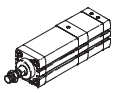
Multi-position cylinders/Adapter kits

FESTO

Multi-position cylinders ADNM

Product range overview

Function	Design	Type	Piston ∅ [mm]	Stroke [mm]	Pisto rod		➔ Page/Internet
					With female thread	With male thread	
Double-acting		**ADNM** Single-ended piston rod	25	1 ... 1,000	■	■	4
			40, 63, 100	1 ... 2,000	■	■	

Function principle

By connecting 2 to 5 cylinders in series with the same piston ∅ and different stroke lengths, up to 6 positions can be approached.

The following rules must be observed:

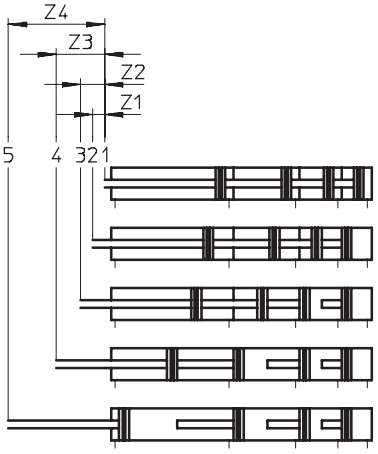
1 Each subsequent cylinder stroke must be greater than the one that preceded it.

2 The sum of all individual strokes may not exceed the total stroke, i.e.
for piston ∅ 25: 500 mm
for piston ∅ 40, 63, 100: 2,000 mm

3 The stroke of the last cylinder must not exceed a maximum permitted stroke length, i.e.
for piston ∅ 25: 300 mm
for piston ∅ 40, 63, 100: 1,000 mm

4 The strokes of the individual cylinders must not exceed in each case a maximum permitted stroke length, i.e.
for piston ∅ 25: 200 mm
for piston ∅ 40, 63: 300 mm
for piston ∅ 100: 400 mm

Example for piston ∅ 25 mm:
ADNM-25 for 5 positions at 0, 25, 50, 100 and 200 mm.



1 Each subsequent cylinder stroke must be greater than the one that preceded it:
Z1 = 25 mm < Z2 = 50 mm < Z3 = 100 mm < Z4 = 200 mm

2 Sum of individual strokes:
= 375 mm < 500 mm

3 Max. stroke of the last cylinder:
Z4 = 200 mm < 300 mm

4 Max. strokes of the individual cylinders:
Z3 = 100 mm < 200 mm
Z2 = 50 mm < 200 mm
Z1 = 25 mm < 200 mm

Multi-position cylinders ADNM

Product range overview

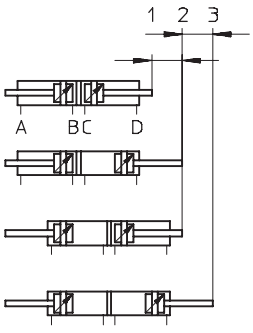
Adapter kits					
Design	Type	For cylinders	Piston ∅ [mm]	Overall stroke length [mm]	➔ Page/Internet
	**DPNC**	DNCB, DNC, ADVC ADN ∅125 ADVU ∅125	32, 40, 50, 63, 80, 100, 125	1,000	25
	**DPNG**	DNG	32, 40, 50, 63, 80, 100	1,000	25
	**DPNA**	ADN	12, 16, 20, 25, 32, 40, 50, 63, 80, 100	600 ... 1,000	26
	**DPVU**	ADVU	12, 16, 20, 25, 32, 40, 50, 63, 80, 100	400 ... 800	26

Function principle

A 3 or 4-position cylinder consists of two separate cylinders whose piston rods advance in opposing directions. Depending upon actuation and stroke pattern, this type of cylinder can assume up to four positions. In each case the cylinder is driven precisely against a stop. If one end of the piston rod is fixed, the cylinder barrel executes the movement. The cylinder must be connected with flexible line connections.

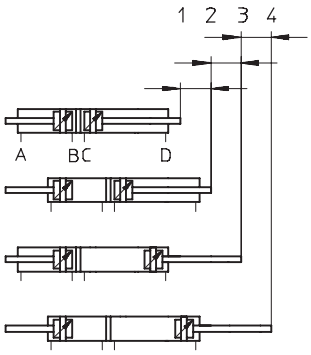
Implementing 3 positions

Two cylinders with identical stroke length must be connected to this end.



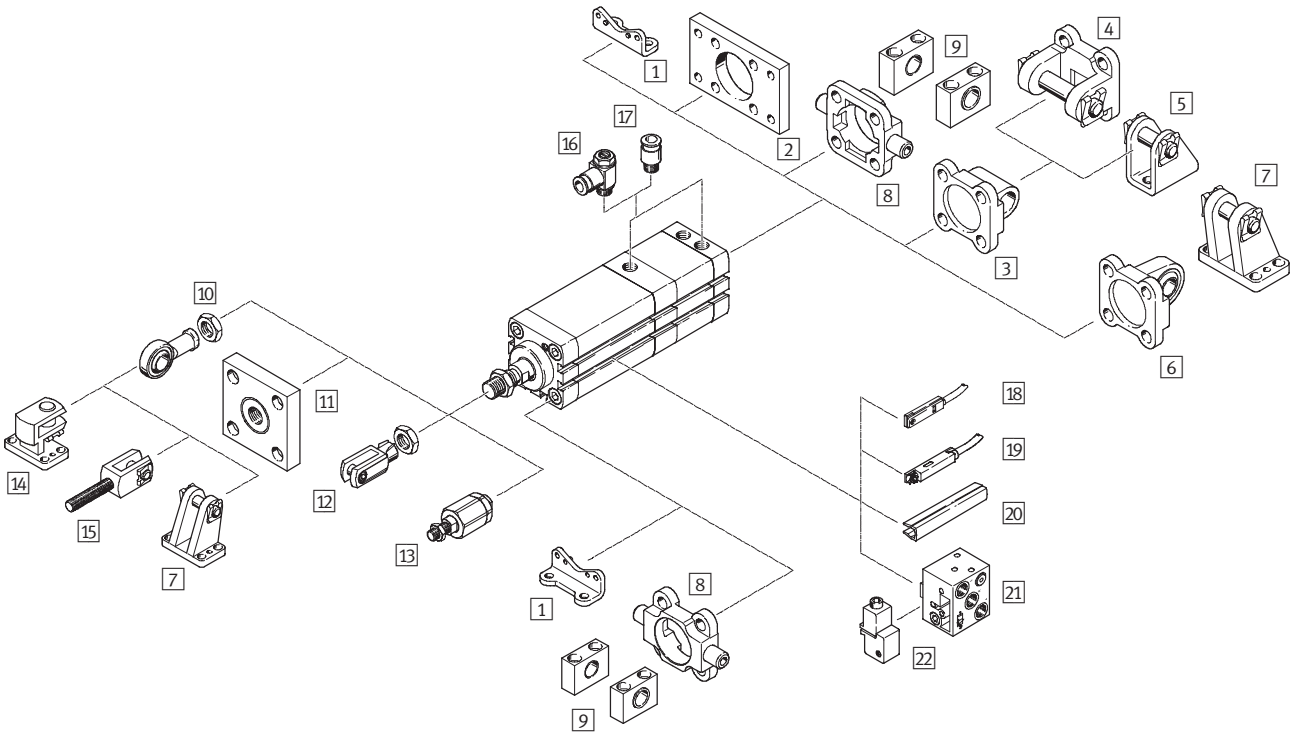
Implementing 4 positions

Two cylinders with different stroke lengths must be connected to this end.



Multi-position cylinders ADNM, standard port pattern

Peripherals overview



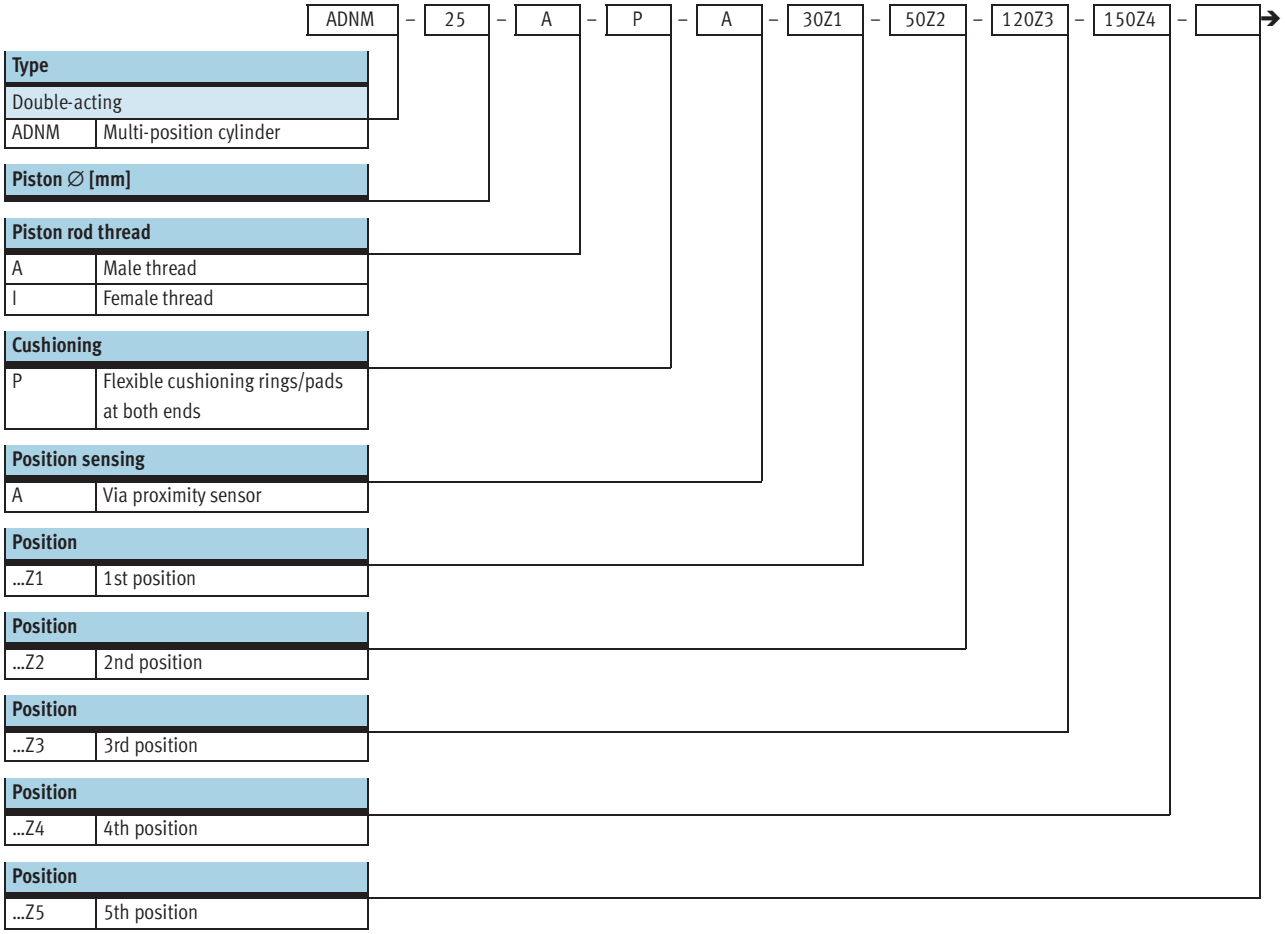
Multi-position cylinders ADNM, standard port pattern

Peripherals overview

Mounting attachments and accessories					
		Brief description	∅ 25	∅ 40, 63, 100	→ Page/Internet
1	Foot mounting HNA	For bearing and end caps	■	■	16
2	Flange mounting FNC	For end caps	■	■	17
3	Swivel flange SNCL	For end caps	■	■	18
4	Swivel flange SNCB	For swivel flange SNCL	–	■	20
5	Clevis foot LBN/CRLBN	For swivel flange SNCL	■	–	19
6	Swivel flange SNCS	For end caps	–	■	18
7	Clevis foot LBG	For swivel flange SNCS	–	■	22
8	Trunnion flange ZNCF/CRZNG	For bearing caps	–	■	21
9	Trunnion support LNZG	For trunnion flange ZNCF/CRZNG	–	■	21
10	Rod eye SGS/CRSGS	With spherical bearing	■	■	22
11	Coupling piece KSG	For compensating radial deviations	■	■	22
12	Rod clevis SG/CRSG	Permits a swivelling movement of the cylinder in one plane	■	■	22
13	Self-aligning rod coupler FK	For compensating radial and angular deviations	■	■	22
14	Right-angle clevis foot LQG	For rod eye SGS	–	■	22
15	Rod clevis SGA	With male thread	–	■	22
16	One-way flow control valve GRLA	For speed regulation	■	■	22
17	Push-in fitting QS	For connecting compressed air tubing with standard external diameters	■	■	quick star
18	Proximity sensor SME/SMT-8	Can be integrated in the sensor slot of the cylinder profile barrel	■	■	23
19	Proximity sensor SME/SMT-8M	Can be integrated in the sensor slot of the cylinder profile barrel	■	■	23
20	Slot cover ABP-5-S	For protecting the sensor cable and keeping dirt out of the sensor slots	■	■	24
21	Proximity sensor SMPO-8E	Pneumatic output signal	■	■	24
22	Mounting kit SMB-8E	For proximity sensor SMPO-8E	■	■	24

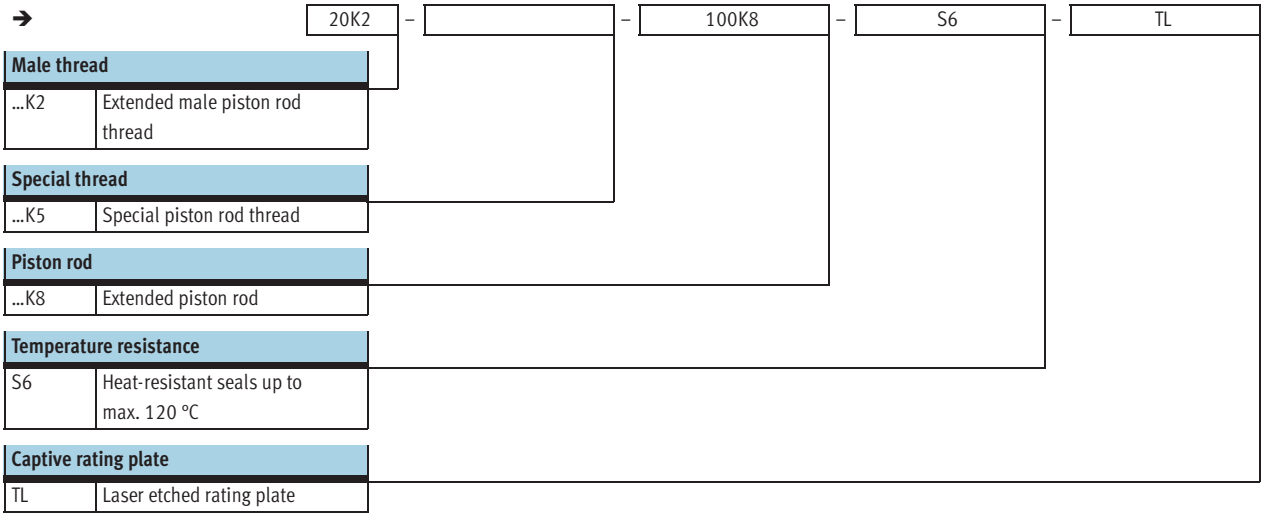
Multi-position cylinders ADNM, standard port pattern

Type codes



Multi-position cylinders ADNM, standard port pattern

Type codes



Multi-position cylinders ADNM, standard port pattern

Technical data

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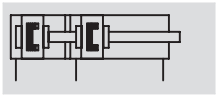
Function



- Ø - Diameter
  25 ... 100 mm
- I - Stroke length
  1 ... 2,000 mm

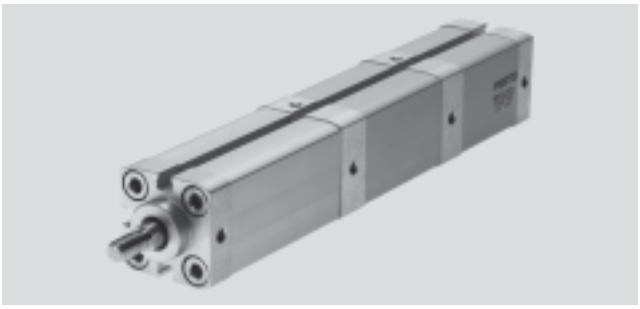
Variants

K2

K5

K8

S6



General technical data					
Piston ∅		25	40	63	100
Pneumatic connection		M5	M5	G⅛	G⅛
Piston rod thread	Female	M6	M10	M12	M16
	Male	M8	M12x1.25	M16x1.5	M20x1.5
Constructional design		Piston			
		Piston rod			
		Cylinder barrel			
Cushioning		Flexible cushioning rings/pads at both ends			
Position sensing		Via proximity sensor			
Type of mounting		Via female threads			
		Via accessories			
Mounting position		Any			

Operating and environmental conditions					
Piston ∅		25	40	63	100
Operating medium		Filtered compressed air, lubricated or unlubricated			
Operating pressure [bar]	2nd position	0.8 ... 10		0.6 ... 10	
	3rd position	1.1 ... 10		0.9 ... 10	
	4th position	1.4 ... 10		1.2 ... 10	
	5th position	1.7 ... 10		1.5 ... 10	
Ambient temperature[1] [°C]		–20 ... +80			
	S6	0 ... +120			
Corrosion resistance class CRC[2]		2			

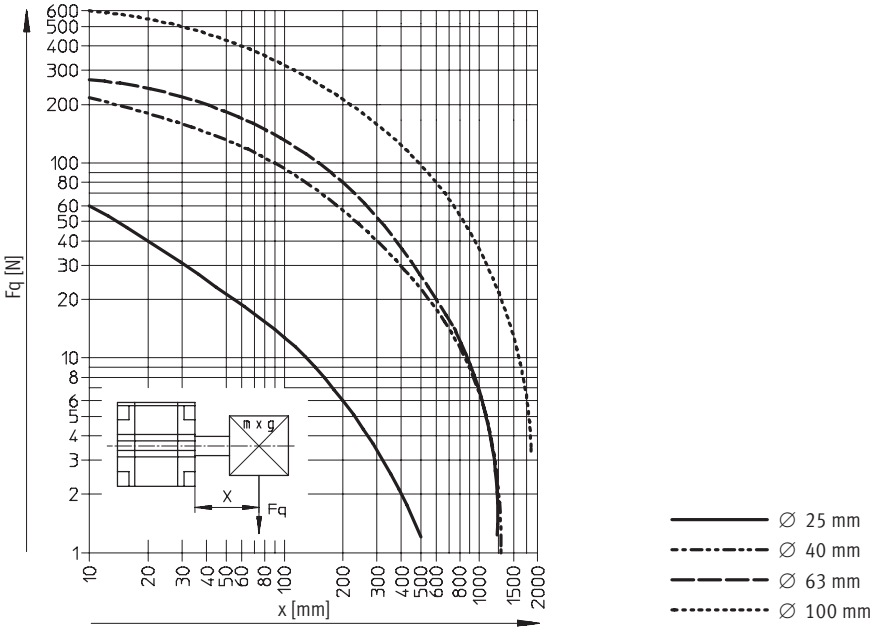
1) Note operating range of proximity sensors
2) Corrosion resistance class 2 to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents

Multi-position cylinders ADNM, standard port pattern

Technical data

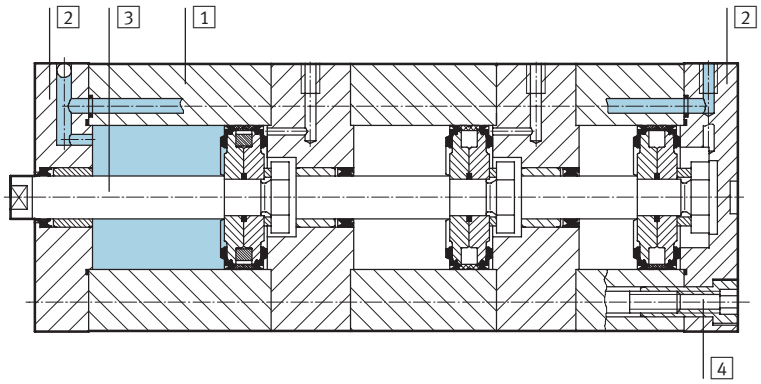
Forces [N] and impact energy [J]					
Piston ∅		25	40	63	100
Theoretical force at 6 bar, advancing		295	754	1870	4712
Theoretical force at 6 bar, retracting		247	633	1681	4417
Max. impact energy at the end positions		0.3	0.7	1.3	2.5
	S6	0.15	0.35	0.65	1.25

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



Materials

Sectional view



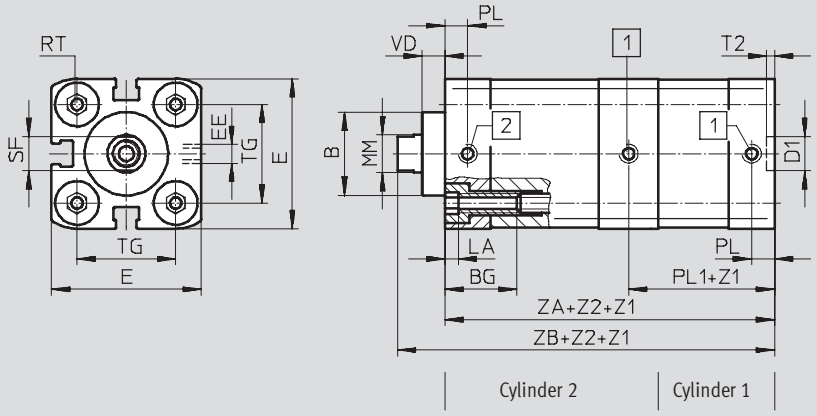
Multi-position cylinder		Basic version	S6
1	Cylinder barrel	Anodised aluminium	Anodised aluminium
2	Cover	Anodised aluminium	Anodised aluminium
3	Piston rod	High-alloy steel	High-alloy steel
4	Flange screws	Galvanised steel	Galvanised steel
–	Seals	Polyurethane	Fluoro elastomer

Multi-position cylinders ADNM, standard port pattern

Technical data

Dimensions – Basic version Download CAD Data ➔ **www.festo.com/us/cad**

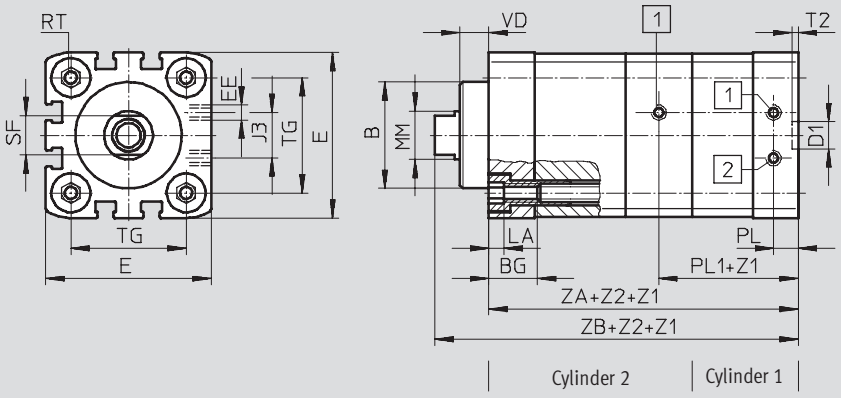
∅ 25/Z2 – 2 cylinders



1 Cylinder advancing
2 Cylinder retracting

Z1 = Stroke of cylinder 1
Z2 = Stroke of cylinder 2

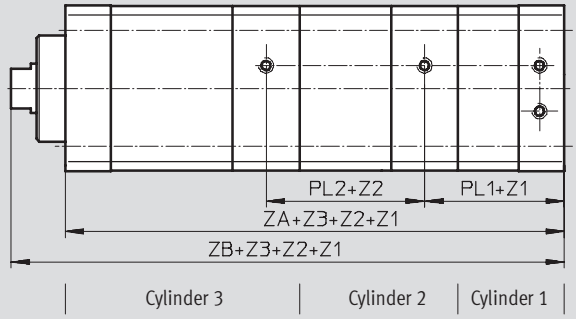
∅ 40 ... 100/Z2 – 2 cylinders



1 Cylinder advancing
2 Cylinder retracting

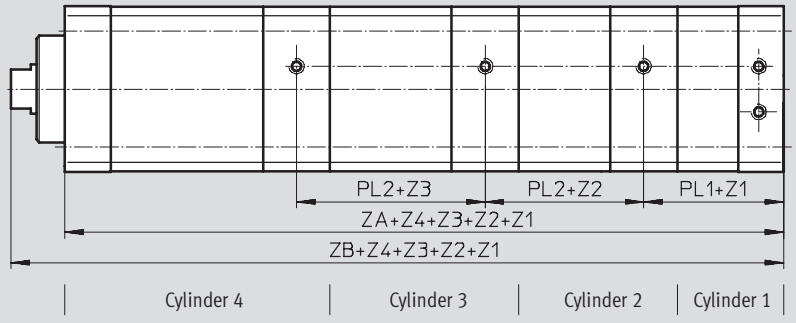
Z1 = Stroke of cylinder 1
Z2 = Stroke of cylinder 2

Z3 – 3 cylinders



Z1 = Stroke of cylinder 1
Z2 = Stroke of cylinder 2
Z3 = Stroke of cylinder 3

Z4 – 4 cylinders



Z1 = Stroke of cylinder 1
Z2 = Stroke of cylinder 2
Z3 = Stroke of cylinder 3
Z4 = Stroke of cylinder 4

Multi-position cylinders ADNM, standard port pattern

Technical data

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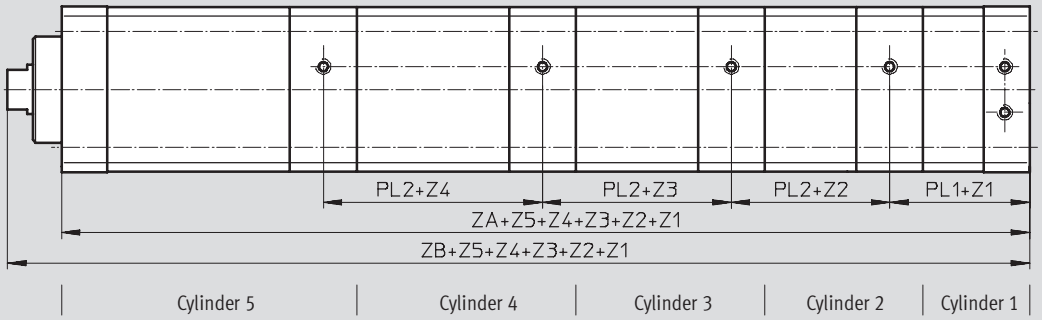
Dimensions – Variants Download CAD Data ➔ **www.festo.com/us/cad**

Z5 – 5 cylinders

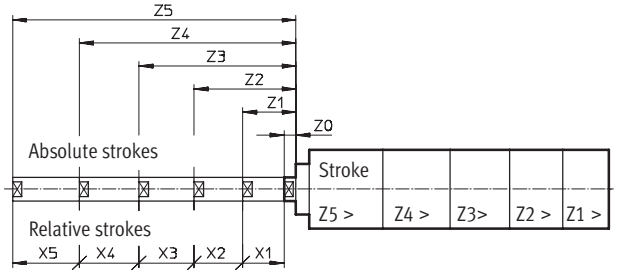


Z1 = Stroke of cylinder 1
Z2 = Stroke of cylinder 2
Z3 = Stroke of cylinder 3
Z4 = Stroke of cylinder 4
Z5 = Stroke of cylinder 5

∅ [mm]	B ∅ f8	BG min.	D1 ∅ H9	E +0.3	EE	J3	LA +0.2	MM ∅ h9
25	22	15	9	39.5	M5	–	5	10
40	35	16		54.5		15		16
63	42		12	75.5	G1⁄8	23		20
100	55	17		113.5		40		25

∅ [mm]	PL +0.2	PL1 +0.2	PL2 +0.2	RT	SF	T2 +0.1	TG ±0.2	VD
25	6	38.3	34.2	M5	9	2.1	26	6
40	8.2	40.4	39.5	M6	13		38	9.5
63		44	42	M8	17	2.6	56.5	12
100	10.5	51.2	52	M10	21		89	15.5

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

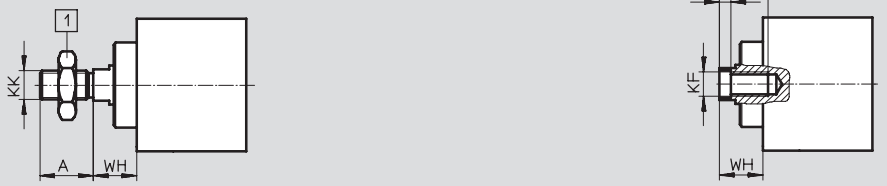


Multi-position cylinders ADNM, standard port pattern

Technical data

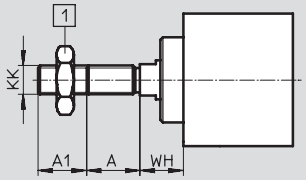
Dimensions – Variants Download CAD Data ➔ **www.festo.com/us/cad**

Basic version



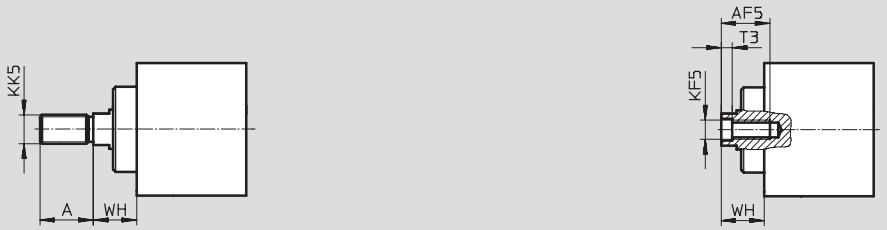
1 Hex nut to DIN 439-B
only with ∅ 40 ... 100

K2 – Extended male piston rod thread

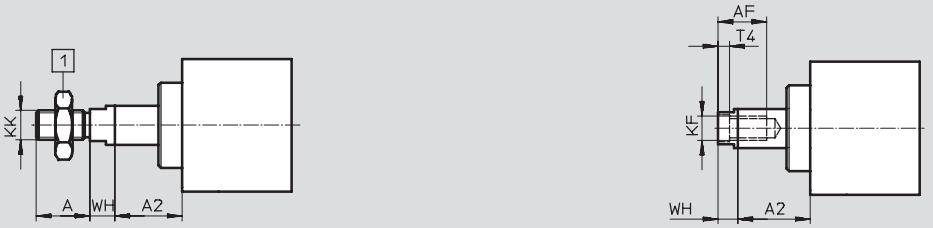


1 Hex nut to DIN 439-B
only with ∅ 40 ... 100

K5 – Special piston rod thread



K8 – Extended piston rod



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

Multi-position cylinders ADNM, standard port pattern

Technical data

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

Multi-position cylinders ADNM, standard port pattern

Ordering data – Modular products

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M Mandatory data								O Options →		
Module No.	Function	Size	Type of thread	Cushioning	Position sensing	1st position	2nd position	3rd position	4th position	5th position
539 695 539 696 539 697 539 698	ADNM	25 40 63 100	A I	P	A	...Z1	...Z2	...Z3	...Z4	...Z5
Order example										
539 695	**ADNM**	**25**	**A**	**P**	**A**	**30Z1**	**50Z2**	**120Z3**	**200Z4**	

Ordering table

	Size		25	40	63	100	Conditions	Code	Enter code
M	Module No.		539 695	539 696	539 697	539 698			
	Function		Multi-position cylinder, standard port pattern					ADNM	ADNM
	Size	[mm]	25	40	63	100		-...	
	Type of thread		Male thread					**-A**	
			Female thread					**-I**	
	Cushioning		Flexible cushioning rings/pads at both ends					**-P**	-P
	Position sensing		Via proximity sensor					**-A**	-A
	1st position	[mm]	1 ... 200	1 ... 300	1 ... 300	1 ... 400	1	**-...Z1**	- ... Z1
	2nd position	[mm]	1 ... 300	1 ... 1000	1 ... 1000	1 ... 1000	1 2	**-...Z2**	- ... Z2
O	3rd position	[mm]	1 ... 300	1 ... 1000	1 ... 1000	1 ... 1000	1 2	**-...Z3**	
	4th position	[mm]	1 ... 300	1 ... 1000	1 ... 1000	1 ... 1000	1 2	**-...Z4**	
↓	5th position	[mm]	1 ... 300	1 ... 1000	1 ... 1000	1 ... 1000	1 2	**-...Z5**	

The end of the retracted piston rod is the reference point for all positions.

1 **Z1 ... Z5** The subsequent position must be larger than the one that precedes it:
Z1 < Z2 < Z3 < Z4 < Z5.
Max. total of all positions:
Size 25: max. 1000 mm
Size 40, 63, 100: max. 2000 mm

2 **Z2 ... Z5** Max. permissible stroke except for the last position (visible piston rod):
Size 25: 200 mm
Size 40, 63: 300 mm
Size 100: 400 mm

Transfer order code

	ADNM	–		–		–	P	–	A	–	...Z1	–	...Z2	–		–		–	

Multi-position cylinders ADNM, standard port pattern

Ordering data – Modular products

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➔ [0] **Options**

	Male thread extended		**Special thread**		**Piston rod extended**		**Temperature resistance**		**Captive rating plate**
	...K2		"..."K5		...K8		S6		TL
–	**20K2**	–	**"M10"K5**	–	**100K8**	–		–	

Ordering table

Size		25	40	63	100	Conditions	Code		Enter code
↓ [0]	Male thread extended	Extended male piston rod thread							
	[mm]	1 ... 20	1 ... 20	1 ... 20	1 ... 30		**-...K2**		
	Special piston rod thread	M10x1.25 M10	M10x1.25 M12	M12x1.25 M16	M16x1.5 M20	[3]	**-"..."K5**		
		M5	M8	M10	–	[4]			
	Piston rod extended	Extended piston rod							
	[mm]	1 ... 300	1 ... 400	1 ... 400	1 ... 500	[5]	**-...K8**		
	Temperature resistance	Heat-resistant seals up to max. 120 °C					**-S6**		
	Captive rating plate	Laser etched rating plate					**-TL**		

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

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

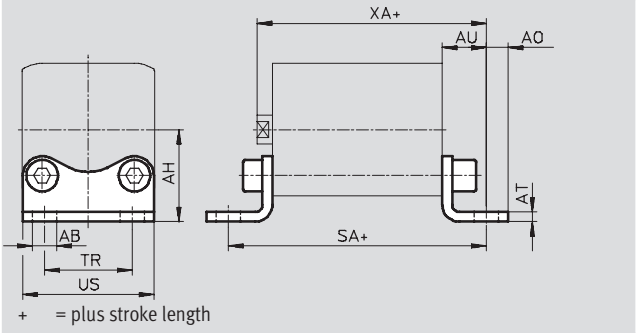
[5] **K8** The sum of the length of the last position and piston rod extension must not exceed the maximum permissible length of the last position

Transfer order code

–		–		–		–		–	

Foot mounting HNA

Material:
HNA: Galvanised steel
HNA-...-R3: Steel with protective coating
Free of copper, PTFE and silicone



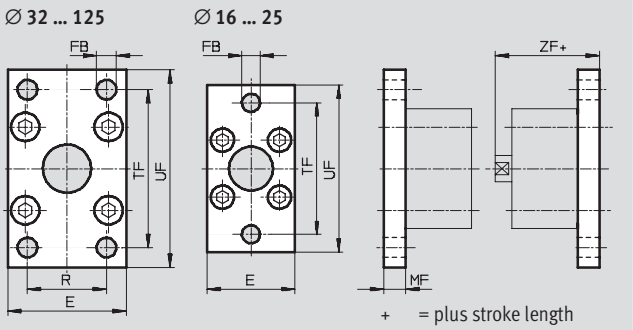
Dimensions and ordering data									
For ∅ [mm]	AB ∅ H14	AH JS14	AO	AT ±0.5	AU ±0.2	SA	TR ±0.2	US −0.5	XA
25	7	29	6.25	4	16	71	26	38.5	61
40	10	38	9		18	81	36	54	69
63		50	8	5	21	91	50	75	78
100	14.5	74	12.5	6	27	121	75	110	103

For ∅	Basic version				R3 – High corrosion protection			
[mm]	CRC[1]	Weight [g]	Part No.	Type	CRC[1]	Weight [g]	Part No.	Type
25	2	55	**537 240**	**HNA-25**	3	55	**537 255**	**HNA-25-R3**
40	2	90	**537 242**	**HNA-40**	3	90	**537 257**	**HNA-40-R3**
63	2	180	**537 244**	**HNA-63**	3	180	**537 259**	**HNA-63-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

Flange mounting FNC

Material:
Galvanised steel
Free of copper, PTFE and silicone



Dimensions and ordering data

For ∅ [mm]	E	FB ∅	MF	R	TF	UF ±1	ZF	CRC[1]	Weight [g]	Part No.	Type
25	40	6.6	8	–	60	76	53	2	–	**537 248**	**FNC-25**
40	54	9	10	36	72	90	61	2	280	**174 377**	**FNC-40**
63	75		12	50	100	120	69	2	690	**174 379**	**FNC-63**
100	110	14	16	75	150	175	92	2	2400	**174 381**	**FNC-100**

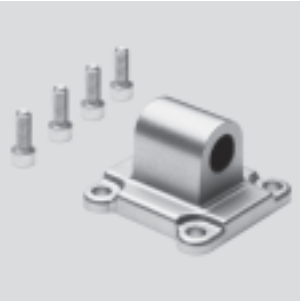
1) Corrosion resistance class 2 to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents

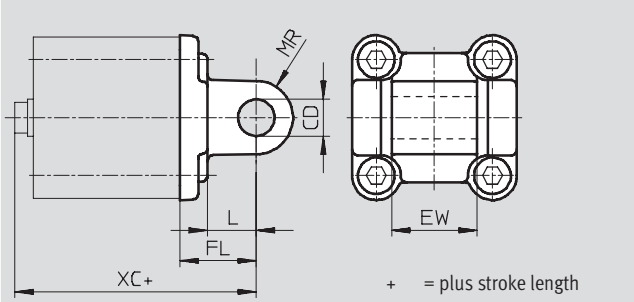
Multi-position cylinders ADNM, standard port pattern

Accessories

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

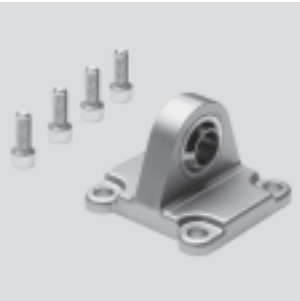
For ∅ [mm]	CD ∅ H9	EW	FL ±0.2	L	MR	XC
25	8	16_{h12}	20	14	8	65
40	12	$28_{-0.2/-0.6}$	25	16	12	76
63	16	$40_{-0.2/-0.6}$	32	21	16	89
100	20	$60_{-0.2/-0.6}$	41	27	20	117

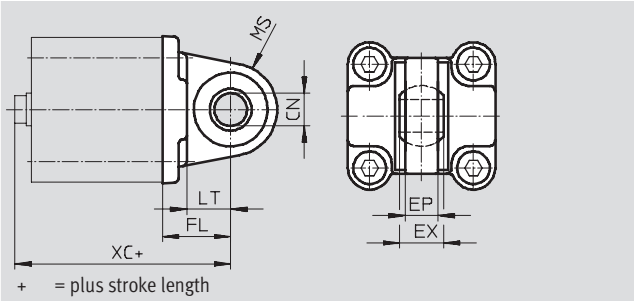
For ∅	Basic version				R3 – High corrosion protection			
[mm]	CRC[1)]	Weight [g]	Part No.	Type	CRC[1)]	Weight [g]	Part No.	Type
25	2	45	**537 793**	**SNCL-25**	3	45	**537 797**	**SNCL-25-R3**
40	2	115	**174 405**	**SNCL-40**	–	–	–	
63	2	270	**174 407**	**SNCL-63**	–	–	–	
100	2	700	**174 409**	**SNCL-100**	–	–	–	

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.
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

Swivel flange SNCS

Material:
Die-cast aluminium





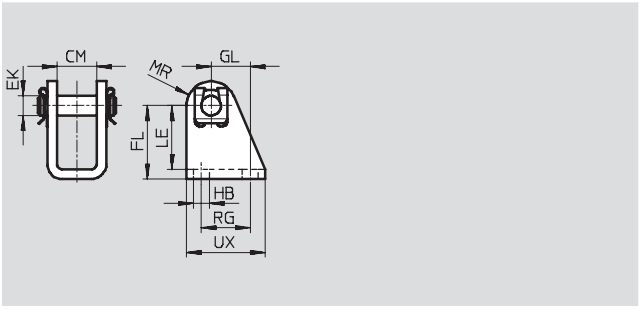
Dimensions and ordering data

For ∅ [mm]	CN ∅ H7	EP ±0.2	EX	FL ±0.2	LT	MS	XC	CRC[1)]	Weight [g]	Part No.	Type
40	12	12	16	25	16	17	70	2	125	**174 398**	**SNCS-40**
63	16	15	21	32	21	22	81	2	280	**174 400**	**SNCS-63**
100	20	18	25	41	27	29	108	2	700	**174 402**	**SNCS-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

Clevis foot LBN

Material:
Galvanised steel
Free of copper, PTFE and silicone



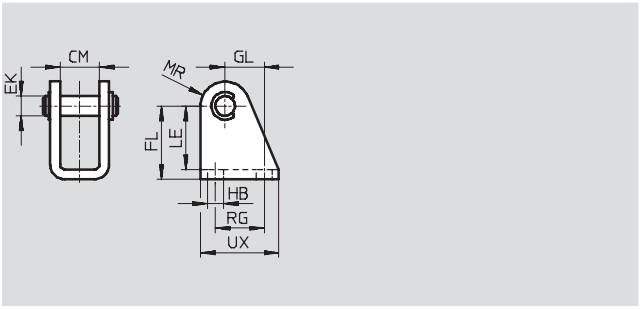
Dimensions and ordering data

For ∅ [mm]	CM	EK ∅	FL	GL	HB ∅	LE	MR	RG	UX	CRC[1]	Weight [g]	Part No.	Type
25	16.1	8	30 +0.4/–0.2	16	6.6	26	10	20	32	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 ∅ [mm]	CM	EK ∅	FL	GL	HB	LE	MR	RG	UX	CRC[1]	Weight [g]	Part No.	Type
25	16.1	8	30 +0.4/–0.2	16	6.6	26	10	20	32	4	62	**161 863**	**CRLBN-20/25**

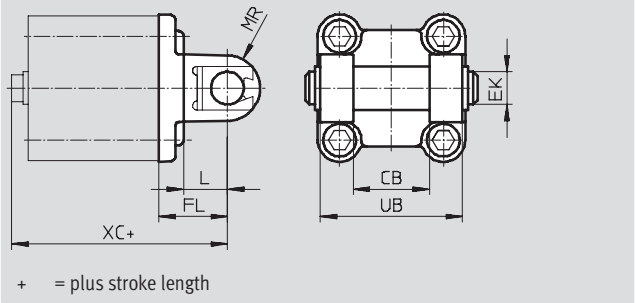
1) Corrosion resistance class 4 to Festo standard 940 070
Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required

Multi-position cylinders ADNM, standard port pattern

Accessories

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

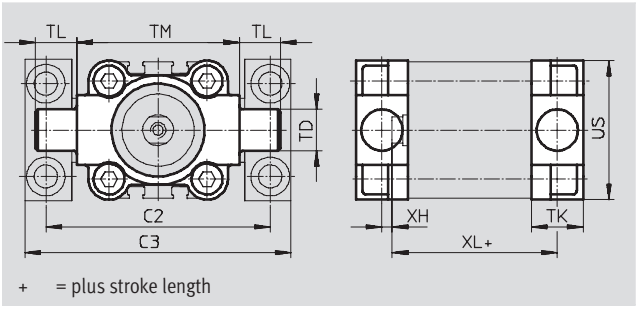
For ∅ [mm]	CB H14	EK ∅ e8	FL ±0.2	L	MR	UB h14	XC
40	28	12	25	16	12	52	76
63	40	16	32	21	16	70	89
100	60	20	41	27	20	110	117

For ∅ [mm]	Basic version				R3 – High corrosion protection			
	CRC[1]	Weight [g]	Part No.	Type	CRC[1]	Weight [g]	Part No.	Type
40	2	150	**174 391**	**SNCB-40**	3	150	**176 945**	**SNCB-40-R3**
63	2	365	**174 393**	**SNCB-63**	3	365	**176 947**	**SNCB-63-R3**
100	2	925	**174 395**	**SNCB-100**	3	925	**176 949**	**SNCB-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

Trunnion flange ZNCF/CRZNG

Material:
ZNCF: Special steel casting
CRZNG: Electrolytically polished special steel casting
Free of copper, PTFE and silicone



\+ = plus stroke length

Dimensions and ordering data

For ∅ [mm]	C2	C3	TD ∅ e9	TK	TL	TM	US	XH	XL
40	87	105	16	20	16	63	54	4	55
63	116	136	20	24	20	90	75	4	61
100	164	189	25	38	25	132	110	10	86

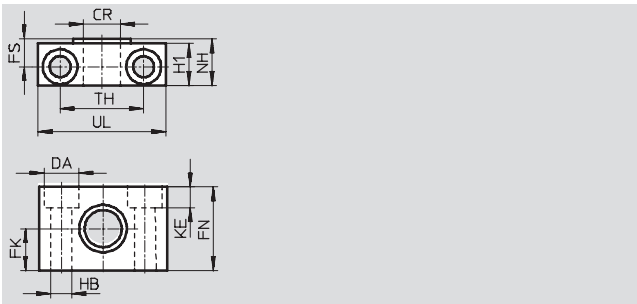
For ∅	Basic version				R3 – High corrosion protection			
	CRC[1]	Weight	Part No.	Type	CRC[1]	Weight	Part No.	Type
[mm]		[g]				[g]		
40	2	240	**174 412**	**ZNCF-40**	4	260	**161 853**	**CRZNG-40**
63	2	600	**174 414**	**ZNCF-63**	4	640	**161 855**	**CRZNG-63**
100	2	2030	**174 416**	**ZNCF-100**	4	2400	**161 857**	**CRZNG-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.
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

Trunnion support LNZG

Material:
Trunnion support: Anodised aluminium
Plain bearing: Plastic

Free of copper, PTFE and silicone

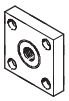


Dimensions and ordering data

For ∅ [mm]	CR ∅ D11	DA ∅ H13	FK ∅ ±0.1	FN	FS	H1	HB ∅ H13	KE	NH	TH ±0.2	UL	CRC[1]	Weight [g]	Part No.	Type
40	16	15	18	36	12	18	9	9	21	36	55	2	400	**32 960**	**LNZG-40/50**
63	20	18	20	40	13	20	11	11	23	42	65	2	480	**32 961**	**LNZG-63/80**
100	25	20	25	50	16	24.5	14	13	28.5	50	75	2	960	**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

Ordering data – Piston rod attachments — Technical data ➔ Internet: piston rod attachment

Designation	For ∅	Part No.	Type
Rod eye SGS			
	25	**9 255**	**SGS-M8**
	40	**9 262**	**SGS-M12x1,25**
	63	**9 263**	**SGS-M16x1,5**
	100	**9 264**	**SGS-M20x1,5**
Rod clevis SG			
	25	**3 111**	**SG-M8**
	40	**6 145**	**SG-M12x1,25**
	63	**6 146**	**SG-M16x1,5**
	100	**6 147**	**SG-M20x1,5**
Coupling piece KSG			
	25	–	
	40	**32 964**	**KSG-M12x1,25**
	63	**32 965**	**KSG-M16x1,5**
	100	**32 966**	**KSG-M20x1,5**

Designation	For ∅	Part No.	Type
Rod clevis SGA for rod eye SGS			
	25	–	
	40	**10 767**	**SGA-M12x1,25**
	63	**10 768**	**SGA-M16x1,5**
	100	**10 769**	**SGA-M20x1,5**
Self-aligning rod coupler FK			
	25	**2 062**	**FK-M8**
	40	**6 141**	**FK-M12x1,25**
	63	**6 142**	**FK-M16x1,5**
	100	**6 143**	**FK-M20x1,5**

Ordering data – Corrosion and acid resistant piston rod attachments — Technical data ➔ Internet: piston rod attachment

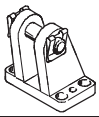
Designation	For ∅	Part No.	Type
Rod eye CRSGS			
	25	**195 581**	**CRSGS-M8**
	40	**195 583**	**CRSGS-M12x1,25**
	63	**195 584**	**CRSGS-M16x1,5**
	100	**195 585**	**CRSGS-M20x1,5**

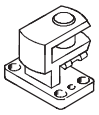
Designation	For ∅	Part No.	Type
Rod clevis CRSG			
	25	**13 568**	**CRSG-M8**
	40	**13 570**	**CRSG-M12x1,25**
	63	**13 571**	**CRSG-M16x1,5**
	100	**13 572**	**CRSG-M20x1,5**

Note

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

Ordering data – Mounting attachments — Technical data ➔ Internet: mounting attachment

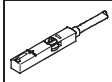
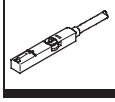
Designation	For ∅	Part No.	Type
Clevis foot LBG for rod eye SGS			
	25	–	
	40	**31 762**	**LBG-40**
	63	**31 764**	**LBG-63**
	100	**31 766**	**LBG-100**

Designation	For ∅	Part No.	Type
Right-angle clevis foot LQG for rod eye SGS			
	25	–	
	40	**31 769**	**LQG-40**
	63	**31 771**	**LQG-63**
	100	**31 773**	**LQG-100**

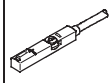
Ordering data – One-way flow control valves — Technical data ➔ Internet: grla

	Connection		Material	Part No.	Type
	For ∅	For tubing O.D.			
For exhaust air					
	25, 40	3	Metal design	**193 137**	**GRLA-M5-QS-3-D**
		4		**193 138**	**GRLA-M5-QS-4-D**
	63, 100	4		**193 143**	**GRLA-⅛-QS-4-D**
		6		**193 144**	**GRLA-⅛-QS-6-D**
		8		**193 145**	**GRLA-⅛-QS-8-D**

Ordering data – Proximity sensors for T-slot, magneto-resistive — Technical data ➔ Internet: smt

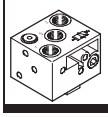
	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with cylinder profile	PNP	Cable, 3-wire	2.5	**543 867**	**SMT-8M-PS-24V-K-2,5-OE**
			Plug M8x1, 3-pin	0.3	**543 866**	**SMT-8M-PS-24V-K-0,3-M8D**
			Plug M12x1, 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**

Ordering data – Proximity sensors for T-slot, magnetic reed — Technical data ➔ Internet: sme

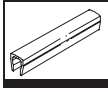
	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with cylinder profile	Contacting	Cable, 3-wire	2.5	**543 862**	**SME-8M-DS-24V-K-2,5-OE**
				5.0	**543 863**	**SME-8M-DS-24V-K-5,0-OE**
			Cable, 3-wire	2.5	**543 872**	**SME-8M-ZS-24V-K-2,5-OE**
			Plug M8x1, 3-pin	0.3	**543 861**	**SME-8M-DS-24V-K-0,3-M8D**
	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 kit 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**

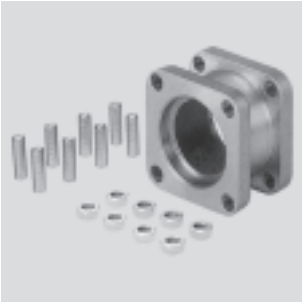
Multi-position cylinders ADNM, standard port pattern

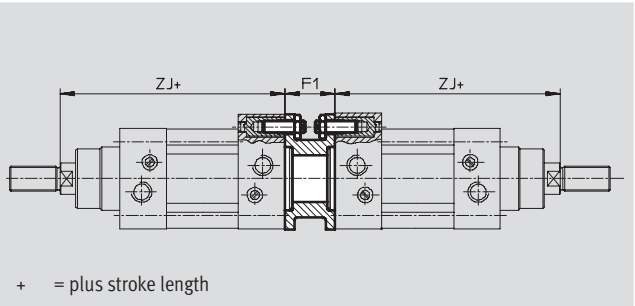
Technical data

Adapter kit DPNC

for standard cylinder DNCB, DNC, standard cylinder ADN ∅125, compact cylinder ADVU ∅125 and short-stroke cylinder ADVC

Material:
Flange: Wrought aluminium alloy; threaded pins, hex nuts: Galvanised steel
Free of copper, PTFE and silicone





\+ = plus stroke length

Note

The maximum overall stroke length may not be exceeded when combining cylinders and the adapter kit.

Dimensions and ordering data

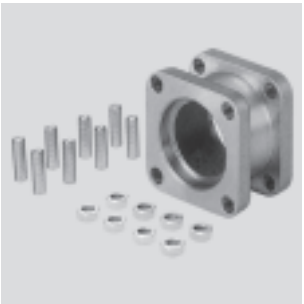
For ∅	F1	ZJ	Max. overall stroke length [mm]	CRC[1]	Weight [g]	Part No.	Type
32	27	120	1,000	2	85	**174 418**	**DPNC-32**
40	27	135	1,000	2	115	**174 419**	**DPNC-40**
50	32	143	1,000	2	210	**174 420**	**DPNC-50**
63	28	158	1,000	2	360	**174 421**	**DPNC-63**
80	38	174	1,000	2	620	**174 422**	**DPNC-80**
100	38	189	1,000	2	1,190	**174 423**	**DPNC-100**
125	48	225	1,000	2	1,600	**174 424**	**DPNC-125**

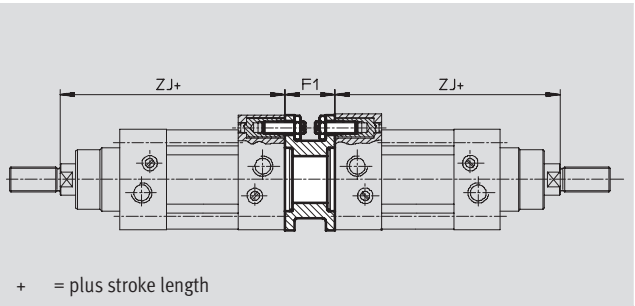
1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents

Adapter kit DPNG

For standard cylinders DNG

Material:
Flange: Wrought aluminium alloy; threaded pins, hex nuts: Galvanised steel
Free of copper, PTFE and silicone





\+ = plus stroke length

Note

The maximum overall stroke length may not be exceeded when combining cylinders and the adapter kit.

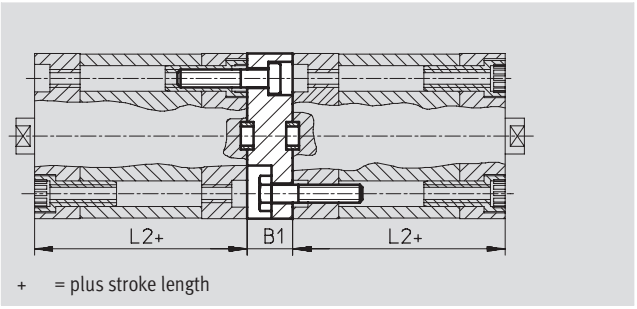
Dimensions and ordering data

For ∅	F1	ZJ	Max. overall stroke length [mm]	CRC[1]	Weight [g]	Part No.	Type
32	27	120	1,000	2	85	**159 485**	**DPNG-32**
40	27	135	1,000	2	115	**159 486**	**DPNG-40**
50	32	143	1,000	2	210	**159 487**	**DPNG-50**
63	28	158	1,000	2	360	**159 488**	**DPNG-63**
80	38	174	1,000	2	620	**159 489**	**DPNG-80**
100	38	189	1,000	2	1,190	**159 490**	**DPNG-100**

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents

Adapter kit DPNA
for standard cylinder ADN

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



\+ = plus stroke length

Note

The maximum overall stroke length may not be exceeded when combining cylinders and the adapter kit.

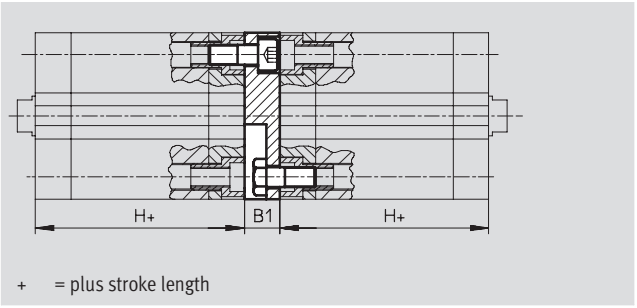
Dimensions and ordering data

For ∅	B1	L2	Max. overall stroke length [mm]	CRC[1]	Part No.	Type
12	13	35	600	2	**537 263**	**DPNA-12**
16	13	35	600	2	**537 264**	**DPNA-16**
20	13	37	600	2	**537 265**	**DPNA-20**
25	13	39	600	2	**537 266**	**DPNA-25**
32	15	44	800	2	**537 267**	**DPNA-32**
40	15	45	800	2	**537 268**	**DPNA-40**
50	15	45	800	2	**537 269**	**DPNA-50**
63	15	49	800	2	**537 270**	**DPNA-63**
80	17	54	1,000	2	**537 271**	**DPNA-80**
100	19,5	67	1,000	2	**537 272**	**DPNA-100**

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents

Adapter kit DPVU
for compact cylinder ADVU

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



\+ = plus stroke length

Note

The maximum overall stroke length may not be exceeded when combining cylinders and the adapter kit.

Dimensions and ordering data

For ∅	B1	H	Max. overall stroke length [mm]	CRC[1]	Weight [g]	Part No.	Type
12/16	12,5	38	400	2	22	**161 194**	**DPVU-12/16**
20	12,5	38	400	2	36	**161 195**	**DPVU-20**
25	13	39,5	400	2	44	**161 196**	**DPVU-25**
32	14,5	44,5	600	2	90	**161 197**	**DPVU-32**
40	14,5	45,5	600	2	137	**161 198**	**DPVU-40**
50	14,5	45,5	600	2	177	**161 199**	**DPVU-50**
63	14,5	50	600	2	308	**161 200**	**DPVU-63**
80	16,5	56	800	2	495	**161 201**	**DPVU-80**
100	19,5	66,5	800	2	859	**161 202**	**DPVU-100**

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents

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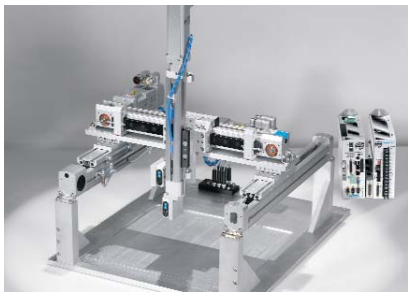

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