M6	M10x1.25									
32	22													20	16	31	10	6	3.5	M10	M8	M12x1.25
40																						
50				28	1 ... 30	20	35	-	G1/8	8	-	M12	M10									
63	1 ... 40		1 ... 500											25	-	-	G1/4	11.7	M16	-	M20x1.5	
80																						
100																						
125	40																					

Ø [mm]	KK5	T3	T4	VD	WH			ZB			ZM	
					+1.3	PPS +1.4	R8/TT +1.3	+1.2	PPS +1.3	R8/TT +1.2		PPS
12	M6	–	1.5	–	4.2	–	–	39.2	–	–	44.5 ^{+0.5}	–
16	M8				4.7			39.7			45.7 ^{+0.5}	
20	M10x1.25	2	2.6	5.2	5.5	–	10.5	42.5	–	47.5	49.5 ^{+0.5}	–
25	M10							44.5		49.5	51.5 ^{+0.5}	
32	M10	2.6	3.3	6.4	6	6.5	12.5	50	50.6	56.5	57.5 ^{+0.5}	58.6 ^{+0.6}
40	M12				6.1	6.6		51.1	51.7	57.5	58.6 ^{+0.6}	59.7 ^{+0.7}
50	M12	3.3	4.7		7.7	8.2	14.7	52.7	53.2	59.7	62.0 ^{+0.6}	63.1 ^{+0.7}
63	M16				7.5	8	14.6	56.5	57	63.6	65.4 ^{+0.6}	66.5 ^{+0.7}
80	M16	4.7	6.1		8.9	9.4	15.4	62.9	63.4	69.4	73.2 ^{+0.6}	74.3 ^{+0.7}
100	M20x1.5 M20				9	–	15.5	76	–	82.5	86.4 ^{+0.6}	–
125	M20	–	7	–	11	–	–	92	–	–	104.4 ^{+0.6}	–

Compact cylinders ADN, to ISO 21287

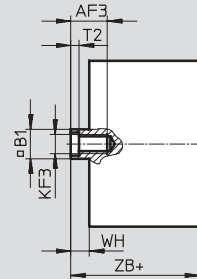
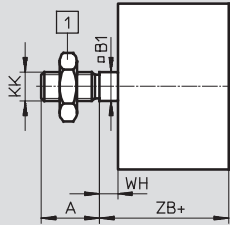
Technical data

FESTO

Dimensions – Variants

Download CAD Data → www.festo.com/us/cad

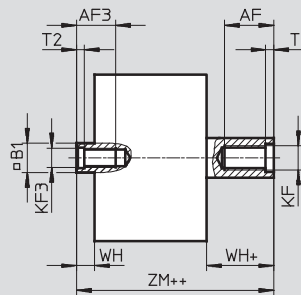
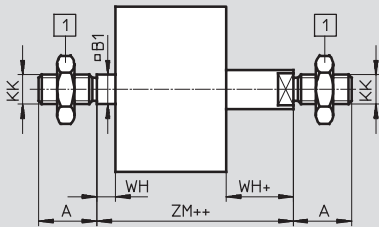
Q – Square piston rod



1 Hex nut DIN 439-B
only with $\varnothing 32 \dots 125$

+ = plus stroke length

Q-S2 – Square, through piston rod

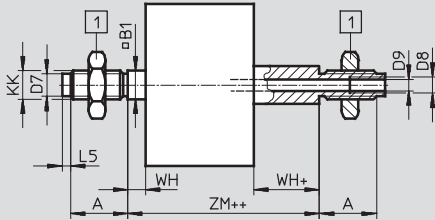


1 Hex nut DIN 439-B
only with $\varnothing 32 \dots 125$

+ = plus stroke length

++ = plus 2x stroke length

Q-S20 – Square, through, hollow piston rod



Note

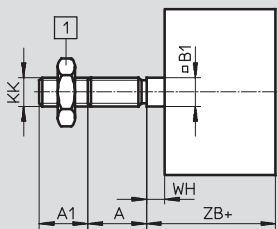
In combination with variants
S2/S20, the piston rod is extended
at one end on the square piston rod.

1 Hex nut DIN 439-B
only with $\varnothing 32 \dots 125$

+ = plus stroke length

++ = plus 2x stroke length

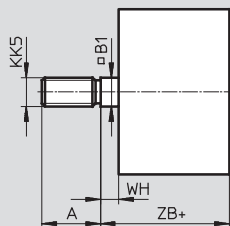
Q-K2 – Square piston rod with extended male thread



1 Hex nut DIN 439-B
only with $\varnothing 32 \dots 125$

+ = plus stroke length

Q-K5 – Square, special piston rod thread



+ = plus stroke length

Compact cylinders ADN, to ISO 21287

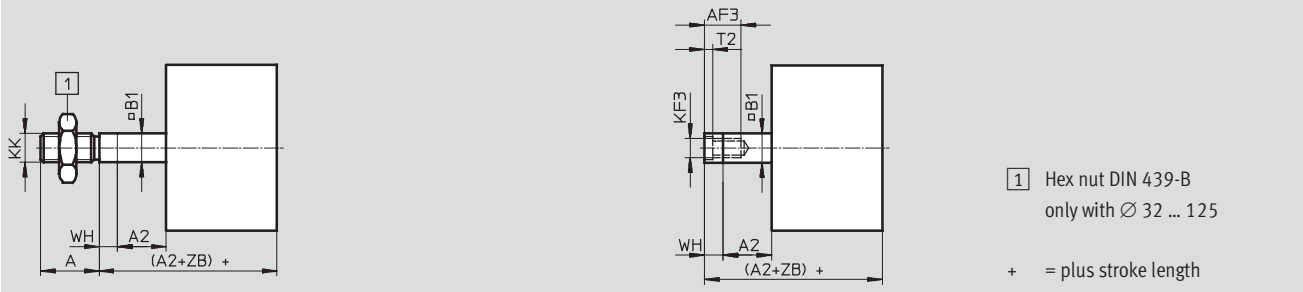
Technical data

FESTO

Dimensions – Variants

Download CAD Data → www.festo.com/us/cad

Q-K8 – Square, extended piston rod



Ø	A	A1	A2	AF	AF3	B1 □	D7 Ø	D8	D9 Ø
[mm]	−0.5			min.	min.				
12	10	1 ... 10	1 ... 300	8	8	5.5	–	–	–
16	12			10	10	7	4.5		3.2
20	16	1 ... 20		14	12	9	6		3.8
25			1 ... 400	16	14	10	8		4.5
32	19			20	16	12	10		6
40	22	20		20	16	–	G ¹ / ₈	8	
50		1 ... 30	1 ... 500	25	24	20	G ¹ / ₄	11.7	
63	1 ... 40								
80	28								
100	40								
125									

Ø	L5	KF	KF3	KK	KK5	T2	WH	ZB	ZM
[mm]							+1.3	+1.2	
12	–	M3	M3	M5	M6	1.5	4.2	39.2	44.5 ^{+0.5}
16	3	M4	M4	M6	M8		4.7	39.7	45.7 ^{+0.5}
20	2	M6	M5	M8	M10x1.25 M10	2	5.5	42.5	49.5 ^{+0.5}
25								44.5	51.5 ^{+0.5}
32	3	M8	M6	M10x1.25	M10	2.6	6	50	57.5 ^{+0.5}
40							6.1	51.1	58.6 ^{+0.6}
50	3.5	M10	M8	M12x1.25	M16	3.3	8.2	53.2	62.8 ^{+0.6}
63							8.1	57.1	66.6 ^{+0.6}
80							8.9	62.9	73.2 ^{+0.6}
100	–	M12	M10	M16x1.5	M16	4.7	9	76	86.4 ^{+0.6}
125		M16	M12	M20x1.5	M20	6.1	11	92	104.4 ^{+0.6}

Compact cylinders ADN, to ISO 21287

Technical data

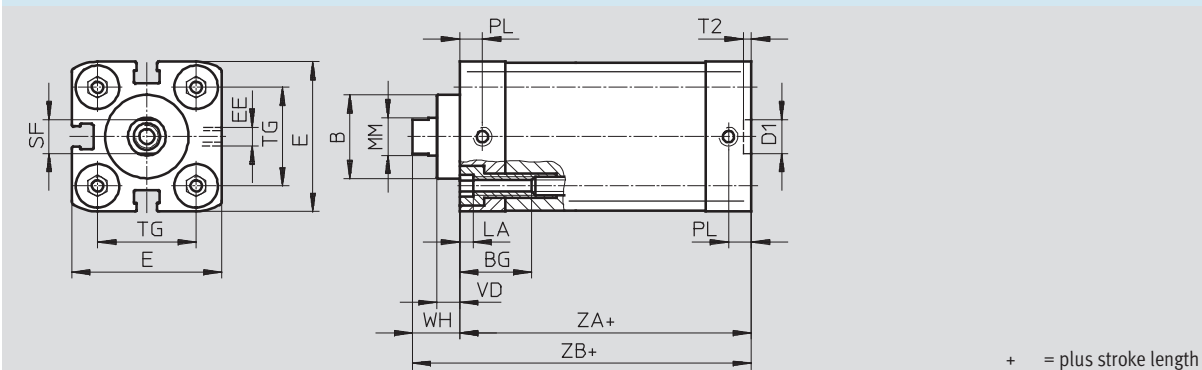
FESTO

Dimensions – Variants

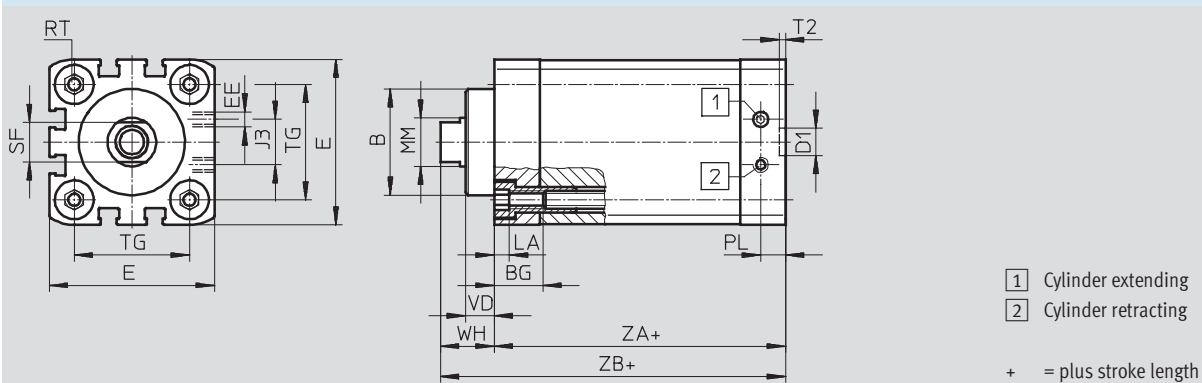
Download CAD Data → www.festo.com/us/cad

S1 – Reinforced piston rod

Ø 25



Ø 40 ... 100



Ø [mm]	B Ø f8	BG min.	D1 Ø H9	E	EE	J3	LA	MM Ø h9	PL
25	22	15	9	39.5 +0.3	M5	–	5	10	6
40	35	16		54.5 +0.3		15		16	8.2
63	42		12	75.5 +0.3	G1/8	23		20	
100	55	17		113.5 +0.6		40		25	10.5

Ø [mm]	RT	SF h13	T2	TG	VD	WH	ZA	ZB
25	M5	9	2.1	26	6	11.8	39	50.9
40	M6	13		38	9.5	18	45	62.9
63	M8	17	2.6	56.5	12	21	49	70.2
100	M10	21		89	15.5	26.5	67	93.5

Compact cylinders ADN, to ISO 21287

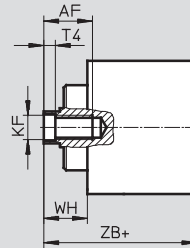
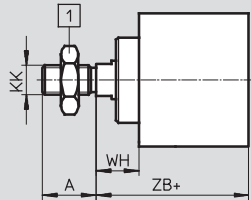
Technical data

FESTO

Dimensions – Variants

Download CAD Data → www.festo.com/us/cad

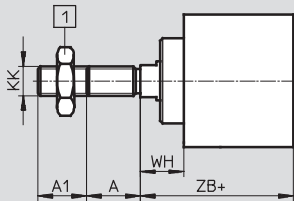
S1 – Reinforced piston rod



1 Hex nut DIN 439-B
only with Ø 40 ... 100

+ = plus stroke length

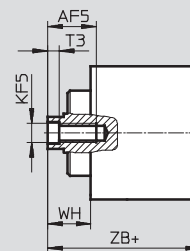
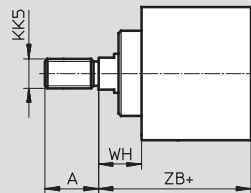
S1-K2 – Reinforced piston rod with extended male thread



1 Hex nut DIN 439-B
only with Ø 40 ... 100

+ = plus stroke length

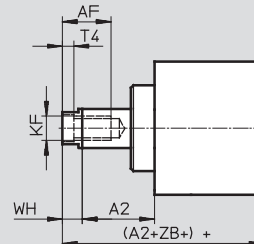
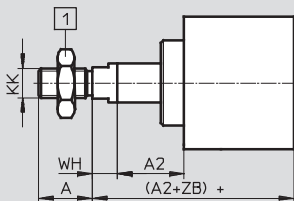
S1-K5 – Extended piston rod with special piston rod thread



1 Hex nut DIN 439-B
only with Ø 40 ... 100

+ = plus stroke length

S1-K8 – Reinforced piston rod with extended piston rod



1 Hex nut DIN 439-B
only with Ø 40 ... 100

+ = plus stroke length

Ø	A	A1	A2	AF	AF5	KF	KF5	KK	KK5	T3	T4	WH	ZB
[mm]	-0.5			min.	min.							+1.3	+1.2
25	16	1 ... 20	1 ... 300	14	12	M6	M5	M8	M10x1.25 M10	2	2.6	11.8	50.9
40	22		1 ... 400	20	16	M10	M8	M12x1.25	M10x1.25 M12	3.3	4.7	18	62.9
63	28				20	M12	M10	M16x1.5	M12x1.25 M16	4.7	6.1	21	70.2
100	40	1 ... 30	1 ... 500	25	–	M16	–	M20x1.5	M16x1.5 M20	–	7	26.5	93.5

Compact cylinders ADN, to ISO 21287

Technical data

FESTO

Ordering data						
Type	Piston Ø [mm]	Stroke [mm]	I – Piston rod with female thread P – Flexible cushioning rings/pads at both ends		A – Male piston rod thread P – Flexible cushioning rings/pads at both ends	
			Part No.	Type	Part No.	Type
	12	5	536211	ADN-12-5-I-P-A	536204	ADN-12-5-A-P-A
		10	536212	ADN-12-10-I-P-A	536205	ADN-12-10-A-P-A
		15	536213	ADN-12-15-I-P-A	536206	ADN-12-15-A-P-A
		20	536214	ADN-12-20-I-P-A	536207	ADN-12-20-A-P-A
		25	536215	ADN-12-25-I-P-A	536208	ADN-12-25-A-P-A
		30	536216	ADN-12-30-I-P-A	536209	ADN-12-30-A-P-A
		40	536217	ADN-12-40-I-P-A	536210	ADN-12-40-A-P-A
	16	5	536226	ADN-16-5-I-P-A	536219	ADN-16-5-A-P-A
		10	536227	ADN-16-10-I-P-A	536220	ADN-16-10-A-P-A
		15	536228	ADN-16-15-I-P-A	536221	ADN-16-15-A-P-A
		20	536229	ADN-16-20-I-P-A	536222	ADN-16-20-A-P-A
		25	536230	ADN-16-25-I-P-A	536223	ADN-16-25-A-P-A
		30	536231	ADN-16-30-I-P-A	536224	ADN-16-30-A-P-A
		40	536232	ADN-16-40-I-P-A	536225	ADN-16-40-A-P-A
		50	536341	ADN-16-50-I-P-A	536331	ADN-16-50-A-P-A
	20	5	536242	ADN-20-5-I-P-A	536234	ADN-20-5-A-P-A
		10	536243	ADN-20-10-I-P-A	536235	ADN-20-10-A-P-A
		15	536244	ADN-20-15-I-P-A	536236	ADN-20-15-A-P-A
		20	536245	ADN-20-20-I-P-A	536237	ADN-20-20-A-P-A
		25	536246	ADN-20-25-I-P-A	536238	ADN-20-25-A-P-A
		30	536247	ADN-20-30-I-P-A	536239	ADN-20-30-A-P-A
		40	536248	ADN-20-40-I-P-A	536240	ADN-20-40-A-P-A
		50	536249	ADN-20-50-I-P-A	536241	ADN-20-50-A-P-A
	25	5	536259	ADN-25-5-I-P-A	536251	ADN-25-5-A-P-A
		10	536260	ADN-25-10-I-P-A	536252	ADN-25-10-A-P-A
		15	536261	ADN-25-15-I-P-A	536253	ADN-25-15-A-P-A
		20	536262	ADN-25-20-I-P-A	536254	ADN-25-20-A-P-A
		25	536263	ADN-25-25-I-P-A	536255	ADN-25-25-A-P-A
		30	536264	ADN-25-30-I-P-A	536256	ADN-25-30-A-P-A
		40	536265	ADN-25-40-I-P-A	536257	ADN-25-40-A-P-A
		50	536266	ADN-25-50-I-P-A	536258	ADN-25-50-A-P-A
	32	5	536278	ADN-32-5-I-P-A	536268	ADN-32-5-A-P-A
		10	536279	ADN-32-10-I-P-A	536269	ADN-32-10-A-P-A
		15	536280	ADN-32-15-I-P-A	536270	ADN-32-15-A-P-A
		20	536281	ADN-32-20-I-P-A	536271	ADN-32-20-A-P-A
		25	536282	ADN-32-25-I-P-A	536272	ADN-32-25-A-P-A
		30	536283	ADN-32-30-I-P-A	536273	ADN-32-30-A-P-A
		40	536284	ADN-32-40-I-P-A	536274	ADN-32-40-A-P-A
		50	536285	ADN-32-50-I-P-A	536275	ADN-32-50-A-P-A
		60	536286	ADN-32-60-I-P-A	536276	ADN-32-60-A-P-A
		80	536287	ADN-32-80-I-P-A	536277	ADN-32-80-A-P-A

Compact cylinders ADN, to ISO 21287

Technical data

FESTO

Ordering data						
Type	Piston Ø	Stroke	I – Piston rod with female thread P – Flexible cushioning rings/pads at both ends		A – Male piston rod thread P – Flexible cushioning rings/pads at both ends	
	[mm]	[mm]	Part No.	Type	Part No.	Type
	40	5	536299	ADN-40-5-I-P-A	536289	ADN-40-5-A-P-A
		10	536300	ADN-40-10-I-P-A	536290	ADN-40-10-A-P-A
		15	536301	ADN-40-15-I-P-A	536291	ADN-40-15-A-P-A
		20	536302	ADN-40-20-I-P-A	536292	ADN-40-20-A-P-A
		25	536303	ADN-40-25-I-P-A	536293	ADN-40-25-A-P-A
		30	536304	ADN-40-30-I-P-A	536294	ADN-40-30-A-P-A
		40	536305	ADN-40-40-I-P-A	536295	ADN-40-40-A-P-A
		50	536306	ADN-40-50-I-P-A	536296	ADN-40-50-A-P-A
		60	536307	ADN-40-60-I-P-A	536297	ADN-40-60-A-P-A
		80	536308	ADN-40-80-I-P-A	536298	ADN-40-80-A-P-A
	50	5	536320	ADN-50-5-I-P-A	536310	ADN-50-5-A-P-A
		10	536321	ADN-50-10-I-P-A	536311	ADN-50-10-A-P-A
		15	536322	ADN-50-15-I-P-A	536312	ADN-50-15-A-P-A
		20	536323	ADN-50-20-I-P-A	536313	ADN-50-20-A-P-A
		25	536324	ADN-50-25-I-P-A	536314	ADN-50-25-A-P-A
		30	536325	ADN-50-30-I-P-A	536315	ADN-50-30-A-P-A
		40	536326	ADN-50-40-I-P-A	536316	ADN-50-40-A-P-A
		50	536327	ADN-50-50-I-P-A	536317	ADN-50-50-A-P-A
		60	536328	ADN-50-60-I-P-A	536318	ADN-50-60-A-P-A
		80	536329	ADN-50-80-I-P-A	536319	ADN-50-80-A-P-A
	63	10	536342	ADN-63-10-I-P-A	536332	ADN-63-10-A-P-A
		15	536343	ADN-63-15-I-P-A	536333	ADN-63-15-A-P-A
		20	536344	ADN-63-20-I-P-A	536334	ADN-63-20-A-P-A
		25	536345	ADN-63-25-I-P-A	536335	ADN-63-25-A-P-A
		30	536346	ADN-63-30-I-P-A	536336	ADN-63-30-A-P-A
		40	536347	ADN-63-40-I-P-A	536337	ADN-63-40-A-P-A
		50	536348	ADN-63-50-I-P-A	536338	ADN-63-50-A-P-A
		60	536349	ADN-63-60-I-P-A	536339	ADN-63-60-A-P-A
		80	536350	ADN-63-80-I-P-A	536340	ADN-63-80-A-P-A
	80	10	536363	ADN-80-10-I-P-A	536353	ADN-80-10-A-P-A
		15	536364	ADN-80-15-I-P-A	536354	ADN-80-15-A-P-A
		20	536365	ADN-80-20-I-P-A	536355	ADN-80-20-A-P-A
		25	536366	ADN-80-25-I-P-A	536356	ADN-80-25-A-P-A
		30	536367	ADN-80-30-I-P-A	536357	ADN-80-30-A-P-A
		40	536368	ADN-80-40-I-P-A	536358	ADN-80-40-A-P-A
		50	536369	ADN-80-50-I-P-A	536359	ADN-80-50-A-P-A
		60	536370	ADN-80-60-I-P-A	536360	ADN-80-60-A-P-A
		80	536371	ADN-80-80-I-P-A	536361	ADN-80-80-A-P-A
	100	10	536384	ADN-100-10-I-P-A	536374	ADN-100-10-A-P-A
		15	536385	ADN-100-15-I-P-A	536375	ADN-100-15-A-P-A
		20	536386	ADN-100-20-I-P-A	536376	ADN-100-20-A-P-A
		25	536387	ADN-100-25-I-P-A	536377	ADN-100-25-A-P-A
		30	536388	ADN-100-30-I-P-A	536378	ADN-100-30-A-P-A
		40	536389	ADN-100-40-I-P-A	536379	ADN-100-40-A-P-A
		50	536390	ADN-100-50-I-P-A	536380	ADN-100-50-A-P-A
		60	536391	ADN-100-60-I-P-A	536381	ADN-100-60-A-P-A
		80	536392	ADN-100-80-I-P-A	536382	ADN-100-80-A-P-A

Compact cylinders ADN, to ISO 21287

Technical data

FESTO

Ordering data						
Type	Piston Ø	Stroke	I – Piston rod with female thread PPS – Pneumatic cushioning, self-adjusting at both ends		A – Male piston rod thread PPS – Pneumatic cushioning, self-adjusting at both ends	
	[mm]	[mm]	Part No.	Type	Part No.	Type
	32	10	572646	ADN-32-10-I-PPS-A	572655	ADN-32-10-A-PPS-A
		15	572647	ADN-32-15-I-PPS-A	572656	ADN-32-15-A-PPS-A
		20	572648	ADN-32-20-I-PPS-A	572657	ADN-32-20-A-PPS-A
		25	572649	ADN-32-25-I-PPS-A	572658	ADN-32-25-A-PPS-A
		30	572650	ADN-32-30-I-PPS-A	572659	ADN-32-30-A-PPS-A
		40	572651	ADN-32-40-I-PPS-A	572660	ADN-32-40-A-PPS-A
		50	572652	ADN-32-50-I-PPS-A	572661	ADN-32-50-A-PPS-A
		60	572653	ADN-32-60-I-PPS-A	572662	ADN-32-60-A-PPS-A
	40	80	572654	ADN-32-80-I-PPS-A	572663	ADN-32-80-A-PPS-A
		10	572664	ADN-40-10-I-PPS-A	572673	ADN-40-10-A-PPS-A
		15	572665	ADN-40-15-I-PPS-A	572674	ADN-40-15-A-PPS-A
		20	572666	ADN-40-20-I-PPS-A	572675	ADN-40-20-A-PPS-A
		25	572667	ADN-40-25-I-PPS-A	572676	ADN-40-25-A-PPS-A
		30	572668	ADN-40-30-I-PPS-A	572677	ADN-40-30-A-PPS-A
		40	572669	ADN-40-40-I-PPS-A	572678	ADN-40-40-A-PPS-A
		50	572670	ADN-40-50-I-PPS-A	572679	ADN-40-50-A-PPS-A
	50	60	572671	ADN-40-60-I-PPS-A	572680	ADN-40-60-A-PPS-A
		80	572672	ADN-40-80-I-PPS-A	572681	ADN-40-80-A-PPS-A
		10	572682	ADN-50-10-I-PPS-A	572691	ADN-50-10-A-PPS-A
		15	572683	ADN-50-15-I-PPS-A	572692	ADN-50-15-A-PPS-A
		20	572684	ADN-50-20-I-PPS-A	572693	ADN-50-20-A-PPS-A
		25	572685	ADN-50-25-I-PPS-A	572694	ADN-50-25-A-PPS-A
		30	572686	ADN-50-30-I-PPS-A	572695	ADN-50-30-A-PPS-A
		40	572687	ADN-50-40-I-PPS-A	572696	ADN-50-40-A-PPS-A
		50	572688	ADN-50-50-I-PPS-A	572697	ADN-50-50-A-PPS-A
		60	572689	ADN-50-60-I-PPS-A	572698	ADN-50-60-A-PPS-A
		80	572690	ADN-50-80-I-PPS-A	572699	ADN-50-80-A-PPS-A

Compact cylinders ADN, to ISO 21287

Technical data

Ordering data						
Type	Piston Ø	Stroke	I – Piston rod with female thread PPS – Pneumatic cushioning, self-adjusting at both ends		A – Male piston rod thread PPS – Pneumatic cushioning, self-adjusting at both ends	
	[mm]		Part No.	Type	Part No.	Type
	63	10	572700	ADN-63-10-I-PPS-A	572709	ADN-63-10-A-PPS-A
		15	572701	ADN-63-15-I-PPS-A	572710	ADN-63-15-A-PPS-A
		20	572702	ADN-63-20-I-PPS-A	572711	ADN-63-20-A-PPS-A
		25	572703	ADN-63-25-I-PPS-A	572712	ADN-63-25-A-PPS-A
		30	572704	ADN-63-30-I-PPS-A	572713	ADN-63-30-A-PPS-A
		40	572705	ADN-63-40-I-PPS-A	572714	ADN-63-40-A-PPS-A
		50	572706	ADN-63-50-I-PPS-A	572715	ADN-63-50-A-PPS-A
		60	572707	ADN-63-60-I-PPS-A	572716	ADN-63-60-A-PPS-A
		80	572708	ADN-63-80-I-PPS-A	572717	ADN-63-80-A-PPS-A
	80	10	572718	ADN-80-10-I-PPS-A	572727	ADN-80-10-A-PPS-A
		15	572719	ADN-80-15-I-PPS-A	572728	ADN-80-15-A-PPS-A
		20	572720	ADN-80-20-I-PPS-A	572729	ADN-80-20-A-PPS-A
		25	572721	ADN-80-25-I-PPS-A	572730	ADN-80-25-A-PPS-A
		30	572722	ADN-80-30-I-PPS-A	572731	ADN-80-30-A-PPS-A
		40	572723	ADN-80-40-I-PPS-A	572732	ADN-80-40-A-PPS-A
		50	572724	ADN-80-50-I-PPS-A	572733	ADN-80-50-A-PPS-A
		60	572725	ADN-80-60-I-PPS-A	572734	ADN-80-60-A-PPS-A
		80	572726	ADN-80-80-I-PPS-A	572735	ADN-80-80-A-PPS-A

Compact cylinders ADN, to ISO 21287

Ordering data – Modular products, basic version and variants

FESTO

M Mandatory data →							
Module No.	Function		Stroke		Cushioning		
	Piston Ø		Piston rod thread		Position sensing		
536 203	ADN	12	1 ... 500	A I	P PPS	A	
536 218		16					
536 233		20					
536 250		25					
536 267		32					
536 288		40					
Ordering example							
536 309	ADN	- 40	- 250	- A	-	- A	

Ordering table										
Size	12	16	20	25	32	40	Condition s	Code	Enter code	
M	Module No.	536 203	536 218	536 233	536 250	536 267	536 288			
	Function	Compact cylinder, double-acting, based on ISO 21287							ADN	
	Piston Ø [mm]	12	16	20	25	32	40	-...		
	Stroke [mm]	1 ... 300				1 ... 400			-...	
	Piston rod thread	Male thread							-A	
		Female thread						1	-I	
	Cushioning	Flexible cushioning rings/pads at both ends							-P	
						Pneumatic cushioning, self-adjusting at both ends		8	-PPS	
	↓	Position sensing	Via proximity sensor							-A

- 1 I Not with piston rod type S20.
Not with extended male thread K2
- 8 PPS Not with improved running performance K10, temperature resistance S6,
low temperature TT, wiper seal R8

Transfer order code

	ADN	-		-		-		-	A
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Compact cylinders ADN, to ISO 21287

Ordering data – Modular products, basic version and variants

0 Options									
Piston rod type		Special thread		Improved running performance		Corrosion protection		Low temperature	
Extended male thread		Extended piston rod		Temperature resistance		Captive rating plate		Wiper seal	
S2 S20	...K2	"...K5	...K8	K10	S6	R3	TL	TT	R8
- S2	- 15K2	- "M16"K5	- 50K8	-	- S6	-	-	-	-

Ordering table										
Size		12	16	20	25	32	40	Conditions	Code	Enter code
0	Piston rod type [mm]		Through piston rod					2	-S2	
			Through, hollow piston rod 1 ... 3001 ... 400					2	-S20	
	Extended male thread [mm]		Piston rod with extended male thread 1 ... 101 ... 20						-...K2	
			Piston rod with special thread Male thread		M6	M8	M10x1.25 M10	M10x1.25 M10	M10 M12	
	Female thread				–	–	M5	M5	M6	
			Extended piston rod [mm]		Extended piston rod 1 ... 3001 ... 400					
	Improved running performance				–	–	Smooth anodised aluminium coated piston rod			
	Temperature resistance		Heat-resistant seals up to max. 120 °C						-S6	
	Corrosion protection		High corrosion protection					5	-R3	
	Captive rating plate		Laser etched rating plate						-TL	
Low temperature [°C]		–	–	–40 ... +80			67	-TT		
Wiper seal		–	–	Dust protection			6	-R8		

2 S2, S20 Not with improved running performance K10.
Not with corrosion protection R3.

Not with wiper seal R8

3 K8 The sum of the stroke length and piston rod extension must not exceed the maximum permissible stroke length

4 K10 Not with extended male thread K2.
Not with special piston rod thread K5.
Not with corrosion protection R3

5 R3 Not with captive rating plate TL.
Not with wiper seal R8

6 TT, R8 Not with improved running performance K10.
Not with temperature resistance S6

7 TT Not with wiper seal R8

Transfer order code

- - - - - - - - - - -

Compact cylinders ADN, to ISO 21287

Ordering data – Modular products, basic version and variants

FESTO

M Mandatory data							→
Module No.	Function		Stroke		Cushioning		
	Piston Ø		Piston rod thread		Position sensing		
536 309	ADN	50	1 ... 500	A	P	A	
536 330		63		I	PPS		
536 351		80					
536 372		100					
536 393		125					
Ordering example							
536 309	ADN	- 50	- 350	- A	-	- A	

Ordering table								
Size	50	63	80	100	125	Conditions	Code	Enter code
M	Module No.	536 309	536 330	536 351	536 372	536 393		
	Function	Compact cylinder, double-acting, based on ISO 21287						ADN
	Piston Ø [mm]	50	63	80	100	125		-...
	Stroke [mm]	1 ... 400		1 ... 500				-...
	Piston rod thread	Male thread						-A
		Female thread					1	-I
	Cushioning	Flexible cushioning rings/pads at both ends						-P
		Pneumatic cushioning, self-adjusting at both ends					8	-PPS
	Position sensing	Via proximity sensor						-A

- 1** I Not with piston rod type S20.
Not with extended male thread K2
- 8** PPS Not with improved running performance K10, temperature resistance S6,
low temperature TT, wiper seal R8

Transfer order code

	ADN	-		-		-		-	A
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Compact cylinders ADN, to ISO 21287

Ordering data – Modular products, basic version and variants

0 Options									
Piston rod type		Special thread		Improved running performance		Corrosion protection		Low temperature	
Extended male thread		Extended piston rod		Temperature resistance		Captive rating plate		Wiper seal	
S2 S20	...K2	"...K5	...K8	K10	S6	R3	TL	TT	R8
- S2	- 15K2	- "M16"K5	- 50K8	-	- S6	-	-	-	-

Ordering table										
Size		50	63	80	100	125	Conditions	Code	Enter code	
0	Piston rod type		Through piston rod				2	-S2		
			Through, hollow piston rod				2	-S20		
	[mm]		1 ... 400		1 ... 500					
	Extended male thread		Piston rod with extended male thread							
	[mm]		1 ... 20		1 ... 30		1 ... 40	-...K2		
	Piston rod with special thread	Male thread	M12 M16	M12 M16	M16 M20 M20x1.5	M16 M20 M20x1.5	M20	-“...”K5		
		Female thread	M8	M8	M10	M10	–			
	Extended piston rod		Extended piston rod							
	[mm]		1 ... 400		1 ... 500		3	-...K8		
	Improved running performance		Smooth anodised aluminium coated piston rod				4	-K10		
	[mm]		2 ... 400		5 ... 400		5 ... 500			
	Temperature resistance		Heat-resistant seals up to max. 120 °C					-S6		
Corrosion protection		High corrosion protection				5	-R3			
Captive rating plate		Laser etched rating plate					-TL			
Low temperature [°C]		–40 ... +80				–	6 7	-TT		
Wiper seal		Dust protection				–	6	-R8		

2 S2, S20 Not with improved running performance K10.
Not with corrosion protection R3.

3 K8 The sum of the stroke length and piston rod extension must not exceed the maximum permissible stroke length

4 K10 Not with extended male thread K2.
Not with special piston rod thread K5.
Not with corrosion protection R3

5 R3 Not with captive rating plate TL.
Not with wiper seal R8

6 TT, R8 Not with improved running performance K10.
Not with temperature resistance S6

7 TT Not with wiper seal R8

Transfer order code

- - - - - - - - - -

Compact cylinders ADN, to ISO 21287

FESTO

Ordering data – Modular products, S10 – Version with constant motion, S11 – Version with low friction

Mandatory data							→
Module No.	Function	Piston Ø	Stroke	Piston rod thread	Cushioning	Position sensing	
536 203	ADN	12	1 ... 500	A	P	A	
536 218		16		I			
536 233		20					
536 250		25					
536 267		32					
536 288		40					
536 309		50					
536 330		63					
536 351		80					
536 372		100					
536 393		125					
Order example							
536 309	ADN	- 50	- 350	- A	- P	- A	

Ordering table										
Size	12	16	20	25	32	40	Condition s	Code		Enter code
M	Module No.	536 203	536 218	536 233	536 250	536 267	536 288			
	Function	Compact cylinder, double-acting, based on ISO 21287							ADN	
	Piston Ø [mm]	12	16	20	25	32	40		-...	
	Stroke [mm]	1 ... 300				1 ... 400			-...	
	Piston rod thread	Male thread							-A	
		Female thread						1	-I	
	Cushioning	Flexible cushioning rings/pads at both ends							-P	
	Position sensing	Via proximity sensor							-A	
O	Male thread extended [mm]	Extended male piston rod thread 1 ... 10 1 ... 20						-...K2		
	Special piston rod thread	Male thread	M6	M8	M10x1.25 M10	M10x1.25 M10	M10 M12	M10 M12	-“...”K5	
		Female thread	–	–	M5	M5	M6	M6		
	Piston rod extended [mm]	Extended piston rod 1 ... 300				1 ... 400		2	-...K8	
	Improved running performance	–	–	Smooth anodised aluminium coated piston rod				3	-K10	
	Constant motion [mm]	Slow speed (constant motion at low piston speeds)						4	-S10	
		Restricted stroke 20 ... 300 20 ... 400								
	Low friction	Low friction						5	-S11	
	Corrosion protection	High corrosion protection						6	-R3	
	Captive rating plate	Laser etched rating plate							-TL	

- | | | | |
|-------|---|-------|----------------------------------|
| 1 I | Not with extended male thread K2 | 4 S10 | Not with low friction S11 |
| 2 K8 | The sum of the stroke length and piston rod extension must not exceed the maximum permissible stroke length | 5 S11 | Not with constant motion S10 |
| 3 K10 | Not with extended male thread K2
Not with special piston rod thread K5
Not with corrosion protection R3 | 6 R3 | Not with captive rating plate TL |

Transfer order code

	ADN	–		–		–		–	P	–	A
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Compact cylinders ADN, to ISO 21287

FESTO

Ordering data – Modular products, S10 – Version with constant motion, S11 – Version with low friction

Options							
Male thread extended	Special thread	Piston rod extended	Improved running performance	Constant motion	Low friction	Corrosion protection	Captive rating plate
...K2	"..."K5	...K8	K10	S10	S11	R3	TL
-	- "M16"K5	- 50K8	-	- S10	-	- R3	-

Ordering table									
Size		50	63	80	100	125	Condition s	Code	Enter code
M	Module No.		536 309	536 330	536 351	536 372	536 393		
	Function		Compact cylinder, double-acting, based on ISO 21287					ADN	ADN
	Piston Ø	[mm]	50	63	80	100	125	-...	
	Stroke	[mm]	1 ... 400		1 ... 500			-...	
	Piston rod thread	Male thread						-A	
		Female thread					1	-I	
	Cushioning	Flexible cushioning rings/pads at both ends						-P	-P
	Position sensing	Via proximity sensor						-A	-A
0	Male thread extended		Extended male piston rod thread						
		[mm]	1 ... 20		1 ... 30		1 ... 40	-...K2	
	Special piston rod thread	Male thread	M12	M12	M16	M16	M20	-“...”K5	
			M16	M16	M20	M20	M20x1.5		
		Female thread	M8	M8	M10	M10	—		
	Piston rod extended	Extended piston rod							
		[mm]	1 ... 400		1 ... 500		2	-...K8	
	Improved running performance	Smooth anodised aluminium coated piston rod					3	-K10	
		[mm]	2 ... 400		5 ... 400	5 ... 500			
	Constant motion	Slow speed (constant motion at low piston speeds)					4	-S10	
		[mm]	20 ... 400		20 ... 500				
	Low friction	Low friction					5	-S11	
Corrosion protection	High corrosion protection					6	-R3		
Captive rating plate	Laser etched rating plate						-TL		

1 I Not with extended male thread K2

2 K8 The sum of the stroke length and piston rod extension must not exceed the maximum permissible stroke length

3 K10 Not with extended male thread K2
Not with special piston rod thread K5
Not with corrosion protection R3

4 S10 Not with low friction S11

5 S11 Not with constant motion S10

6 R3 Not with captive rating plate TL

Transfer order code

- [] - [] - [] - [] - [] - [] - [] - []

Compact cylinders ADN, to ISO 21287

FESTO

Ordering data – Modular products, Q – Version with square piston rod, non-rotating

Mandatory data						
Module No.	Function	Piston Ø	Stroke	Piston rod thread	Cushioning	Position sensing
536 203	ADN	12	1 ... 500	A I	P	A
536 218		16				
536 233		20				
536 250		25				
536 267		32				
536 288		40				
536 309		50				
536 330		63				
536 351		80				
536 372		100				
536 393	125					
Order example						
536 309	ADN	- 50	- 350	- A	- P	- A

Ordering table									
Size	12	16	20	25	32	40	Condition s	Code	Enter code
M	Module No.	536 203	536 218	536 233	536 250	536 267	536 288		
	Function	Compact cylinder, double-acting, based on ISO 21287						ADN	ADN
	Piston Ø [mm]	12	16	20	25	32	40	-...	
	Stroke [mm]	1 ... 300			1 ... 400			-...	
	Piston rod thread	Male thread						-A	
		Female thread					1	-I	
	Cushioning	Flexible cushioning rings/pads at both ends						-P	-P
	Position sensing	Via proximity sensor						-A	-A
O	Protection against torsion	Square piston rod						-Q	-Q
	Type of piston rod	Through piston rod						-S2	
			Through, hollow piston rod					-S20	
			Restricted stroke						
	[mm]		1 ... 200		1 ... 300				
	Male thread extended	Extended male piston rod thread							
	[mm]	1 ... 10		1 ... 20				-...K2	
	Special piston Male thread rod thread	M6	M8	M10x1.25 M10	M10x1.25 M10	M10	M10	-“...”K5	
	Piston rod extended	Extended piston rod							
	[mm]	1 ... 300			1 ... 400		2	-...K8	
	Temperature resistance	Heat-resistant seals up to max. 120 °C						-S6	
	Captive rating plate	Laser etched rating plate						-TL	

1 I Not with piston rod type S20
Not with extended male thread K2

2 K8 The sum of the stroke length and piston rod extension must not exceed the maximum permissible stroke length

Transfer order code

	ADN	-		-		-	P	-	A
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Compact cylinders ADN, to ISO 21287

FESTO

Ordering data – Modular products, Q – Version with square piston rod, non-rotating

Options						
Protection against torsion	Type of piston rod	Male thread extended	Special thread	Piston rod extended	Temperature resistance	Captive rating plate
Q	S2 S20	...K2	"..."K5	...K8	S6	TL
- Q	- S2	- 15K2	- "M16"K5	- 50K8	- S6	-

Ordering table										
Size		50	63	80	100	125	Condition s	Code	Enter code	
M	Module No.	536 309	536 330	536 351	536 372	536 393				
	Function	Compact cylinder, double-acting, based on ISO 21287						ADN	ADN	
	Piston Ø [mm]	50	63	80	100	125		-...		
	Stroke [mm]	1 ... 400			1 ... 500			-...		
	Piston rod thread	Male thread						-A		
		Female thread					1	-I		
	Cushioning	Flexible cushioning rings/pads at both ends						-P	-P	
	Position sensing	Via proximity sensor						-A	-A	
	Q	Protection against torsion	Square piston rod						-Q	-Q
		Type of piston rod	Through piston rod						-S2	
Through, hollow piston rod						-S20				
Restricted stroke										
[mm]		1 ... 300			1 ... 400					
Male thread extended [mm]		Extended male piston rod thread								
		1 ... 20			1 ... 30		1 ... 40	-...K2		
Special piston Male thread rod thread		M12	M12	M16	M16	M20		-“...”K5		
Piston rod extended [mm]		Extended piston rod								
		1 ... 400			1 ... 500		2	-...K8		
Temperature resistance	Heat-resistant seals up to max. 120 °C						-S6			
Captive rating plate	Laser etched rating plate						-TL			

¹ I Not with piston rod type S20
Not with extended male thread K2

² K8 The sum of the stroke length and piston rod extension must not exceed the maximum permissible stroke length

Transfer order code

- Q - - - - -

Compact cylinders ADN, to ISO 21287

FESTO

Ordering data – Modular products, S1 – Version with reinforced piston rod

M Mandatory data							O Options					
Module No.	Function	Piston Ø	Stroke	Piston rod thread	Cushioning	Position sensing	Male thread extended	Special thread	Piston rod extended	Temperature resistance	Reinforced piston rod	Captive rating plate
536 250	ADN	25	5 ... 500	A	P	A	...K2	“...”K5	...K8	S6	S1	TL
536 288		40		I								
536 330		63										
536 372		100										
Order example												
536 288	ADN	40	320	I	P	A			50K8	S6	S1	TL

Ordering table									
Size		25	40	63	100	Condition s	Code		Enter code
M	Module No.		536 250	536 288	536 330	536 372			
	Function		Compact cylinder, double-acting, based on ISO 21287					ADN	ADN
	Piston Ø	[mm]	25	40	63	100		-...	
	Stroke	[mm]	5 ... 300	10 ... 400		10 ... 500		-...	
	Piston rod thread		Male thread					-A	
			Female thread				1	-I	
	Cushioning		Flexible cushioning rings/pads at both ends					-P	-P
	Position sensing		Via proximity sensor					-A	-A
O	Male thread extended [mm]		Extended male piston rod thread						
			1 ... 20				1 ... 30	-...K2	
	Special piston rod thread	Male thread	M10x1.25 M10	M10x1.25 M12	M12x1.25 M16	M16x1.5 M20		-“...”K5	
		Female thread	M5	M8	M10	—			
	Piston rod extended [mm]		Extended piston rod						
			1 ... 300				1 ... 400	1 ... 500	2
	Temperature resistance		Heat-resistant seals up to max. 120 °C					-S6	
	Reinforced piston rod		Reinforced piston rod or extended piston rod bearing					-S1	-S1
	Captive rating plate		Laser etched rating plate					-TL	

[1] I Not with extended male thread K2

[2] K8 The sum of the stroke length and piston rod extension must not exceed the maximum permissible stroke length

Transfer order code

	ADN	-		-		-	P	-	A	-		-		-	S1	-	
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Compact cylinders ADN-KP, standard port pattern, with clamping unit

FESTO

Type codes

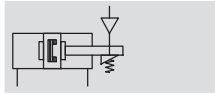
		ADN	–	20	–	50	–	KP	–	A	–	P	–	A	–	K2
Type																
Double-acting																
ADN	Compact cylinder															
Piston Ø [mm]																
Stroke [mm]																
Clamping unit																
KP	Integrated															
Piston rod thread																
A	Male thread															
I	Female thread															
Cushioning																
P	Flexible cushioning rings/pads at both ends															
Position sensing																
A	Via proximity sensor															
Variant																
K2	Extended male piston rod thread															
K5	Special piston rod thread															
K8	Extended piston rod															
TL	Captive rating plate															

Compact cylinders ADN-KP, standard port pattern, with clamping unit

FESTO

Technical data

Function



-N- Diameter
20 ... 100 mm
-T- Stroke length
10 ... 500 mm

Variants



K2



K5



K8



Note

Additional measures are required for use in safety-related control systems; in Europe, for example, the standards listed under the EC Machinery Directive must be observed. Without

additional measures in accordance with statutory minimum requirements, the product is not suitable for use in safety-related sections of control systems.

General technical data									
Piston Ø		20	25	32	40	50	63	80	100
Pneumatic connection	Cylinder	M5	M5	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$
	KP	M5	M5	M5	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$
Female piston rod thread		M6		M8		M10		M12	
	K5	M5		M6		M8		M10	
Male piston rod thread		M8		M10x1.25		M12x1.25		M16x1.5	
	K5	M10, M10x1.25		M10, M12		M12, M16		M16, M20, M20x1.5	
Max. axial backlash with clamped piston rod without load [mm]		0.5				0.7			
Constructional design		Piston							
		Piston rod							
		Cylinder barrel							
Cushioning		Flexible cushioning rings/pads at both ends							
Position sensing		Via proximity sensor							
Type of mounting		Via through-holes							
		Via female threads							
		Via accessories							
Mounting position		Any							
Clamping type with effective direction of action		From both sides							

Operating and environmental conditions	
Operating medium	Filtered compressed air, lubricated or unlubricated
Operating pressure [bar]	1.5 ... 10
Min. release pressure [bar]	3
Ambient temperature ¹⁾ [°C]	-10 ... +80
Corrosion resistance class CRC ²⁾	2

1) Note operating range of proximity sensors

2) Corrosion resistance class 2 to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents

Compact cylinders ADN-KP, standard port pattern, with clamping unit

FESTO

Technical data

Impact energy [J]								
Piston Ø	20	25	32	40	50	63	80	100
Max. impact energy at the end positions	0.2	0.3	0.4	0.7	1	1.3	1.8	2.5

Permissible impact velocity:

$$v_{perm.} = \sqrt{\frac{2 \times E_{perm.}}{m_{dead} + m_{load}}}$$

$v_{perm.}$ Permissible impact velocity

$E_{perm.}$ Max. impact energy

m_{dead} Moving load (drive)

m_{load} Moving work load

Note

These specifications represent the maximum values which can be reached. Note the maximum permitted impact energy.

Maximum permissible load:

$$m_{load} = \frac{2 \times E_{perm.}}{v^2} - m_{dead}$$

Forces [N]								
Piston Ø	20	25	32	40	50	63	80	100
Theoretical force at 6 bar, advancing	188	295	483	754	1178	1870	3016	4712
Theoretical force at 6 bar, retracting	141	247	415	633	990	1682	2721	4418
Static holding force	350	350	600	1000	1400	2000	5000	5000

Note

The specified holding force refers to a static load. If this value is exceeded, slippage may occur. Dynamic forces occurring during operation must not

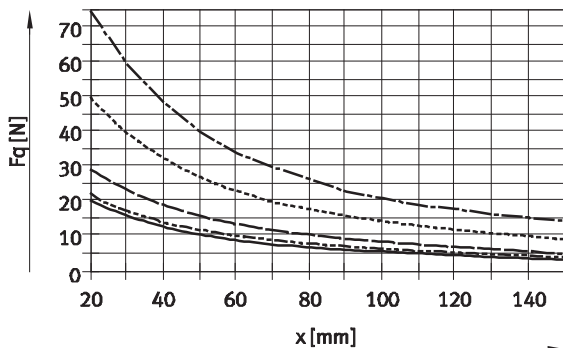
exceed the static holding force. The clamping unit is not backlash-free in the clamped condition if varying loads are applied to the piston rod.

Activation:

The clamping unit may only be released if the forces at the piston have reached equilibrium. Otherwise, there is a risk of accidents due to

sudden movement of the piston rod. Blocking off the air supply at both ends (e.g. with a 5/3-way valve) does not provide any safety.

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



— Ø 20
 - - - Ø 25
 — Ø 32/40
 - - - Ø 50/63
 — Ø 80/100

Weight [g]								
Piston Ø	20	25	32	40	50	63	80	100
Product weight with 0 mm stroke	282	344	503	789	1268	1894	3973	5497
Additional weight per 10 mm stroke	22	26	29	45	60	68	93	112
Moving load with 0 mm stroke	53	63	100	173	296	368	755	932
Additional load per 10 mm stroke	6	6	9	16	25	25	39	39

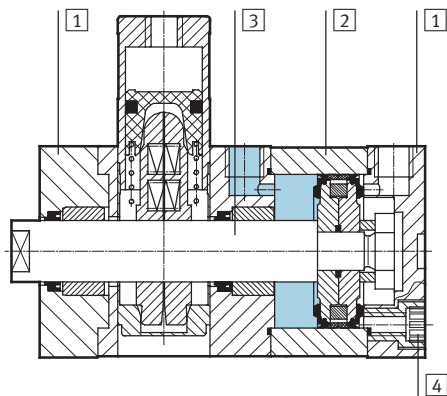
Compact cylinders ADN-KP, standard port pattern, with clamping unit

Technical data

FESTO

Materials

Sectional view



Compact cylinder		
1	Cover	Anodised aluminium
2	Cylinder barrel	Anodised aluminium
3	Piston rod	High-alloy steel
4	Flange screws	Ø 20 ... 63 Galvanised steel
		Ø 80 ... 100 Standard screws, galvanised steel
–	Seals	Polyurethane, nitrile rubber
	Note on materials	RoHS compliant

Compact cylinders ADN-KP, standard port pattern, with clamping unit

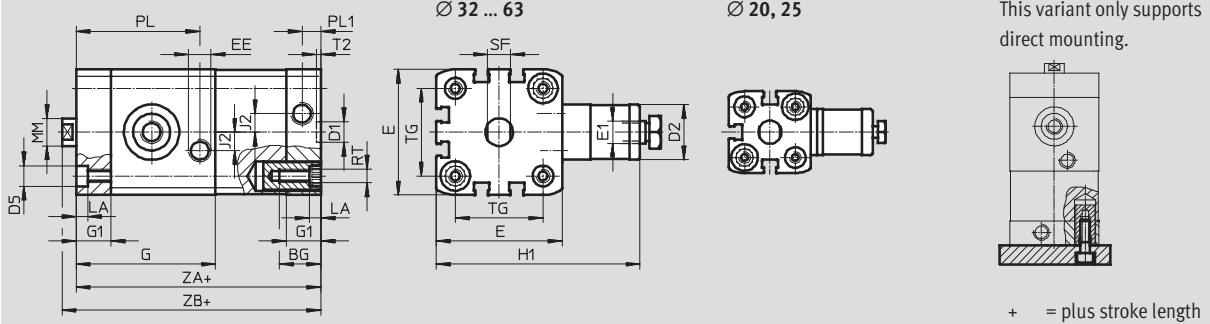
FESTO

Technical data

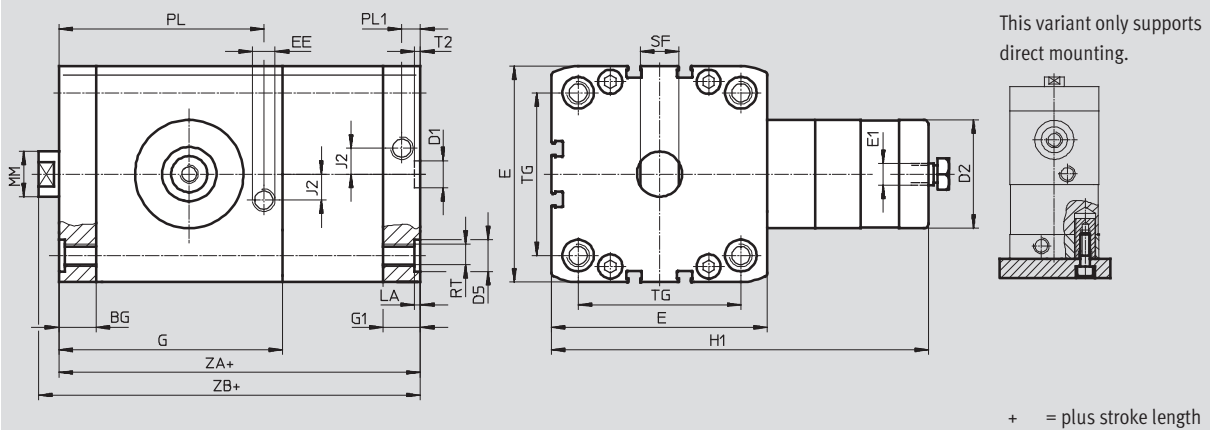
Dimensions – Basic version

Download CAD Data → www.festo.com/us/cad

Ø 20 ... 63



Ø 80, 100



Ø	BG	D1	D2	D5	E	E1	EE	G	G1	H1	J2
[mm]	min.	Ø H9	Ø	Ø F9							
20	19.5	9	20	9	35.5 ^{+0.3}	M5	M5	49.8	12	63	2.6
25					39.5 ^{+0.3}			50.6		65	
32					47 ^{+0.3}			56.4		68	
40	26	12	24	12	54.5 ^{+0.3}	G1/8	G1/8	60.4	15	89	8
50					65.5 ^{+0.3}			67.4		108	
63					75.5 ^{+0.3}			76.8		120	
80	17	12	48	15	95.5 ^{+0.6}			99	16.5	167	11.5
100	21.5				113.5 ^{+0.6}			99.6		176	

Ø	LA	MM Ø	PL	PL1	RT	SF	T2	TG	ZA	ZB
[mm]	+0.2	h8	+0.2	+0.2		h13	+0.2	±0.2	±0.3	+1.2
20	5	10	42.8	6	M5	9	2.1	22	74.8	80.8
25			44.6					26	77.6	83.1
32		12	49.6	8.2	M6	10		32.5	85.4	91.4
40			16			53.6		13	38	90.4
50		20	60.6		M8	17	2.6	46.5	97.4	105.6
63	70		56.5	110.8				118.9		
80	2.6	25	90.7	M10	21	72		136.5	145.4	
100			88.6			10.5		89	145.1	154.1

Compact cylinders ADN-KP, standard port pattern, with clamping unit

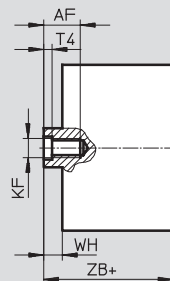
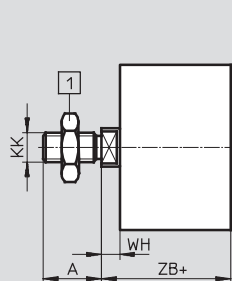
FESTO

Technical data

Dimensions – Variants

Download CAD Data → www.festo.com/us/cad

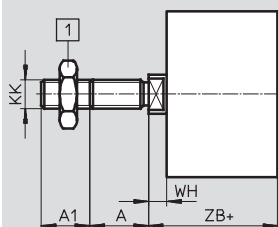
Basic version



1 Hex nut to DIN 439-B
only with $\varnothing 32 \dots 100$

+ = plus stroke length

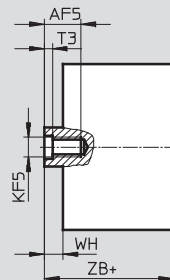
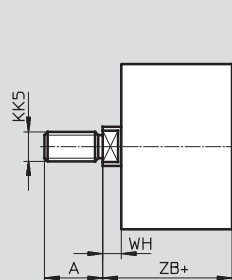
K2 – Extended male piston rod thread



1 Hex nut to DIN 439-B
only with $\varnothing 32 \dots 100$

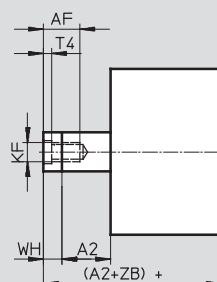
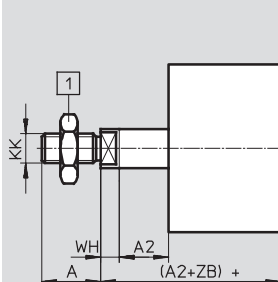
+ = plus stroke length

K5 – Special piston rod thread



+ = plus stroke length

K8 – Extended piston rod



1 Hex nut to DIN 439-B
only with $\varnothing 32 \dots 100$

+ = plus stroke length

Compact cylinders ADN-KP, standard port pattern, with clamping unit

FESTO

Technical data

Ø	A	A1	A2	AF	AF5	KF	KF5
[mm]	-0.5			min.	min.		
20	16	1 ... 20	1 ... 300	14	12	M6	M5
25			1 ... 400	16	14	M8	M6
32	22						
40				28	1 ... 30	1 ... 500	20
50							
63							
80							
100							

Ø [mm]	KK	KK5	T3	T4	WH +1.3	ZB +1.2
20	M8	M10x1.25	2	2.6	5.5	80.8
25		M10				83.1
32	M10x1.25	M10	2.6	3.3	6	91.4
40		M12			6.1	96.5
50	M12x1.25	M12	3.3	4.7	8.2	105.6
63		M16			8.1	118.9
80	M16x1.5	M16	4.7	6.1	8.9	145.4
100		M20x1.5 M20			9	154.1

Compact cylinders ADN-KP, standard port pattern, with clamping unit

FESTO

Ordering data – Modular products

M Mandatory data →							
Module No.	Function	Piston Ø	Stroke	Clamping unit	Piston rod thread	Cushioning	Position sensing
548 206	ADN	20	10 ... 500	KP	A I	P	A
548 207		25					
548 208		32					
548 209		40					
548 210		50					
548 211		63					
548 212		80					
548 213		100					
Order example							
548 209	ADN	– 40	– 350	– KP	– A	– P	– A

Ordering table							
Size	20	25	32	40	Condition s	Code	Enter code
M	Module No.	548 206	548 207	548 208	548 209		
	Function	Compact cylinder, double-acting, standard port pattern, with clamping unit					ADN
	Piston Ø [mm]	20	25	32	40	-...	
	Stroke [mm]	10 ... 300		10 ... 400		-...	
	Clamping unit	Integrated					-KP
	Piston rod thread	Male thread					-A
		Female thread				1	-I
	Cushioning	Flexible cushioning rings/pads at both ends					-P
	Position sensing	Via proximity sensor					-A
O	Male thread extended [mm]	Extended male piston rod thread 1 ... 20					-...K2
	Special piston rod thread	Male thread	M10x1.25 M10	M10x1.25 M10	M10 M12		-“...”K5
		Female thread	M5	M5	M6	M6	
	Piston rod extended [mm]	Extended piston rod 1 ... 300			1 ... 400	2	-...K8
	Captive rating plate	Laser etched rating plate					-TL

- 1 I Not with extended male thread K2
 2 K8 The sum of the stroke length and piston rod extension must not exceed the maximum permissible stroke length

Transfer order code

	ADN	-		-		-	KP	-		-	P	-	A
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Compact cylinders ADN-KP, standard port pattern, with clamping unit

FESTO

Ordering data – Modular products

Options			
Male thread extended	Special thread	Piston rod extended	Captive rating plate
...K2	"..."K5	...K8	TL
- 20K2	- "M10"K5	-	- TL

Ordering table									
Size		50	63	80	100	Condition s	Code	Enter code	
[M]	Module No.	548 210	548 211	548 212	548 213				
	Function	Compact cylinder, double-acting, standard port pattern, with clamping unit					ADN	ADN	
	Piston Ø [mm]	50	63	80	100		-...		
	Stroke [mm]	10 ... 400			10 ... 500		-...		
	Clamping unit	Integrated					-KP	-KP	
	Piston rod thread	Male thread					-A		
		Female thread				1	-I		
	Cushioning	Flexible cushioning rings/pads at both ends					-P	-P	
	Position sensing	Via proximity sensor					-A	-A	
[O]	Male thread extended [mm]	Extended male piston rod thread 1 ... 201 ... 30					-...K2		
	Special piston rod thread	Male thread	M12 M16	M12 M16	M16 M20 M20x1.5	M16 M20 M20x1.5	-“...”K5		
		Female thread	M8	M8	M10	M10			
		Piston rod extended [mm]	Extended piston rod 1 ... 4001 ... 500			2		-...K8	
	Captive rating plate		Laser etched rating plate					-TL	

- [1] I** Not with extended male thread K2
- [2] K8** The sum of the stroke length and piston rod extension must not exceed the maximum permissible stroke length

Transfer order code

- - - -

Compact cylinders ADN-EL, standard port pattern, with end position lock

FESTO

Type codes

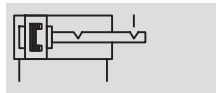
		ADN	–	20	–	100	–	ELV	–	A	–	P	–	A	–	K2
Type																
Double-acting																
ADN	Compact cylinder															
Piston Ø [mm]																
Stroke [mm]																
End position lock																
ELB	At both ends															
ELV	At front															
ELH	At rear															
Piston rod thread																
A	Male thread															
I	Female thread															
Cushioning																
P	Flexible cushioning rings/pads at both ends															
Position sensing																
A	Via proximity sensor															
Variant																
K2	Extended male piston rod thread															
K5	Special piston rod thread															
K8	Extended piston rod															
TL	Captive rating plate															

Compact cylinders ADN-EL, standard port pattern, with end position lock

FESTO

Technical data

Function



- N- Diameter
20 ... 100 mm
- T- Stroke length
10 ... 500 mm

Variants



K2



K5



K8



Note

Additional measures are required for use in safety-related control systems; in Europe, for example, the standards listed under the EC Machinery Directive must be observed. Without

additional measures in accordance with statutory minimum requirements, the product is not suitable for use in safety-related sections of control systems.

General technical data								
Piston Ø	20	25	32	40	50	63	80	100
Pneumatic connection	M5	M5	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$
Female piston rod thread	M6		M8		M10		M12	
K5	M5		M6		M8		M10	
Male piston rod thread	M8		M10x1.25		M12x1.25		M16x1.5	
K5	M10		M10		M12		M16	
Max. axial backlash with end position locked	[mm]	1.3					2.1	
Constructional design	Piston							
	Piston rod							
	Cylinder barrel							
End position lock	ELB	At both ends						
	ELV	At front						
	ELH	At rear						
Cushioning	Flexible cushioning rings/pads at both ends							
Position sensing	Via proximity sensor							
Type of mounting	Via female threads							
	Via accessories							
Mounting position	Any							

Note

- No screws with a head or similar may be used in place of the end position lock, as there is a risk that the function will be impaired if they are screwed in too deeply.
- The exhaust hole must not be closed.
- Locking can be performed from any stroke position, once the drive is brought mechanically into its end position.
- The end position lock has been designed to guard against the load dropping in case of pressure failure.
- Operation of the cylinder in conjunction with a 3-way valve (especially with the function “mid-position closed” and those with “metallic sealing”) should be avoided. The residual pressure that is enclosed on the locking side of the cylinder can release the locking function.
- The cylinder must not be operated with external stops (e.g. shock absorber, buffer, oil brake, etc.):
 - It may not be possible to reliably reach the internal end position.
 - The locking mechanism can wear out prematurely. (In the event of pressure drop in the opposite chamber to less than the locking pressure, the locking piston will prematurely fall to its end position.)

Compact cylinders ADN-EL, standard port pattern, with end position lock

FESTO

Technical data

Operating and environmental conditions								
Piston Ø	20	25	32	40	50	63	80	100
Operating medium	Filtered compressed air, lubricated or unlubricated							
Operating pressure [bar]	2.5 ... 10				1.5 ... 10			
Ambient temperature ¹⁾ [°C]	-20 ... +80							
Corrosion resistance class CRC ²⁾	2							

1) Note operating range of proximity sensors

2) Corrosion resistance class 2 to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents

Forces [N]								
Piston Ø	20	25	32	40	50	63	80	100
Theoretical force at 6 bar, advancing	188	295	483	754	1178	1870	3016	4712
Theoretical force at 6 bar, retracting	141	247	415	686	1057	1750	2827	4524
Static holding force	250	500			2000		5000	

Sizing example

Note

When sizing pneumatic cylinders it is recommended as a basic principle that only 50% of the indicated theoretical forces (see above) be used.

Given:

Installation position = Vertical

Workpiece load = 44 kg

$$F = m \times g = 44 \text{ kg} \times 9.81 \text{ m/s}^2 = 431.6 \text{ N}$$

To be calculated:

Suitable piston Ø

Analysis with 32 mm piston Ø:

Theoretical force at 6 bar, advancing = 483 N

50% of the theoretical force = 241.5 N

Static holding force with 32 mm piston Ø = 500 N

The static force on the end position lock is within the permissible range (max. 500 N) with a workpiece load of 44 kg (431.6 N), however the cylinder would be at 89% capacity.

Result:

A cylinder with a piston Ø of 40 mm is therefore recommended for this application.

Impact energy [J]								
Piston Ø	20	25	32	40	50	63	80	100
Max. impact energy at the end positions	0.2	0.3	0.4	0.7	1	1.3	1.8	2.5

Permissible impact velocity:

$$v_{\text{perm.}} = \sqrt{\frac{2 \times E_{\text{perm.}}}{m_{\text{dead}} + m_{\text{load}}}}$$

$v_{\text{perm.}}$ Permissible impact velocity

$E_{\text{perm.}}$ Max. impact energy

m_{dead} Moving load (drive)

m_{load} Moving work load

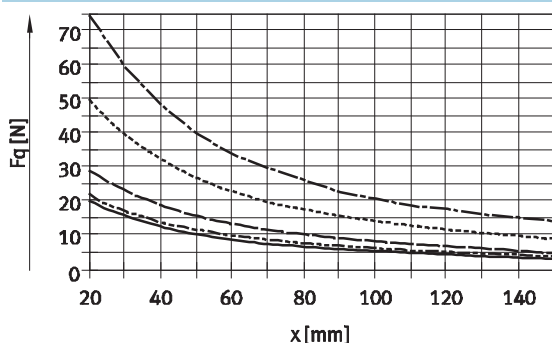
Maximum permissible load:

$$m_{\text{load}} = \frac{2 \times E_{\text{perm.}}}{v^2} - m_{\text{dead}}$$

Note

These specifications represent the maximum values which can be reached. Note the maximum permitted impact energy.

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

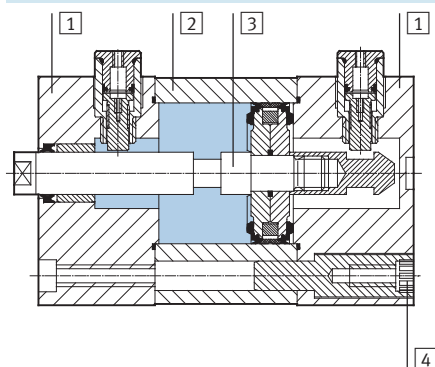


— Ø 20
 - - - - - Ø 25
 ——— Ø 32/40
 - · - · - Ø 50/63
 ——— Ø 80/100

Technical data

Weight [g]								
Piston Ø	20	25	32	40	50	63	80	100
End position lock at both ends								
Product weight with 0 mm stroke	234	339	518	665	1334	1734	3300	4735
Additional weight per 10 mm stroke	22	26	29	38	51	59	79	98
Moving load with 0 mm stroke	43	53	85	101	199	248	475	637
Additional load per 10 mm stroke	6	6	9	9	16	16	25	25
End position lock at front								
Product weight with 0 mm stroke	177	248	387	498	922	1228	2296	3448
Additional weight per 10 mm stroke	22	26	29	38	51	59	79	98
Moving load with 0 mm stroke	35	46	75	98	175	225	464	626
Additional load per 10 mm stroke	6	6	9	9	16	16	25	25
End position lock at rear								
Product weight with 0 mm stroke	181	252	380	505	920	1217	2233	3409
Additional weight per 10 mm stroke	22	26	29	38	51	59	79	98
Moving load with 0 mm stroke	37	45	73	89	168	217	413	582
Additional load per 10 mm stroke	6	6	9	9	16	16	25	25

Sectional view



Compact cylinder		
1	Cover	Anodised aluminium
2	Cylinder barrel	Anodised aluminium
3	Piston rod	High-alloy steel
4	Flange screws	Ø 20 ... 63
		Ø 80 ... 100
–	Seals	Polyurethane, nitrile rubber
	Note on materials	RoHS compliant

Compact cylinders ADN-EL, standard port pattern, with end position lock

FESTO

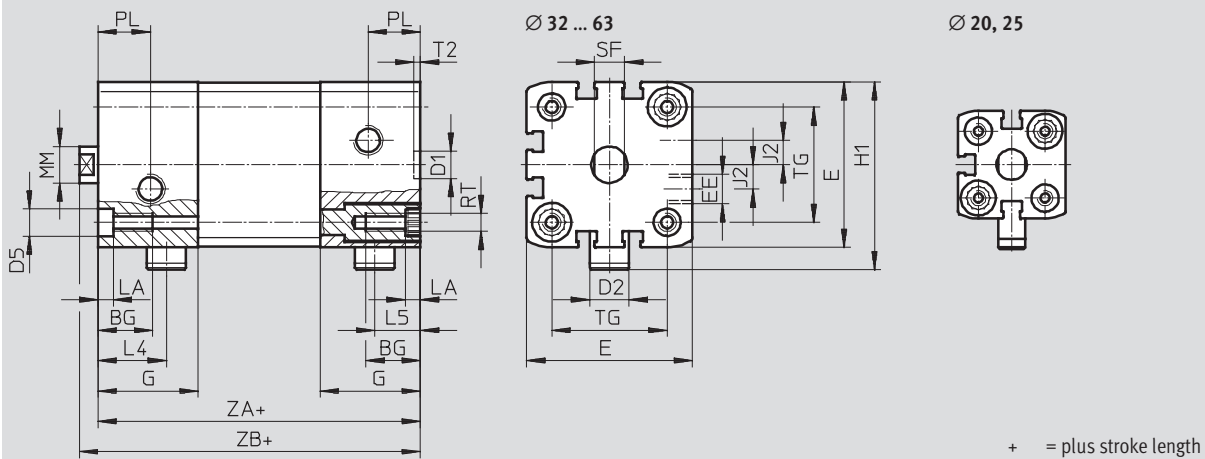
Technical data

Dimensions – Basic version

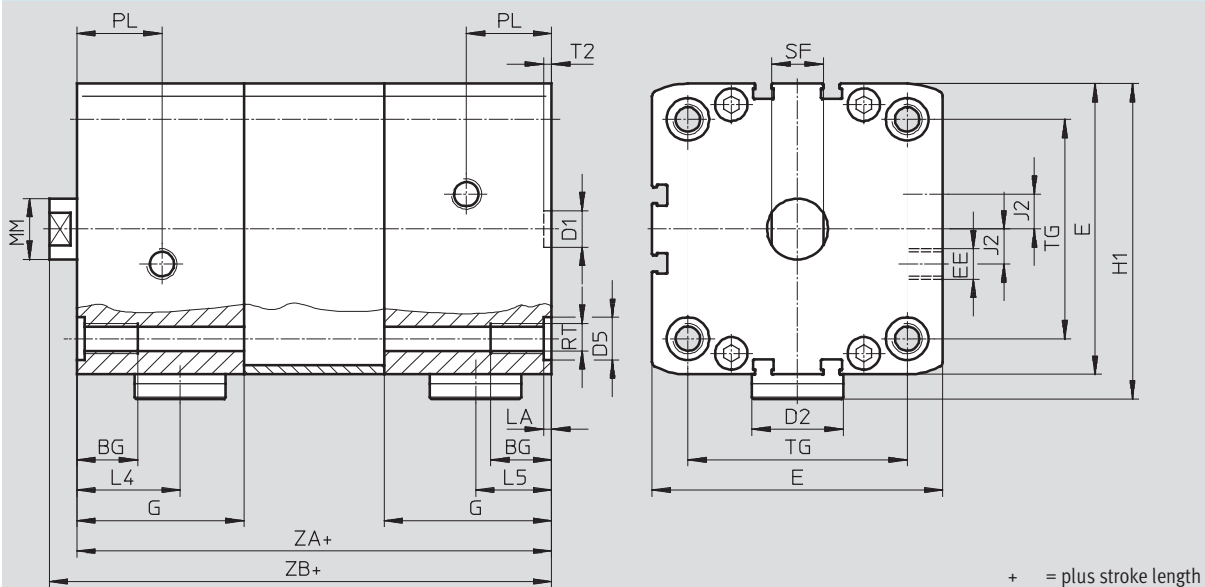
Download CAD Data → www.festo.com/us/cad

ELB – End position lock at both ends

Ø 20 ... 63

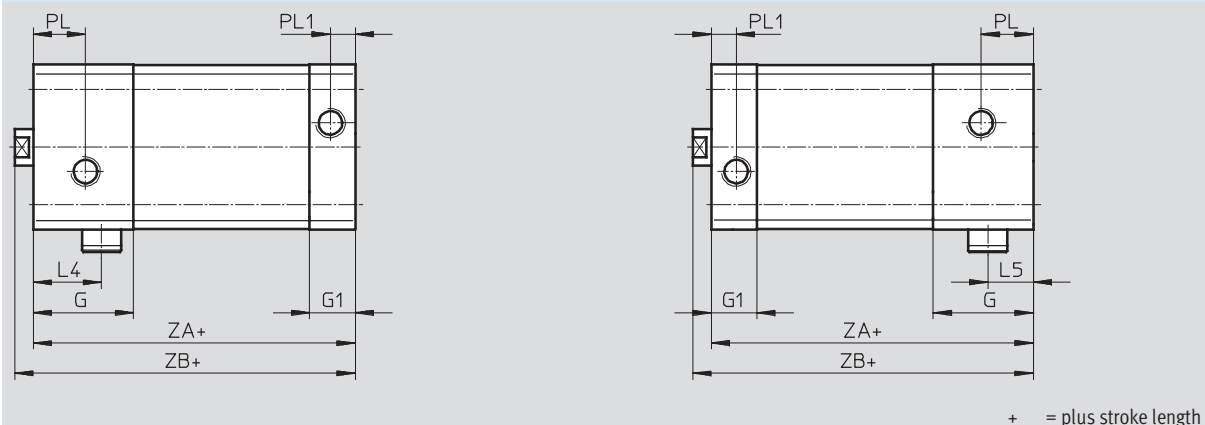


Ø 80 ... 100



ELV – End position lock at front

ELH – End position lock at rear



Compact cylinders ADN-EL, standard port pattern, with end position lock

FESTO

Technical data

Ø [mm]	BG min.	D1 Ø H9	D2 Ø	D5 Ø F9	E	EE	G	G1	H1	J2	L4	L5
20	18	9	9	9	35.5 +0.3	M5	25	12	45.5	2.6	18.5	12.5
25			39.5 +0.3		29.5		53.3		20.8		14	
32			13		47 +0.3	G1/8	33	15	58	6	22.5	15
40					54.5 +0.3				61.8	8		
50	20	12	20	12	65.5 +0.3		43		77		11.5	27.5
63					75.5 +0.3				82	21.7		
80			30	15	95.5 +0.6		55	16.5	103.5	34	25	
100					113.5 +0.6		57	21.5	113.5	20	35	27

Ø	LA	MM Ø	PL	PL1	RT	SF	T2	TG	ZA ±0.3		ZB +1.2	
[mm]	+0.2	h8				h13	+0.1	±0.2	ELB	ELV. ELH	ELB	ELV. ELH
20	5	10	6	6	M5	9	2.1	22	63	50	68.8	55.5
25		12	16	8.2	M6	10		26	74	56.5	79.5	62
32								32.5	80	62	86	68
40								38	81	63	87.1	69
50		16	21		M8	13	2.6	46.5	101	73	109.2	81.2
63	56.5							105	77	113.1	85.1	
80	2.6	20	28		M10	17		72	131	92.5	139.9	101.4
100				89				138	102.5	147	111.5	

Compact cylinders ADN-EL, standard port pattern, with end position lock

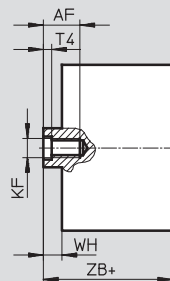
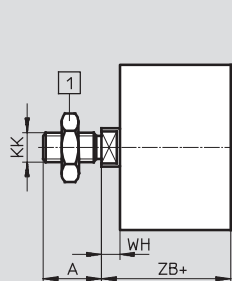
FESTO

Technical data

Dimensions – Variants

Download CAD Data → www.festo.com/us/cad

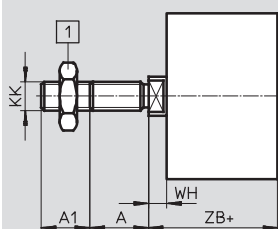
Basic version



1 Hex nut to DIN 439-B
only with $\varnothing 32 \dots 100$

+ = plus stroke length

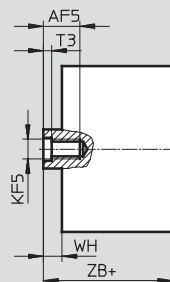
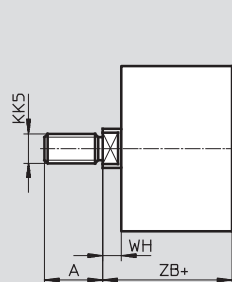
K2 – Extended male piston rod thread



1 Hex nut to DIN 439-B
only with $\varnothing 32 \dots 100$

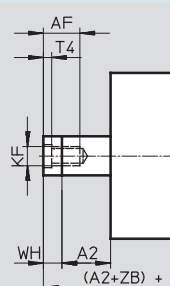
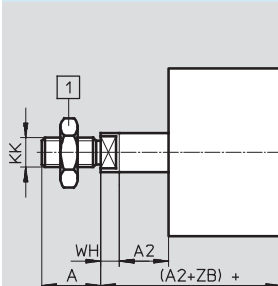
+ = plus stroke length

K5 – Special piston rod thread



+ = plus stroke length

K8 – Extended piston rod



1 Hex nut to DIN 439-B
only with $\varnothing 32 \dots 100$

+ = plus stroke length

Compact cylinders ADN-EL, standard port pattern, with end position lock

FESTO

Technical data

Ø	A	A1	A2	AF	AF5	KF	KF5										
[mm]	-0.5			min.	min.												
20	16	1 ... 20	1 ... 300	14	12	M6	M5										
25			1 ... 400	16	14	M8	M6										
32	22							20	16	M10	M8						
40												28	1 ... 30	1 ... 500	20	M12	M10
50																	
63																	
80																	
100																	

Ø [mm]	KK	KK5	T3	T4	WH +1.3	ZB +1.2	
						ELB	ELV. ELH
20	M8	M10x1.25	2	2.6	5.5	68.8	55.5
25		M10				79.5	62
32	M10x1.25	M10	2.6	3.3	6	86	68
40		M12			6.1	87.1	69
50	M12x1.25	M12	3.3	4.7	8.2	109.2	81.2
63		M16			8.1	113.1	85.1
80	M16x1.5	M16	4.7	6.1	8.9	139.9	101.4
100		M20x1.5 M20			9	147	111.5

Compact cylinders ADN-EL, standard port pattern, with end position lock

FESTO

Ordering data – Modular products

M Mandatory data →							
Module No.	Function	Piston Ø	Stroke	End position lock	Piston rod thread	Cushioning	Position sensing
548 214	ADN	20	10 ... 500	ELB	A	P	A
548 215		25		ELV	I		
548 216		32		ELH			
548 217		40					
548 218		50					
548 219		63					
548 220		80					
548 221		100					
Order example							
548 220	ADN	- 80	- 450	- ELV	- I	- P	- A

Ordering table							
Size	20	25	32	40	Condition s	Code	Enter code
M Module No.	548 214	548 215	548 216	548 217			
Function	Compact cylinder, double-acting, standard port pattern, with end position lock					ADN	ADN
Piston Ø [mm]	20	25	32	40		-...	
Stroke [mm]	10 ... 300		10 ... 400			-...	
End position lock	At both ends					-ELB	
	At front					-ELV	
	At rear					-ELH	
Piston rod thread	Male thread					-A	
	Female thread					-I	
Cushioning	Flexible cushioning rings/pads at both ends					-P	-P
Position sensing	Via proximity sensor					-A	-A
O Male thread extended [mm]	Extended male piston rod thread 1 ... 20					-...K2	
Special piston rod thread	Male thread	M10x1.25	M10x1.25	M10	M10	-“...”K5	
	Female thread	M10	M10	M12	M12		
Piston rod extended [mm]	Extended piston rod 1 ... 300					-...K8	
Captive rating plate	Laser etched rating plate					-TL	

- ¹ I Not with extended male thread K2
² K8 The sum of the stroke length and piston rod extension must not exceed the maximum permissible stroke length

Transfer order code

	ADN	-		-		-		-	P	-	A
--	-----	---	--	---	--	---	--	---	---	---	---

Compact cylinders ADN-EL, standard port pattern, with end position lock

FESTO

Ordering data – Modular products

Options

Male thread extended	Special thread	Piston rod extended	Captive rating plate
...K2	"..."K5	...K8	TL
-	- "M10"K5	- 50K8	- TL

Ordering table								
Size		50	63	80	100	Condition s	Code	Enter code
[M]	Module No.	548 218	548 219	548 220	548 221			
	Function	Compact cylinder, double-acting, standard port pattern, with end position lock					ADN	ADN
	Piston Ø [mm]	50	63	80	100		-...	
	Stroke [mm]	10 ... 400		10 ... 500			-...	
	End position lock	At both ends					-ELB	
		At front					-ELV	
		At rear					-ELH	
	Piston rod thread	Male thread					-A	
		Female thread				[1]	-I	
	Cushioning	Flexible cushioning rings/pads at both ends					-P	-P
	Position sensing	Via proximity sensor					-A	-A
[O]	Male thread extended [mm]	Extended male piston rod thread 1 ... 20 1 ... 30					-...K2	
	Special piston rod thread	Male thread	M12 M16	M12 M16	M16 M20 M20x1.5	M16 M20 M20x1.5	-“...”K5	
		Female thread	M8	M8	M10	M10		
	Piston rod extended [mm]	Extended piston rod 1 ... 400 1 ... 500				[2]	-...K8	
	Captive rating plate	Laser etched rating plate					-TL	

- [1] I** Not with extended male thread K2
- [2] K8** The sum of the stroke length and piston rod extension must not exceed the maximum permissible stroke length

Transfer order code

- - - -

Compact cylinders AEN, to ISO 21287

Type codes

FESTO

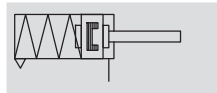
		AEN	–	50	–	25	–	A	–	P	–	A	–	Q
Type														
Single-acting														
AEN	Compact cylinder													
Piston Ø [mm]														
Stroke [mm]														
Piston rod thread														
A	Male thread													
I	Female thread													
Cushioning														
P	Flexible cushioning rings/pads at both ends													
Position sensing														
A	Via proximity sensor													
Variant														
Z	Single-acting, pulling													
Q	Square piston rod													
K2	Extended male piston rod thread													
K5	Special piston rod thread													
K8	Extended piston rod													
K10	Smooth anodised piston rod													
S6	Heat-resistant seals up to max. 120 °C													
TL	Captive rating plate													

Compact cylinders AEN, to ISO 21287

Technical data

FESTO

Function



pulling

-N- Diameter
12 ... 100 mm

-T- Stroke length
1 ... 25 mm

[www.festo.com/en/
Spare_parts_service](http://www.festo.com/en/Spare_parts_service)

Variants



S6



K2



K5



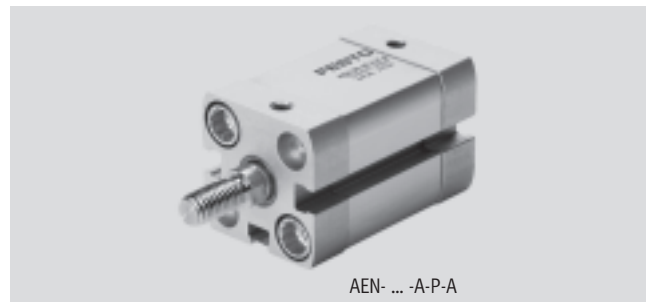
K8



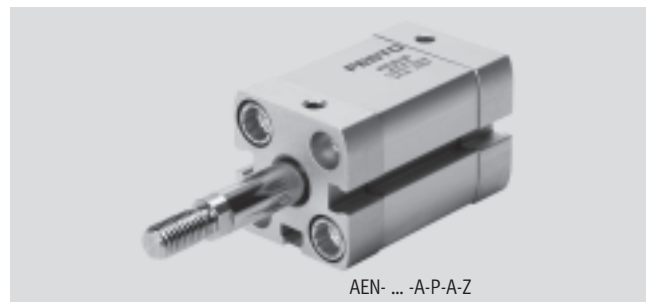
K10



Q



AEN- ... -A-P-A



AEN- ... -A-P-A-Z

General technical data										
Piston Ø	12	16	20	25	32	40	50	63	80	100
Pneumatic connection	M5	M5	M5	M5	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$	G $\frac{1}{8}$
Piston rod thread										
Female	M3	M4	M6	M6	M8	M8	M10	M10	M12	M12
Male	M5	M6	M8	M8	M10x1.25	M10x1.25	M12x1.25	M12x1.25	M16x1.5	M16x1.5
Design	Piston									
	Piston rod									
	Cylinder barrel									
Cushioning	Flexible cushioning rings/pads at both ends									
Position sensing	Via proximity sensor									
Type of mounting	Via through-hole									
	Via female thread									
	Via accessories									
Mounting position	Any									

Operating and environmental conditions										
Piston Ø	12	16	20	25	32	40	50	63	80	100
Operating medium	Filtered compressed air, lubricated or unlubricated									
Operating pressure [bar]										
–	1.5 ... 10		1 ... 10							
Z	1.7 ... 10	2.2 ... 10	1.3 ... 10		0.7 ... 10	0.6 ... 10				
Q	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 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Compact cylinders AEN, to ISO 21287

Technical data

FESTO

Forces [N] and impact energy [J]										
Piston Ø	12	16	20	25	32	40	50	63	80	100
AEN										
Theoretical force at 6 bar, advancing	56	95	162	259	441	702	1,098	1,783	2,899	4,511
AEN-...Z, pulling										
Theoretical force at 6 bar, retracting	39	65	115	211	373	634	977	1,663	2,610	4,323
Max. impact energy in the end positions	0.04	0.04	0.04	0.08	0.1	0.15	0.18	0.28	0.35	0.7

Permissible impact velocity:

$$v_{perm.} = \sqrt{\frac{2 \times E_{perm.}}{m_{dead} + m_{load}}}$$

$v_{perm.}$ Permissible impact velocity
 $E_{perm.}$ Max. impact energy
 m_{dead} Moving load (drive)
 m_{load} Moving effective load

Note

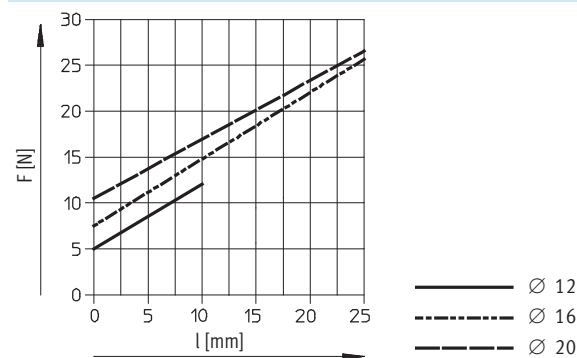
This data represents the maximum values that can be achieved. The maximum permissible impact energy must be observed.

Maximum permissible load:

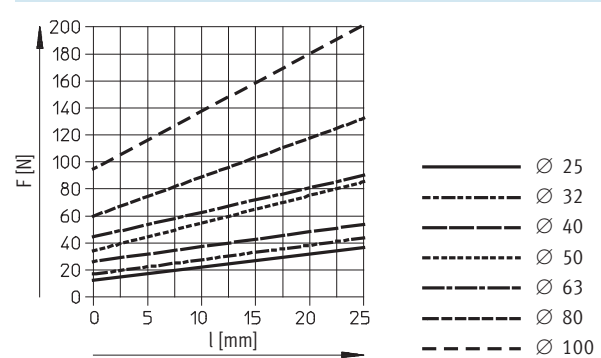
$$m_{load} = \frac{2 \times E_{perm.}}{v^2} - m_{dead}$$

Spring return force F as a function of the stroke l

Ø 12 ... 20



Ø 25 ... 100



Note

The degree of friction depends upon the mounting position and the type of load involved. Single-acting cylinders should as far as possible be operated without lateral forces.

Compact cylinders AEN, to ISO 21287

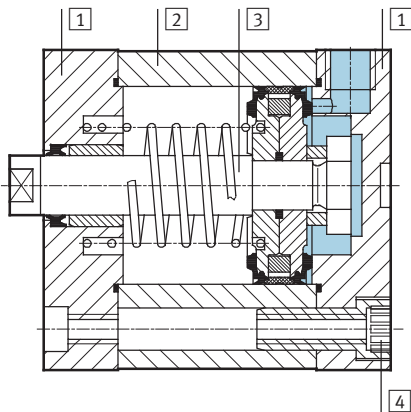
Technical data

FESTO

Weight [g]										
Piston Ø	12	16	20	25	32	40	50	63	80	100
Product weight with 0 mm stroke	77	79	131	156	265	346	540	722	1,300	2,154
Additional weight per 10 mm stroke	12	14	21	23	30	37	51	59	79	98
Moving load with 0 mm stroke	9	15	30	50	60	80	140	180	400	570
Additional load per 10 mm stroke	2	4	6	6	9	9	16	16	25	25

Materials

Sectional view



Compact cylinder		Basic version	S6
1	Bearing and end cap	Anodised aluminium	
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
Note on materials		RoHS-compliant	

Compact cylinders AEN, to ISO 21287

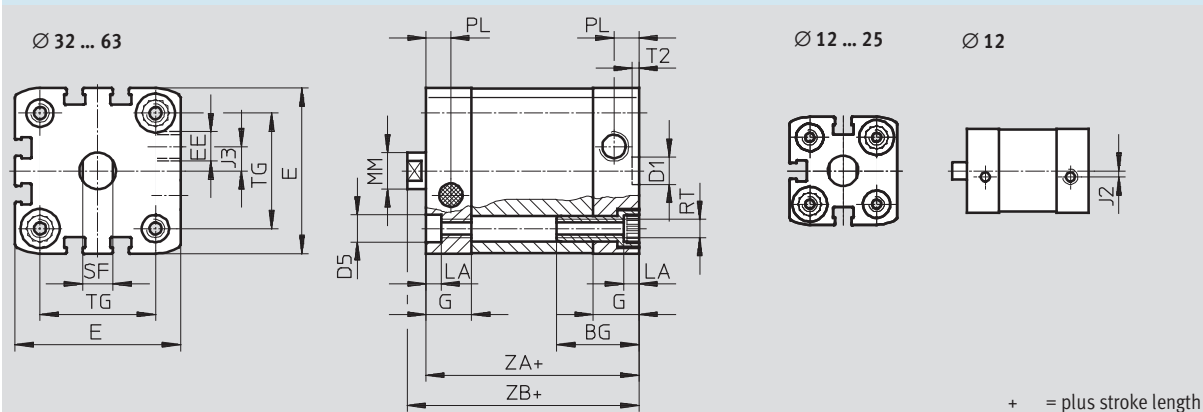
Technical data

FESTO

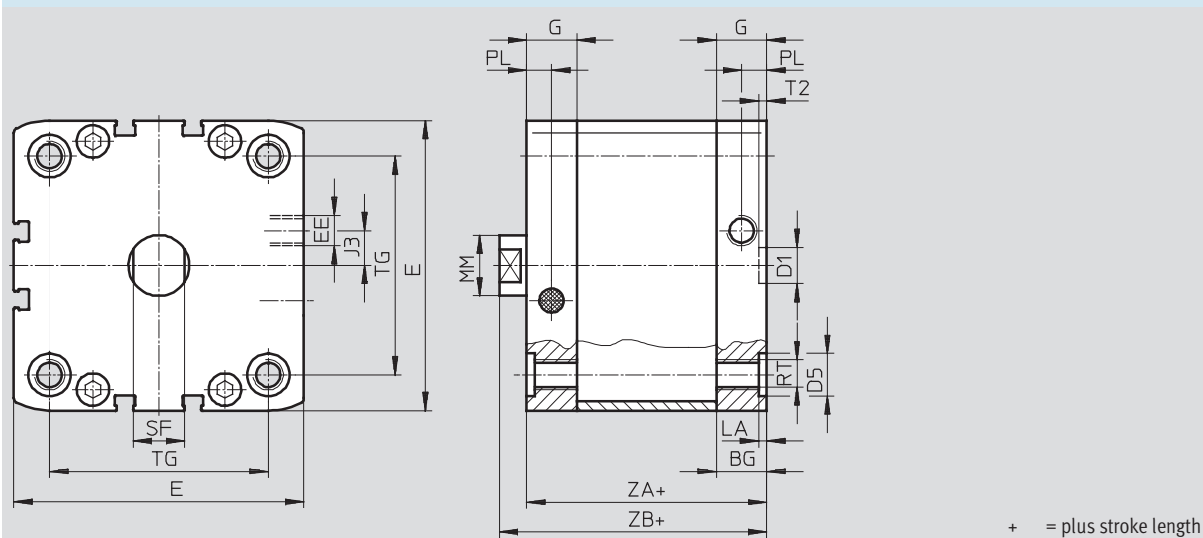
Dimensions – Basic version

Download CAD Data → www.festo.com/us/cad

Ø 12 ... 63



Ø 80 ... 100



Compact cylinders AEN, to ISO 21287

Technical data

FESTO

Ø	BG	D1 Ø	D5 Ø	E	EE	G	J2	J3	LA
[mm]	min.	H9	F9						+0.2
12	17	9	6	27.5 ^{+0.3}	M5	10.5	2	—	3.5
16				29 ^{+0.3}		11	2.6		
20	19.5		9	35.5 ^{+0.3}		12			5
25				39.5 ^{+0.3}					
32	26			47 ^{+0.3}	G1/8	15	6		
40				54.5 ^{+0.3}			8		
50	27	12	65.5 ^{+0.3}	11.5			2.6		
63			75.5 ^{+0.3}						
80	17	15	95.5 ^{+0.6}	16.5	20				
100	21.5		113.5 ^{+0.6}	21.5					

Ø	MM Ø h8	PL	RT	SF	T2	TG	ZA	ZB
[mm]		+0.2		h13	+0.1	±0.2	±0.3	+1.2
12	6	6	M4	5	2.1	16	35	39.2
16	8			7		18		39.7
20	10		M5	9		22	37	42.5
25						26	39	44.5
32	12	8.2	M6	10		32.5	44	50
40					38	45	51.1	
50	16		M8	13	46.5		53.2	
63					56.5	49	57.1	
80	20		M10	17	72	54	62.9	
100		89			67	76		

Compact cylinders AEN, to ISO 21287

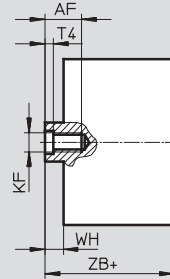
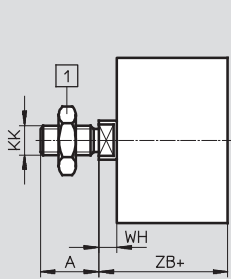
Technical data

FESTO

Dimensions – Variants

Download CAD Data → www.festo.com/us/cad

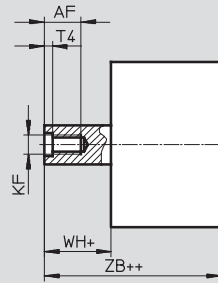
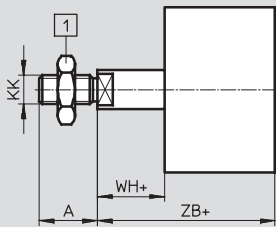
Basic version



1 Hex nut DIN 439-B
only with $\varnothing 32 \dots 100$

+ = plus stroke length

Z – pulling

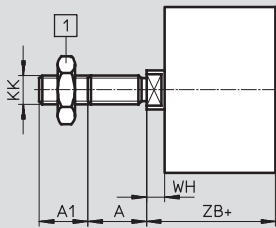


1 Hex nut DIN 439-B
only with $\varnothing 32 \dots 100$

+ = plus stroke length

++ = plus 2x stroke length

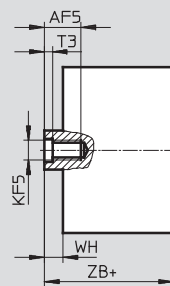
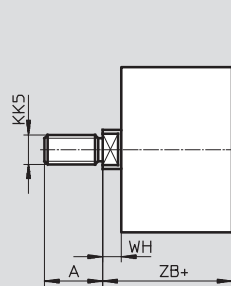
K2 – Extended male piston rod thread



1 Hex nut DIN 439-B
only with $\varnothing 32 \dots 100$

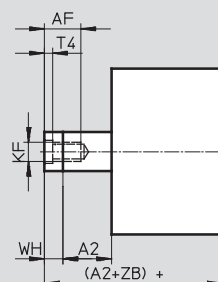
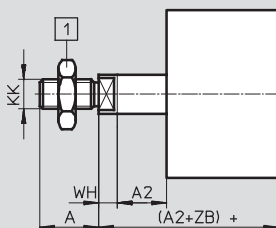
+ = plus stroke length

K5 – Special piston rod thread



+ = plus stroke length

K8 – Extended piston rod



1 Hex nut DIN 439-B
only with $\varnothing 32 \dots 100$

+ = plus stroke length

Compact cylinders AEN, to ISO 21287

Technical data

FESTO

Ø	A	A1	A2	AF	AF5	KF	KF5					
[mm]	−0.5			min.	min.							
12	10	1 ... 10	1 ... 300	8	−	M3	−					
16	12			10		M4						
20	16			1 ... 20	1 ... 400	14	12	M6	M5			
25		19	16			14	M8	M6				
32												
40												
50	22								20	16	M10	M8
63												
80												
100	28	1 ... 30	1 ... 500		20	M12	M10					

Ø [mm]	KK	KK5	T3	T4	WH +1.3	ZB +1.2
12	M5	M6	-	1.5	4.2	39.2
16	M6	M8			4.7	39.7
20	M8	M10x1.25	2	2.6	5.5	42.5
25		M10			5.5	44.5
32	M10x1.25	M10	2.6	3.3	6	50
40		M12			6.1	51.1
50	M12x1.25	M12	3.3	4.7	8.2	53.2
63		M16			8.1	57.1
80	M16x1.5	M16	4.7	6.1	8.9	62.9
100		M20x1.5 M20			9	76

Compact cylinders AEN, to ISO 21287

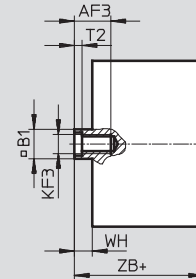
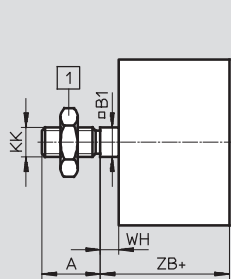
Technical data

FESTO

Dimensions – Variants

Download CAD Data → www.festo.com/us/cad

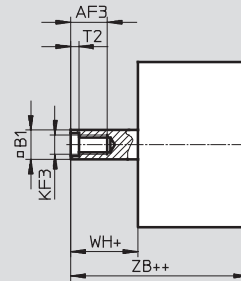
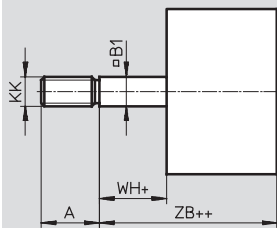
Q – Square piston rod



1 Hex nut DIN 439-B
only with $\varnothing 32 \dots 100$

+ = plus stroke length

Q – Z – pulling

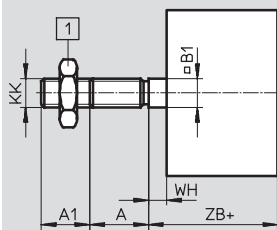


1 Hex nut DIN 439-B
only with $\varnothing 32 \dots 100$

+ = plus stroke length

++ = plus 2x stroke length

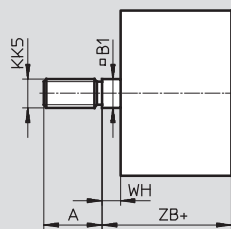
Q-K2 – Square piston rod with extended male thread



1 Hex nut DIN 439-B
only with $\varnothing 32 \dots 100$

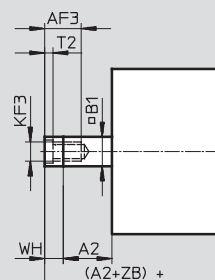
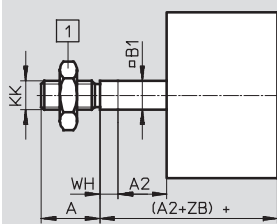
+ = plus stroke length

Q-K5 – Square, special piston rod thread



+ = plus stroke length

Q-K8 – Square, extended piston rod



1 Hex nut DIN 439-B
only with $\varnothing 32 \dots 100$

+ = plus stroke length

Compact cylinders AEN, to ISO 21287

Technical data

FESTO

∅	A	A1	A2	AF3	B1 □	KF3				
[mm]	−0.5			min.						
12	10	1 ... 10	1 ... 300	8	5.5	M3				
16	12			10	7	M4				
20	16			12	9	M5				
25		1 ... 20	1 ... 400	14	10	M6				
32	16			12	M8					
40			19							
50			22							
63	28		1 ... 30	1 ... 500	20	16	M10			
80										
100										

∅ [mm]	KK	KK5	T2	WH +1.3	ZB +1.2
12	M5	M6	1.5	4.2	39.2
16	M6	M8		4.7	39.7
20	M8	M10x1.25	2	5.5	42.5
25		M10			44.5
32	M10x1.25	M10	2.6	6	50
40				6.1	51.1
50	M12x1.25	M16	3.3	8.2	53.2
63				8.1	57.1
80	M16x1.5	M16	4.7	8.9	62.9
100				9	76

Compact cylinders AEN, to ISO 21287

FESTO

Ordering data – Modular products, basic version and variants

Mandatory data							→
Module No.	Function	Piston Ø	Stroke	Type of thread	Cushioning	Position sensing	
536 414	AEN	12	1 ... 25	A I	P	A	
536 415		16					
536 416		20					
536 417		25					
536 418		32					
536 419		40					
536 420		50					
536 421		63					
536 422		80					
536 423		100					
Order example							
536 423	AEN	- 100	- 21	- A	- P	- A	

Ordering table										
Size		12	16	20	25	32	Condition s	Code	Enter code	
M	Module No.	536 414	536 415	536 416	536 417	536 418				
	Function	Compact cylinder, single-acting, based on ISO 21287						AEN		
	Piston Ø [mm]	12	16	20	25	32		-...		
	Stroke [mm]	1 ... 10	1 ... 25					-...		
	Type of thread	Male thread						-A		
		Female thread					1	-I		
	Cushioning	Flexible cushioning rings/pads at both ends						-P		
	Position sensing	Via proximity sensor						-A		
	O	Effective direction of action	Single-acting, pulling							-Z
		Male thread extended [mm]	Extended male piston rod thread							
1 ... 10				1 ... 20			2	-...K2		
Special piston rod thread		Male thread	M6	M8	M10x1.25 M10	M10x1.25 M10	M10 M12	2	-“...”K5	
		Female thread	–	–	M5	M5	M6			
Piston rod extended [mm]		Extended piston rod								
		1 ... 10	1 ... 25				3	-...K8		
Improved running performance		–	–	Smooth anodised aluminium coated piston rod				-K10		
Temperature resistance		Heat-resistant seals up to max. 120 °C						-S6		
Captive rating plate	Laser etched rating plate						-TL			

- 1 I Not with extended male thread K2
2 K2, K5 Not with improved running performance K10

- 3 K8 The sum of the stroke length and piston rod extension must not exceed the maximum permissible stroke length

Transfer order code

	AEN	–		–		–	P	–	A
--	-----	---	--	---	--	---	---	---	---

Compact cylinders AEN, to ISO 21287

Ordering data – Modular products, basic version and variants

FESTO

Options						
Effective direction of action	Male thread extended	Special thread	Piston rod extended	Improved running performance	Temperature resistance	Captive rating plate
Z	...K2	"..."K5	...K8	K10	S6	TL
-	- 25K2	-	- 4K8	-	- S6	- TL

Ordering table									
Size	40	50	63	80	100	Condition s	Code		Enter code
M Module No.	536 419	536 420	536 421	536 422	536 423				
Function	Compact cylinder, single-acting, based on ISO 21287						AEN		AEN
Piston Ø [mm]	40	50	63	80	100		-...		
Stroke [mm]	1 ... 25						-...		
Type of thread	Male thread						-A		
	Female thread					1	-I		
Cushioning	Flexible cushioning rings/pads at both ends						-P		-P
Position sensing	Via proximity sensor						-A		-A
0 Effective direction of action	Single-acting, pulling						-Z		
Male thread extended [mm]	Extended male piston rod thread								
	1 ... 20		1 ... 30			2	-...K2		
Special piston rod thread	Male thread	M10	M12	M12	M16	M16	2	-..."K5	
		M12	M16	M16	M20	M20			
	Female thread	M6	M8	M8	M10	M10			
Piston rod extended [mm]	Extended piston rod								
	1 ... 25					3	-...K8		
Improved running performance	Smooth anodised aluminium coated piston rod						-K10		
Temperature resistance	Heat-resistant seals up to max. 120 °C						-S6		
Captive rating plate	Laser etched rating plate						-TL		

- 1** I Not with extended male thread K2
2 K2, K5 Not with improved running performance K10

- 3** K8 The sum of the stroke length and piston rod extension must not exceed the maximum permissible stroke length

Transfer order code

- - - - - - -

Compact cylinders AEN, to ISO 21287

FESTO

Ordering data – Modular products, Q – Version with square piston rod, non-rotating

Mandatory data							→
Module No.	Function	Piston Ø	Stroke	Type of thread	Cushioning	Position sensing	
536 415	AEN	16	1 ... 25	A	P	A	
536 416		20		I			
536 417		25					
536 418		32					
536 419		40					
536 420		50					
536 421		63					
536 422		80					
536 423		100					
Order example							
536 423	AEN	- 100	- 21	- A	- P	- A	

Ordering table							
Size	16	20	25	32	Condition s	Code	Enter code
M Module No.	536 415	536 416	536 417	536 418			
Function	Compact cylinder, single-acting, based on ISO 21287					AEN	AEN
Piston Ø [mm]	16	20	25	32		-...	
Stroke [mm]	1 ... 25					-...	
Type of thread	Male thread					-A	
	Female thread				1	-I	
Cushioning	Flexible cushioning rings/pads at both ends					-P	-P
Position sensing	Via proximity sensor					-A	-A
O Effective direction of action	Single-acting, pulling					-Z	
Protection against torsion	Square piston rod					-Q	-Q
Male thread extended [mm]	Extended male piston rod thread					-...K2	
Special piston Male thread rod thread	M8	M10x1.25 M10	M10x1.25 M10	M10		-“...”K5	
Piston rod extended [mm]	Extended piston rod				2	-...K8	
Temperature resistance	Heat-resistant seals up to max. 120 °C					-S6	
Captive rating plate	Laser etched rating plate					-TL	

1 I Not with extended male thread K2

2 K8 The sum of the stroke length and piston rod extension must not exceed the maximum permissible stroke length

Transfer order code

	AEN	-		-		-	P	-	A
--	-----	---	--	---	--	---	---	---	---

Compact cylinders AEN, to ISO 21287

FESTO

Ordering data – Modular products, Q – Version with square piston rod, non-rotating

Options						
Effective direction of action	Protection against torsion	Male thread extended	Special thread	Piston rod extended	Temperature resistance	Captive rating plate
Z	Q	...K2	"..."K5	...K8	S6	TL
- Z	- Q	- 25K2	-	- 4K8	-	- TL

Ordering table									
Size	40	50	63	80	100	Condition s	Code		Enter code
M Module No.	536 419	536 420	536 421	536 422	536 423				
Function	Compact cylinder, single-acting, based on ISO 21287						AEN		AEN
Piston Ø [mm]	40	50	63	80	100		-...		
Stroke [mm]	1 ... 25						-...		
Type of thread	Male thread						-A		
	Female thread					¹	-I		
Cushioning	Flexible cushioning rings/pads at both ends						-P		-P
Position sensing	Via proximity sensor						-A		-A
0 Effective direction of action	Single-acting, pulling						-Z		
Protection against torsion	Square piston rod						-Q		-Q
Male thread extended [mm]	Extended male piston rod thread						-...K2		
Special piston rod thread	Male thread	M10	M12	M12	M16	M16	-..."K5		
Piston rod extended [mm]	Extended piston rod						-...K8		
	1 ... 25					²	-S6		
Temperature resistance	Heat-resistant seals up to max. 120 °C						-TL		
Captive rating plate	Laser etched rating plate								

¹ I Not with extended male thread K2

² K8 The sum of the stroke length and piston rod extension must not exceed the maximum permissible stroke length

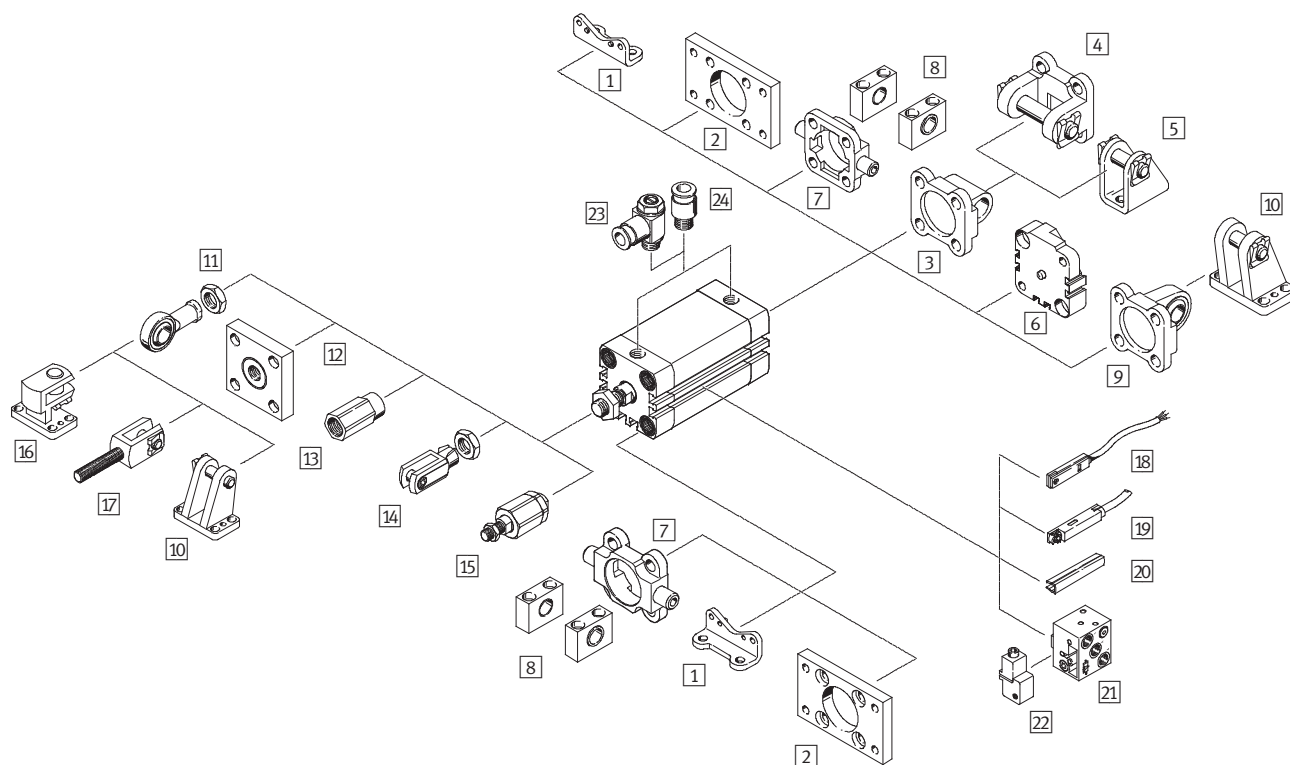
Transfer order code

- - Q - - - - - -

Compact cylinders ADNP, to ISO 21287, with polymer end caps

Peripherals overview

FESTO



Compact cylinders ADNP, to ISO 21287, with polymer end caps

Peripherals overview

Mounting attachments and accessories			
	Brief description		→ Page/Internet
1	Foot mounting HNA	For bearing or end caps	79
2	Flange mounting FNC	For bearing or end caps	80
3	Swivel flange SNCL	For end caps	81
4	Swivel flange SNCB	For swivel flange SNCL	85
5	Clevis foot LBN/CRLBN	For swivel flange SNCL	84
6	Multi-position kit DPNA	For connecting two cylinders with identical piston $\varnothing$ to form a multi-position cylinder	83
7	Trunnion flange ZNCF/CRZNG	For bearing caps	86
8	Trunnion support LNZG	For trunnion flange ZNCF/CRZNG	87
9	Swivel flange SNCS	For end caps	82
10	Clevis foot LBG	For swivel flange SNCS	82
11	Rod eye SGS/CRSGS	With spherical bearing	88
12	Coupling piece KSG/KSZ	For compensating radial deviations	88
13	Adapter AD	For mounting a vacuum suction cup on a hollow cylinder piston rod	88
14	Rod clevis SG/CRSG	Permits a swivelling movement of the cylinder in one plane	88
15	Self-aligning rod coupler FK	For compensating radial and angular deviations	88
16	Right-angle clevis foot LQG	For rod eye SGS	89
17	Rod clevis SGA	With male thread	88
18	Proximity sensor SME/SMT-8	Can be integrated in the sensor slot of the cylinder profile barrel	91
19	Proximity sensor SME/SMT-8M	Can be integrated in the sensor slot of the cylinder profile barrel	91
20	Slot cover ABP-5-S	For protecting the sensor cable and keeping dirt out of the sensor slots	91
21	Proximity sensor SMPO-8E	Pneumatic output signal	91
22	Mounting kit SMB-8E	For proximity sensor SMPO-8E	91
23	One-way flow control valve GRLA/GRLZ	For speed regulation	89
24	Push-in fitting QS	For connecting compressed air tubing with standard O.D.	quick star

Note

For the compressed air ports only
push-in fittings or one-way flow
control valves with cylindrical

connecting thread (M or G thread)
may be used.

Compact cylinders ADNP, to ISO 21287, with polymer end caps

FESTO

Type codes

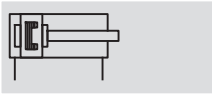
		ADNP	–	20	–	50	–	A	–	P	–	A
Type												
Double-acting												
ADNP	Compact cylinder											
Piston Ø [mm]												
Stroke [mm]												
Piston rod thread												
A	Male thread											
I	Female thread											
Cushioning												
P	Flexible cushioning rings/pads at both ends											
Position sensing												
A	Via proximity sensor											

Compact cylinders ADNP, to ISO 21287, with polymer end caps

FESTO

Technical data

Function



- Ø - Diameter
20 ... 50 mm

- T - Stroke length
5 ... 80 mm

www.festo.com/en/
Spare_parts_service



General technical data					
Piston Ø	20	25	32	40	50
Pneumatic connection	M5	M5	G1/8	G1/8	G1/8
Piston rod thread	Female	M6	M6	M8	M8
	Male	M8	M8	M10x1.25	M10x1.25
Constructional design	Piston				
	Piston rod				
	Cylinder barrel				
Cushioning	Flexible cushioning rings/pads at both ends				
Position sensing	Via proximity sensor				
Type of mounting	Via through-holes				
	Via female threads				
	Via accessories				
Mounting position	Any				

Operating and environmental conditions	
Operating medium	Filtered compressed air, lubricated or unlubricated
Operating pressure [bar]	0.6 ... 10
Ambient temperature ¹⁾ [°C]	-10 ... +60
Corrosion resistance class CRC ²⁾	2

1) Note operating range of proximity sensors

2) Corrosion resistance class 2 to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents

Compact cylinders ADNP, to ISO 21287, with polymer end caps

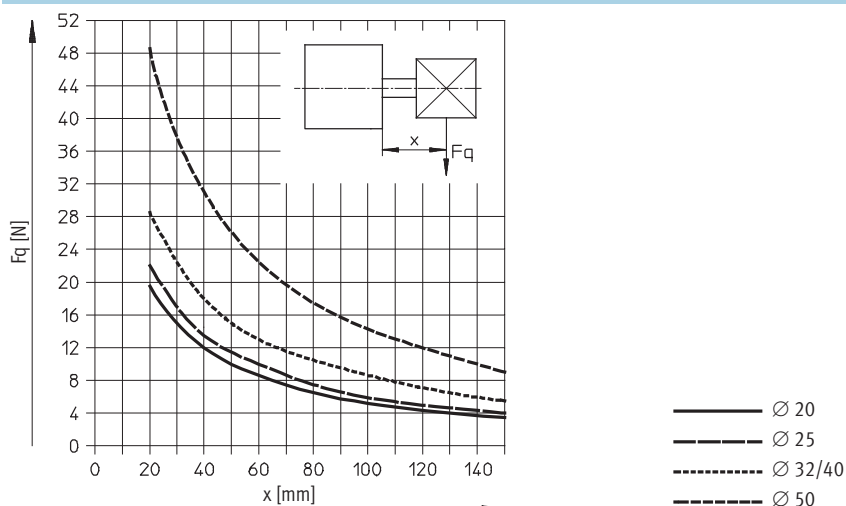
Technical data

FESTO

Forces [N] and impact energy [J]

Piston Ø	20	25	32	40	50
Theoretical force at 6 bar, advancing	188	295	483	754	1178
Theoretical force at 6 bar, retracting	141	247	415	686	1057
Max. impact energy at the end positions	0.16	0.24	0.32	0.56	0.80

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

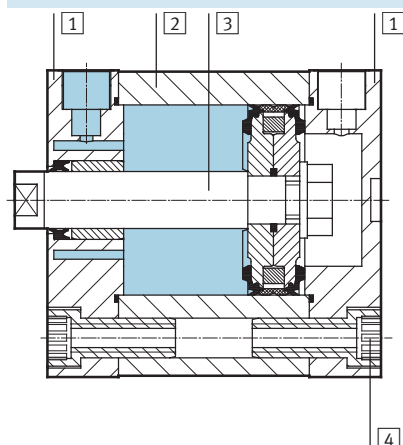


Weight [g]

Piston Ø	20	25	32	40	50
Product weight with 0 mm stroke	115	116	204	240	380
Additional weight per 10 mm stroke	17	19	24	32	41
Moving load with 0 mm stroke	20	20	45	55	94
Additional load per 10 mm stroke	2	2	3	3	6

Materials

Sectional view



Compact cylinder

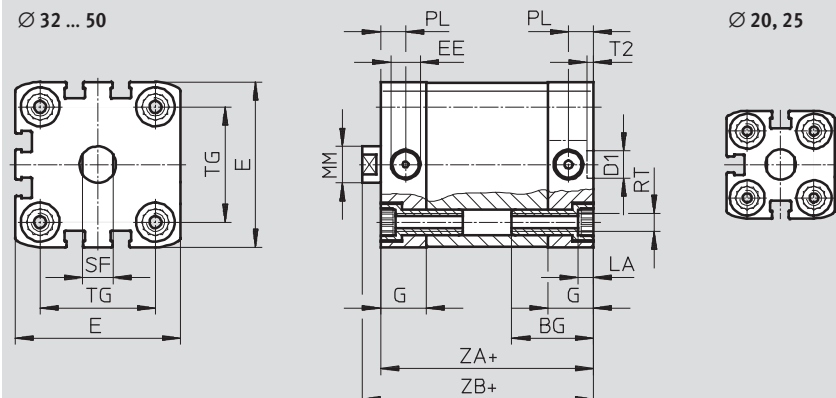
1	Cover	Polyarylamide
2	Cylinder barrel	Smooth anodised aluminium
3	Piston rod	Smooth anodised aluminium, steel insert with male thread
4	Flange screws	Galvanised steel
-	Seals	Polyurethane, nitrile rubber
Note on materials		RoHS compliant

Compact cylinders ADNP, to ISO 21287, with polymer end caps

Technical data

Dimensions – Basic version

Download CAD Data → www.festo.com/us/cad
 $\varnothing$ 20 ... 50

 $\varnothing$ 32 ... 50


Note

For the compressed air ports only push-in fittings or one-way flow control valves with cylindrical connecting thread (M or G thread) may be used.

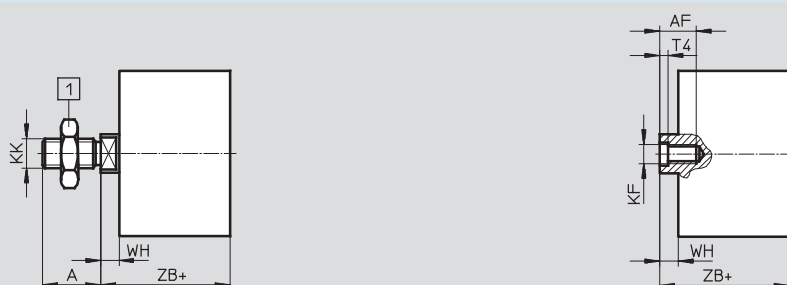
+ = plus stroke length

$\varnothing$ [mm]	BG min.	D1 $\varnothing$ H9	EE	E +0.3	G	LA +0.2	MM $\varnothing$ h8	PL	RT	SF h13	T2 +0.1	TG $\pm$ 0.2	ZA $\pm$ 0.3	ZB +1.2
20	19.5	9	M5	35.5	12	5	10	6	M5	8	2.1	22	37	42.5
25			M5	39.5								26	39	44.5
32	26	9	G $\frac{1}{8}$	47	15	5	12	8.2	M6	10	2.1	32.5	44	50
40			G $\frac{1}{8}$	54.5								38	45	51.1
50	27	12	G $\frac{1}{8}$	65.5			16		M8	13		46.5		53.2

Dimensions – Variants

Download CAD Data → www.festo.com/us/cad

Basic version



1 Hex nut to DIN 439-B only with $\varnothing$ 32 ... 50

+ = plus stroke length

$\varnothing$ [mm]	A -0.5	AF min.	KF	KK	T4	WH +1.3	ZB +1.2
20	16	14	M6	M8	2.6	5.5	42.5
25							44.5
32	19	16	M8	M10x1.25	3.3	6	50
40							51.1
50	22	20	M10	M12x1.25	4.7	8.2	53.2

Compact cylinders ADNP, to ISO 21287, with polymer end caps

FESTO

Technical data

Ordering data						
Type	Piston Ø [mm]	Stroke [mm]	Female piston rod thread		Male piston rod thread	
			Part No.	Type	Part No.	Type
	20	5	571971	ADNP-20-5-I-P-A	571926	ADNP-20-5-A-P-A
		10	571972	ADNP-20-10-I-P-A	571927	ADNP-20-10-A-P-A
		15	571973	ADNP-20-15-I-P-A	571928	ADNP-20-15-A-P-A
		20	571974	ADNP-20-20-I-P-A	571929	ADNP-20-20-A-P-A
		25	571975	ADNP-20-25-I-P-A	571930	ADNP-20-25-A-P-A
		30	571976	ADNP-20-30-I-P-A	571931	ADNP-20-30-A-P-A
		40	571977	ADNP-20-40-I-P-A	571932	ADNP-20-40-A-P-A
		50	571978	ADNP-20-50-I-P-A	571933	ADNP-20-50-A-P-A
		60	571979	ADNP-20-60-I-P-A	571934	ADNP-20-60-A-P-A
	25	5	571980	ADNP-25-5-I-P-A	571935	ADNP-25-5-A-P-A
		10	571981	ADNP-25-10-I-P-A	571936	ADNP-25-10-A-P-A
		15	571982	ADNP-25-15-I-P-A	571937	ADNP-25-15-A-P-A
		20	571983	ADNP-25-20-I-P-A	571938	ADNP-25-20-A-P-A
		25	571984	ADNP-25-25-I-P-A	571939	ADNP-25-25-A-P-A
		30	571985	ADNP-25-30-I-P-A	571940	ADNP-25-30-A-P-A
		40	571986	ADNP-25-40-I-P-A	571941	ADNP-25-40-A-P-A
		50	571987	ADNP-25-50-I-P-A	571942	ADNP-25-50-A-P-A
		60	571988	ADNP-25-60-I-P-A	571943	ADNP-25-60-A-P-A
	32	10	571989	ADNP-32-10-I-P-A	571944	ADNP-32-10-A-P-A
		15	571990	ADNP-32-15-I-P-A	571945	ADNP-32-15-A-P-A
		20	571991	ADNP-32-20-I-P-A	571946	ADNP-32-20-A-P-A
		25	571992	ADNP-32-25-I-P-A	571947	ADNP-32-25-A-P-A
		30	571993	ADNP-32-30-I-P-A	571948	ADNP-32-30-A-P-A
		40	571994	ADNP-32-40-I-P-A	571949	ADNP-32-40-A-P-A
		50	571995	ADNP-32-50-I-P-A	571950	ADNP-32-50-A-P-A
		60	571996	ADNP-32-60-I-P-A	571951	ADNP-32-60-A-P-A
		80	571997	ADNP-32-80-I-P-A	571952	ADNP-32-80-A-P-A
	40	10	571998	ADNP-40-10-I-P-A	571953	ADNP-40-10-A-P-A
		15	571999	ADNP-40-15-I-P-A	571954	ADNP-40-15-A-P-A
		20	572000	ADNP-40-20-I-P-A	571955	ADNP-40-20-A-P-A
		25	572001	ADNP-40-25-I-P-A	571956	ADNP-40-25-A-P-A
		30	572002	ADNP-40-30-I-P-A	571957	ADNP-40-30-A-P-A
		40	572003	ADNP-40-40-I-P-A	571958	ADNP-40-40-A-P-A
		50	572004	ADNP-40-50-I-P-A	571959	ADNP-40-50-A-P-A
		60	572005	ADNP-40-60-I-P-A	571960	ADNP-40-60-A-P-A
		80	572006	ADNP-40-80-I-P-A	571961	ADNP-40-80-A-P-A
	50	10	572007	ADNP-50-10-I-P-A	571962	ADNP-50-10-A-P-A
		15	572008	ADNP-50-15-I-P-A	571963	ADNP-50-15-A-P-A
		20	572009	ADNP-50-20-I-P-A	571964	ADNP-50-20-A-P-A
		25	572010	ADNP-50-25-I-P-A	571965	ADNP-50-25-A-P-A
		30	572011	ADNP-50-30-I-P-A	571966	ADNP-50-30-A-P-A
		40	572012	ADNP-50-40-I-P-A	571967	ADNP-50-40-A-P-A
		50	572013	ADNP-50-50-I-P-A	571968	ADNP-50-50-A-P-A
		60	572014	ADNP-50-60-I-P-A	571969	ADNP-50-60-A-P-A
		80	572015	ADNP-50-80-I-P-A	571970	ADNP-50-80-A-P-A

Compact cylinders ADN/AEN, to ISO 21287

Accessories

FESTO

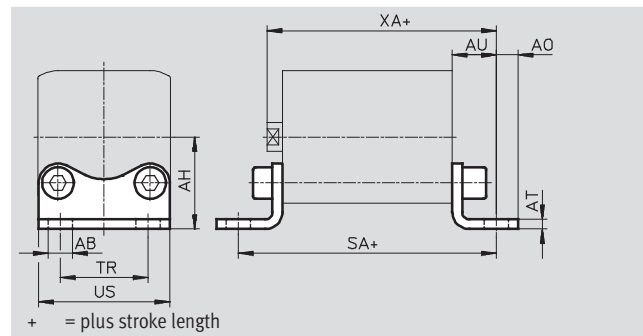
Foot mounting HNA

Material:

HNA: Galvanised steel

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

Free of copper, PTFE and silicone



Dimensions and ordering data											
For Ø	AB Ø	AH	AO	AT	AU	SA	TR	US	XA		
[mm]	H14	JS14		±0.5	±0.2		±0.2	−0.5			
12	5.8	21	5	3	13	61	16	26	52.2		
16		22	4.75				18	27.5	52.9		
20	7	27	6.25	4	16	69	22	34.5	58.7		
25		29					26	38.5	60.7		
32		33.5					7	32	46	66.2	
40	10	38	9	5	18	81	36	54	69.2		
50		45	8				21	87	45	64	74.2
63		50							91	50	75
80	12	63	10.5	6	26	106	63	63	89		
100	14.5	74	12.5							27	121

For Ø	Basic version				R3 – High corrosion protection			
	CRC ¹⁾	Weight	Part No.	Type	CRC ¹⁾	Weight	Part No.	Type
[mm]		[g]				[g]		
12	2	25	537 237	HNA-12	3	25	537 252	HNA-12-R3
16	2	30	537 238	HNA-16	3	30	537 253	HNA-16-R3
20	2	50	537 239	HNA-20	3	50	537 254	HNA-20-R3
25	2	55	537 240	HNA-25	3	55	537 255	HNA-25-R3
32	2	70	537 241	HNA-32	3	70	537 256	HNA-32-R3
40	2	90	537 242	HNA-40	3	90	537 257	HNA-40-R3
50	2	160	537 243	HNA-50	3	160	537 258	HNA-50-R3
63	2	180	537 244	HNA-63	3	180	537 259	HNA-63-R3
80	2	380	537 249	HNA-80	3	380	537 260	HNA-80-R3
100	2	470	537 250	HNA-100	3	470	537 261	HNA-100-R3

1) Corrosion resistance class 2 to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Corrosion resistance class 3 to Festo standard 940 070

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

Compact cylinders ADN/AEN, to ISO 21287

Accessories

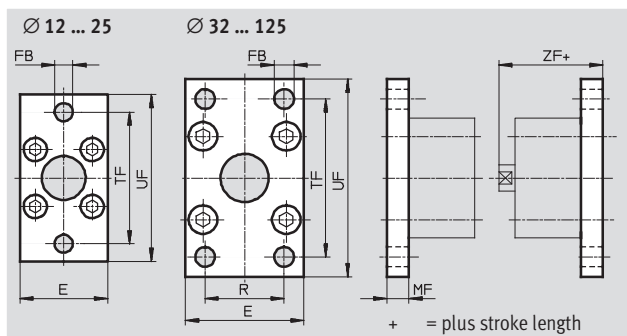
FESTO

Flange mounting FNC

Material:

Galvanised steel

Free of copper, PTFE and silicone



Dimensions and ordering data											
For Ø	E	FB Ø	MF	R	TF	UF	ZF	CRC ¹⁾	Weight	Part No.	Type
[mm]						±1			[g]		
12	28	5.5	8	-	40	50	47.2	1	79	537 245	FNC-12
16	29				43	55	47.9	1	88	537 246	FNC-16
20	36	6.6			55	70	50.7	1	141	537 247	FNC-20
25	40				60	76	52.7	1	165	537 248	FNC-25
32	45	7	10	32	64	80	60.2	1	221	174 376	FNC-32
40	54	9		36	72	90	61.2	1	291	174 377	FNC-40
50	65		12	45	90	110	65.2	1	536	174 378	FNC-50
63	75			50	100	120	69.2	1	679	174 379	FNC-63
80	93	12	16	63	126	150	79	1	1,495	174 380	FNC-80
100	110	14		75	150	175	92	1	2,041	174 381	FNC-100
125	132	16	20	90	180	210	112	1	3,775	174 382	FNC-125

1) CRC1: Corrosion resistance class to Festo standard 940070

Components with light corrosion exposure. Protection for transport and storage. Components without significant decorative function or surface, e.g. installed out of sight internally or behind covers.

Compact cylinders ADN/AEN, to ISO 21287

Accessories

FESTO

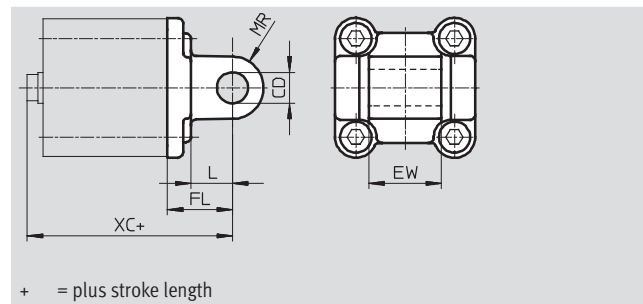
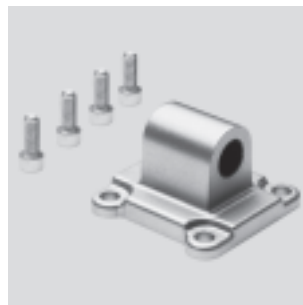
Swivel flange SNCL

Material:

SNCL: Die-cast aluminium

SNCL-...-R3: Die-cast aluminium with protective coating

Free of copper, PTFE and silicone



Dimensions and ordering data						
For Ø	CD	EW	FL	L	MR	XC
[mm]	Ø H9		±0.2			
12	6	12 _{h12}	16	10	6	55.2
16						55.9
20	8	16 _{h12}	20	14	8	62.7
25						64.7
32	10	26 _{-0.2/-0.6}	22	13	10	72.2
40	12	28 _{-0.2/-0.6}	25	16	12	75.2
50		32 _{-0.2/-0.6}	27			80.2
63	16	40 _{-0.2/-0.6}	32	21	16	89.2
80		50 _{-0.2/-0.6}	36	22		99
100	20	60 _{-0.2/-0.6}	41	27	20	117
125	25	70 _{-0.2/-0.6}	50	30	25	142

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	537 790	SNCL-12	3	20	537 794	SNCL-12-R3
16	2	25	537 791	SNCL-16	3	25	537 795	SNCL-16-R3
20	2	40	537 792	SNCL-20	3	40	537 796	SNCL-20-R3
25	2	45	537 793	SNCL-25	3	45	537 797	SNCL-25-R3
32	2	85	174 404	SNCL-32	–	–	–	–
40	2	115	174 405	SNCL-40	–	–	–	–
50	2	180	174 406	SNCL-50	–	–	–	–
63	2	270	174 407	SNCL-63	–	–	–	–
80	2	480	174 408	SNCL-80	–	–	–	–
100	2	700	174 409	SNCL-100	–	–	–	–
125	2	1300	174 410	SNCL-125	–	–	–	–

1) Corrosion resistance class 2 to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Corrosion resistance class 3 to Festo standard 940 070

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

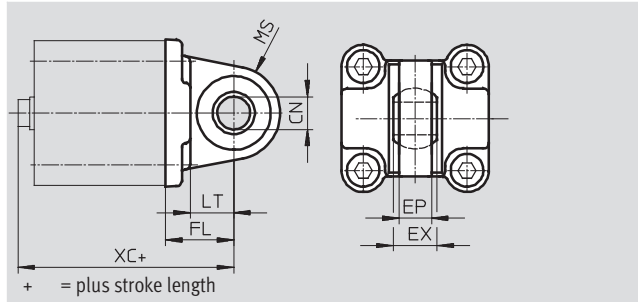
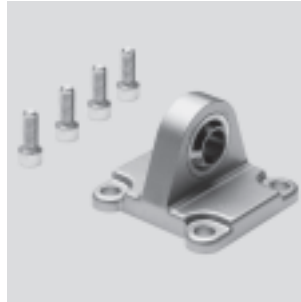
Compact cylinders ADN/AEN, to ISO 21287

Accessories

FESTO

Swivel flange SNCS

Material:
Die-cast aluminium



Dimensions and ordering data										
For Ø	CN	EP	EX	FL	LT	MS	XC	CRC ¹⁾	Weight	Part No. Type
[mm]	Ø H7	±0.2		±0.2					[g]	
32	10	10.5	14	22	13	15	72.2	2	85	174 397 SNCS-32
40	12	12	16	25	16	17	75.2	2	125	174 398 SNCS-40
50	16	15	21	27	16	20	80.2	2	210	174 399 SNCS-50
63	16	15	21	32	21	22	89.2	2	280	174 400 SNCS-63
80	20	18	25	36	22	27	99	2	540	174 401 SNCS-80
100	20	18	25	41	27	29	117	2	700	174 402 SNCS-100
125	30	25	37	50	30	39	142	2	1410	174 403 SNCS-125

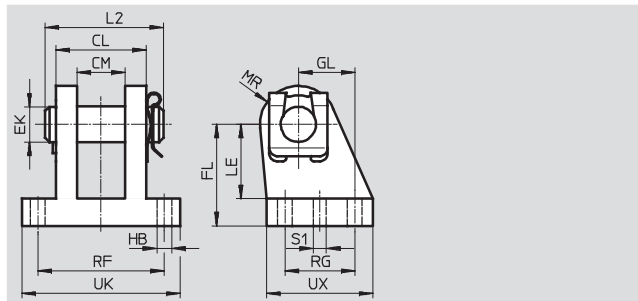
1) Corrosion resistance class 2 to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents

Clevis foot LBG

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

Material:
Nodular graphite cast iron
Free of copper, PTFE and silicone



Dimensions and ordering data															
For Ø	CL	CM	EK	FL	GL	HB	L2	LE	MR	RF	RG	S1	UK	UX	CRC ¹⁾
[mm]	±0.2		Ø			Ø						Ø			
32	28	14.1	10	32	16±0.25	6.8	35	24	12	42	20±0.3	4.8	56	36	2
40	30	16.1	12	36	20±0.3	6.8	39	26	14	44	26±0.3	5.8	58	41.5	2
50	40	21.1	16	45	25±0.3	9.2	50	33	15	56	31±0.4	5.8	70	47	2
63	40	21.1	16	50	25±0.3	9	50	38	17	56	31±0.4	7.8	70	45	2
80	50	25.1	20	63	30	11	60	49	18	70	36	7.8	89	55	2
100	50	25.1	20	71	41	11	60	56	22	70	46	9.8	89	65	2
125	80	37.2	30	90	60	14	89	70	26	106	70	11.8	128	96	2

1) Corrosion resistance class 2 to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents

Compact cylinders ADN/AEN, to ISO 21287

Accessories

FESTO

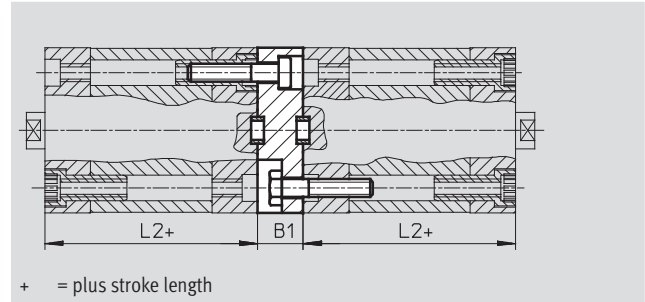
Multi-position kit DPNA

Material:

Flange: Aluminium

Screws: Galvanised steel

Free of copper, PTFE and silicone



Note

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

Dimensions and ordering data						
For Ø [mm]	L2	B1	Max. overall stroke length [mm]	CRC ¹⁾	Part No.	Type
12	35	13	600	2	537 263	DPNA-12
16			600	2	537 264	DPNA-16
20			600	2	537 265	DPNA-20
25			600	2	537 266	DPNA-25
32	44	15	800	2	537 267	DPNA-32
40	45		800	2	537 268	DPNA-40
50			800	2	537 269	DPNA-50
63	49		800	2	537 270	DPNA-63
80	54	17	1000	2	537 271	DPNA-80
100	67	19.5	1000	2	537 272	DPNA-100

1) Corrosion resistance class 2 to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents

Compact cylinders ADN/AEN, to ISO 21287

Accessories

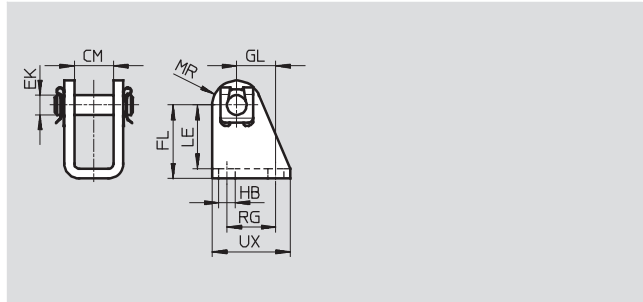
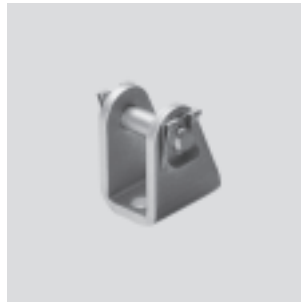
FESTO

Clevis foot LBN

Material:

Galvanised steel

Free of copper, PTFE and silicone



Dimensions and ordering data												
For Ø	CM	EK Ø	FL	GL	HB Ø	LE	MR	RG	UX	CRC ¹⁾	Weight [g]	Part No. Type
[mm]												
12/16	12.1	6	27 +0.3/-0.2	13	5.5	24	7	15	25	2	40	6 058 LBN-12/16
20/25	16.1	8	30 +0.4/-0.2	16	6.6	26	10	20	32	2	81	6 059 LBN-20/25

1) Corrosion resistance class 2 to Festo standard 940 070

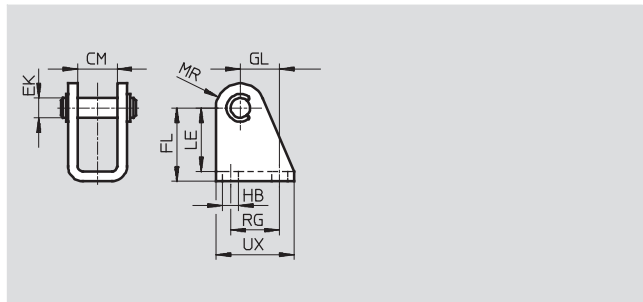
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents

Clevis foot CRLBN, stainless steel

Material:

High-alloy steel

Free of copper, PTFE and silicone



Dimensions and ordering data												
For Ø	CM	EK Ø	FL	GL	HB Ø	LE	MR	RG	UX	CRC ¹⁾	Weight [g]	Part No. Type
[mm]												
12/16	12.1	6	27 +0.3/-0.2	13	5.5	24	7	15	25	4	55	161 862 CRLBN-12/16
20/25	16.1	8	30 +0.4/-0.2	16	6.6	26	10	20	32	4	62	161 863 CRLBN-20/25

1) Corrosion resistance class 4 to Festo standard 940 070

Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required

Compact cylinders ADN/AEN, to ISO 21287

Accessories

FESTO

Swivel flange

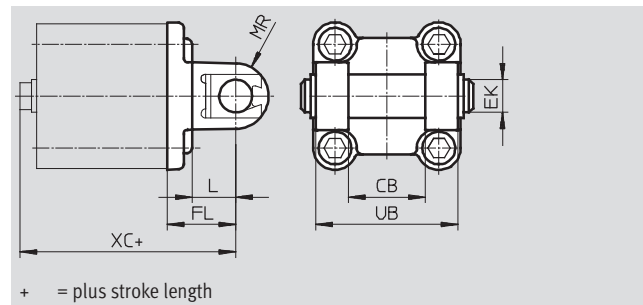
SNCB/SNCB-...-R3

Material:

SNCB: Die-cast aluminium

SNCB-...-R3: Die-cast aluminium with protective coating, high corrosion protection

Free of copper, PTFE and silicone



Dimensions and ordering data							
For Ø	CB	EK Ø	FL	L	MR	UB	XC
[mm]	H14	e8	±0.2			h14	
32	26	10	22	13	8.5	45	72
40	28	12	25	16	12	52	76
50	32	12	27	16	12	60	80
63	40	16	32	21	16	70	89
80	50	16	36	22	16	90	99
100	60	20	41	27	20	110	117
125	70	25	50	30	25	130	142

For Ø [mm]	Basic version				R3 – High corrosion protection			
	CRC ¹⁾	Weight [g]	Part No.	Type	CRC ¹⁾	Weight [g]	Part No.	Type
32	2	100	174 390	SNCB-32	3	100	176 944	SNCB-32-R3
40	2	150	174 391	SNCB-40	3	150	176 945	SNCB-40-R3
50	2	225	174 392	SNCB-50	3	225	176 946	SNCB-50-R3
63	2	365	174 393	SNCB-63	3	365	176 947	SNCB-63-R3
80	2	610	174 394	SNCB-80	3	610	176 948	SNCB-80-R3
100	2	925	174 395	SNCB-100	3	925	176 949	SNCB-100-R3
125	2	1785	174 396	SNCB-125	3	1785	176 950	SNCB-125-R3

1) Corrosion resistance class 2 to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Corrosion resistance class 3 to Festo standard 940 070

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

Compact cylinders ADN/AEN, to ISO 21287

Accessories

FESTO

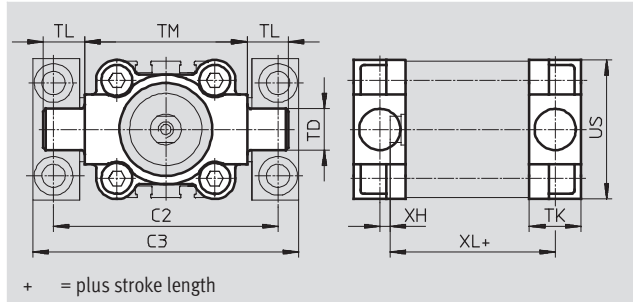
Trunnion flange ZNCF/CRZNG

Material:

ZNCF: Special steel casting

CRZNG: Electrolytically polished
special steel casting

Free of copper, PTFE and silicone



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
125	192	217	25	50	25	160	131	14	106

For Ø	Basic version				R3 – High corrosion protection			
	CRC ¹⁾	Weight	Part No.	Type	CRC ¹⁾	Weight	Part No.	Type
[mm]		[g]				[g]		
32	2	130	174 411	ZNCF-32	4	150	161 852	CRZNG-32
40	2	240	174 412	ZNCF-40	4	260	161 853	CRZNG-40
50	2	390	174 413	ZNCF-50	4	430	161 854	CRZNG-50
63	2	600	174 414	ZNCF-63	4	640	161 855	CRZNG-63
80	2	1150	174 415	ZNCF-80	4	1300	161 856	CRZNG-80
100	2	2030	174 416	ZNCF-100	4	2400	161 857	CRZNG-100
125	2	3490	174 417	ZNCF-125	4	3600	185 362	CRZNG-125

1) Corrosion resistance class 2 to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Corrosion resistance class 4 to Festo standard 940 070

Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required

Compact cylinders ADN/AEN, to ISO 21287

Accessories

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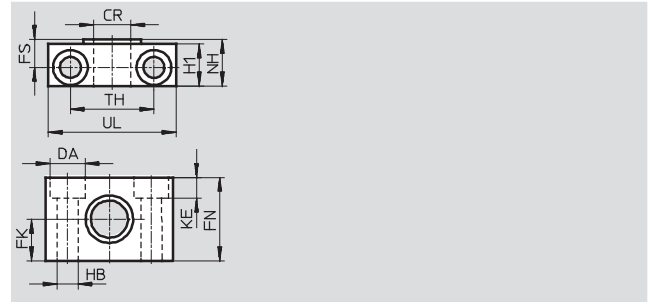
Trunnion support LN2G

Material:

Trunnion support: Anodised aluminium

Plain bearing: Plastic

Free of copper, PTFE and silicone



Dimensions and ordering data															
For Ø	CR	DA	FK	FN	FS	H1	HB	KE	NH	TH	UL	CRC ¹⁾	Weight	Part No.	Type
[mm]	Ø	Ø	Ø				Ø								
	D11	H13	±0.1				H13			±0.2			[g]		
32	12	11	15	30	10.5	15	6.6	6.8	18	32	46	2	90	32 959	LNZG-32
40, 50	16	15	18	36	12	18	9	9	21	36	55	2	140	32 960	LNZG-40/50
63, 80	20	18	20	40	13	20	11	11	23	42	65	2	190	32 961	LNZG-63/80
100, 125	25	20	25	50	16	24.5	14	13	28.5	50	75	2	320	32 962	LNZG-100/125

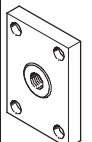
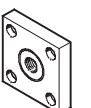
1) Corrosion resistance class 2 to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents

Compact cylinders ADN/AEN, to ISO 21287

Accessories

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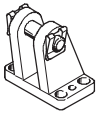
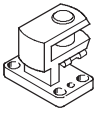
Ordering data – Piston rod attachments				Technical data → Internet: piston-rod attachment			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Rod eye SGS				Rod clevis SGA used in combination with rod eye SGS			
	12	–			12, 16, 20, 25	–	
	16	9 254	SGS-M6		32, 40	32 954	SGA-M10x1,25
	20, 25	9 255	SGS-M8		50, 63	10 767	SGA-M12x1,25
	32, 40	9 261	SGS-M10x1,25		80, 100	10 768	SGA-M16x1,25
	50, 63	9 262	SGS-M12x1,25		125	10 769	SGA-M20x1,25
	80, 100	9 263	SGS-M16x1,5				
	125	9 264	SGS-M20x1,5				
				Self-aligning rod coupler FK			
	12		30 984	FK-M5			
	16		2 061	FK-M6			
	20, 25		2 062	FK-M8			
	32, 40		6 140	FK-M10x1,25			
	50, 63		6 141	FK-M12x1,25			
	80, 100		6 142	FK-M16x1,5			
	125		6 143	FK-M20x1,5			
				Coupling piece KSZ			
	12		–				
	16		36 123	KSZ-M6			
	20, 25		36 124	KSZ-M8			
	32, 40		36 125	KSZ-M10x1,25			
	50, 63		36 126	KSZ-M12x1,25			
	80, 100		36 127	KSZ-M16x1,5			
	125		36 128	KSZ-M20x1,5			
Coupling piece KSG							
	12, 16, 20, 25	–					
	32, 40		32 963	KSG-M10x1,25			
	50, 63		32 964	KSG-M12x1,25			
	80, 100		32 965	KSG-M16x1,5			
	125		32 966	KSG-M20x1,5			
Adapter AD							
	12		–				
	16		157 328	AD-M6-M5			
			157 329	AD-M6-1/8			
			157 330	AD-M6-1/4			
	20		157 331	AD-M8-1/8			
	25		157 332	AD-M8-1/4			
	32		157 333	AD-M10x1,25-1/8			
	40		157 334	AD-M10x1,25-1/4			
	50		160 256	AD-M12x1,25-1/4			
	63		160 257	AD-M12x1,25-3/8			

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Ordering data – Corrosion and acid resistant piston rod attachments				Technical data → Internet: crsg			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Rod eye CRSGS				Rod clevis CRSG			
	12	–			12	–	
	16	195 580	CRSGS-M6		16, 20	13 567	CRSG-M6
	20, 25	195 581	CRSGS-M8		20, 25	13 568	CRSG-M8
	32, 40	195 582	CRSGS-M10x1,25		32, 40	13 569	CRSG-M10x1,25
	50, 63	195 583	CRSGS-M12x1,25		50, 63	13 570	CRSG-M12x1,25
	80, 100	195 584	CRSGS-M16x1,5		80, 100	13 571	CRSG-M16x1,5
	125	195 585	CRSGS-M20x1,5		125	13 572	CRSG-M20x1,5

Ordering data – Mounting attachments				Technical data → Internet: clevis foot			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Clevis foot LBG for rod eye SGS				Right-angle clevis foot LQG for rod eye SGS			
	32, 40	31 761	LBG-32		32, 40	31 768	LQG-32
	50, 63	31 762	LBG-40		50, 63	31 769	LQG-40
	80, 100	31 763	LBG-50		80, 100	31 770	LQG-50
		31 764	LBG-63			31 771	LQG-63
	125	31 765	LBG-80		125	31 772	LQG-80
		31 766	LBG-100			31 773	LQG-100

Ordering data – One-way flow control valves					Technical data → Internet: grla	
	Connection		Material	Part No.	Type	
	For Ø	For tubing O.D.				
For exhaust air						
	12, 16, 20, 25	3	Metal design	193 137	GRLA-M5-QS-3-D	
		4		193 138	GRLA-M5-QS-4-D	
		6		193 139	GRLA-M5-QS-6-D	
	32, 40, 50, 63, 80, 100	3		193 142	GRLA-1/8-QS-3-D	
		4		193 143	GRLA-1/8-QS-4-D	
		6		193 144	GRLA-1/8-QS-6-D	
		8		193 145	GRLA-1/8-QS-8-D	
	125	6		193 146	GRLA-1/4-QS-6-D	
		8		193 147	GRLA-1/4-QS-8-D	
		10		193 148	GRLA-1/4-QS-10-D	

Compact cylinders ADN/AEN, to ISO 21287

Accessories

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Ordering data – One-way flow control valves				Technical data → Internet: grlz	
	Connection		Material	Part No.	Type
	For Ø	For tubing O.D.			
For supply air					
	12, 16, 20, 25	3	Metal design	193 153	GRLZ-M5-QS-3-D
		4		193 154	GRLZ-M5-QS-4-D
		6		193 155	GRLZ-M5-QS-6-D
	32, 40, 50, 63, 80, 100	3		193 156	GRLZ-1/8-QS-3-D
		4		193 157	GRLZ-1/8-QS-4-D
		6		193 158	GRLZ-1/8-QS-6-D
		8		193 159	GRLZ-1/8-QS-8-D
		125		–	151 195

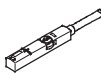
Ordering data – One-way flow control valves for cylinder ADNP			Technical data → Internet: vfoc	
	Connection		Part No.	Type
	For Ø			
Inline				
	20, 25		540 362	VFOC-E-S4-Q4
	32, 40, 50		540 363	VFOC-E-S6-Q6

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	PNP	Cable, 3-wire	2.5	543 867	SMT-8M-PS-24V-K-2,5-OE
			Plug M8x1, 3-pin	0.3	543 866	SMT-8M-PS-24V-K-0,3-M8D
			Plug M12x1, 3-pin	0.3	543 869	SMT-8M-PS-24V-K-0,3-M12
		NPN	Cable, 3-wire	2.5	543 870	SMT-8M-NS-24V-K-2,5-OE
			Plug M8x1, 3-pin	0.3	543 871	SMT-8M-NS-24V-K-0,3-M8D
	Insertable in the slot lengthwise, flush with the cylinder profile	PNP	Cable, 3-wire	2.5	175 436	SMT-8-PS-K-LED-24-B
			Plug M8x1, 3-pin	0.3	175 484	SMT-8-PS-S-LED-24-B
N/C contact						
	Insertable in the slot from above, flush with cylinder profile	PNP	Cable, 3-wire	7.5	543 873	SMT-8M-PO-24V-K7,5-OE

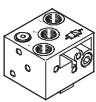
Compact cylinders ADN/AEN, to ISO 21287

Accessories

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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	543 862	SME-8M-DS-24V-K-2,5-OE
				5.0	543 863	SME-8M-DS-24V-K-5,0-OE
			Cable, 3-wire	2.5	543 872	SME-8M-ZS-24V-K-2,5-OE
				Plug M8x1, 3-pin	0.3	543 861
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	150 855	SME-8-K-LED-24
			Plug M8x1, 3-pin	0.3	150 857	SME-8-S-LED-24
N/C contact						
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	7.5	160 251	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	541 333	NEBU-M8G3-K-2.5-LE3
			5	541 334	NEBU-M8G3-K-5-LE3
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541 363	NEBU-M12G5-K-2.5-LE3
			5	541 364	NEBU-M12G5-K-5-LE3
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541 338	NEBU-M8W3-K-2.5-LE3
			5	541 341	NEBU-M8W3-K-5-LE3
	Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541 367	NEBU-M12W5-K-2.5-LE3
			5	541 370	NEBU-M12W5-K-5-LE3

Ordering data – Rectangular proximity sensors, pneumatic			Technical data → Internet: smpo	
	Pneumatic connection		Part No.	Type
3/2-way valve, normally closed				
	Female thread M5		178 563	SMPO-8E

Ordering data – Mounting kits for proximity sensors SMPO-8E			Technical data → Internet: smb	
	Assembly		Part No.	Type
	Clamped in T-slot		178 230	SMB-8E

Ordering data – Slot cover for T-slot					
	Assembly	Length		Part No.	Type
	Insertable from above	2x 0.5 m		151 680	ABP-5-S

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