

# Compact Cylinders ADN/AEN/ADNGF – Inch Series, Based on ISO 21287



Compact cylinders for maximum productivity in confined spaces, combining innovative technology, high performance and reduced installation space requirements

- More than the standard: Piston  $\varnothing$  1/2" to 5"
- Variable strokes up to 20"
- Compact cylinder with standard port pattern, dimensions based on ISO 21287
- Innovative technology for maximum speeds
- Flexible in use thanks to customised variants
- Spare parts service

Product Range Overview																
Function	Type	Piston $\varnothing$ [in]	Stroke [in]	Force [lbf]	Variants											
					A	I	P	A	Q	S2	S20	K2	K8	S6	S1	R3
Basic version																
Double-acting	ADN	1/2, 5/8, 3/4, 1, 1 1/4, 1 5/8, 2, 2 1/2, 3, 4, 5	0.04 ... 19.7	15 ... 1,655	■	■	■	■	■	■	■	■	■	■	■	■
Single-acting	AEN	1/2, 5/8, 3/4, 1, 1 1/4, 1 5/8, 2, 2 1/2, 3, 4	0.04 ... 1	15 ... 1,655	■	■	■	■	■	-	-	■	■	■	-	-
Non-rotating, with yoke																
Double-acting	ADNGF	1/2, 5/8, 3/4, 1, 1 1/4, 1 5/8, 2, 2 1/2, 3, 4	0.04 ... 15.75	15 ... 1,060	-	-	■	■	-	■	-	-	-	-	-	-

Variants			
A	Male thread	A	Position sensing
I	Female thread	Q	Square piston rod
P	Flexible cushioning rings/pads at both ends	S2	Through piston rod
		S20	Through, hollow piston rod
K2	Extended male piston rod thread	S1	Reinforced piston rod
K8	Extended piston rod	R3	High corrosion protection
S6	Heat resistant seals up to max. 248 °F		

- Features**
- Sensor slots on three sides for flush mounting of proximity sensors
  - Integrated cushioning rings for absorbing residual energy at high speeds and machine cycles
  - Centering hole in the end cap matches centering pins ZBS
- More features → 2

Contents		
Basic Version, Double-acting	Basic Version, Single-acting	Non-rotating, with Yoke, Double-acting
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- Accessories → 42	- Accessories → 42	- Accessories → 42
→ <a href="http://www.festo.com/catalog/ADN">www.festo.com/catalog/ADN</a>	→ <a href="http://www.festo.com/catalog/AEN">www.festo.com/catalog/AEN</a>	→ <a href="http://www.festo.com/catalog/ADNGF">www.festo.com/catalog/ADNGF</a>

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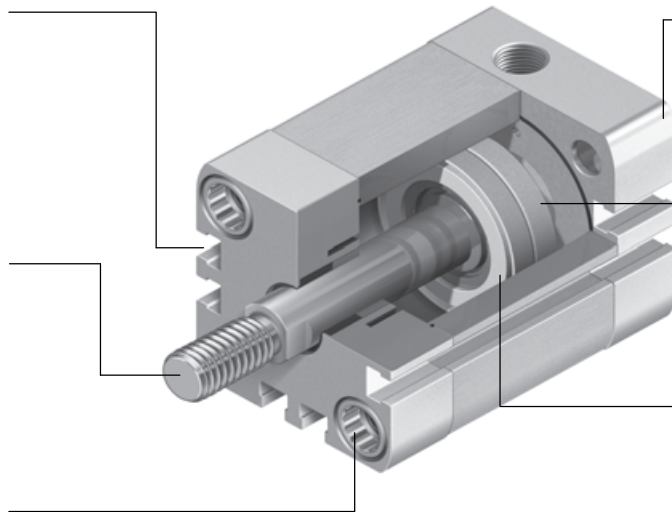


## Key Features

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



Centering hole in the end cap matches centering pins ZBS

Magnet for contactless position sensing

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

### More than the standard

- Series ADN/AEN compact cylinders are based on 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

### Convenient

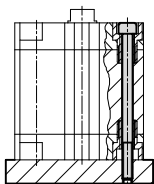
- Easy to mount with a comprehensive range of mounting accessories for just about every type of installation
- Highly flexible thanks to the wide range of variants
- Contactless position sensing using proximity sensors

### Reliable

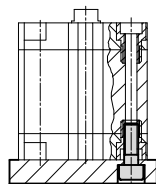
- Optimised manufacturing methods, patented technology and more than 40 years of experience in the field of cylinders make Festo and ADN/AEN a great team

### Mounting options

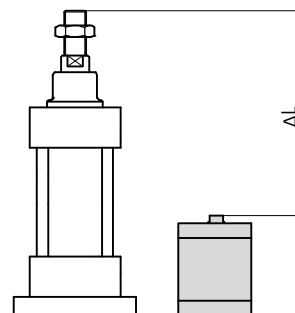
With through screw



Direct mounting



### Size



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

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Key Features

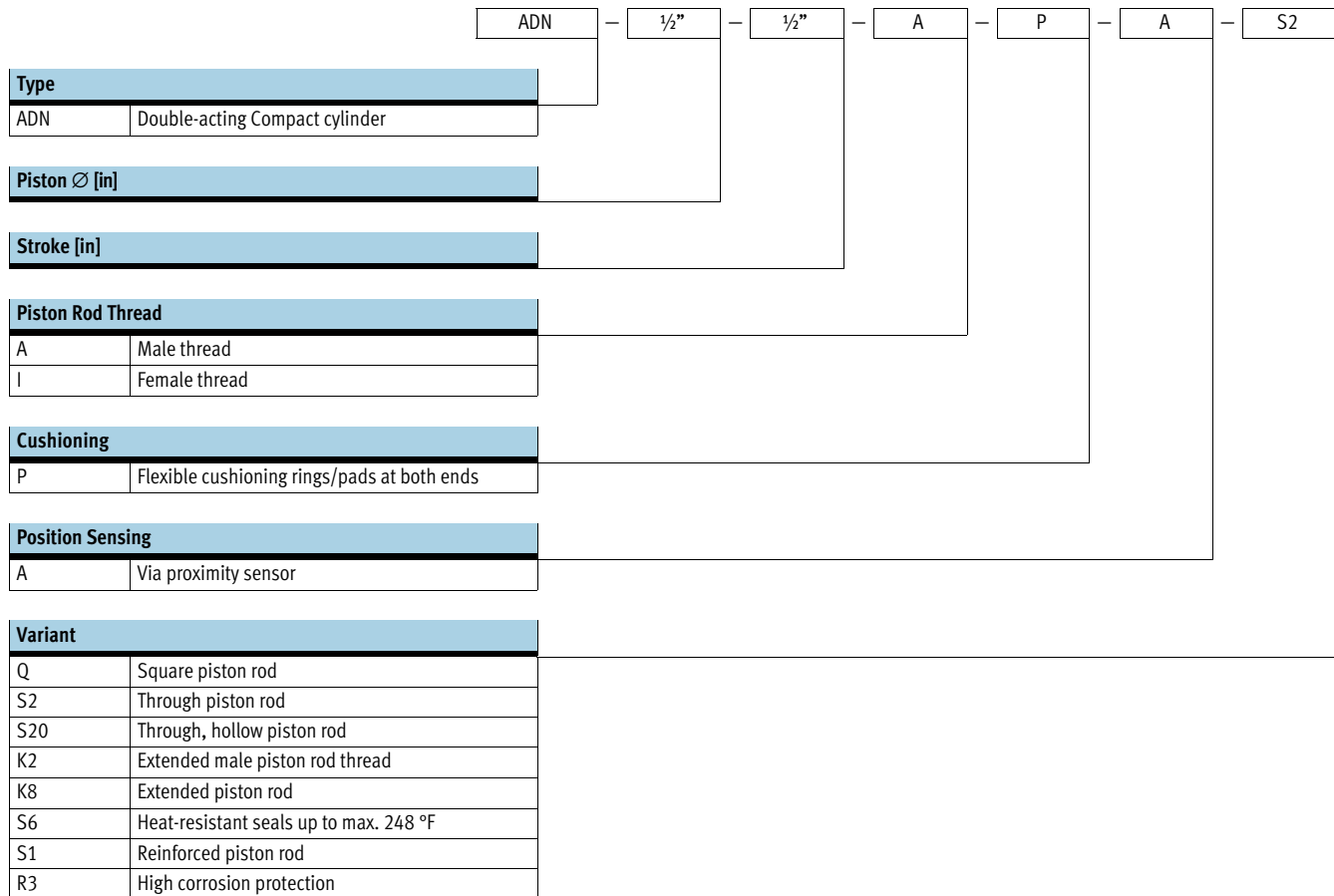
Variants from the Modular System					
Symbol	Key features	Description	ADN	AEN	ADNGF
	Q Square piston rod	Protection against torsion. For correctly oriented feeding	■	■	-
	S2 Through piston rod	For working at both ends with the same forces in the advance and return stroke, for attaching external stops	■	-	■
	S20 Through, hollow piston rod	For carrying vacuum, small parts, media, etc.	■	-	-
	K2 Extended male piston rod thread	-	■	■	-
	K8 Extended piston rod	-	■	■	-
	S6 Heat-resistant seals	Temperature resistance up to max. 248 °F	■	■	-
	S1 Reinforced piston rod	Increased lateral forces. Absorbs many times more lateral force than a basic cylinder	■	-	-
	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	■	-	-



Software tools on CD-ROM:  
Configuration of Festo product modules  
[www.festo.com](http://www.festo.com)

# Compact Cylinders ADN – Inch Series, Based on ISO 21287

Type Codes



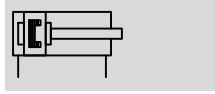
# Compact Cylinders ADN – Inch Series, Based on ISO 21287



Technical Data

Function

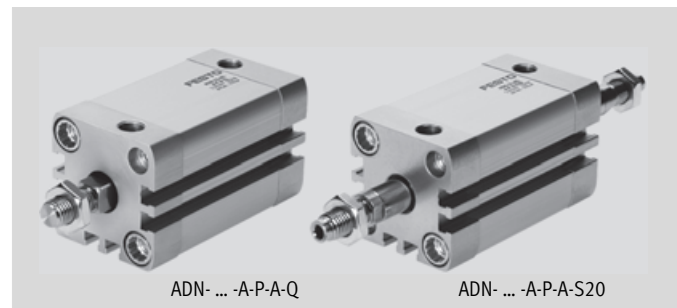
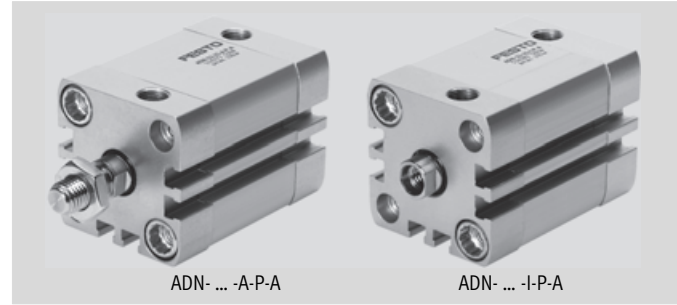
Variants → 3



Diameter 1/2 ... 5 inch

Stroke length 0.04 ... 19.7 inch

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General Technical Data												
Piston Ø	[in]	1/2	5/8	3/4	1	1 1/4	1 5/8	2	2 1/2	3	4	5
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										

Technical Data – Basic Version and Variants							
Piston Ø	[in]	1/2	5/8	3/4	1	1 1/4	1 5/8
Pneumatic connection		10-32 UNF-2B	10-32 UNF-2B	10-32 UNF-2B	10-32 UNF-2B	1/8-27 NPT	1/8-27 NPT
Female piston rod thread		4-48 UNF-2B	8-36 UNF-2B	10-32 UNF-2B	10-32 UNF-2B	5/16-24 UNF-2B	5/16-24 UNF-2B
Female piston rod thread Q variant		4-48 UNF-2B	8-36 UNF-2B	10-32 UNF-2B	10-32 UNF-2B	10-32 UNF-2B	10-32 UNF-2B
Male piston rod thread		10-32 UNF-2A	10-32 UNF-2A	5/16-24 UNF-2A	5/16-24 UNF-2A	3/8-24 UNF-2A	3/8-24 UNF-2A
Max. torsional backlash of piston rod [°]		2	1.8	1.6	1.6	1.2	1.2

Piston Ø	[in]	2	2 1/2	3	4	5
Pneumatic connection		1/8-27 NPT	1/8-27 NPT	1/8-27 NPT	1/8-27 NPT	1/4-18 NPT
Female piston rod thread		3/8-24 UNF-2B	3/8-24 UNF-2B	1/2-20 UNF-2B	1/2-20 UNF-2B	5/8-18 UNF-2B
Female piston rod thread Q variant		5/16-24 UNF-2B	5/16-24 UNF-2B	3/8-24 UNF-2B	3/8-24 UNF-2B	1/2-20 UNF-2B
Male piston rod thread		1/2-20 UNF-2A	1/2-20 UNF-2A	5/8-18 UNF-2A	5/8-18 UNF-2A	3/4-16 UNF-2A
Max. torsional backlash of piston rod [°]		1	1	0.8	0.8	0.8

# Compact Cylinders ADN – Inch Series, Based on ISO 21287



Technical Data

Technical Data – Variant S1					
Piston Ø	[in]	1	1 5/8	2 1/2	4
Pneumatic connection		10-32 UNF-2B	10-32 UNF-2B	1/8-27 NPT	1/8-27 NPT
Piston rod thread	Female	10-32 UNF-2B	3/8-24 UNF-2B	1/2-20 UNF-2B	5/8-18 UNF-2B
	Male	5/16-24 UNF-2A	1/2-20 UNF-2A	5/8-18 UNF-2A	3/4-16 UNF-2A

Operating and Environmental Conditions													
Piston Ø	[in]	1/2	5/8	3/4	1	1 1/4	1 5/8	2	2 1/2	3	4	5	
Operating medium		Filtered compressed air, lubricated or unlubricated											
Operating pressure [psi]		14.5 ... 145		8.7 ... 145									
	Q	19 ... 145		14.5 ... 145			11.8 ... 145			8.8 ... 145			
	S1	–			14.5 ... 145		–	14.5 ... 145		–	14.5 ... 145	–	14.5 ... 145
	S2, S20	22 ... 145	19 ... 145	17.6 ... 145		14.5 ... 145			11.8 ... 145				
	S6	14.5 ... 145		8.8 ... 145									
Ambient temperature <sup>1)</sup> [°F]		–4 ... +176											
	S6	32 ... +248											
	R3	–4 ... +176											
Corrosion resistance class CRC <sup>2)</sup>		2											
	R3	3											

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

Corrosion resistance class 3 to Festo standard 940 070; Components with heavy corrosion exposure. Externally visible components in direct contact with normal industrial atmosphere or media such as solvents and cleaning agents, where the surface requirement is predominantly functional.

Forces [lbf] and Impact Energy [ft-lbf]												
Piston Ø	[in]	1/2	5/8	3/4	1	1 1/4	1 5/8	2	2 1/2	3	4	5
Theoretical force at 90 psi, advancing		15.3	27.2	42.3	66.3	108.6	169.5	264.8	420.4	678	1059.3	1655.2
	S1	–	–	–	66.3	–	169.5	–	420.4	–	1059.3	–
	S2	11.5	20.2	31.7	55.5	93.3	154.2	237.6	393.4	635.5	1017	1589.1
Theoretical force at 90 psi, retracting		11.5	20.2	31.7	55.5	93.3	154.2	237.6	393.4	635.5	1017	1589.1
	S1	–	–	–	55.5	–	142.3	–	377.9	–	992.9	–
	S2	11.5	20.2	31.7	55.5	93.3	154.2	237.6	393.4	635.5	1017	1589.1
Max. impact energy at the end positions		0.052	0.111	0.148	0.221	0.295	0.516	0.738	0.959	1.327	1.844	2.43
	S1	–	–	–	0.22	–	0.52	–	0.96	–	1.84	–
	S6	0.03	0.06	0.07	0.11	0.15	0.26	0.37	0.48	0.66	0.92	1.29
	K10	–	–	0.12	0.18	0.24	0.41	0.59	0.74	1.03	1.48	1.92
	S20	–	0.01	0.02	0.06	0.11	0.29	0.35	0.46	0.59	0.66	0.7

Permissible impact velocity:

$$V_{perm.} = \sqrt{\frac{2 \times 32.2 E_{perm.}}{m_{piston} + m_{load}}}$$

Maximum permissible load:

$$m_{load} = \frac{2 \times 32.2 E_{perm.}}{v^2} - m_{piston}$$

### Notes

$m_{piston}$  equals mass of cylinder moving parts  
 $m_{load}$  equals mass of external load

This data represents the maximum values that can be achieved. Values fluctuate in practice relative to the size of the effective load. Allowance must also be made for the limits of the cushioning capacity of the drive and the permissible impact energy.

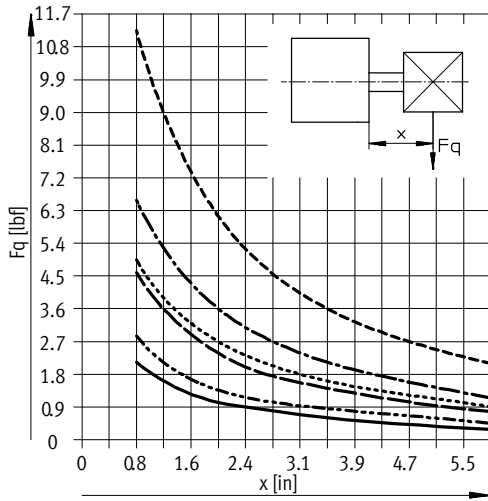
# Compact Cylinders ADN – Inch Series, Based on ISO 21287

Technical Data

FESTO

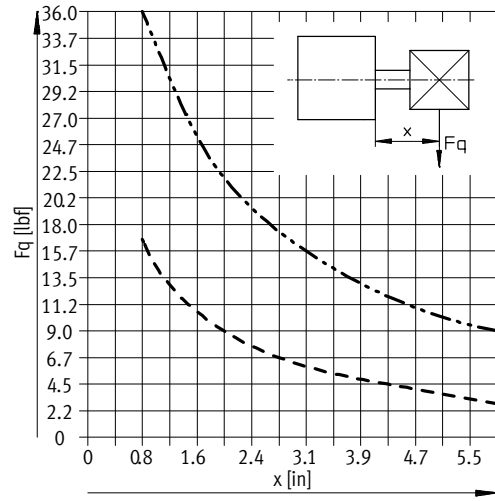
## Max. Lateral Force $F_q$ as a Function of the Projection $x$

$\varnothing 1/2 \dots 2 1/2$



- $\varnothing 1/2$
- - -  $\varnothing 5/8$
- · -  $\varnothing 3/4$
- · ·  $\varnothing 1$
- · -  $\varnothing 1 1/4 / 1 5/8$
- - -  $\varnothing 2 / 2 1/2$

$\varnothing 3 \dots 5$



- - -  $\varnothing 3/4$
- · -  $\varnothing 5$

# Compact Cylinders ADN – Inch Series, Based on ISO 21287

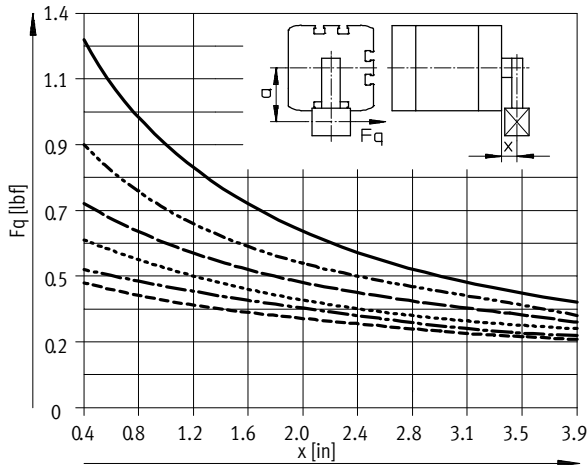


Technical Data

## Max. Lateral Force $F_q$ as a Function of the Projection $x$ and the Lever Arm $a$

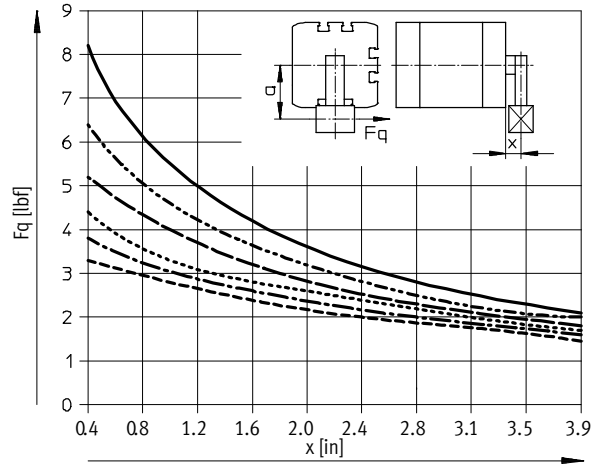
Q – Square piston rod

$\varnothing 1/2$



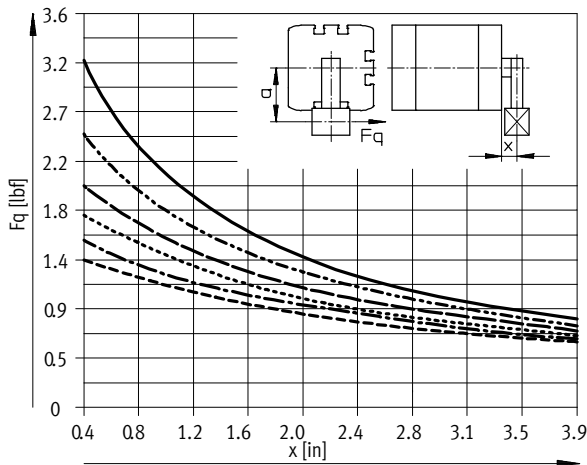
- a = 0.2 in
- - - a = 0.4 in
- · - a = 0.6 in
- · · a = 0.8 in
- - - a = 1.0 in
- · - a = 1.2 in

$\varnothing 5/8$



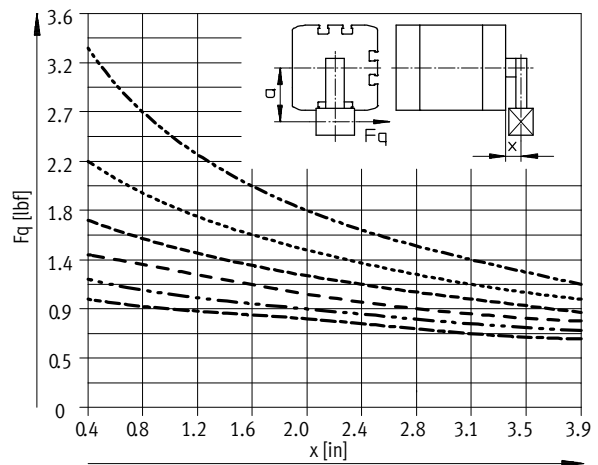
- a = 0.2 in
- - - a = 0.4 in
- · - a = 0.6 in
- · · a = 0.8 in
- - - a = 1.0 in
- · - a = 1.2 in

$\varnothing 3/4/1$



- a = 0.2 in
- - - a = 0.4 in
- · - a = 0.6 in
- · · a = 0.8 in
- - - a = 1.0 in
- · - a = 1.2 in

$\varnothing 1 1/4/1 5/8$



- - - a = 0.4 in
- · · a = 0.8 in
- - - a = 1.2 in
- · - a = 1.6 in
- - - a = 2.0 in
- · - a = 2.4 in

### 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 (→ 7).



# Compact Cylinders ADN – Inch Series, Based on ISO 21287

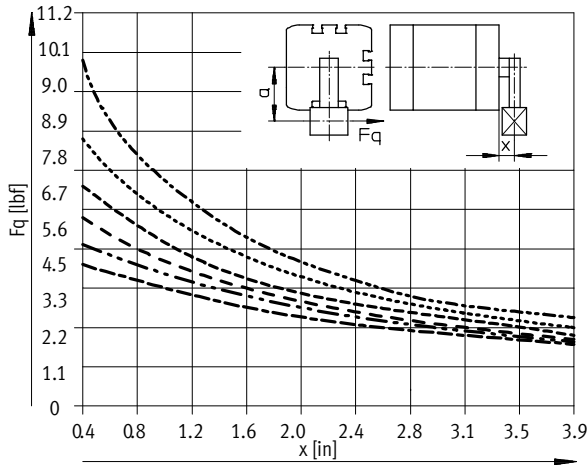
Technical Data



## Max. Lateral Force $F_q$ as a Function of the Projection $x$ and the Lever Arm $a$

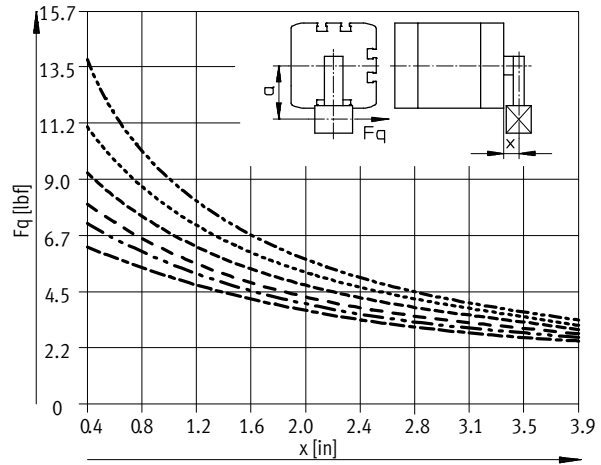
Q – Square piston rod

$\varnothing 2\frac{1}{2}$



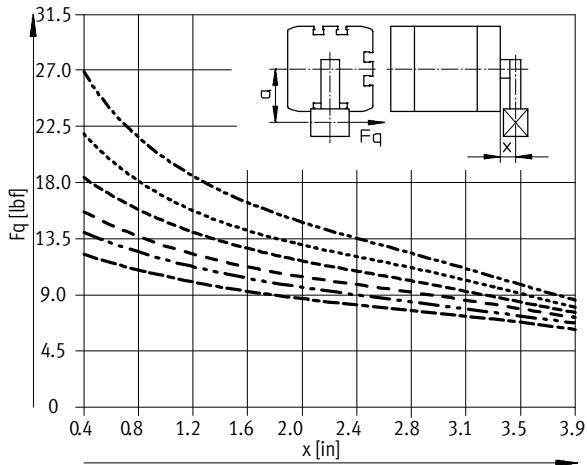
- a = 0.2 in
- ..... a = 0.4 in
- a = 0.6 in
- a = 0.8 in
- a = 1.0 in
- a = 1.2 in

$\varnothing 3/4$



- a = 0.2 in
- ..... a = 0.4 in
- a = 0.6 in
- a = 0.8 in
- a = 1.0 in
- a = 1.2 in

$\varnothing 5$



- a = 0.2 in
- ..... a = 0.4 in
- a = 0.6 in
- a = 0.8 in
- a = 1.0 in
- a = 1.2 in

### 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 ( $\rightarrow 7$ ).

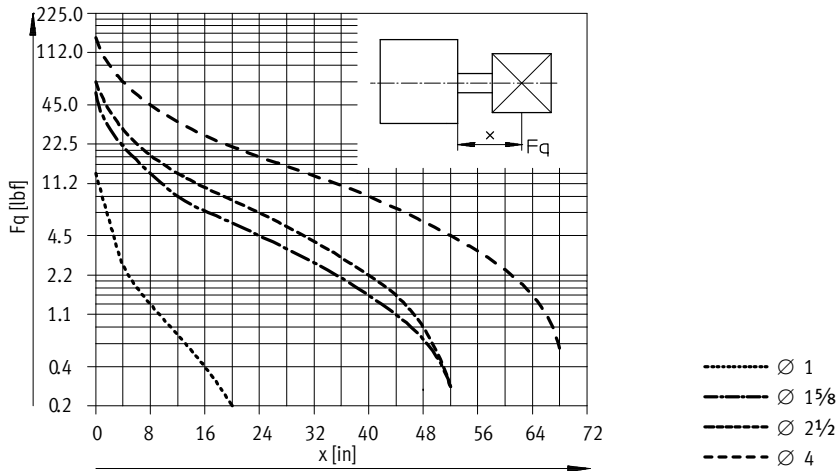
# Compact Cylinders ADN – Inch Series, Based on ISO 21287

Technical Data



## Max. Lateral Force $F_Q$ as a Function of the Projection $x$

S1 – Reinforced piston rod

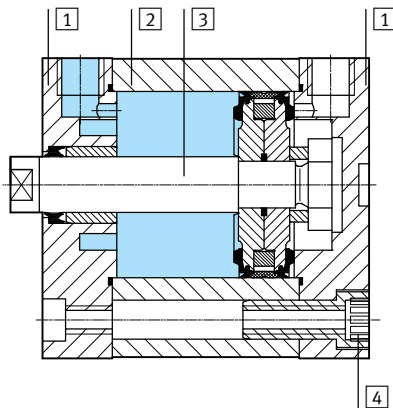


## Weight [lb]

Piston Ø	1/2	5/8	3/4	1	1 1/4	1 5/8	2	2 1/2	3	4	5
Product weight with 0 in stroke	0.15	0.16	0.26	0.31	0.53	0.69	1.08	1.44	2.6	4.31	5.76
Additional weight per 0.4 in stroke	0.02	0.03	0.04	0.05	0.06	0.07	0.1	0.12	0.16	0.2	0.23
Moving load with 0 in stroke	0.02	0.03	0.06	0.1	0.12	0.16	0.28	0.36	0.8	1.14	2.16
Additional load per 0.4 in stroke	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.05	0.05	0.08

## Materials

Sectional view

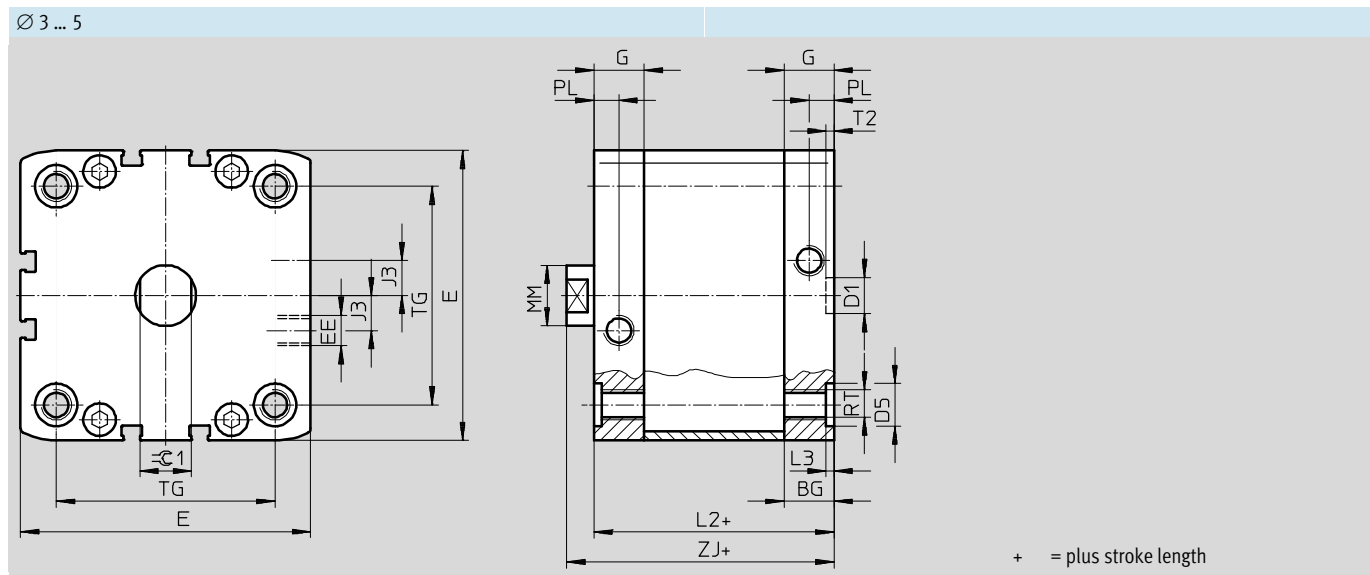
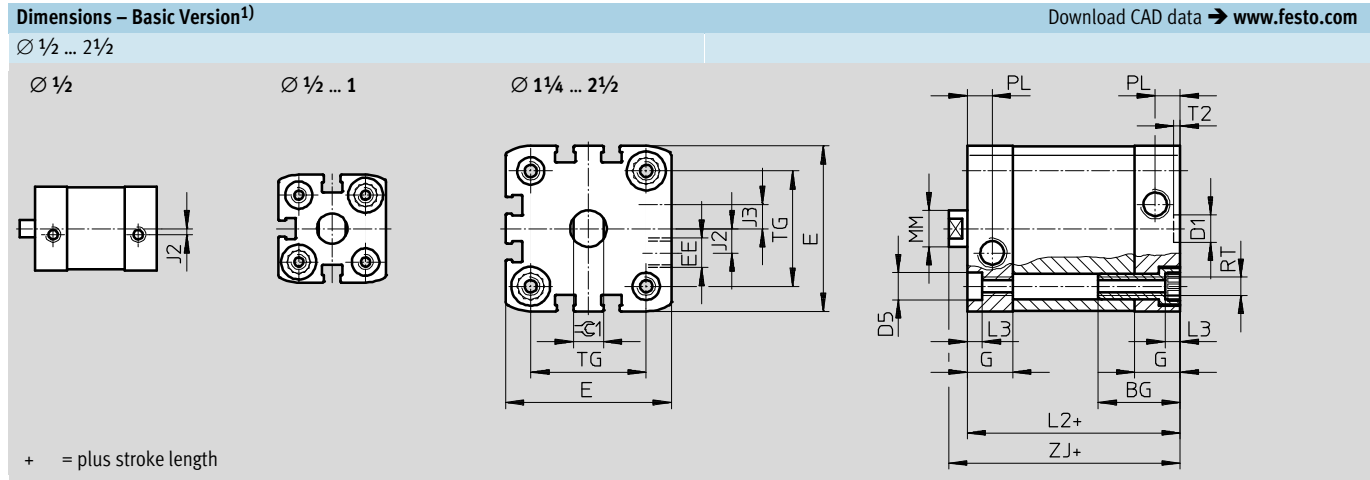


Compact cylinder	Basic version, Q	S6	R3
1 Cover	Anodised aluminum		
2 Cylinder barrel	Anodised aluminum		
3 Piston rod	High-alloy steel		
4 Flange screws	Ø 1/2 ... 5/8	High-alloy steel	High-alloy steel
	Ø 3/4 ... 1	Galvanised steel	High-alloy steel
	Ø 1 1/4 ... 2 1/2	Galvanised steel	Steel, zinc flake coating
	Ø 3 ... 5	Standard screws, galvanised steel	Standard screws, high-alloy steel
- Seals	Polyurethane	Fluoro elastomer	Polyurethane

# Compact Cylinders ADN – Inch Series, Based on ISO 21287



Dimensional Drawings



∅	BG	D1 ∅ H9	D5 ∅ F9	E	EE	G	J2	J3	L2 max.	L3 +0.01	MM ∅	PL +0.01	RT	T2 +0.1	TG ±0.01	ZJ +0.04	⊖C1 h13 [mm]	
1/2	0.67	0.35	0.24	1.08+0.01	10-32 UNF-2B	0.41	0.08	-	1.38	0.14	0.24	0.24	M4	0.08	0.63	1.54	5	
5/8				1.14+0.01		0.43	-	0.31			0.71				1.57	7		
3/4	0.77		0.35	1.4+0.01		0.47	-	0.1	1.46	0.39	0.2				M5	0.87	1.68	9
1				1.56+0.01		-	0.24	1.54	1.02							1.76		
1 1/4	1.06	0.47	0.35	1.85+0.01	1/8-27 NPT	0.59	-	0.31	1.77	0.2	0.47	0.32	M6	0.1	1.28	1.98	10	
1 3/8				2.15+0.01											1.5	2.02		
2				2.58+0.01											1.93	2.25		
2 1/2	0.67	0.47	0.59	2.97+0.01	1/4-18 NPT	0.65	-	0.45	1.93	0.1	0.63	0.41	M8	0.1	1.83	2.09	13	
3				3.76+0.02											2.13	2.25		
4				0.85											0.85	-		0.79
5	0.79	-	-	5.3+0.01	1/4-18 NPT	0.79	-	0.83	3.19	-	0.98	M10	0.1	3.5	2.99	17		
													M12		4.33	3.62	21	

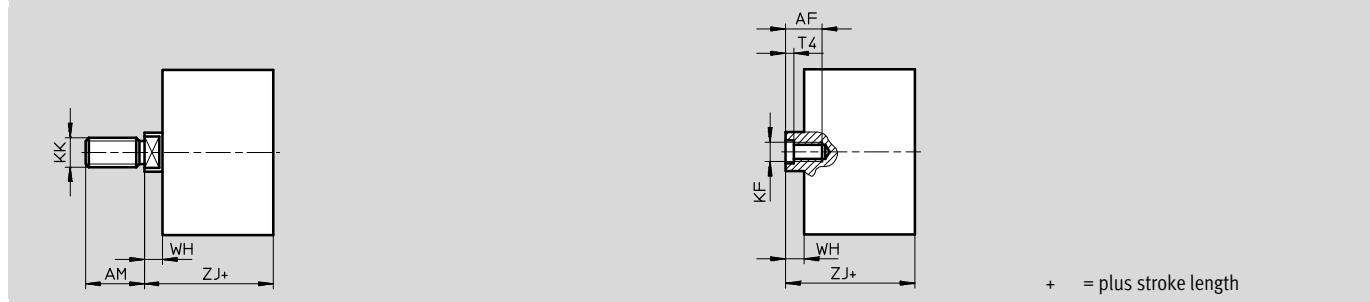
1) Dimensions are in inches, unless otherwise noted.

# Compact Cylinders ADN – Inch Series, Based on ISO 21287

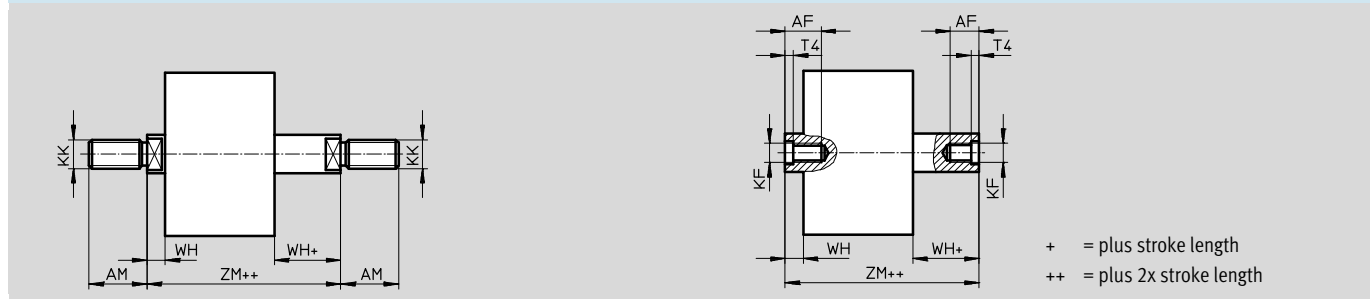


Dimensional Drawings

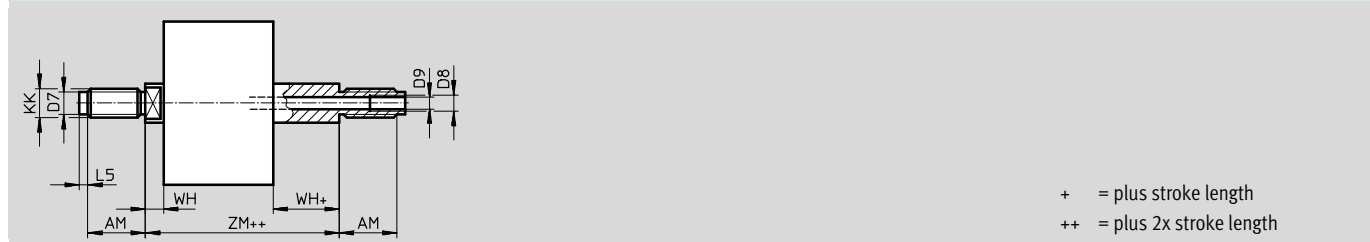
**Dimensions – Variants<sup>1)</sup>** Download CAD data → [www.festo.com](http://www.festo.com)  
 Basic version



**S2 – Through piston rod**



**S20 – Through, hollow piston rod**



∅	AF	AM	B	D7	D8	D9	L5	KF	KK	T4	VD	WH	ZJ	ZM
[in]	min.	-0.02	∅	∅								+0.04		
1/2	0.31	0.39	-	-	-	-	-	4-48 UNF-2B	10-32 UNF-2A	0.06	-	0.16	1.54	1.71
5/8	0.39	0.47	-	0.18		3.2	0.12	8-36 UNF-2B				0.19	1.57	1.76
3/4	0.55	0.63	0.71	0.24		3.8	0.08	10-32 UNF-2B	5/16-24 UNF-2A	0.1	0.2	0.22	1.68	1.91
1													1.76	1.98
1 1/4	0.63	0.75	1.06	0.31		4.5	0.12	5/16-24 UNF-2B	3/8-24 UNF-2A	0.13	0.25	0.24	1.98	2.22
1 5/8					2.02								2.26	
2	0.79	0.87	1.22	0.39	6	0.14	3/8-24 UNF-2B	1/2-20 UNF-2A	0.19	0.25	0.32	2.09	2.42	
2 1/2												2.25	2.57	
3	0.79	1.1	1.38	-	G1/8	8	-	1/2-20 UNF-2B	5/8-18 UNF-2A	0.24	0.25	0.35	2.48	2.8
4					G1/4								2.99	3.31
5					G1/4								11.7	5/8-18 UNF-2B

1) Dimensions are in inches, unless otherwise noted.

# Compact Cylinders ADN – Inch Series, Based on ISO 21287

Dimensional Drawings

**Dimensions – Variants<sup>1)</sup>** Download CAD data → [www.festo.com](http://www.festo.com)

**K2 – Extended male piston rod thread**

+ = plus stroke length

**K8 – Extended piston rod**

**Note**  
Piston rod extension is performed at one end in combination with the S2/S20 variants (at the square piston rod in combination with the Q variant).  
+ = plus stroke length

∅ [in]	A1	A2	A3 min.	AM -0.02	KK	T3	WH +0.04	ZJ +0.04
1/2	0.04 ... 0.4	0.04 ... 11.8	-	0.4	10-32 UNF-2A	-	0.16	1.57
5/8				0.47			0.19	
3/4	0.04 ... 0.79	0.04 ... 15.75	0.47	0.63	5/16-24 UNF-2A	0.08	0.22	1.69
1				0.75	3/8-24 UNF-2A	0.1	0.24	1.77
1 1/4				0.87	1/2-20 UNF-2A	0.13	0.32	1.97
1 5/8				0.79	1.1	5/8-18 UNF-2A	0.19	0.35
2	0.04 ... 1.18	0.04 ... 19.7	-	1.57	3/4-16 UNF-2A	-	0.43	2.09
2 1/2				0.79			0.35	2.24
3	0.04 ... 1.57							2.48
4								2.99
5								3.62

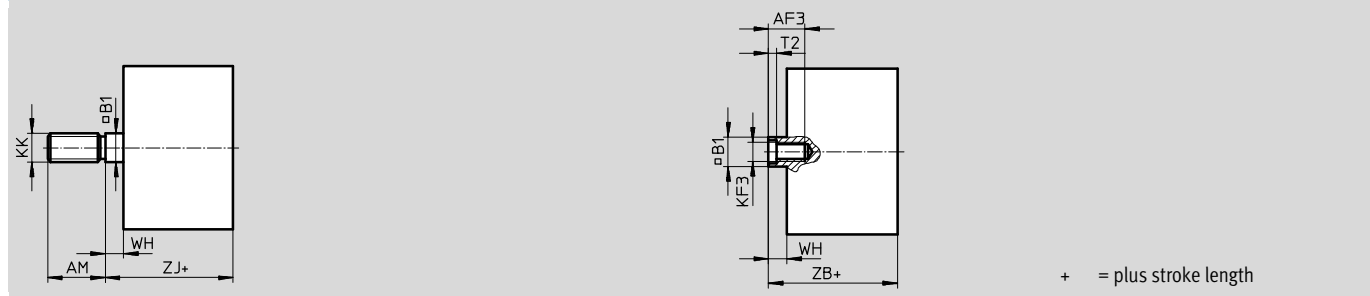
1) Dimensions are in inches, unless otherwise noted.

# Compact Cylinders ADN – Inch Series, Based on ISO 21287

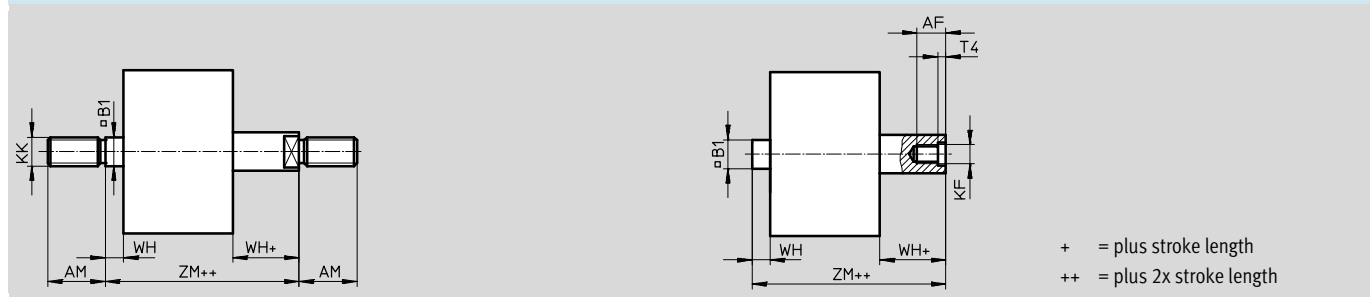


Dimensional Drawings

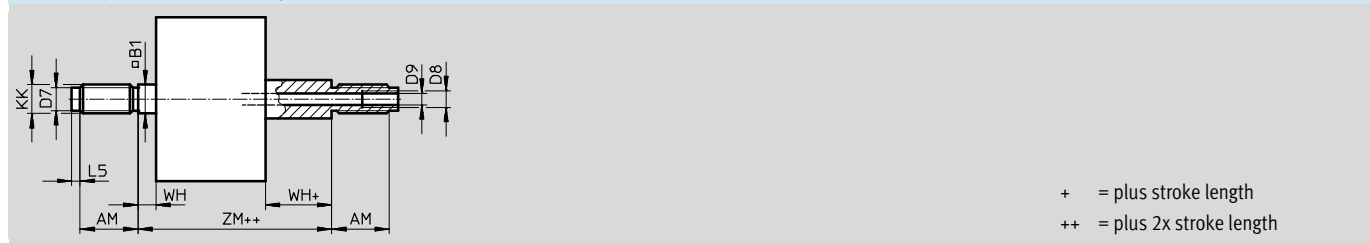
**Dimensions – Variants<sup>1)</sup>** Download CAD data → [www.festo.com](http://www.festo.com)  
 Q – Square piston rod



Q-S2 – Square, through piston rod



Q-S20 – Square, through, hollow piston rod



∅	AF	AM	B1	D7	D8	D9	KF	KF3	KK	L5	T4	WH	ZJ	ZM
[in]	min.	-0.02	□	∅								+0.04		
1/2	0.31	0.39	0.22	-	-	-	4-48 UNF-2B	4-48 UNF-2B	10-32 UNF-2A	0.12	0.06	0.17	1.54	1.71
5/8	0.39	0.47	0.28	0.18		0.13	8-36 UNF-2B	8-36 UNF-2B	10-32 UNF-2A	0.12	0.06	0.19	1.57	1.76
3/4	0.47	0.63	0.35	0.24		0.15	10-32 UNF-2B	10-32 UNF-2B	5/16-24 UNF-2A	0.08	0.08	0.22	1.68	1.91
1														
1 1/4	0.55	0.75	0.39	0.31		0.18	5/16-24 UNF-2B	10-32 UNF-2B	3/8-24 UNF-2A	0.12	0.1	0.24	1.98	2.22
1 5/8														
2	0.63	0.87	0.47	0.39		0.24	3/8-24 UNF-2B	5/16-24 UNF-2B	1/2-20 UNF-2A	0.14	0.13	0.32	2.09	2.42
2 1/2														
3	0.79	1.1	0.63	-	G1/8	0.33	1/2-20 UNF-2B	A-24 UNF-2B	5/8-18 UNF-2A	-	0.19	0.35	2.48	2.8
4						0.35								
5	0.94	1.57	0.79	-	G1/4	0.45	5/16-24 UNF-2B	1/2-20 UNF-2B	3/4-16 UNF-2A	-	0.24	0.43	3.62	4.06

1) Dimensions are in inches, unless otherwise noted.

# Compact Cylinders ADN – Inch Series, Based on ISO 21287

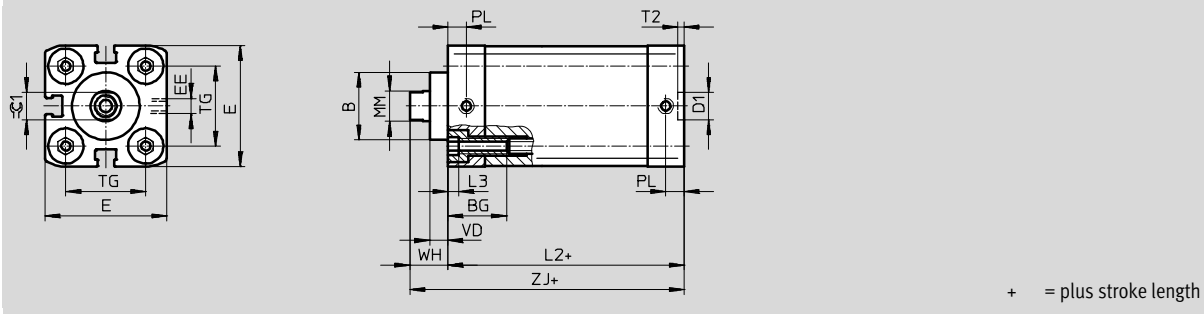
Dimensional Drawings

## Dimensions – Variants<sup>1)</sup>

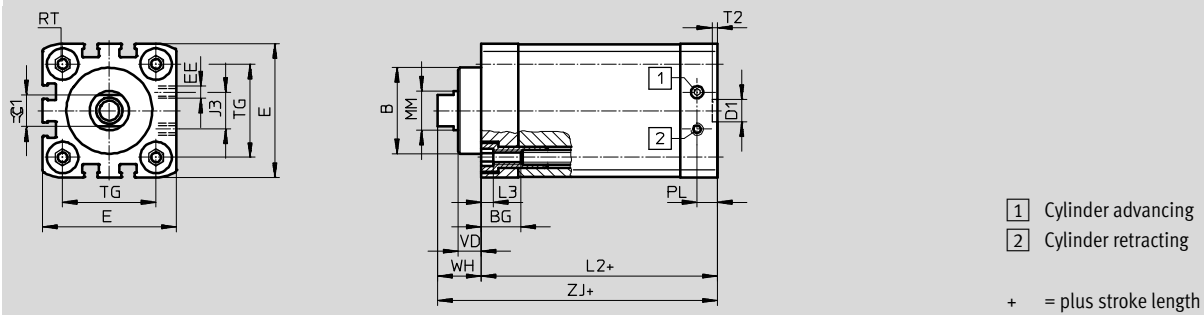
Download CAD data → [www.festo.com](http://www.festo.com)

S1 – Reinforced piston rod

∅ 1



∅ 1 5/8 ... 4



S1 – Reinforced piston rod



∅	A3	AF	AM	B	BG	D1	E	EE	J3	KF	KK	L2
[in]	min.	min.	-0.5	∅ F8	min.	∅ H9	+0.01					
1	0.47	0.55	0.63	0.87	0.59	0.35	1.56	10-32 UNF-2B	-	10-32 UNF-2B	5/16-24 UNF-2B	1.54
1 5/8	0.63	0.79	0.87	1.38	0.63		2.15		0.59	3/8-24 UNF-2B	1/2-20 UNF-2B	1.77
2 1/2	0.79		1.1	1.65		0.47	2.97	1/8-27 NPT-2 B	0.91	1/2-20 UNF-2B	5/8-18 UNF-2B	1.93
4	-	0.98	1.57	2.17	0.67		4.47		1.57	5/8-18 UNF-2B	3/4-16 UNF-2B	2.64

∅	L3	MM	PM	RT	T2	T3	T4	TG	VD	WH	ZJ	∅C1
[in]		∅								+1.3		h13 [mm]
1	0.2	0.39	0.24	M5	0.08	0.08	0.1	1.02	0.24	0.46	1.99	9
1 5/8		0.63	0.32	M6		0.13	0.19	1.5	0.37	0.7	2.47	13
2 1/2		0.79		M8	0.19	0.24	2.22	0.47	0.83	2.76	17	
4		0.98	0.41	M10	0.1	-	0.28	3.5	0.61	1.04	3.67	21

1) Dimensions are in inches, unless otherwise noted.

# Compact Cylinders ADN – Inch Series, Based on ISO 21287



Ordering Data – Pre-configured Products

Ordering Data						
Type	Piston Ø [in]	Stroke [in]	Female piston rod thread		Male piston rod thread	
			Part No.	Type	Part No.	Type
	1/2	1/4	557025	ADN-1/2"-1/4"-I-P-A	557019	ADN-1/2"-1/4"-A-P-A
		1/2	557026	ADN-1/2"-1/2"-I-P-A	557020	ADN-1/2"-1/2"-A-P-A
		3/4	557027	ADN-1/2"-3/4"-I-P-A	557021	ADN-1/2"-3/4"-A-P-A
		1	557028	ADN-1/2"-1"-I-P-A	557022	ADN-1/2"-1"-A-P-A
		1 1/4	557029	ADN-1/2"-1 1/4"-I-P-A	557023	ADN-1/2"-1 1/4"-A-P-A
		1 1/2	557030	ADN-1/2"-1 1/2"-I-P-A	557024	ADN-1/2"-1 1/2"-A-P-A
	5/8	1/4	557039	ADN-5/8"-1/4"-I-P-A	557032	ADN-5/8"-1/4"-A-P-A
		1/2	557040	ADN-5/8"-1/2"-I-P-A	557033	ADN-5/8"-1/2"-A-P-A
		3/4	557041	ADN-5/8"-3/4"-I-P-A	557034	ADN-5/8"-3/4"-A-P-A
		1	557042	ADN-5/8"-1"-I-P-A	557035	ADN-5/8"-1"-A-P-A
		1 1/4	557043	ADN-5/8"-1 1/4"-I-P-A	557036	ADN-5/8"-1 1/4"-A-P-A
		1 1/2	557044	ADN-5/8"-1 1/2"-I-P-A	557037	ADN-5/8"-1 1/2"-A-P-A
	3/4	1/4	557055	ADN-3/4"-1/4"-I-P-A	557047	ADN-3/4"-1/4"-A-P-A
		1/2	557056	ADN-3/4"-1/2"-I-P-A	557048	ADN-3/4"-1/2"-A-P-A
		3/4	557057	ADN-3/4"-3/4"-I-P-A	557049	ADN-3/4"-3/4"-A-P-A
		1	557058	ADN-3/4"-1"-I-P-A	557050	ADN-3/4"-1"-A-P-A
		1 1/4	557059	ADN-3/4"-1 1/4"-I-P-A	557051	ADN-3/4"-1 1/4"-A-P-A
		1 1/2	557060	ADN-3/4"-1 1/2"-I-P-A	557052	ADN-3/4"-1 1/2"-A-P-A
	1	1/4	557072	ADN-1"-1/4"-I-P-A	557064	ADN-1"-1/4"-A-P-A
		1/2	557073	ADN-1"-1/2"-I-P-A	557065	ADN-1"-1/2"-A-P-A
		3/4	557074	ADN-1"-3/4"-I-P-A	557066	ADN-1"-3/4"-A-P-A
		1	557075	ADN-1"-1"-I-P-A	557067	ADN-1"-1"-A-P-A
		1 1/4	557076	ADN-1"-1 1/4"-I-P-A	557068	ADN-1"-1 1/4"-A-P-A
		1 1/2	557077	ADN-1"-1 1/2"-I-P-A	557069	ADN-1"-1 1/2"-A-P-A
1 1/4	1/4	557090	ADN-1 1/4"-1/4"-I-P-A	557081	ADN-1 1/4"-1/4"-A-P-A	
	1/2	557091	ADN-1 1/4"-1/2"-I-P-A	557082	ADN-1 1/4"-1/2"-A-P-A	
	3/4	557092	ADN-1 1/4"-3/4"-I-P-A	557083	ADN-1 1/4"-3/4"-A-P-A	
	1	557093	ADN-1 1/4"-1"-I-P-A	557084	ADN-1 1/4"-1"-A-P-A	
	1 1/4	557094	ADN-1 1/4"-1 1/4"-I-P-A	557085	ADN-1 1/4"-1 1/4"-A-P-A	
	1 1/2	557095	ADN-1 1/4"-1 1/2"-I-P-A	557086	ADN-1 1/4"-1 1/2"-A-P-A	
	2	557096	ADN-1 1/4"-2"-I-P-A	557087	ADN-1 1/4"-2"-A-P-A	
	2 1/2	557097	ADN-1 1/4"-2 1/2"-I-P-A	557088	ADN-1 1/4"-2 1/2"-A-P-A	
	3	557098	ADN-1 1/4"-3"-I-P-A	557089	ADN-1 1/4"-3"-A-P-A	



# Compact Cylinders ADN – Inch Series, Based on ISO 21287



Ordering Data – Pre-configured Products

Ordering Data						
Type	Piston Ø [in]	Stroke [in]	Female piston rod thread		Male piston rod thread	
			Part No.	Type	Part No.	Type
	1 5/8	1/4	557109	ADN-1 5/8"-1/4"-I-P-A	557100	ADN-1 5/8"-1/4"-A-P-A
		1/2	557110	ADN-1 5/8"-1/2"-I-P-A	557101	ADN-1 5/8"-1/2"-A-P-A
		3/4	557111	ADN-1 5/8"-3/4"-I-P-A	557102	ADN-1 5/8"-3/4"-A-P-A
		1	557112	ADN-1 5/8"-1"-I-P-A	557103	ADN-1 5/8"-1"-A-P-A
		1 1/4	557113	ADN-1 5/8"-1 1/4"-I-P-A	557104	ADN-1 5/8"-1 1/4"-A-P-A
		1 1/2	557114	ADN-1 5/8"-1 1/2"-I-P-A	557105	ADN-1 5/8"-1 1/2"-A-P-A
		2	557115	ADN-1 5/8"-2"-I-P-A	557106	ADN-1 5/8"-2"-A-P-A
		2 1/2	557116	ADN-1 5/8"-2 1/2"-I-P-A	557107	ADN-1 5/8"-2 1/2"-A-P-A
	3	557117	ADN-1 5/8"-3"-I-P-A	557108	ADN-1 5/8"-3"-A-P-A	
	2	1/4	557128	ADN-2"-1/4"-I-P-A	557119	ADN-2"-1/4"-A-P-A
		1/2	557129	ADN-2"-1/2"-I-P-A	557120	ADN-2"-1/2"-A-P-A
		3/4	557130	ADN-2"-3/4"-I-P-A	557121	ADN-2"-3/4"-A-P-A
		1	557131	ADN-2"-1"-I-P-A	557122	ADN-2"-1"-A-P-A
		1 1/4	557132	ADN-2"-1 1/4"-I-P-A	557123	ADN-2"-1 1/4"-A-P-A
		1 1/2	557133	ADN-2"-1 1/2"-I-P-A	557124	ADN-2"-1 1/2"-A-P-A
		2	557134	ADN-2"-2"-I-P-A	557125	ADN-2"-2"-A-P-A
		2 1/2	557135	ADN-2"-2 1/2"-I-P-A	557126	ADN-2"-2 1/2"-A-P-A
	3	557136	ADN-2"-3"-I-P-A	557127	ADN-2"-3"-A-P-A	
	2 1/2	1/2	557146	ADN-2 1/2"-1/2"-I-P-A	557138	ADN-2 1/2"-1/2"-A-P-A
		3/4	557147	ADN-2 1/2"-3/4"-I-P-A	557139	ADN-2 1/2"-3/4"-A-P-A
		1	557148	ADN-2 1/2"-1"-I-P-A	557140	ADN-2 1/2"-1"-A-P-A
		1 1/4	557149	ADN-2 1/2"-1 1/4"-I-P-A	557141	ADN-2 1/2"-1 1/4"-A-P-A
		1 1/2	557150	ADN-2 1/2"-1 1/2"-I-P-A	557142	ADN-2 1/2"-1 1/2"-A-P-A
		2	557151	ADN-2 1/2"-2"-I-P-A	557143	ADN-2 1/2"-2"-A-P-A
		2 1/2	557152	ADN-2 1/2"-2 1/2"-I-P-A	557144	ADN-2 1/2"-2 1/2"-A-P-A
		3	557153	ADN-2 1/2"-3"-I-P-A	557145	ADN-2 1/2"-3"-A-P-A
	3	1/2	557163	ADN-3"-1/2"-I-P-A	557155	ADN-3"-1/2"-A-P-A
		3/4	557164	ADN-3"-3/4"-I-P-A	557156	ADN-3"-3/4"-A-P-A
1		557165	ADN-3"-1"-I-P-A	557157	ADN-3"-1"-A-P-A	
1 1/4		557166	ADN-3"-1 1/4"-I-P-A	557158	ADN-3"-1 1/4"-A-P-A	
1 1/2		557167	ADN-3"-1 1/2"-I-P-A	557159	ADN-3"-1 1/2"-A-P-A	
2		557168	ADN-3"-2"-I-P-A	557160	ADN-3"-2"-A-P-A	
2 1/2		557169	ADN-3"-2 1/2"-I-P-A	557161	ADN-3"-2 1/2"-A-P-A	
3		557170	ADN-3"-3"-I-P-A	557162	ADN-3"-3"-A-P-A	
4	1/2	557180	ADN-4"-1/2"-I-P-A	557172	ADN-4"-1/2"-A-P-A	
	3/4	557181	ADN-4"-3/4"-I-P-A	557173	ADN-4"-3/4"-A-P-A	
	1	557182	ADN-4"-1"-I-P-A	557174	ADN-4"-1"-A-P-A	
	1 1/4	557183	ADN-4"-1 1/4"-I-P-A	557175	ADN-4"-1 1/4"-A-P-A	
	1 1/2	557184	ADN-4"-1 1/2"-I-P-A	557176	ADN-4"-1 1/2"-A-P-A	
	2	557185	ADN-4"-2"-I-P-A	557177	ADN-4"-2"-A-P-A	
	2 1/2	557186	ADN-4"-2 1/2"-I-P-A	557178	ADN-4"-2 1/2"-A-P-A	
	3	557187	ADN-4"-3"-I-P-A	557179	ADN-4"-3"-A-P-A	

# Compact Cylinders ADN – Inch Series, Based on ISO 21287



Ordering Data – Configurable Products, Basic Version and Variants

## Mandatory Data →

Module No.	Function	Stroke	Cushioning
	Piston Ø	Piston rod thread	Position sensing
557018	ADN	1/2	P
557031		5/8	A
557046		3/4	
557063		1	
557080		1 1/4	
557099		1 5/8	
<b>Order example</b>			
<b>557031</b>	<b>ADN</b>	<b>5/8"</b>	<b>10" – A – P – A</b>

Ordering Table									
Size	1/2	5/8	3/4	1	1 1/4	1 5/8	Conditions	Code	Enter Code
<b>M</b> Module No.	<b>557018</b>	<b>557031</b>	<b>557046</b>	<b>557063</b>	<b>557080</b>	<b>557099</b>			
Function	Compact cylinder, double-acting, based on ISO 21287							<b>ADN</b>	ADN
Piston Ø [in]	1/2	5/8	3/4	1	1 1/4	1 5/8		-...	
Stroke [in]	0.04 ... 11.8			0.04 ... 15.75				-...	
Piston rod thread	Male thread							<b>-A</b>	
	Female thread						<b>1</b>	<b>-I</b>	
Cushioning	Flexible cushioning rings/pads at both ends							<b>-P</b>	-P
Position sensing	Via proximity sensor							<b>-A</b>	-A

- 1** | Not with piston rod type S20
- Not with extended male thread K2

Transfer order code

	<b>ADN</b>	-		-		-	<b>P</b>	-	<b>A</b>
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# Compact Cylinders ADN – Inch Series, Based on ISO 21287



Ordering Data – Configurable Products, Basic Version and Variants

## Options

<b>Protection against torsion</b>		<b>Male thread extended</b>		<b>Temperature resistance</b>		<b>Corrosion protection</b>	
<b>Type of piston rod</b>		<b>Piston rod extended</b>		<b>Reinforced piston rod</b>			
Q	S2 S20	...K2	...K8	S6	S1	R3	
- Q	- S2	- 0.2"K2		- S6			

Ordering Table										
Size	1/2	5/8	3/4	1	1 1/4	1 5/8	Conditions	Code	Enter Code	
0	Protection against torsion						Square piston rod		-Q	-Q
	Type of piston rod						Through piston rod	2	-S2	
							Through, hollow piston rod	2	-S20	
							Restricted stroke			
	[in]	0.04 ... 7.9		0.04 ... 11.8						
	Male thread extended						Extended male piston rod thread		-...K2	
	[in]	0.04 ... 0.4		0.04 ... 0.8						
	Piston rod extended						Extended piston rod		-...K8	
	[in]	0.04 ... 11.8		0.04 ... 15.75			3			
	Temperature resistance						Heat-resistant seals up to max. 248 °F		-S6	
	Reinforced piston rod						Reinforced piston rod or extended piston rod bearing		-S1	
	Corrosion protection						High corrosion protection		-R3	

- 2 **S2, S20** 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

Transfer order code

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

# Compact Cylinders ADN – Inch Series, Based on ISO 21287



Ordering Data – Configurable Products, Basic Version and Variants

## Mandatory Data →

Module No.	Function	Stroke	Cushioning
	Piston Ø	Piston rod thread	Position sensing
557118	ADN	2	0.04 ... 19.7
557137		2½	A
557154		3	I
557171		4	P
557395		5	A
<b>Order ex-ample</b>			
<b>557118</b>	<b>ADN</b>	<b>2"</b>	<b>10" – A – P – A</b>

Ordering Table									
Size	2	2½	3	4	5	Conditions	Code	Enter Code	
<b>M</b> Module No.	<b>557118</b>	<b>557137</b>	<b>557154</b>	<b>557171</b>	<b>557395</b>				
Function	Compact cylinder, double-acting, based on ISO 21287						<b>ADN</b>		ADN
Piston Ø [in]	2	2½	3	4	5		-...		
Stroke [in]	0.04 ... 15.75		0.04 ... 19.7				-...		
Piston rod thread	Male thread						<b>-A</b>		
	Female thread					<b>1</b>	<b>-I</b>		
Cushioning	Flexible cushioning rings/pads at both ends						<b>-P</b>		-P
Position sensing	Via proximity sensor						<b>-A</b>		-A

- 1** | Not with piston rod type S20
- Not with extended male thread K2

Transfer order code

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

# Compact Cylinders ADN – Inch Series, Based on ISO 21287



Ordering Data – Configurable Products, Basic Version and Variants

## Options

<b>Protection against torsion</b>		<b>Male thread extended</b>		<b>Temperature resistance</b>		<b>Corrosion protection</b>	
<b>Type of piston rod</b>		<b>Piston rod extended</b>		<b>Reinforced piston rod</b>			
Q	S2 S20	...K2	...K8	S6	S1	R3	
- Q	- S2	- 0.5"K2		- S6			

Ordering Table									
Size	2	2½	3	4	5	Conditions	Code	Enter Code	
0	Protection against torsion					Square piston rod		-Q	-Q
	Type of piston rod					Through piston rod	2	-S2	
						Through, hollow piston rod	2	-S20	
	Restricted stroke								
	[in]	0.04 ... 11.8		0.04 ... 15.75					
	Male thread extended					Extended male piston rod thread		-...K2	
	[in]	0.04 ... 0.79		0.04 ... 1.18		0.04 ... 1.57			
	Piston rod extended					Extended piston rod		-...K8	
	[in]	0.04 ... 15.75		0.04 ... 19.7		3			
	Temperature resistance					Heat-resistant seals up to max. 248 °F		-S6	
	Reinforced piston rod					Reinforced piston rod or extended piston rod bearing		-S1	
	Corrosion protection					High corrosion protection		-R3	

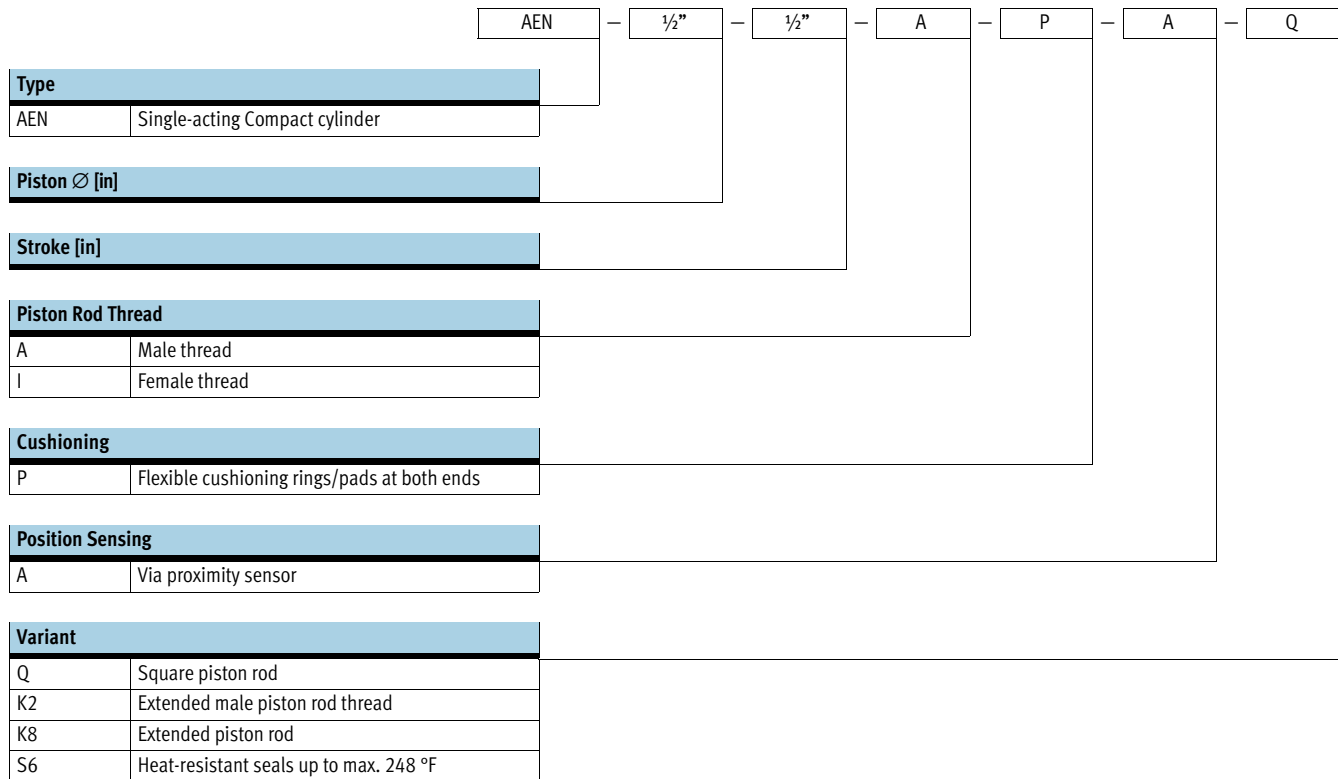
- 2 **S2, S20** Not with improved running performance K10  
Not with corrosion protection R3
- 3 **K8** The sum of the stroke length and piston rod extension must not exceed the maximum permissible stroke length

Transfer order code

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

# Compact Cylinders AEN – Inch Series, Based on ISO 21287

Type Codes

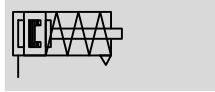


# Compact Cylinders AEN – Inch Series, Based on ISO 21287



Technical Data

Function



Diameter 1/2 ... 4 in

Stroke length 0.04 ... 1 in

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

Variants



S6



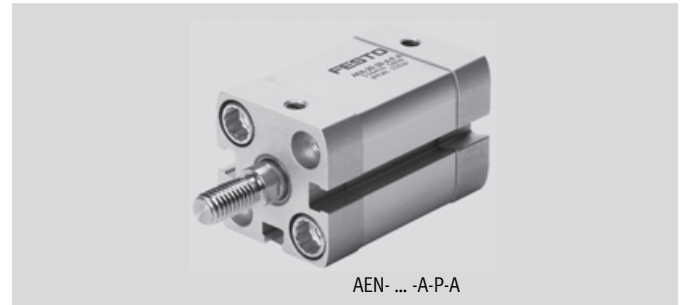
K2



K8



Q



AEN- ... -A-P-A

General Technical Data											
Piston Ø	[in]	1/2	5/8	3/4	1	1 1/4	1 5/8	2	2 1/2	3	4
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									

Technical Data – Basic Version and Variants						
Piston Ø	[in]	1/2	5/8	3/4	1	1 1/4
Pneumatic connection		10-32 UNF-2B	10-32 UNF-2B	10-32 UNF-2B	10-32 UNF-2B	1/8-27 NPT
Female piston rod thread		4-48 UNF-2B	8-36 UNF-2B	10-32 UNF-2B	10-32 UNF-2B	5/16-24 UNF-2B
Male piston rod thread		10-32 UNF-2B	10-32 UNF-2B	5/16-24 UNF-2B	5/16-24 UNF-2B	3/8-24 UNF-2B

Piston Ø	[in]	1 5/8	2	2 1/2	3	4
Pneumatic connection		1/8-27 NPT	1/8-27 NPT	1/8-27 NPT	1/8-27 NPT	1/8-27 NPT
Female piston rod thread		5/16-24 UNF-2B	3/8-24 UNF-2B	3/8-24 UNF-2B	1/2-20 UNF-2B	1/2-20 UNF-2B
Male piston rod thread		3/8-24 UNF-2B	1/2-20 UNF-2B	1/2-20 UNF-2B	5/8-18 UNF-2B	5/8-18 UNF-2B

Operating and Environmental Conditions											
Piston Ø	[in]	1/2	5/8	3/4	1	1 1/4	1 5/8	2	2 1/2	3	4
Operating medium		Filtered compressed air, lubricated or unlubricated									
Operating pressure		22 ... 145		14.5 ... 145							
	[psi]	Q		22 ... 145							
Ambient temperature <sup>1)</sup>		-4 ... +176									
	[°F]	S6									
Corrosion resistance class CRC <sup>2)</sup>		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 AEN – Inch Series, Based on ISO 21287



Technical Data

Forces [lbf] and Impact Energy [ft-lbf]											
Piston Ø [in]	1/2	5/8	3/4	1	1 1/4	1 5/8	2	2 1/2	3	4	
Theoretical force at 90 psi, advancing	59	95	161	260	440	700	1100	1780	2870	4510	
Max. impact energy at the end positions	0.03	0.03	0.03	0.06	0.07	0.11	0.13	0.21	0.26	0.51	

Permissible impact velocity: 
$$V_{perm.} = \sqrt{\frac{2 \times 32.2 \times E_{perm.}}{m_{piston} + m_{load}}}$$

Maximum permissible load: 
$$m_{load} = \frac{2 \times 32.2 \times E_{perm.}}{v^2} - m_{piston}$$

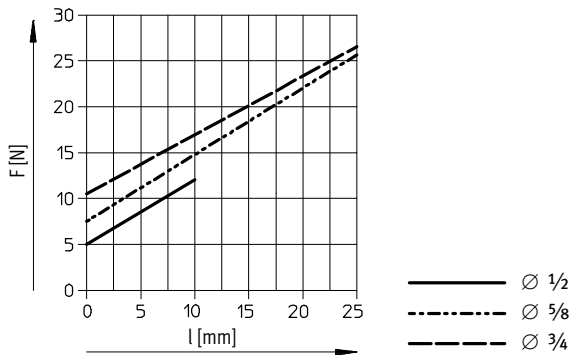
### Notes

$m_{piston}$  equals mass of cylinder moving parts  
 $m_{load}$  equals mass of external load

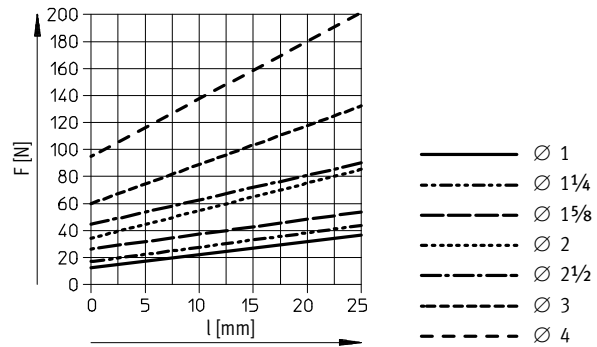
This data represents the maximum values that can be achieved. Values fluctuate in practice relative to the size of the effective load. Allowance must also be made for the limits of the cushioning capacity of the drive and the permissible impact energy.

### Spring Return Force F as a Function of the Stroke l

Ø 1/2 ... 3/4



Ø 1 ... 4



### Note

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



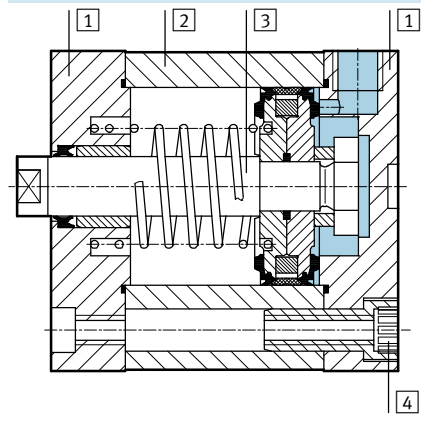
# Compact Cylinders AEN – Inch Series, Based on ISO 21287

Technical Data

Weight [lb]											
Piston Ø	[in]	1/2	5/8	3/4	1	1 1/4	1 5/8	2	2 1/2	3	4
Product weight with 0 in stroke		0.15	0.16	0.26	0.31	0.53	0.69	1.08	1.44	2.6	4.31
Additional weight per 0.4 in stroke		0.02	0.03	0.04	0.05	0.06	0.07	0.1	0.12	0.16	0.2
Moving load with 0 in stroke		0.02	0.03	0.06	0.1	0.12	0.16	0.28	0.36	0.8	1.14
Additional load per 0.4 in stroke		0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.05	0.05

## Materials

Sectional view

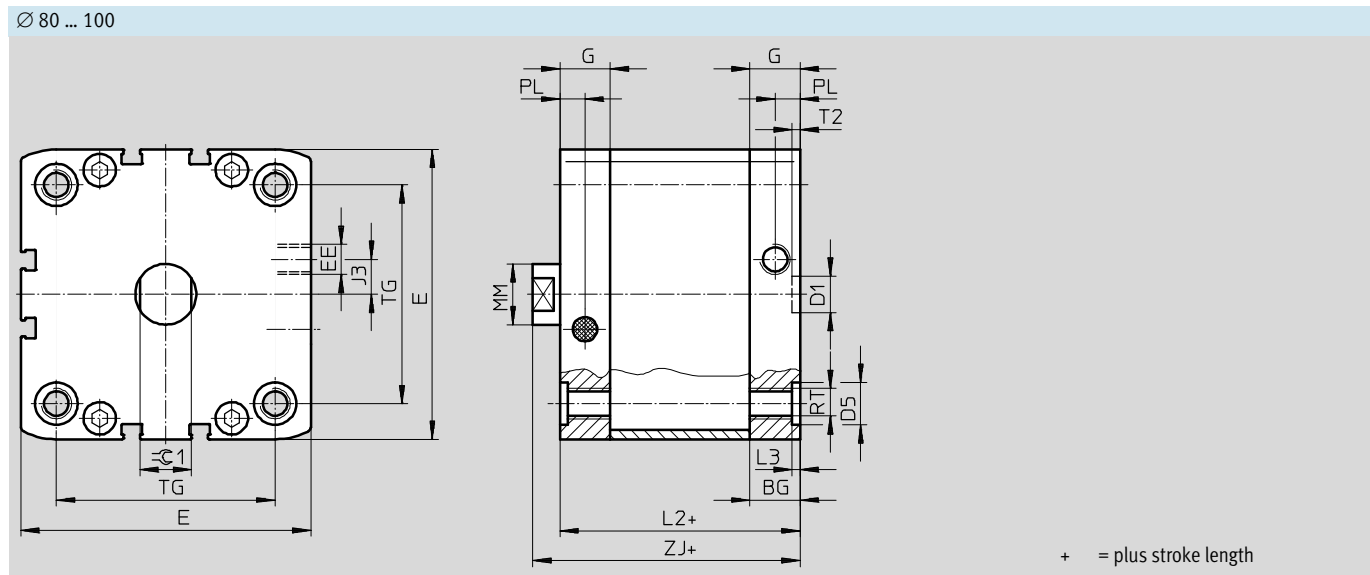
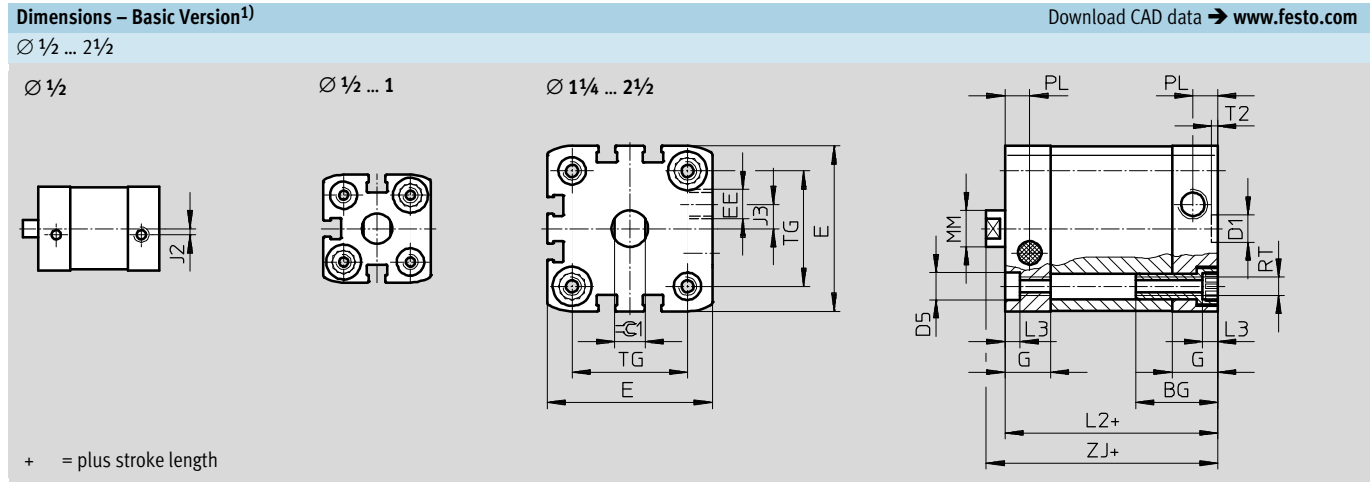


Compact cylinder		Basic version	S6
1	Cover	Anodised aluminum	
2	Cylinder barrel	Anodised aluminum	
3	Piston rod	High-alloy steel	
4	Flange screws	Ø 1/2 ... 5/8	High-alloy steel
		Ø 3/4 ... 1 1/4	Galvanised steel
		Ø 1 5/8 ... 4	Standard screws, galvanised steel
-	Seals	Polyurethane	Fluoro elastomer

# Compact Cylinders AEN – Inch Series, Based on ISO 21287



Dimensional Drawings



∅	BG	D1	D5	E	EE	G	J2	J3	L2	L3	MM	PL	RT	T2	TG	ZJ	≈C1 h13			
[in]		∅ H9	∅ F9						max.	+0.01	∅	+0.01		+0.1	±0.01	+0.04	[mm]			
1/2	0.67	0.35	0.24	1.08+0.01	10-32 UNF	0.41	0.08	-	1.38	0.14	0.24	0.24	M4	0.08	0.63	1.54	5			
5/8				1.14+0.01		0.43	-	0.1							0.71	1.57	7			
3/4	0.77		0.35	1.4+0.01		0.47	-	0.1	1.46	0.2	0.47				0.32	M6	0.01	0.87	1.68	9
1				1.56+0.01		-	0.24	1.73	1.02									1.76		
1 1/4	1.06	0.47	0.35	1.85+0.01	1/8-27 NPT	0.59	-	0.31	1.77	0.2	0.47	0.32	M8	0.01	1.28	1.98	10			
1 5/8				2.15+0.01			-	0.45							1.93	1.5		2.02		
2	0.67	0.47	0.47	2.58+0.01		0.65	0.65	-	0.45	2.13	0.1	0.79	0.41	M10	0.01	1.83	2.09	13		
2 1/2				2.97+0.01				-	0.79							2.22	2.25			
3	0.85	0.59	0.59	3.76+0.02	0.85	0.85	-	0.79	2.64	0.1	0.79	0.41	M10	0.01	2.83	2.48	17			
4	0.85	0.59	0.59	4.47+0.02	0.85	0.85	-	0.79	2.64	0.1	0.79	0.41	M10	0.01	3.5	2.99	17			

1) Dimensions are in inches, unless otherwise noted.

# Compact Cylinders AEN – Inch Series, Based on ISO 21287

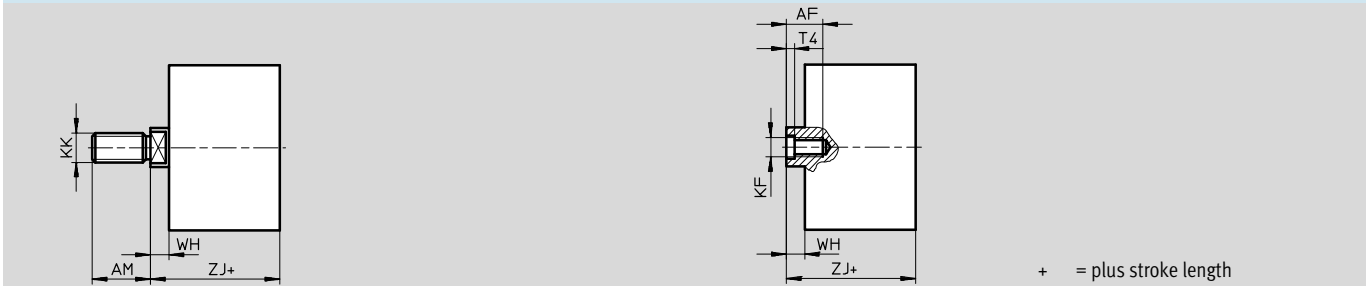
Dimensional Drawings



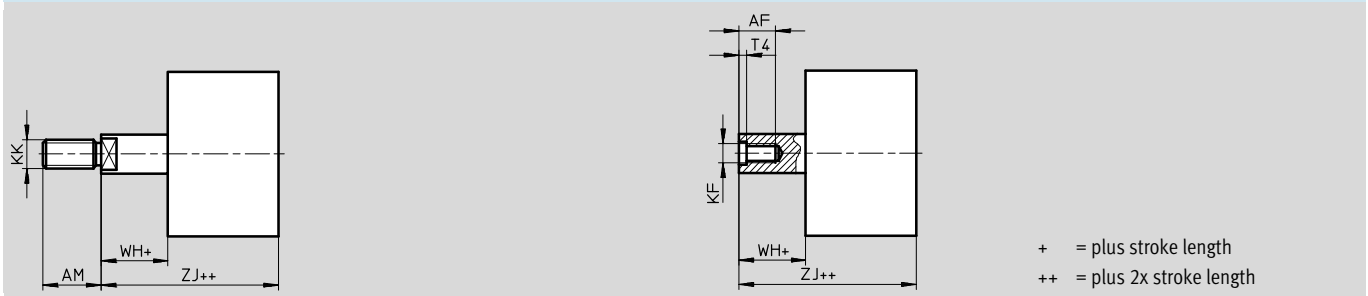
## Dimensions – Variants<sup>1)</sup>

Download CAD data → [www.festo.com](http://www.festo.com)

### Basic version



### Z – Pulling



∅	AF	AM	KF	KK	T4	WH	ZJ
[in]	min.	-0.02				+0.04	
1/2	0.31	0.39	4-48 UNF	10-32 UNF	0.06	0.16	1.54
5/8	0.39	0.47	8-36 UNF			0.19	1.57
3/4	0.55	0.63	10-32 UNF	5/16-24 UNF	0.1	0.22	1.68
1							1.76
1 1/4	0.63	0.75	5/16-24 UNF	3/8-24 UNF	0.13	0.24	1.98
1 5/8							2.02
2	0.79	0.87	3/8-24 UF-2B	1/2-20 UNF	0.19	0.32	2.09
2 1/2							
3	0.79	1.1	1/2-20 UNF	5/8-18 UNF	0.24	0.35	2.48
4							

1) Dimensions are in inches, unless otherwise noted.

# Compact Cylinders AEN – Inch Series, Based on ISO 21287

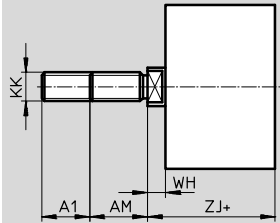


Dimensional Drawings

## Dimensions – Variants<sup>1)</sup>

Download CAD data → [www.festo.com](http://www.festo.com)

### K2 – Extended male piston rod thread



+ = plus stroke length

### K8 – Extended piston rod



∅ [in]	A1	A2	AM -0.02	KK	WH +0.04	ZJ +0.04
1/2	0.04 ... 0.4	0.04 ... 11.8	0.4	10-32 UNF	0.16	1.57
5/8			0.47		0.19	
3/4	0.04 ... 0.79	0.04 ... 15.75	0.63	5/16-24 UNF	0.22	1.69
1			0.75	3/8-24 UNF	0.24	1.77
1 1/4			0.87	1/2-20 UNF	0.32	1.97
1 5/8			1.1	5/8-18 UNF	0.35	2.01
2	0.04 ... 1.18	0.04 ... 19.7	1.1	5/8-18 UNF	0.35	2.09
2 1/2						2.24
3						2.48
4						2.99

1) Dimensions are in inches, unless otherwise noted.

# Compact Cylinders AEN – Inch Series, Based on ISO 21287

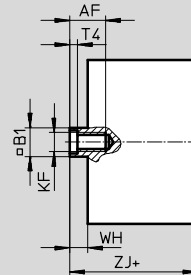
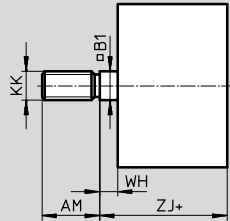
Dimensional Drawings

**FESTO**

## Dimensions – Variants<sup>1)</sup>

Download CAD data → [www.festo.com](http://www.festo.com)

Q – Square piston rod



+ = plus stroke length

∅	AF	AM	B1	KF	KK	T4	WH	ZJ
[in]	min.	-0.02	□				+0.04	
5/8	0.39	0.47	0.28	8-36 UNF	10-32 UNF	0.06	0.19	1.57
3/4	0.47	0.63	0.35	10-32 UNF	5/16-24 UNF	0.08	0.22	1.68
1								1.76
1 1/4	0.55	0.75	0.39	5/16-24 UNF	3/8-24 UNF	0.1	0.24	1.98
1 5/8								2.02
2	0.63	0.87	0.47	3/8-24 UNF	1/2-20 UNF	0.13	0.32	2.09
2 1/2								2.25
3	0.79	1.1	0.63	1/2-20 UNF	5/8-18 UNF	0.19	0.35	2.48
4								2.99

1) Dimensions are in inches, unless otherwise noted.

# Compact Cylinders AEN – Inch Series, Based on ISO 21287



Ordering Data – Configurable Products, Basic Version and Variants

**M** Mandatory Data →

Module No.	Function	Piston Ø	Stroke	Type of thread	Cushioning	Position sensing
557188	AEN	1/2	0.04 ... 1	A	P	A
557189		5/8		I		
557190		3/4				
557191		1				
557192		1 1/4				
557193		1 5/8				
557194		2				
557195		2 1/2				
557196		3				
557197		4				
<b>Order example</b>						
<b>557188</b>	<b>AEN</b>	<b>1/2"</b>	<b>0.4"</b>	<b>A</b>	<b>P</b>	<b>A</b>

**Ordering Table**

Size	1/2	5/8	3/4	1	1 1/4	Conditions	Code	Enter code
<b>M</b> Module No.	<b>557188</b>	<b>557189</b>	<b>557190</b>	<b>557191</b>	<b>557192</b>			
Function	Compact cylinder, single-acting – inch series, based on ISO 21287						<b>AEN</b>	AEN
Piston Ø [in]	1/2	5/8	3/4	1	1 1/4		-...	
Stroke [in]	0.04 ... 0.4	0.04 ... 1					-...	
Type of thread	Male thread						<b>-A</b>	
	Female thread						<b>-I</b>	
Cushioning	Flexible cushioning rings/pads at both ends						<b>-P</b>	-P
Position sensing	Via proximity sensor						<b>-A</b>	-A
<b>O</b> Protection against torsion	-	Square piston rod					<b>-Q</b>	
Male thread extended [in]	Extended male piston rod thread		0.04 ... 0.8				<b>-...K2</b>	
Piston rod extended [in]	Extended piston rod		0.04 ... 1				<b>-...K8</b>	
Temperature resistance	Heat-resistant seals up to max. 248 °F						<b>-S6</b>	

Transfer order code

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

# Compact Cylinders AEN – Inch Series, Based on ISO 21287



Ordering Data – Configurable Products, Basic Version and Variants

→ **Options**

<b>Protection against torsion</b> Q	<b>Male thread extended</b> ...K2	<b>Piston rod extended</b> ...K8	<b>Temperature resistance</b> S6
-	- <b>0.3"K2</b>	- <b>0.6"K8</b>	- <b>S6</b>

Ordering Table									
Size	1 5/8	2	2 1/2	3	4	Conditions	Code	Enter code	
<b>M</b> Module No.	<b>557193</b>	<b>557194</b>	<b>557195</b>	<b>557196</b>	<b>557197</b>				
Function	Compact cylinder, single-acting – inch series, based on ISO 21287						<b>AEN</b>		AEN
Piston Ø [in]	1 5/8	2	2 1/2	3	4		-...		
Stroke [in]	1 ... 25						-...		
Type of thread	Male thread						<b>-A</b>		
	Female thread						<b>-I</b>		
Cushioning	Flexible cushioning rings/pads at both ends						<b>-P</b>		-P
Position sensing	Via proximity sensor						<b>-A</b>		-A
<b>O</b> Protection against torsion	Square piston rod						<b>-Q</b>		
Male thread extended [in]	Extended male piston rod thread			0.04 ... 0.8		0.04 ... 1.2		<b>-...K2</b>	
Piston rod extended [in]	Extended piston rod							<b>-...K8</b>	
Temperature resistance	Heat-resistant seals up to max. 248 °F							<b>-S6</b>	

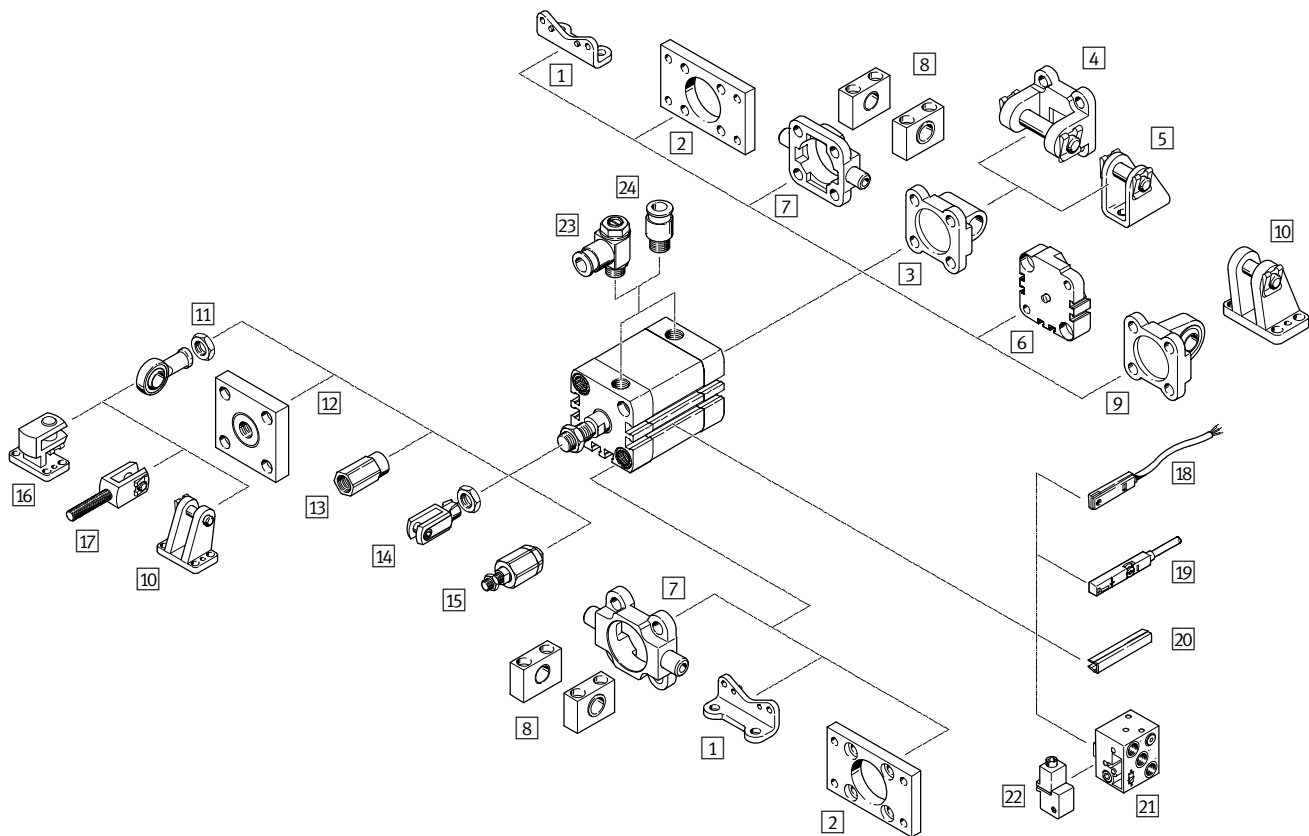
Transfer order code

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

# Compact Cylinders ADN/AEN – Inch Series, Based on ISO 21287

Accessories Overview

FESTO

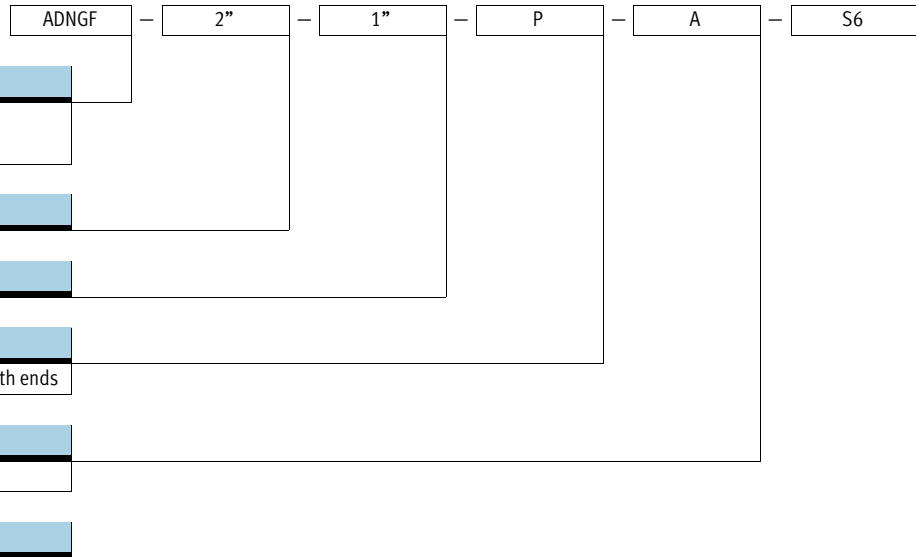


Mounting Attachments and Accessories		→ Page
	Brief description	
1	Foot mounting HNA	42
2	Flange mounting FNC	43
3	Swivel flange SNCL	44
4	Swivel flange SNCB	47
5	Clevis foot LBN/CRLBN	46
6	Multi-position kit DPNA	46
7	Trunnion flange ZNCF/CRZNG	48
8	Trunnion support LNZG	48
9	Swivel flange SNCS	45
10	Clevis foot LBG	45
11	Rod eye SGS/CRSGS	49
12	Coupling piece KSG/KSZ	49
13	Adapter AD	49
14	Rod clevis SG/CRSG	49
15	Self-aligning rod coupler FK	49
16	Right-angle clevis foot LQG	49
17	Rod clevis SGA	49
18	Proximity sensor SME/SMT-8	52
19	Proximity sensor SME/SMT-8M	52
20	Slot cover ABP-5-S	52
21	Proximity sensor SMPO-8E	51
22	Mounting kit SMB-8E	51
23	One-way flow control valve GRLA/GRLZ	50
24	Push-in fitting QS	50



# Compact Cylinders ADNGF – Inch Series, Based on ISO 21287

Type Codes



**Type**

ADNGF Double-acting compact cylinder with guide rods and yoke plate

**Piston Ø [in]**

**Stroke [in]**

**Cushioning**

P Flexible cushioning rings/pads at both ends

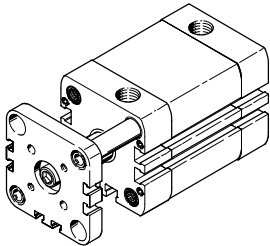
**Position Sensing**

A Via proximity sensor

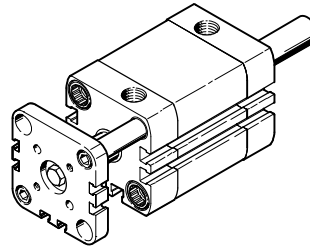
**Variant**

S2 Through piston rod

**With Guide Rods and Yoke Plate**  
ADNGF-...



**With Guide Rods, Yoke Plate and through Piston Rod**  
ADNGF-...-S2

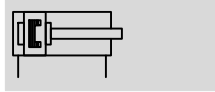


# Compact Cylinders ADFG – Inch Series, Based on ISO 21287



Technical Data

Function



Diameter 1/2 ... 4 inch

Stroke length 0.04 ... 15.75 inch

Variants



S2



S6



General Technical Data											
Piston Ø	[in]	1/2	5/8	3/4	1	1 1/4	1 5/8	2	2 1/2	3	4
Pneumatic connection		10-32 UNF	10-32 UNF	10-32 UNF	10-32 UNF	1/8-27 NPT	1/8-27 NPT	1/8-27 NPT	1/8-27 NPT	1/8-27 NPT	1/8-27 NPT
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												
Piston Ø	[in]	1/2	5/8	3/4	1	1 1/4	1 5/8	2	2 1/2	3	4	
Operating medium		Filtered compressed air, lubricated or unlubricated										
Operating pressure [psi]		22 ... 145				14.5 ... 145						
	S2	22 ... 145				14.5 ... 145						
Ambient temperature <sup>1)</sup> [°F]		-4 ... +176										
	S6	32 ... +248										
Corrosion resistance class CRC <sup>2)</sup>		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 [lbf] and Impact Energy [lbf-in]											
Piston Ø	[in]	1/2	5/8	3/4	1	1 1/4	1 5/8	2	2 1/2	3	4
Theoretical force at 90 psi, advancing		15.3	27.2	42.3	66.3	108.6	169.5	264.8	420.4	678	1059.3
	S2	11.5	20.2	31.7	55.5	92.6	154.2	237.6	393.4	635.5	1017
Theoretical force at 90 psi, retracting		11.5	20.2	31.7	55.5	92.6	154.2	237.6	393.4	635.5	1017
	S2	11.5	20.2	31.7	55.5	92.6	154.2	237.6	393.4	635.5	1017
Max. impact energy at the end positions		0.6	1.3	1.8	2.7	3.5	6.2	8.9	11.5	15.9	22.1

Permissible impact velocity:

$$v_{perm.} = \sqrt{\frac{2 \times 32.2 \times E_{perm.}}{m_{piston} + m_{load}}}$$

Maximum permissible load:

$$m_{load} = \frac{2 \times 32.2 \times E_{perm.}}{v^2} - m_{piston}$$

### Notes

$m_{piston}$  equals mass of cylinder moving parts  
 $m_{load}$  equals mass of external load

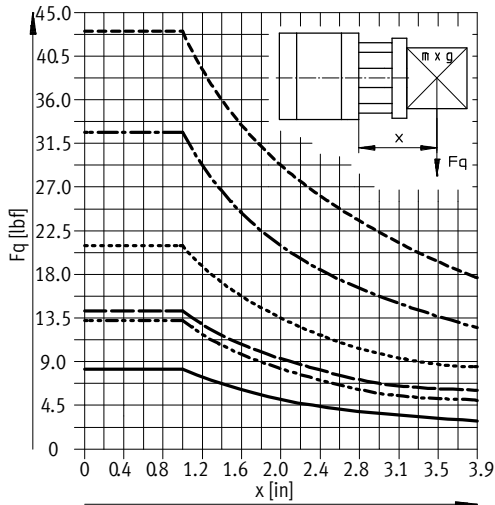
This data represents the maximum values that can be achieved. Values fluctuate in practice relative to the size of the effective load. Allowance must also be made for the limits of the cushioning capacity of the drive and the permissible impact energy.

# Compact Cylinders ADNGF – Inch Series, Based on ISO 21287

Technical Data

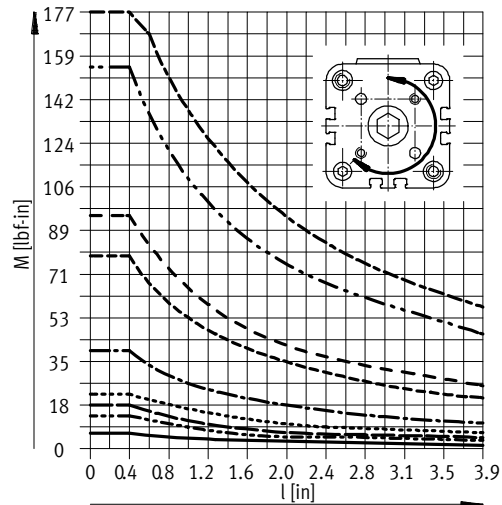


Max. Lateral Force  $F_q$  as a Function of the Projection  $x$



- $\varnothing 1/2/5/8$
- - -  $\varnothing 3/4/1$
- $\varnothing 1 1/4$
- - -  $\varnothing 1 5/8$
- $\varnothing 2/2 1/2$
- - -  $\varnothing 3/4$

Torque  $M$  as a Function of the Stroke Length  $l$



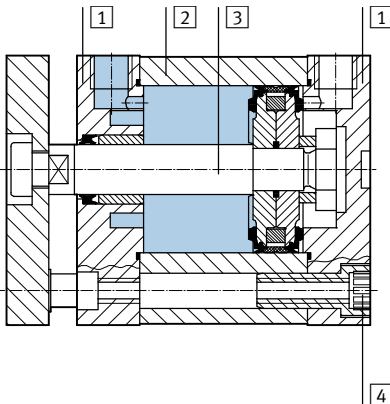
- $\varnothing 1/2/5/8$
- - -  $\varnothing 3/4$
- $\varnothing 1$
- - -  $\varnothing 1 1/4$
- $\varnothing 1 5/8$
- - -  $\varnothing 2$
- $\varnothing 2 1/2$
- - -  $\varnothing 3$
- $\varnothing 4$

## Weight [lb]

Piston $\varnothing$	[in]	1/2	5/8	3/4	1	1 1/4	1 5/8	2	2 1/2	3	4
Product weight with 0 in stroke		0.18	0.19	0.32	0.38	0.65	0.86	1.37	1.83	3.36	5.35
Additional weight per 0.4 in stroke		0.03	0.03	0.05	0.06	0.08	0.09	0.13	0.14	0.19	0.23
Moving load with 0 in stroke		0.04	0.06	0.12	0.17	0.24	0.33	0.57	0.75	1.56	2.18
Additional load per 0.4 in stroke		0.01	0.01	0.02	0.02	0.03	0.03	0.06	0.06	0.09	0.09

## Materials

Sectional view



Compact cylinder	Basic version	S6
1 Cover	Anodised aluminum	
2 Cylinder barrel	Anodised aluminum	
3 Piston rod	High-alloy steel	
4 Flange screws	$\varnothing 1/2 \dots 5/8$	High-alloy steel
	$\varnothing 3/4 \dots 2 1/2$	Galvanised steel
	$\varnothing 3 \dots 4$	Standard screws, galvanised steel
- Seals	Polyurethane	Fluoro elastomer

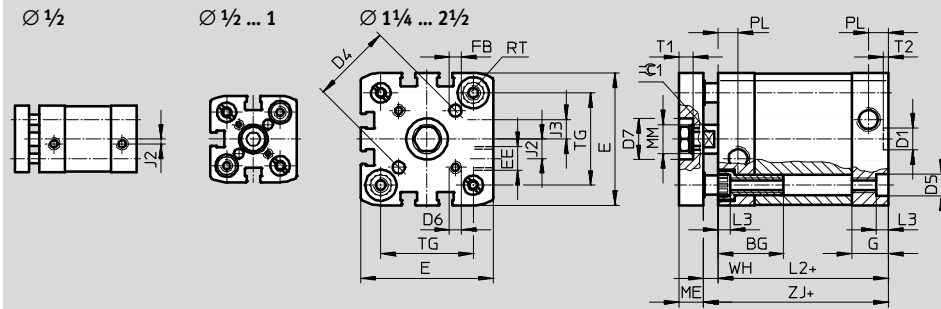
# Compact Cylinders ADNGF – Inch Series, Based on ISO 21287

Dimensional Drawings

## Dimensions – Basic Version<sup>1)</sup>

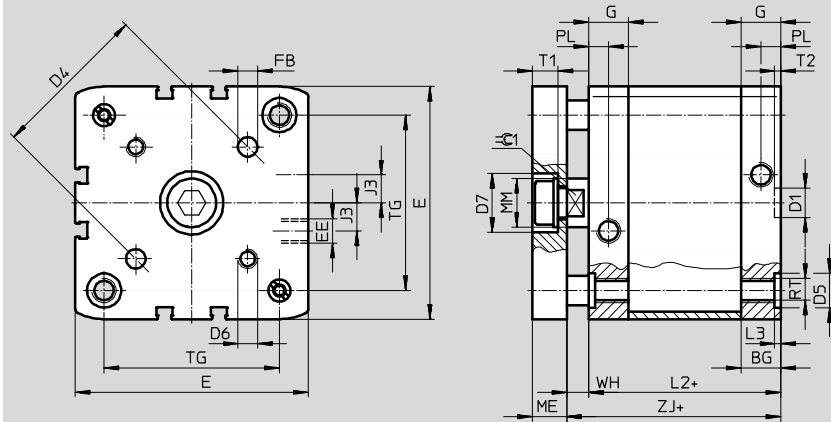
Download CAD data → [www.festo.com](http://www.festo.com)

Ø 1/2 ... 2 1/2



+ = plus stroke length

Ø 3 ... 4



+ = plus stroke length

# Compact Cylinders ADNGF – Inch Series, Based on ISO 21287



Dimensional Drawings

∅ [in]	BG	D1 ∅ H9	D4 ∅	D5 ∅ F9	D6	D7 ∅ H9	E	EE	FB ∅ H8	G	J2	J3
1/2	0.67	0.35	0.47	0.24	M3	-	1.08 <sup>+0.01</sup>	10-32 UNF	0.12	0.41	0.08	-
5/8			0.55				1.14 <sup>+0.01</sup>			0.43		
3/4	0.77		0.67	0.35	M4	0.55	1.4 <sup>+0.01</sup>		0.16	0.47	-	0.1
1			0.87				1.56 <sup>+0.01</sup>					
1 1/4	1.06		1.1		M5	0.67	1.85 <sup>+0.01</sup>		0.20	-	0.24	
1 5/8			1.3				2.15 <sup>+0.01</sup>					
2		0.47	1.65	M6	0.87	2.58 <sup>+0.01</sup>	0.24	-	0.31			
2 1/2			1.97			2.97 <sup>+0.01</sup>						
3	0.67	2.56	0.59	M8	0.94	3.76 <sup>+0.02</sup>	0.31	0.65	-	0.45		
4	0.85	3.15		M10		4.47 <sup>+0.02</sup>	0.39	0.85	-	0.79		

∅ [in]	L2 max.	L3 +0.01	ME	MM ∅	PL +0.01	RT	T1	T2 +0.01	TG ±0.01	WH +0.04	ZJ +0.04	⊖C1 h13 [mm]
1/2	1.38	0.14	0.24	0.24	0.24	M4	-	0.08	0.63	0.17	1.54	5
5/8				0.31					0.71	0.19	1.57	7
3/4	1.46		0.31	0.39	M5	0.2	0.87		0.22	1.68	9	
1	1.54		0.39	0.47			1.02			1.76		
1 1/4	1.73		0.32	M6	0.24	1.28	0.24		1.98	10		
1 5/8	1.77					1.5			2.02			
2	1.93	0.47		0.63	M8	0.3	0.1	1.83	0.32	2.09	13	
2 1/2		2.22		2.25								
3	2.13	0.1	0.55	0.79	M10	0.41	0.1	2.83	0.35	2.48	17	
4	2.64	0.1						0.41		3.5		2.99

1) Dimensions are in inches, unless otherwise noted.

# Compact Cylinders ADNGF – Inch Series, Based on ISO 21287



Ordering Data – Pre-configured Products

Ordering Data				
Type	Piston Ø [in]	Stroke [in]	Non-rotating with yoke	
			Part No.	Type
	1/2	1/4	557199	ADNGF-1/2"-1/4"-P-A
		1/2	557200	ADNGF-1/2"-1/2"-P-A
		3/4	557201	ADNGF-1/2"-3/4"-P-A
		1	557202	ADNGF-1/2"-1"-P-A
		1 1/4	557203	ADNGF-1/2"-1 1/4"-P-A
		1 1/2	557204	ADNGF-1/2"-1 1/2"-P-A
	5/8	1/4	557206	ADNGF-5/8"-1/4"-P-A
		1/2	557207	ADNGF-5/8"-1/2"-P-A
		3/4	557208	ADNGF-5/8"-3/4"-P-A
		1	557209	ADNGF-5/8"-1"-P-A
		1 1/4	557210	ADNGF-5/8"-1 1/4"-P-A
		1 1/2	557211	ADNGF-5/8"-1 1/2"-P-A
	3/4	1/4	557214	ADNGF-3/4"-1/4"-P-A
		1/2	557215	ADNGF-3/4"-1/2"-P-A
		3/4	557216	ADNGF-3/4"-3/4"-P-A
		1	557217	ADNGF-3/4"-1"-P-A
		1 1/4	557218	ADNGF-3/4"-1 1/4"-P-A
		1 1/2	557219	ADNGF-3/4"-1 1/2"-P-A
		2	557220	ADNGF-3/4"-2"-P-A
		2 1/2	557221	ADNGF-3/4"-2 1/2"-P-A
	1	1/4	557223	ADNGF-1"-1/4"-P-A
		1/2	557224	ADNGF-1"-1/2"-P-A
		3/4	557225	ADNGF-1"-3/4"-P-A
		1	557226	ADNGF-1"-1"-P-A
1 1/4		557227	ADNGF-1"-1 1/4"-P-A	
1 1/2		557228	ADNGF-1"-1 1/2"-P-A	
2		557229	ADNGF-1"-2"-P-A	
1 1/4	1/4	557232	ADNGF-1 1/4"-1/4"-P-A	
	1/2	557233	ADNGF-1 1/4"-1/2"-P-A	
	3/4	557234	ADNGF-1 1/4"-3/4"-P-A	
	1	557235	ADNGF-1 1/4"-1"-P-A	
	1 1/4	557236	ADNGF-1 1/4"-1 1/4"-P-A	
	1 1/2	557237	ADNGF-1 1/4"-1 1/2"-P-A	
	2	557238	ADNGF-1 1/4"-2"-P-A	
	2 1/2	557239	ADNGF-1 1/4"-2 1/2"-P-A	
3	557240	ADNGF-1 1/4"-3"-P-A		

# Compact Cylinders ADNGF – Inch Series, Based on ISO 21287



Ordering Data – Pre-configured Products

Ordering Data					
Type	Piston Ø [in]	Stroke [in]	Non-rotating with yoke		
			Part No.	Type	
	1 5/8	1/4	557242	ADNGF-1 5/8"-1/4"-P-A	
		1/2	557243	ADNGF-1 5/8"-1/2"-P-A	
		3/4	557244	ADNGF-1 5/8"-3/4"-P-A	
		1	557245	ADNGF-1 5/8"-1"-P-A	
		1 1/4	557246	ADNGF-1 5/8"-1 1/4"-P-A	
		1 1/2	557247	ADNGF-1 5/8"-1 1/2"-P-A	
		2	557248	ADNGF-1 5/8"-2"-P-A	
		2 1/2	557249	ADNGF-1 5/8"-2 1/2"-P-A	
		3	557250	ADNGF-1 5/8"-3"-P-A	
		2	1/4	557252	ADNGF-2"-1/4"-P-A
			1/2	557253	ADNGF-2"-1/2"-P-A
			3/4	557254	ADNGF-2"-3/4"-P-A
			1	557255	ADNGF-2"-1"-P-A
			1 1/4	557256	ADNGF-2"-1 1/4"-P-A
			1 1/2	557257	ADNGF-2"-1 1/2"-P-A
			2	557258	ADNGF-2"-2"-P-A
			2 1/2	557259	ADNGF-2"-2 1/2"-P-A
		3	557260	ADNGF-2"-3"-P-A	
		2 1/2	1/2	557262	ADNGF-2 1/2"-1/2"-P-A
			3/4	557263	ADNGF-2 1/2"-3/4"-P-A
			1	557264	ADNGF-2 1/2"-1"-P-A
			1 1/4	557265	ADNGF-2 1/2"-1 1/4"-P-A
			1 1/2	557266	ADNGF-2 1/2"-1 1/2"-P-A
			2	557267	ADNGF-2 1/2"-2"-P-A
			2 1/2	557268	ADNGF-2 1/2"-2 1/2"-P-A
		3	557269	ADNGF-2 1/2"-3"-P-A	
		3	1/2	557271	ADNGF-3"-1/2"-P-A
			3/4	557272	ADNGF-3"-3/4"-P-A
			1	557273	ADNGF-3"-1"-P-A
			1 1/4	557274	ADNGF-3"-1 1/4"-P-A
			1 1/2	557275	ADNGF-3"-1 1/2"-P-A
			2	557276	ADNGF-3"-2"-P-A
			2 1/2	557277	ADNGF-3"-2 1/2"-P-A
		3	557278	ADNGF-3"-3"-P-A	
		4	1/2	557280	ADNGF-4"-1/2"-P-A
			3/4	557281	ADNGF-4"-3/4"-P-A
	1		557282	ADNGF-4"-1"-P-A	
	1 1/4		557283	ADNGF-4"-1 1/4"-P-A	
	1 1/2		557284	ADNGF-4"-1 1/2"-P-A	
	2		557285	ADNGF-4"-2"-P-A	
	2 1/2		557286	ADNGF-4"-2 1/2"-P-A	
	3	557287	ADNGF-4"-3"-P-A		

# Compact Cylinders ADNGF – Inch Series, Based on ISO 21287



Ordering Data – Configurable Products

M Mandatory Data						O Options
Module No.	Function	Size	Stroke	Cushioning	Position sensing	Type of piston rod
557198	ADNGF	1/2	0.04 ... 19.7	P	A	S2
557205		5/8				
557213		3/4				
557222		1				
557231		1 1/4				
557241		1 5/8				
557251		2				
557261		2 1/2				
557270		3				
557279		4				
<b>Order example</b>						
<b>557198</b>	<b>ADNGF</b>	<b>1/2"</b>	<b>4"</b>	<b>P</b>	<b>A</b>	<b>S2</b>

Ordering Table														
Size	1/2	5/8	3/4	1	1 1/4	1 5/8	2	2 1/2	3	4	Conditions	Code	Enter code	
M Module No.	<b>557198</b>	<b>557205</b>	<b>557213</b>	<b>557222</b>	<b>557231</b>	<b>557241</b>	<b>557251</b>	<b>557261</b>	<b>557270</b>	<b>557279</b>				
Function	Compact cylinder, double-acting, NPT											<b>ADNGF</b>	ADNGF	
Size [in]	1/2	5/8	3/4	1	1 1/4	1 5/8	2	2 1/2	3	4		-...		
Stroke [in]	0.04 ... 7.9		0.12 ... 7.9		0.2 ... 11.8					0.2 ... 15.75			-...	
Cushioning	Flexible cushioning rings/pads at both ends											<b>-P</b>	-P	
Position sensing	Via proximity sensor											<b>-A</b>	-A	
O Type of piston rod	Through piston rod											<b>-S2</b>		

Transfer order code

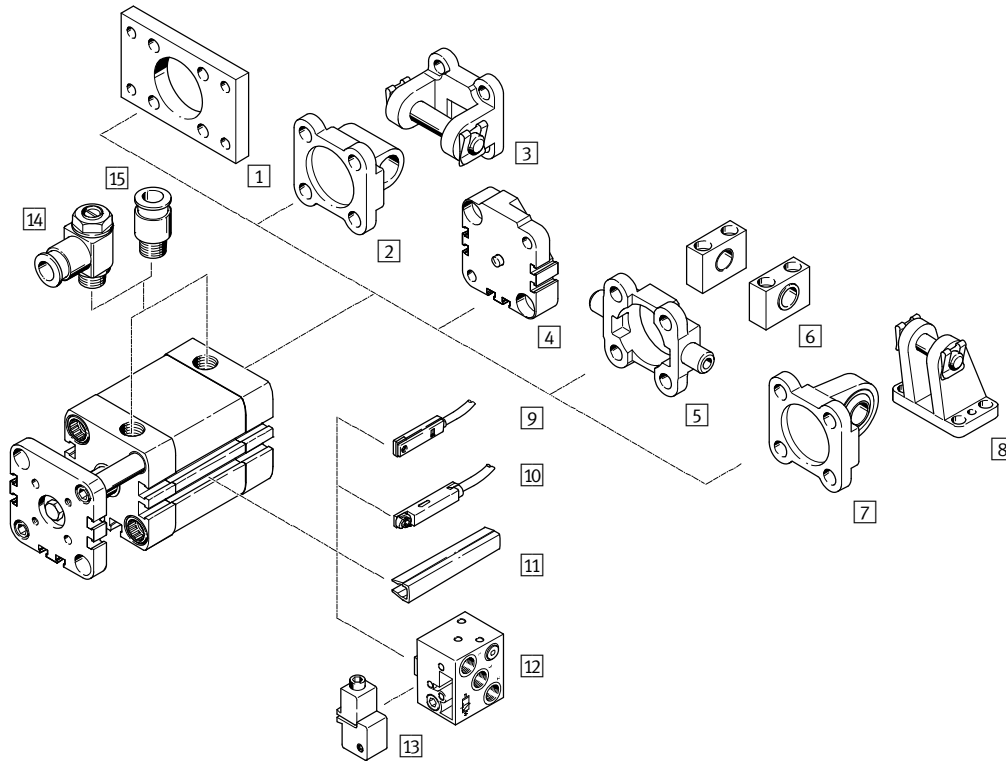
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# Compact Cylinders ADNGF – Inch Series, Based on ISO 21287

Accessories Overview

FESTO



Mounting Attachments and Accessories			
	Brief description	→ Page	
1	Flange mounting FNC	For end caps	43
2	Swivel flange SNCL	For end caps	44
3	Swivel flange SNCB	For end caps	47
4	Multi-position kit DPNA	For connecting two cylinders with identical piston $\varnothing$ to form a multi-position cylinder	46
5	Trunnion flange ZNCF/CRZNG	For end caps	48
6	Trunnion support LNZG	For trunnion flange ZNCF/CRZNG	48
7	Swivel flange SNCS	For end caps	45
8	Clevis foot LBG	For swivel flange SNCS	45
9	Proximity sensor SME/SMT-8	Can be integrated in the sensor slot of the cylinder profile barrel	52
10	Proximity sensor SME/SMT-8M	Can be integrated in the sensor slot of the cylinder profile barrel	52
11	Slot cover ABP-5-S	To protect the sensor cable and keep dirt out of the sensor slots	52
12	Proximity sensor SMPO-8E	Pneumatic output signal	51
13	Mounting kit SMB-8E	For proximity sensor SMPO-8E	51
14	One-way flow control valve GRLA/GRLZ	For speed regulation	50
15	Push-in fitting QS	For connecting compressed air tubing with standard external diameters	50

# Compact Cylinders ADN/AEN/ADNGF – Inch Series, Based on ISO 21287



Accessories

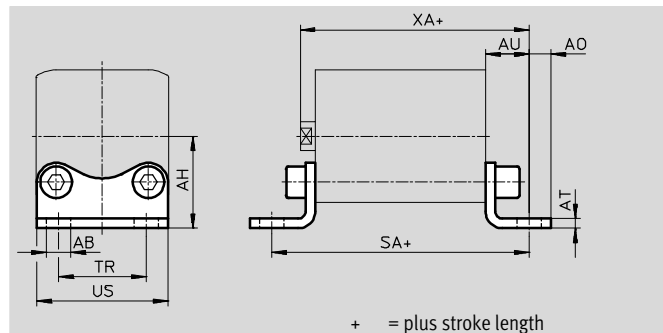
## Foot mounting HNA

Material:

HNA: Galvanised steel

HNA...-R3: Steel with protective coating

Free of copper, PTFE and silicone



+ = plus stroke length

### Dimensions and Ordering Data<sup>1)</sup>

For $\varnothing$ [in]	AB $\varnothing$ H14	AH JS14	AO	AT $\pm 0.02$	AU $\pm 0.01$	SA	TR $\pm 0.01$	US $-0.02$	XA	Basic version				R3 – High corrosion protection			
										CRC <sup>2)</sup>	Weight [lb]	Part No.	Type	CRC <sup>2)</sup>	Weight [lb]	Part No.	Type
1/2	0.23	0.83	0.2	0.12	0.51	2.4	0.63	1.02	2.06	2	0.05	537237	HNA-12	3	0.05	537252	HNA-12-R3
5/8		0.87	0.19				0.71	1.08	2.08	2	0.06	537238	HNA-16	3	0.06	537253	HNA-16-R3
3/4	0.28	1.06	0.25	0.16	0.63	2.72	0.87	1.36	2.31	2	0.1	537239	HNA-20	3	0.1	537254	HNA-20-R3
1		1.14					2.8	1.02	1.52	2.39	2	0.11	537240	HNA-25	3	0.11	537255
1 1/4		1.32	0.28				2.99	1.26	1.81	2.61	2	0.14	537241	HNA-32	3	0.14	537256
1 5/8	0.39	1.5	0.35	0.2	0.83	3.43	1.42	2.13	2.72	2	0.18	537242	HNA-40	3	0.18	537257	HNA-40-R3
2		1.77	3.43				1.77	2.52	2.92	2	0.32	537243	HNA-50	3	0.32	537258	HNA-50-R3
2 1/2	0.47	1.97	0.31	0.24	1.02	4.17	1.97	2.95	3.08	2	0.36	537244	HNA-63	3	0.36	537259	HNA-63-R3
3		2.48	0.41				1.02	4.17	2.48	2.48	3.5	2	0.76	537249	HNA-80	3	0.76
4	0.57	2.91	0.49	1.06	4.76	2.95	4.33	4.06	2	0.94	537250	HNA-100	3	0.94	537261	HNA-100-R3	

1) Dimensions are in inches, unless otherwise noted.

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.

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

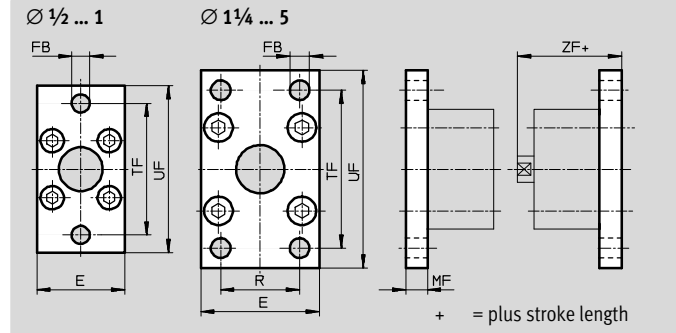
# Compact Cylinders ADN/AEN/ADNGF – Inch Series, Based on ISO 21287



Accessories

## Flange mounting FNC

Material:  
Galvanised steel  
Free of copper, PTFE and silicone



### Dimensions and Ordering Data<sup>1)</sup>

For Ø [in]	E	FB Ø	MF	R	TF	UF ±0.4	ZF	CRC <sup>2)</sup>	Weight [lb]	Part No.	Type
1/2	1.1	0.22	0.31	-	1.57	1.97	1.86	2	0.16	<b>537245</b>	<b>FNC-12</b>
5/8	1.14				1.69	2.17	1.89	2	0.18	<b>537246</b>	<b>FNC-16</b>
3/4	1.42	0.26			2.17	2.76	2.0	2	0.29	<b>537247</b>	<b>FNC-20</b>
1	1.57				2.36	2.99	2.07	2	0.34	<b>537248</b>	<b>FNC-25</b>
1 1/4	1.77	0.28	0.39	1.26	2.52	3.15	2.37	2	0.48	<b>174376</b>	<b>FNC-32</b>
1 5/8	2.13	0.35		1.42	2.83	3.54	2.41	2	0.56	<b>174377</b>	<b>FNC-40</b>
2	2.56		0.47	1.77	3.54	4.33	2.57	2	1.04	<b>174378</b>	<b>FNC-50</b>
2 1/2	2.95			1.97	3.94	4.72	2.72	2	1.38	<b>174379</b>	<b>FNC-63</b>
3	3.66	0.47	0.63	2.48	4.96	5.91	3.11	2	3.3	<b>174380</b>	<b>FNC-80</b>
4	4.33	0.55		2.95	5.91	6.89	3.62	2	4.8	<b>174381</b>	<b>FNC-100</b>
5	5.2	0.63	0.79	3.54	7.09	8.27	4.41	2	7.5	<b>174382</b>	<b>FNC-125</b>

1) Dimensions are in inches, unless otherwise noted.

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/AEN/ADNGF – Inch Series, Based on ISO 21287

FESTO

Accessories

## Swivel flange SNCL

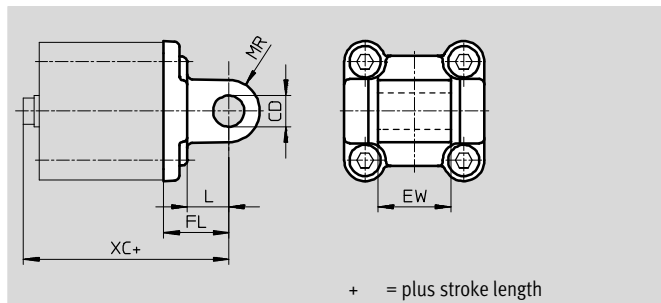
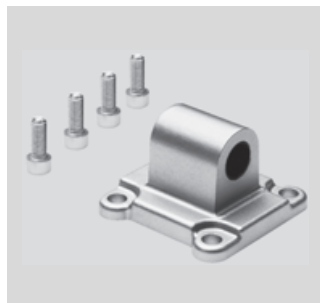
Material:

SNCL: Die-cast aluminum

SNCL...-R3: Die-cast aluminum with

protective coating

Free of copper, PTFE and silicone



### Dimensions and Ordering Data<sup>1)</sup>

For Ø [in]	CD Ø H9	EW	FL ±0.01	L	MR	XC	Basic version				R3 – High corrosion protection			
							CRC <sup>2)</sup>	Weight [lb]	Part No.	Type	CRC <sup>2)</sup>	Weight [lb]	Part No.	Type
1/2	0.24	0.47 <sub>h12</sub>	0.63	0.39	0.24	2.17	2	0.04	<b>537790</b>	<b>SNCL-12</b>	3	0.04	<b>537794</b>	<b>SNCL-12-R3</b>
5/8						2.2	2	0.05	<b>537791</b>	<b>SNCL-16</b>	3	0.05	<b>537795</b>	<b>SNCL-16-R3</b>
3/4	0.31	0.63 <sub>h12</sub>	0.79	0.55	0.31	2.47	2	0.08	<b>537792</b>	<b>SNCL-20</b>	3	0.08	<b>537796</b>	<b>SNCL-20-R3</b>
1						2.55	2	0.09	<b>537793</b>	<b>SNCL-25</b>	3	0.09	<b>537797</b>	<b>SNCL-25-R3</b>
1 1/4	0.39	1.02 <sub>-0.01/-0.02</sub>	0.87	0.51	0.39	2.84	2	0.17	<b>174404</b>	<b>SNCL-32</b>	–	–	–	–
1 5/8	0.47	1.1 <sub>-0.01/-0.02</sub>	0.98	0.63	0.47	2.96	2	0.23	<b>174405</b>	<b>SNCL-40</b>	–	–	–	–
2		1.26 <sub>-0.01/-0.02</sub>	1.06			3.16	2	0.36	<b>174406</b>	<b>SNCL-50</b>	–	–	–	–
2 1/2	0.63	1.57 <sub>-0.01/-0.02</sub>	1.26	0.83	0.63	3.51	2	0.54	<b>174407</b>	<b>SNCL-63</b>	–	–	–	–
3		1.97 <sub>-0.01/-0.02</sub>	1.42	0.87		3.9	2	0.96	<b>174408</b>	<b>SNCL-80</b>	–	–	–	–
4	0.79	2.36 <sub>-0.01/-0.02</sub>	1.61	1.06	0.79	4.61	2	1.4	<b>174409</b>	<b>SNCL-100</b>	–	–	–	–
5	0.98	2.76 <sub>-0.01/-0.02</sub>	1.97	1.18		5.59	2	2.6	<b>174410</b>	<b>SNCL-125</b>	–	–	–	–

1) Dimensions are in inches, unless otherwise noted.

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.

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

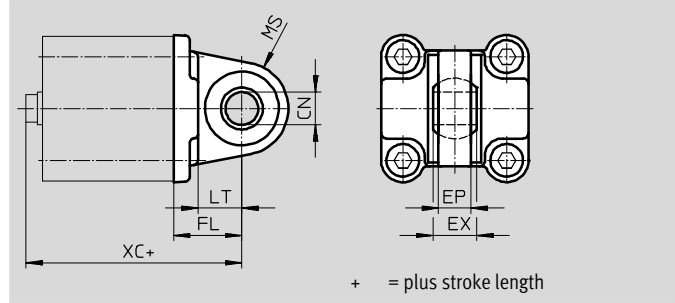
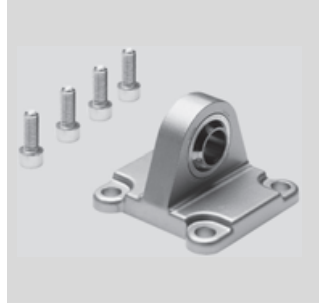
# Compact Cylinders ADN/AEN/ADNGF – Inch Series, Based on ISO 21287

FESTO

Accessories

## Swivel flange SNCS

Material:  
Die-cast aluminum



Dimensions and Ordering Data <sup>1)</sup>											
For Ø	CN	EP	EX	FL	LT	MS	XC	CRC <sup>2)</sup>	Weight	Part No.	Type
[in]	Ø H7	±0.01		±0.01					[lb]		
1¼	0.39	0.41	0.55	0.87	0.51	0.59	2.84	2	0.17	174397	SNCS-32
1⅝	0.47	0.47	0.63	0.98	0.63	0.67	2.96	2	0.25	174398	SNCS-40
2	0.63	0.59	0.83	1.06	0.63	0.79	3.16	2	0.42	174399	SNCS-50
2½	0.63	0.59	0.83	1.26	0.83	0.87	3.51	2	0.56	174400	SNCS-63
3	0.79	0.71	0.98	1.42	0.87	1.06	3.9	2	1.08	174401	SNCS-80
4	0.79	0.71	0.98	1.61	1.06	1.14	4.61	2	1.4	174402	SNCS-100
5	1.18	0.98	1.46	1.97	1.18	1.54	5.59	2	2.82	174403	SNCS-125

1) Dimensions are in inches, unless otherwise noted.

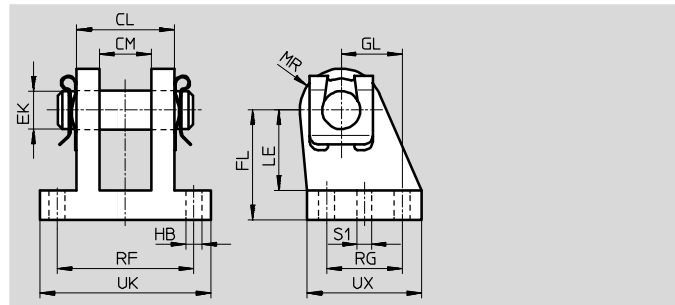
2) Corrosion resistance class 2 to Festo standard 940 070

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.

## 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 <sup>1)</sup>																	
For Ø	CL	CM	EK	FL	GL	HB	LE	MR	RF	RG	S1	UK	UX	CRC <sup>2)</sup>	Weight	Part No.	Type
[in]			Ø			Ø					Ø				[lb]		
1¼	1.1	0.56	0.39	1.26	0.63	0.27	0.94	0.47	1.65	0.79	0.19	2.2	1.42	2	0.44	31761	LBG-32
1⅝	1.18	0.63	0.47	1.42	0.79	0.27	1.02	0.55	1.73	1.02	0.23	2.28	1.63	2	0.6	31762	LBG-40
2	1.57	0.83	0.63	1.77	0.98	0.36	1.3	0.59	2.2	1.22	0.23	2.76	1.85	2	1.08	31763	LBG-50
2½	1.57	0.83	0.63	1.97	0.98	0.35	1.5	0.67	2.2	1.22	0.31	2.76	1.85	2	1.16	31764	LBG-63
3	1.97	0.99	0.79	2.48	1.18	0.43	1.93	0.71	2.76	1.42	0.31	3.5	2.24	2	2.1	31765	LBG-80
4	1.97	0.99	0.79	2.8	1.61	0.43	2.2	0.87	2.76	1.81	0.39	3.5	2.66	2	2.75	31766	LBG-100
5	3.15	1.46	1.18	3.54	2.36	0.55	2.76	1.02	4.17	2.76	0.46	5.04	3.78	2	8.28	31767	LBG-125

1) Dimensions are in inches, unless otherwise noted.

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.

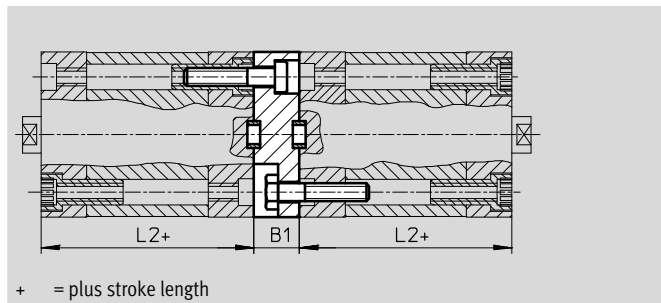
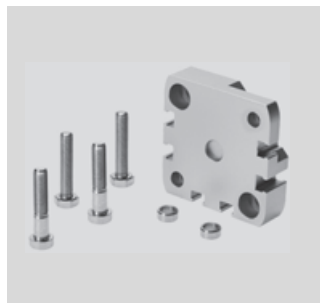
# Compact Cylinders ADN/AEN/ADNGF – Inch Series, Based on ISO 21287

FESTO

Accessories

## Multi-position kit DPNA

Material:  
Flange: Aluminum  
Screws: Galvanised steel  
Free of copper, PTFE and silicone



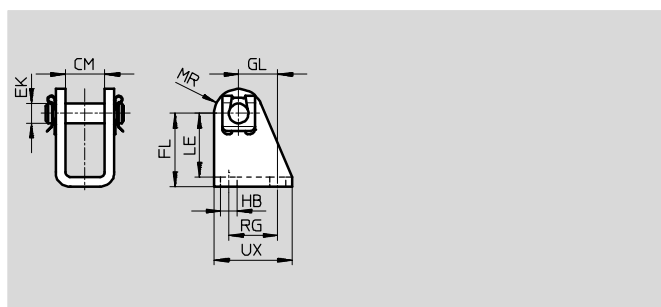
Dimensions and Ordering Data <sup>1)</sup>						
For Ø [in]	Max. overall stroke length [in]	L2	B1	CRC <sup>2)</sup>	Part No.	Type
1/2	23.6	1.38	0.51	2	537263	DPNA-12
5/8	23.6			2	537264	DPNA-16
3/4	23.6			2	537265	DPNA-20
1	23.6			2	537266	DPNA-25
1 1/4	31.5	1.73	0.59	2	537267	DPNA-32
1 5/8	31.5	1.77		2	537268	DPNA-40
2	31.5			2	537269	DPNA-50
2 1/2	31.5	1.93		2	537270	DPNA-63
3	39.4	2.13	0.67	2	537271	DPNA-80
4	39.4	2.64	0.77	2	537272	DPNA-100

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

1) Dimensions are in inches, unless otherwise noted.  
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.

## Clevis foot LBN

Material:  
Galvanised steel  
Free of copper, PTFE and silicone



Dimensions and Ordering Data <sup>1)</sup>													
For Ø [in]	CM	EK Ø	FL	GL	HB Ø	LE	MR	RG	UX	CRC <sup>1)</sup>	Weight [lb]	Part No.	Type
1/2, 5/8	0.48	0.24	1.06 +0.01/-0.01	0.51	0.22	0.94	0.28	0.59	0.98	2	0.08	6058	LBN-12/16
3/4, 1	0.63	0.31	1.18 +0.02/-0.01	0.63	0.26	1.02	0.39	0.79	1.26	2	0.16	6059	LBN-20/25

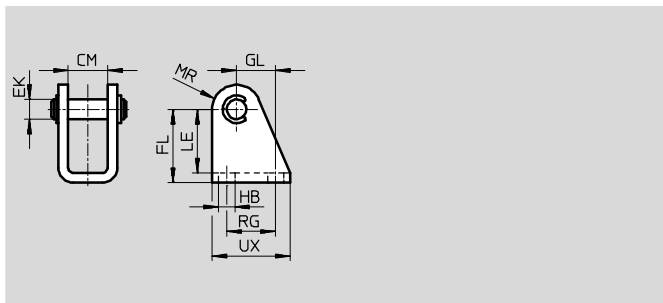
1) Dimensions are in inches, unless otherwise noted.  
2) Corrosion resistance class 2 to Festo standard 940 070  
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

# Compact Cylinders ADN/AEN/ADNGF – Inch Series, Based on ISO 21287

Accessories

## Clevis foot CRLBN, stainless steel

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



### Dimensions and Ordering Data<sup>1)</sup>

For Ø	CM	EK Ø	FL	GL	HB Ø	LE	MR	RG	UX	CRC <sup>1)</sup>	Weight [lb]	Part No.	Type
[in]													
1/2, 5/8	0.48	0.24	1.06 +0.01/-0.01	0.51	0.22	0.94	0.28	0.59	0.98	4	0.11	161862	CRLBN-12/16
3/4, 1	0.63	0.31	1.18 +0.02/-0.01	0.63	0.26	1.02	0.39	0.79	1.26	4	0.12	161863	CRLBN-20/25

1) Dimensions are in inches, unless otherwise noted.

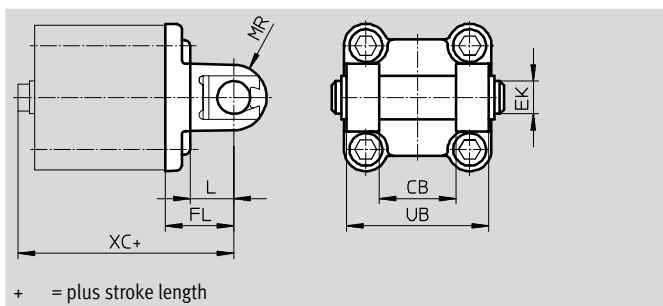
CRC4: Corrosion resistance class to Festo standard 940070

Components with very heavy corrosion exposure. Components in contact with aggressive media, e.g. in food or chemical industries. These applications must, if necessary, be verified by special tests with the media concerned.

## Swivel flange

### SNCB/SNCB-...-R3

Material:  
SNCB: Die-cast aluminum  
SNCB-...-R3: Die-cast aluminum with  
protective coating, high corrosion pro-  
tection  
Free of copper, PTFE and silicone



+ = plus stroke length

### Dimensions and Ordering Data<sup>1)</sup>

For Ø	CB	EK Ø	FL	L	MR	UB	XC	Basic version				R3 – High corrosion protection					
								CRC <sup>2)</sup>	Weight [lb]	Part No.	Type	CRC <sup>2)</sup>	Weight [lb]	Part No.	Type		
[in]	H14	e8	±0.01			h14											
1 1/4	1.02	0.39	0.87	0.51	0.33	1.77	2.83	2	0.2	174390	SNCB-32	3	0.2	176944	SNCB-32-R3		
1 5/8	1.1	0.47	0.98	0.63	0.47	2.05	2.99	2	0.3	174391	SNCB-40	3	0.3	176945	SNCB-40-R3		
2	1.26	0.47	1.06	0.63	0.47	2.36	3.15	2	0.45	174392	SNCB-50	3	0.45	176946	SNCB-50-R3		
2 1/2	1.57	0.63	1.26	0.83	0.63	2.76	3.5	2	0.73	174393	SNCB-63	3	0.73	176947	SNCB-63-R3		
3	1.97	0.63	1.42	0.87	0.63	3.54	3.9	2	1.22	174394	SNCB-80	3	1.22	176948	SNCB-80-R3		
4	2.36	0.79	1.61	1.06	0.79	4.33	4.61	2	1.85	174395	SNCB-100	3	1.85	176949	SNCB-100-R3		
5	2.76	0.98	1.97	1.18	0.98	5.12	5.59	2	3.57	174396	SNCB-125	3	3.57	176950	SNCB-125-R3		

1) Dimensions are in inches, unless otherwise noted.

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.

CRC3: Corrosion resistance class to Festo standard 940 070

Components with heavy corrosion exposure. Externally visible components in direct contact with normal industrial atmosphere or media such as solvents and cleaning agents, where the surface requirement is predominantly functional.

# Compact Cylinders ADN/AEN/ADNGF – Inch Series, Based on ISO 21287



Accessories

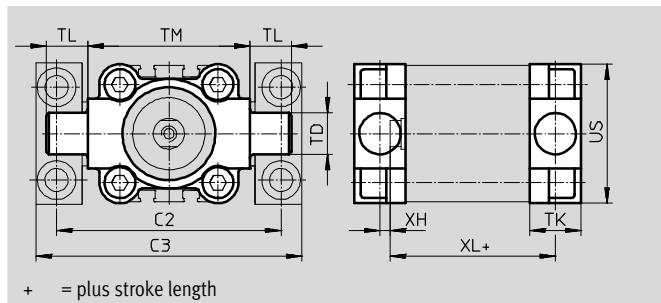
## Trunnion flange ZNCF/CRZNG

Material:

ZNCF: Special steel casting

CRZNG: Electrolytically polished special steel casting

Free of copper, PTFE and silicone



### Dimensions and Ordering Data<sup>1)</sup>

For Ø [in]	C2	C3	TD Ø e9	TK	TL	TM	US	XH	XL	Basic version				R3 – High corrosion protection			
										CRC <sup>1)</sup>	Weight [lb]	Part No.	Type	CRC <sup>1)</sup>	Weight [lb]	Part No.	Type
1¼	2.8	3.39	0.47	0.63	0.47	1.97	1.77	0.08	2.05	2	0.26	174411	ZNCF-32	4	0.3	161852	CRZNG-32
1⅝	3.43	4.13	0.63	0.79	0.63	2.48	2.13	0.16	2.17	2	0.48	174412	ZNCF-40	4	0.52	161853	CRZNG-40
2	.39	4.61	0.63	0.94	0.63	2.95	2.52	0.16	2.24	2	0.78	174413	ZNCF-50	4	0.86	161854	CRZNG-50
2½	4.57	5.35	0.79	0.94	0.79	3.54	2.95	0.16	2.4	2	1.2	174414	ZNCF-63	4	1.28	161855	CRZNG-63
3	5.35	6.14	0.79	1.1	0.79	4.33	3.66	0.2	3.19	2	2.3	174415	ZNCF-80	4	2.6	161856	CRZNG-80
4	6.46	7.44	0.98	1.5	0.98	5.2	4.33	0.39	3.39	2	4.06	174416	ZNCF-100	4	4.8	161857	CRZNG-100
5	7.56	8.54	0.98	3.39	0.98	6.3	5.13	0.55	4.17	2	6.98	174417	ZNCF-125	4	7.2	185362	CRZNG-125

1) Dimensions are in inches, unless otherwise noted.

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.

CRC4: Corrosion resistance class to Festo standard 940070

Components with very heavy corrosion exposure. Components in contact with aggressive media, e.g. in food or chemical industries. These applications must, if necessary, be verified by special tests with the media concerned.

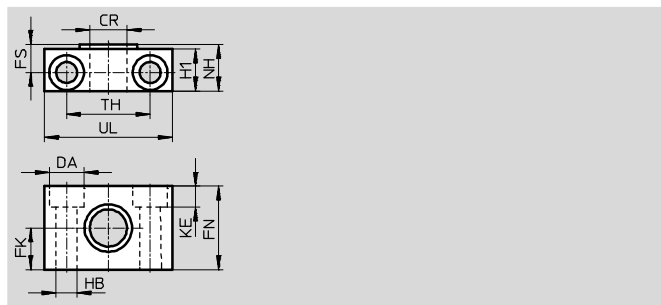
## Trunnion support LNZG

Material:

Trunnion support: Anodised aluminum

Plain bearing: Plastic

Free of copper, PTFE and silicone



### Dimensions and Ordering Data<sup>1)</sup>

For Ø [in]	CR Ø D11	DA Ø H13	FK Ø ±0.01	FN	FS	H1	HB Ø H13	KE	NH	TH ±0.01	UL	CRC <sup>2)</sup>	Weight [lb]	Part No.	Type
1¼	0.47	0.43	0.59	1.18	0.41	0.59	0.26	0.27	0.71	1.26	1.81	2	0.25	32959	LNZG-32
1⅝, 2	0.63	0.59	0.71	1.42	0.47	0.71	0.35	0.35	0.83	1.42	2.17	2	0.8	32960	LNZG-40/50
2½, 3	0.79	0.71	0.79	1.57	0.51	0.79	0.43	0.43	0.91	1.65	2.56	2	0.96	32961	LNZG-63/80
4, 5	0.98	0.79	0.98	1.97	0.63	0.96	0.55	0.51	1.12	1.97	2.95	2	1.92	32962	LNZG-100/125

1) Dimensions are in inches, unless otherwise noted.

2) Corrosion resistance class 2 to Festo standard 940 070





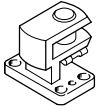
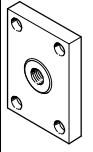
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.



# Compact Cylinders ADN/AEN/ADNGF – Inch Series, Based on ISO 21287

**FESTO**



Accessories


Ordering Data – Piston Rod Attachments				Technical data → <a href="http://www.festo.com/catalogue/ctype">www.festo.com/catalogue/ctype</a> or <order code>			
Designation	For Ø [in]	Part No.	Type	Designation	For Ø [in]	Part No.	Type
<b>Rod eye SGS</b>				<b>Rod clevis SGA used in combination with rod eye SGS</b>			
	1/2, 5/8	532694	SGS-10-32		SGS-10-32,	–	
	3/4, 1	532695	SGS-5/16-24		SGS-5/16-24		
	1 1/4, 1 5/8	532696	SGS-3/8-24		SGS-3/8-24	32954	SGA-M10x1,25
	2, 2 1/2	532697	SGS-1/2-20		SGS-1/2-20	10767	SGA-M12x1,25
	3, 4	532698	SGS-5/8-18		SGS-5/8-18	10768	SGA-M16x1,25
	5	532699	SGS-3/4-16		SGS-3/4-16	10769	SGA-M20x1,25
<b>Rod clevis SG</b>				<b>Self-aligning rod coupler FK</b>			
	1/2, 5/8	546552	SG-UNF10-32-B		1/2, 5/8	532703	FK-10-32
	3/4, 1	546574	SG-UNF5/16"-24-B		3/4, 1	532704	FK-5/16-24
	1 1/4, 1 5/8	546540	SG-UNF3/8"-24-B		1 1/4, 1 5/8	532705	FK-3/8-24
	2, 2 1/2	546545	SG-UNF1/2"-20-B		2, 2 1/2	532706	FK-1/2-20
	3, 4	546575	SG-UNF5/8"-18-B		3, 4	532707	FK-5/8-18
	5	546576	SG-UNF3/4"-16-B		5	532708	FK-3/4-16
<b>Right-angle clevis foot LQG used in combination with rod eye SGS</b>				<b>Coupling piece KSZ</b>			
	1 1/4, 1 5/8	31768	LQG-32		1/2, 5/8	–	
	2, 2 1/2	31769	LQG-40		3/4, 1	–	
	3, 4	31770	LQG-50		1 1/4, 1 5/8	36129	KSZ-3/8-24-UNF
			LQG-63		2, 2 1/2	36130	KSZ-1/2-20-UNF
	5	31772	LQG-80		3, 4	36131	KSZ-5/8-18-UNF
			LQG-100		5	36132	KSZ-3/4-16-UNF

# Compact Cylinders ADN/AEN/ADNGF – Inch Series, Based on ISO 21287

FESTO

Accessories

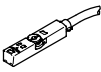
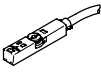
Ordering Data – One-way Flow Control Valves				Technical data → <a href="http://www.festo.com/catalogue/ctype">www.festo.com/catalogue/ctype</a> or <order code>			
Connection	Material		Part No.	Type			
	For Ø [in]	For tubing O.D. [in]					
<b>For exhaust air</b>							
	1/2, 5/8, 3/4, 1	5/32	Metal design	165008	GRLA-10-32-UNF-QS-5/32-U		
		1/4		192753	GRLA-10-32-UNF-QS-1/4-U		
	1 1/4, 1 5/8, 2, 2 1/2, 3, 4	5/32		165009	GRLA-1/8-NPT-QS-5/32-U		
		3/16		190941	GRLA-1/8-NPT-QS-3/16-U		
		1/4		165010	GRLA-1/8-NPT-QS-1/4-U		
		5/16		165013	GRLA-1/8-NPT-QS-5/16-U		
		3/16		190944	GRLA-1/4-NPT-QS-3/16-U		
	5	1/4		165011	GRLA-1/4-NPT-QS-1/4-U		
		5/16		165014	GRLA-1/4-NPT-QS-5/16-U		
		3/8		190947	GRLA-1/4-NPT-QS-3/8-U		
		<b>For supply air</b>					
		1/2, 5/8, 3/4, 1		3/16	Metal design	151577	GRLZ-10-UNF-3/16-B
1/4			151578	GRLZ-10-UNF-1/4-B			
1 1/4, 1 5/8, 2, 2 1/2, 3, 4		1/4	151562	GRLZ-1/8-NPT-1/4-B			
		3/8	151563	GRLZ-1/8-NPT-3/8-B			
		–	151198	GRLZ-1/4-RS-B			
5		–					

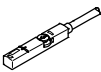
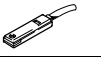
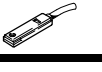
Ordering Data – Push-in Fittings QB, NPT Thread					Technical Data → <a href="http://www.festo.com/catalog/QB">www.festo.com/catalog/QB</a>		
For tubing O.D. [in]	10/32 UNF		1/8NPT		1/4NPT		
	Part No.	Type	Part No.	Type	Part No.	Type	
<b>With external hex</b>							
	1/8	533266	QB-10-32-UNF-1/8-U	533270	QB-1/8-1/8-U	–	
	5/32	533267	QB-10-32-UNF-5/32-U	533271	QB-1/8-5/32-U	–	
	3/16	533268	QB-10-32-UNF-3/16-U	533272	QB-1/8-3/16-U	533275	QB-1/4-3/16-U
	1/4	533269	QB-10-32-UNF-1/4-U	533273	QB-1/8-1/4-U	533276	QB-1/4-1/4-U
	5/16	–	–	533274	QB-1/8-5/16-U	533277	QB-1/4-5/16-U
	3/8	–	–	–	–	533278	QB-1/4-3/8-U

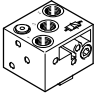
# Compact Cylinders ADN/AEN/ADNGF – Inch Series, Based on ISO 21287

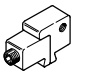
FESTO

Accessories

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	
<b>N/O contact</b>							
	Insertable in the slot from above, flush with cylinder profile, short design	PNP	Cable, 3-wire	2.5	574335	SMT-8M-A-PS-24V-E-2,5-OE	
			Plug M8x1, 3-pin	0.3	574334	SMT-8M-A-PS-24V-E-0,3-M8D	
			Plug M12x1, 3-pin	0.3	574337	SMT-8M-A-PS-24V-E-0,3-M12	
		NPN	Cable, 3-wire	2.5	574338	SMT-8M-A-NS-24V-E-2,5-OE	
Plug M8x1, 3-pin	0.3		574339	SMT-8M-A-NS-24V-E-0,3-M8D			
<b>N/C contact</b>							
	Insertable in the slot from above, flush with cylinder profile, short design	PNP	Cable, 3-wire	7.5	574340	SMT-8M-A-PO-24V-E-7,5-OE	

Ordering Data – Proximity Sensors for T-slot, Magnetic Reed						Technical data → www.festo.com/catalogue/sm	
	Type of mounting	Switch output	Electrical connection	Cable length [ft]	Part No.	Type	
<b>N/O contact</b>							
	Insertable in the slot from above, flush with cylinder profile	Contacting	Cable, 3-wire	8.2	543862	SME-8M-DS-24V-K-2,5-OE	
				16.4	543863	SME-8M-DS-24V-K-5,0-OE	
			Cable, 3-wire	8.2	543872	SME-8M-ZS-24V-K-2,5-OE	
			Plug M8x1, 3-pin	1.0	543861	SME-8M-DS-24V-K-0,3-M8D	
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	8.2	150855	SME-8-K-LED-24	
			Plug M8x1, 3-pin	1.0	150857	SME-8-S-LED-24	
<b>N/C contact</b>							
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	24.6	160251	SME-8-O-K-LED-24	

Ordering Data – Rectangular Proximity Sensors, Pneumatic					Technical data → www.festo.com/catalogue/sm	
	Pneumatic connection				Part No.	Type
<b>3/2-way valve, normally closed</b>						
	Female thread M5				178563	SMPO-8E



Ordering Data – Mounting Kit for Proximity Sensor SMPO-8E					Technical data → www.festo.com/catalogue/smb	
	Assembly				Part No.	Type
	Clamped in T-slot				178230	SMB-8E

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

## Compact Cylinders ADN/AEN/ADNGF – Inch Series, Based on ISO 21287

**FESTO**

Accessories

Ordering Data – Connecting Cables			Technical data → <a href="http://www.festo.com/catalogue/nebu">www.festo.com/catalogue/nebu</a>	
	Electrical connection, left	Electrical connection, right	Cable length [ft]	Part No. Type
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	8.2	<b>541333 NEBU-M8G3-K-2.5-LE3</b>
			16.4	<b>541334 NEBU-M8G3-K-5-LE3</b>
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	8.2	<b>541363 NEBU-M12G5-K-2.5-LE3</b>
			16.4	<b>541364 NEBU-M12G5-K-5-LE3</b>
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	8.2	<b>541338 NEBU-M8W3-K-2.5-LE3</b>
			16.4	<b>541341 NEBU-M8W3-K-5-LE3</b>
	Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	8.2	<b>541367 NEBU-M12W5-K-2.5-LE3</b>
			16.4	<b>541370 NEBU-M12W5-K-5-LE3</b>

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