

Tandem/high-force cylinders

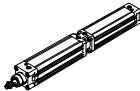
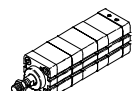
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Tandem/high-force cylinders

Product range overview

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Function	Version	Type	Piston Ø	Stroke	Position sensing	Piston rod	
			[mm]	[mm]		A	With male thread
Double-acting	Tandem cylinders						
		DNCT	32, 40, 50	2 ... 500	■	■	—
			63, 80, 100, 125	3 ... 500			
	High-force cylinders						
		ADNH	2x 25, 3x 25, 4x 25	1 ... 150	■	■	■
			2x 40, 3x 40, 4x 40	1 ... 150			
			2x 63, 3x 63, 4x 63	1 ... 150			
			2x 100, 3x 100, 4x 100	1 ... 150			

Special features

General

By connecting 2, 3 or 4 cylinders with the same piston diameter and stroke in series, the force in the advance stroke (thrust) can be doubled, tripled or quadrupled in comparison to a single cylinder.

DNCT

- A maximum of 2 cylinders can be combined.
- Like the thrust, the force in the return stroke is double that of a single cylinder with corresponding piston diameter.

ADNH

- A maximum of 4 cylinders can be combined.
- The internal distribution of compressed air means that only 2 connections are required to pressurise all cylinders.
- The force in the return stroke corresponds to that of a single cylinder with corresponding piston diameter.

Tandem/high-force cylinders

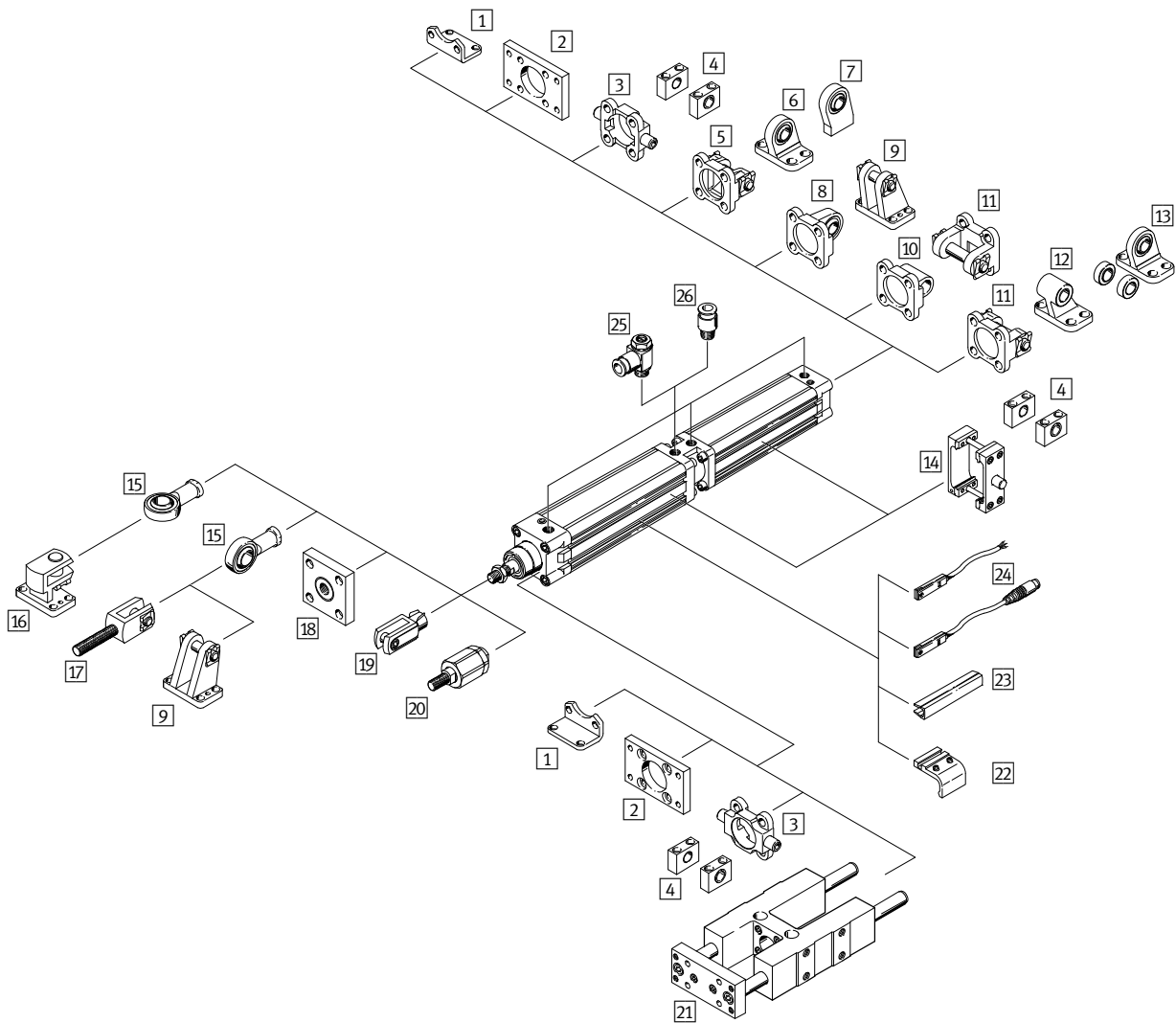
Product range overview

Type	Cushioning		Extended male thread K2	Special thread K5	Extended piston rod K8	Heat resistant up to 120 °C S6	→ Page/Internet
	Non-adjustable P	Adjustable PPV					
Tandem cylinders							
DNCT	–	■	–	–	–	■	4
High-force cylinders							
ADNH	■	–	■	■	■	■	20

Tandem cylinders DNCT, standard port pattern

Peripherals overview

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Tandem cylinders DNCT, standard port pattern

Peripherals overview

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Mounting attachments and accessories			
	Description		→ Page/Internet
1	Foot mounting HNC	For bearing and end caps	10
2	Flange mounting FNC	For bearing or end caps	10
3	Trunnion flange ZNCF	For bearing or end caps	11
4	Trunnion support LNZG	–	13
5	Swivel flange SNC	For end caps	13
6	Clevis foot LSNG	With spherical bearing	16
7	Clevis foot LSNSG	Weld-on, with spherical bearing	16
8	Swivel flange SNCS	With spherical bearing for end caps	14
9	Clevis foot LBG	–	16
10	Swivel flange SNCL	For end caps	15
11	Swivel flange SNCB	For end caps	14
12	Clevis foot LNG	–	16
13	Clevis foot LSN	With spherical bearing	16
14	Trunnion mounting kit DAMT	For mounting anywhere on the cylinder profile barrel	12
15	Rod eye SGS	With spherical bearing	17
16	Right-angle clevis foot LQG	–	16
17	Rod clevis SGA	With male thread	17
18	Coupling piece KSG	For compensating radial deviations	17
19	Rod clevis SG	Permits a swivelling movement of the cylinder in one plane	17
20	Self-aligning rod coupler FK	For compensating radial and angular deviations	17
21	Guide unit FENG	For protecting standard cylinders from torsion at high torque loads	18
22	Mounting kit SMB-8-FENG	For proximity sensor SMT-8 when attaching to cylinders in combination with guide unit FENG	18
23	Slot cover ABP-5-S	To protect the sensor cable and keep dirt out of the sensor slots	19
24	Proximity sensor SME/SMT-8	Can be integrated in the cylinder profile barrel	19
25	One-way flow control valve GRLA	To regulate speed	17
26	Push-in fitting QS	For connecting compressed air tubing with standard external diameters	qs

Tandem cylinders DNCT, standard port pattern

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Type codes

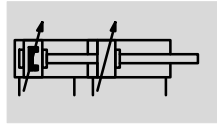
		DNCT	-	40	-	80	-	PPV	-	A	-	S6
Type												
Double-acting												
DNCT	Tandem cylinder											
Piston Ø [mm]												
Stroke [mm]												
Cushioning												
PPV	Pneumatic cushioning adjustable at both ends											
Position sensing												
A	For proximity sensing											
Variant												
S6	Heat-resistant up to 120 °C											

Tandem cylinders DNCT, standard port pattern

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Technical data

Function



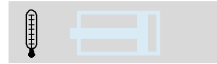
- - Diameter
32 ... 125 mm

- - Stroke length
Ø 32 ... 50:
2 ... 500 mm

Ø 63 ... 125:
3 ... 500 mm

- - www.festo.com

Variants



S6

Based on standard

- DIN ISO 6431
- VDMA 24562



DIN



General technical data							
Piston Ø	32	40	50	63	80	100	125
Pneumatic connection	G $\frac{1}{8}$	G $\frac{1}{4}$	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{2}$
Piston rod thread	M10x1.25	M12x1.25	M16x1.5	M16x1.5	M20x1.5	M20x1.5	M27x2
Constructional design	Piston						
	Piston rod						
	Cylinder barrel						
Cushioning	Pneumatic cushioning adjustable at both ends						
Cushioning length [mm]	20	20	22	22	32	32	42
Position sensing	For proximity sensing						
Type of mounting	With female thread						
	Via accessories						
Mounting position	Any						

Operating conditions							
Piston Ø	32	40	50	63	80	100	125
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4]						
Note on operating/pilot medium	Operation with lubricated medium possible (in which case lubricated operation will always be required)						
Operating pressure [bar]	0.6 ... 10						

Ambient conditions		
Tandem cylinder	Basic version	S6
Ambient temperature ¹⁾ [°C]	-20 ... +80	0 ... +120
Corrosion resistance class CRC ²⁾	2	2

1) Note operating range of proximity sensors

2) 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

Forces [N] and impact energy [J]							
Piston Ø	32	40	50	63	80	100	125
Theoretical force at 6 bar, advancing	898	1387	2168	3552	5737	9130	14244
Theoretical force at 6 bar, retracting	830	1266	1980	3364	5442	8836	13762
Max. impact energy at end positions	0.1	0.2	0.2	0.5	0.9	1.2	5

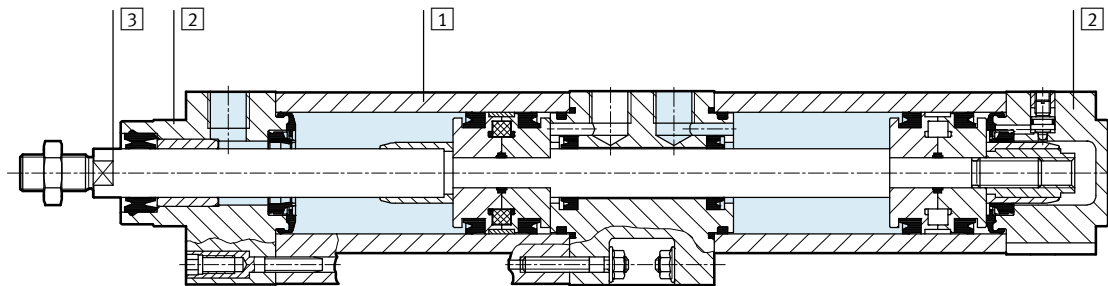
Tandem cylinders DNCT, standard port pattern

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Technical data

Materials

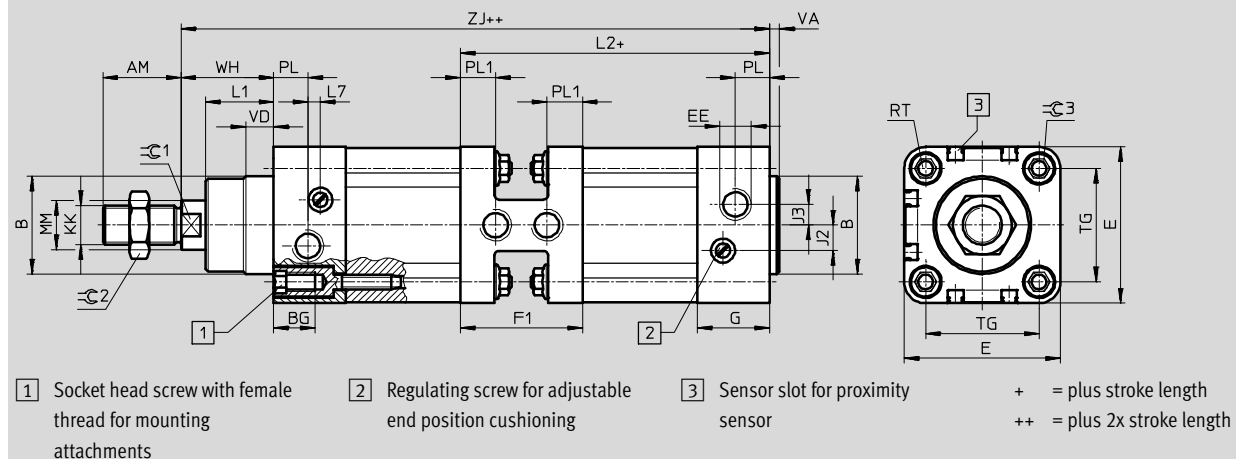
Sectional view



Tandem cylinder	Basic version	S6
1 Cylinder barrel	Wrought aluminium alloy, smooth anodised	Wrought aluminium alloy, smooth anodised
2 Bearing and end cap	Die-cast aluminium	Die-cast aluminium
3 Piston rod	High-alloy steel	High-alloy steel
– Seals	Polyurethane, nitrile rubber	Fluorocarbon rubber
Note on materials	RoHS compliant	

Dimensions

Download CAD data → www.festo.com



Ø	AM	B	BG	E	EE	F1	G	J2	J3	KK	L1	L2	L7
[mm]		Ø d11											
32	22	30	16	45.5	G1/8	35	25.1	6	5.2	M10x1.25	18	104.2	3.3
40	24	35	16	54	G1/4	47.6	29.6	8	6	M12x1.25	21.5	123.5	3.6
50	32	40	17	64	G1/4	50	29.6	10.4	8.5	M16x1.5	28	126.7	5.1
63	32	45	17	75	G3/8	64.4	35.6	12.4	10	M16x1.5	28.5	150	6.6
80	40	45	17	93	G3/8	68	35.9	12.5	8	M20x1.5	34.7	161.7	10.5
100	40	55	17	110	G1/2	75	38.8	12	10	M20x1.5	38.2	178.1	8
125	54	60	22	134	G1/2	70	44.7	13	8	M27x2	46	188.5	14

Ø	MM	PL	PL1	RT	TG	VA	VD	WH	ZJ	⌀1	⌀2	⌀3
[mm]	Ø											
32	12	15.1	9	M6	32.5	4	10	26.2 ±0.7	199.6 ±0.7	10	16	6
40	16	14	13.3	M6	38	4	10.5	30 +0.7/-0.9	229.4 +0.7/-0.9	13	18	6
50	20	14	14.5	M8	46.5	4	11.5	37.7 +0.7/-0.9	241.1 +0.7/-0.9	17	24	8
63	20	17	17.2	M8	56.5	4	15	38.2 +0.7/-0.9	273.9 +0.7/-0.9	17	24	8
80	25	16.4	19	M10	72	4	15.7	46.2 +0.7/-1.4	301.6 +0.7/-1.4	22	30	6
100	25	18.8	21	M10	89	4	19.2	50.1 +0.7/-1.4	331.3 +0.7/-1.4	22	30	6
125	32	18	18.5	M12	110	6	20.5	65.3 +0.7/-1.4	372.3 +0.7/-1.4	27	36	8

Tandem cylinders DNCT, standard port pattern

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Technical data

Ordering data				
Type	Piston Ø [mm]	Stroke [mm]	Part No.	Type
Basic version				
	32	2 ... 500	191 106	DNCT-32-...-PPV-A
	40	2 ... 500	191 107	DNCT-40-...-PPV-A
	50	2 ... 500	191 108	DNCT-50-...-PPV-A
	63	3 ... 500	191 109	DNCT-63-...-PPV-A
	80	3 ... 500	191 110	DNCT-80-...-PPV-A
	100	3 ... 500	191 111	DNCT-100-...-PPV-A
	125	3 ... 500	191 112	DNCT-125-...-PPV-A
S6 – Heat-resistant seals up to 120 °C				
	32	2 ... 500	191 210	DNCT-32-...-PPV-A-S6
	40	2 ... 500	191 211	DNCT-40-...-PPV-A-S6
	50	2 ... 500	191 212	DNCT-50-...-PPV-A-S6
	63	3 ... 500	191 213	DNCT-63-...-PPV-A-S6
	80	3 ... 500	191 214	DNCT-80-...-PPV-A-S6
	100	3 ... 500	191 215	DNCT-100-...-PPV-A-S6
	125	3 ... 500	191 216	DNCT-125-...-PPV-A-S6

Tandem cylinders DNCT, standard port pattern

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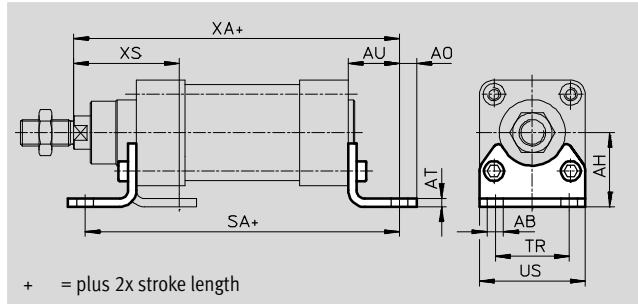
Accessories

Foot mounting HNC

Material:

Galvanised steel

Free of copper and PTFE



Dimensions and ordering data													
For Ø	AB	AH	AO	AT	AU	SA	TR	US	XA	XS	CRC ¹⁾	Weight	Part No. Type
[mm]	Ø											[g]	
32	7	32	6.5	4	24	221.4	32	45	223.6	45	2	144	174369 HNC-32
40	10	36	9	4	28	255.4	36	54	257.4	53	2	193	174370 HNC-40
50	10	45	9.5	5	32	267.4	45	64	273.1	62	2	353	174371 HNC-50
63	10	50	12.5	5	32	299.7	50	75	305.9	63	2	436	174372 HNC-63
80	12	63	15	6	41	337.4	63	93	342.6	81	2	829	174373 HNC-80
100	14.5	71	17.5	6	41	363.2	75	110	372.3	86	2	1009	174374 HNC-100
125	16.5	90	22	8	45	397	90	131	417.3	102	2	1902	174375 HNC-125

1) CRC2: Corrosion resistance class to Festo standard 940 070

Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

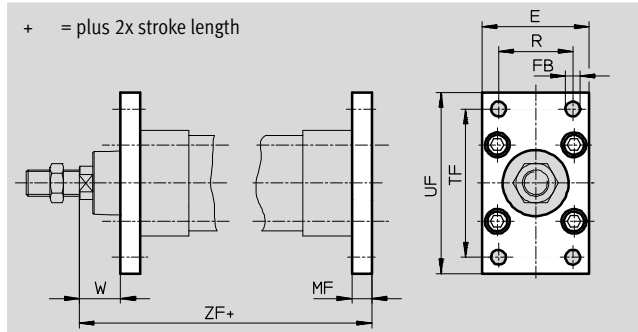
Flange mounting FNC

Material:

Galvanised steel

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data												
For Ø	E	FB Ø	MF	R	TF	UF	W	ZF	CRC ¹⁾	Weight	Part No.	Type
[mm]		H13								[g]		
32	45	7	10	32	64	80	16	209.6	1	221	174376	FNC-32
40	54	9	10	36	72	90	20	239.4	1	291	174377	FNC-40
50	65	9	12	45	90	110	25	253.1	1	536	174378	FNC-50
63	75	9	12	50	100	120	25	285.9	1	679	174379	FNC-63
80	93	12	16	63	126	150	30	317.6	1	1495	174380	FNC-80
100	110	14	16	75	150	175	35	347.3	1	2041	174381	FNC-100
125	132	16	20	90	180	210	45	392.3	1	3775	174382	FNC-125

1) CRC2: Corrosion resistance class to Festo standard 940 070

Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

Tandem cylinders DNCT, standard port pattern

Accessories

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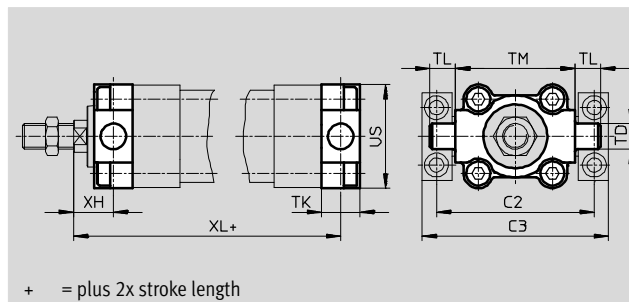
Trunnion flange ZNCF

Material:

Corrosion resistant cast steel

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data												
For Ø	C2	C3	TD Ø e9	TK	TL	TM	US	XH	XL	CRC ¹⁾	Weight [g]	Part No. Type
[mm]												
32	71	86	12	16	12	50	45	18	207.6	2	150	174411 ZNCF-32
40	87	105	16	20	16	63	54	20	239.4	2	285	174412 ZNCF-40
50	99	117	16	24	16	75	64	25	253.1	2	473	174413 ZNCF-50
63	116	136	20	24	20	90	75	25	285.9	2	687	174414 ZNCF-63
80	136	156	20	28	20	110	93	32	315.6	2	1296	174415 ZNCF-80
100	164	189	25	38	25	132	110	32	350.3	2	2254	174416 ZNCF-100
125	192	217	25	50	25	160	131	40	397.3	2	3484	174417 ZNCF-125

1) CRC2: Corrosion resistance class to Festo standard 940 070

Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

Tandem cylinders DNCT, standard port pattern

Accessories

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Trunnion mounting kit DAMT

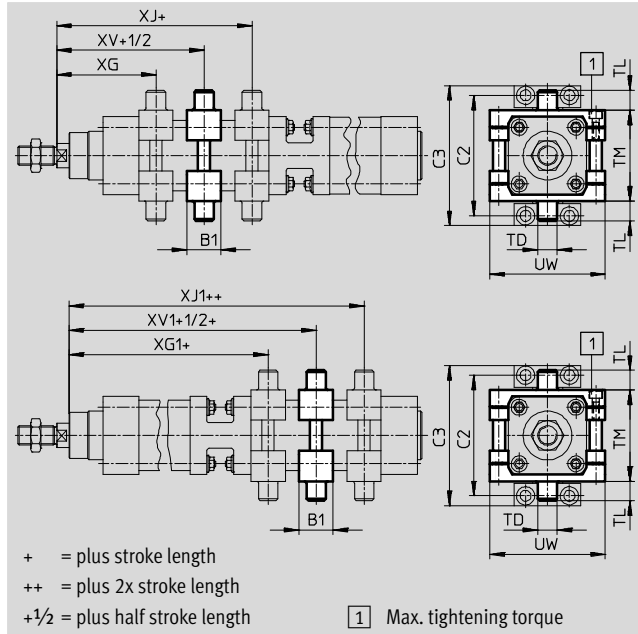
The mounting kit can be attached at any position along the profile barrel of the cylinder.

Material:

Tempered steel

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data									
For Ø	B1	C2	C3	TD Ø e9	TL	TM	UW	XG	XG1
[mm]									
32	30	71	86	12	12	50	65	66.3	145.4
40	32	87	105	16	16	63	75	75.6	169.5
50	34	99	117	16	16	75	95	84.3	181.4
63	41	116	136	20	20	90	105	94.3	208.8
80	44	136	156	20	20	110	130	104.1	229.9
100	48	164	189	25	25	132	145	112.9	252.2
125	50	192	217	25	25	160	175	135	278.8

For Ø	XJ	XJ1	XV	XV1	Max. tightening torque [Nm]	CRC ¹⁾	Weight [g]	Part No.	Type
[mm]									
32	80.4	159.5	73.4	152.5	4+1	2	213	2213233	DAMT-V1-32-A
40	89.9	183.8	82.8	176.7	8+1	2	388	2214899	DAMT-V1-40-A
50	97.4	194.5	90.9	188	8+2	2	608	2214909	DAMT-V1-50-A
63	103.4	217.8	98.9	213.3	18+2	2	911	2214971	DAMT-V1-63-A
80	117.9	243.7	111	236.8	28+2	2	1494	163529	DAMT-V1-80-A
100	129.2	268.5	121.1	260.4	28+2	2	2095	163530	DAMT-V1-100-A
125	158.8	302.6	146.9	290.7	40+2	2	3013	163531	DAMT-V7-125-A

1) CRC2: Corrosion resistance class to Festo standard 940 070

Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

Tandem cylinders DNCT, standard port pattern

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Accessories

Trunnion support LNZG

Material:

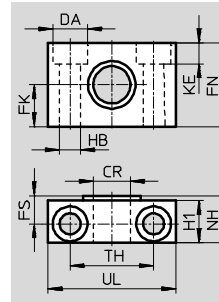
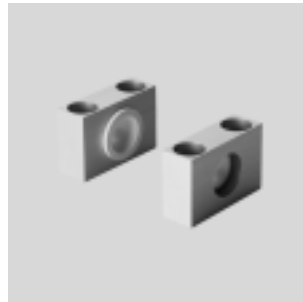
Trunnion support:

Anodised aluminium

Plain bearing: Plastic

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data															
For Ø	CR Ø	DA Ø	FK Ø	FN	FS	H1	HB Ø	KE	NH	TH	UL	CRC ¹⁾	Weight	Part No.	Type
[mm]	D11	H13	±0.1				H13			±0.2			[g]		
32	12	11	15	30	10.5	15	6.6	6.8	18	32	46	2	83	32959	LNZG-32
40, 50	16	15	18	36	12	18	9	9	21	36	55	2	129	32960	LNZG-40/50
63, 80	20	18	20	40	13	20	11	11	23	42	65	2	178	32961	LNZG-63/80
100, 125	25	20	25	50	16	24.5	14	13	28.5	50	75	2	306	32962	LNZG-100/125

1) CRC2: Corrosion resistance class to Festo standard 940 070

Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

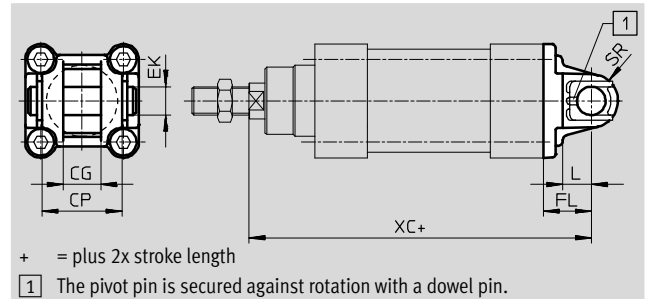
Swivel flange SNC

Material:

Die-cast aluminium

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data											
For Ø	CG	CP	EK Ø	FL	L	SR	XC	CRC ¹⁾	Weight	Part No.	Type
[mm]	H14	h14	h9	±0.2					[g]		
32	14	34	10	22	13	10	221.6	2	93	174383	SNC-32
40	16	40	12	25	16	12	254.4	2	140	174384	SNC-40
50	21	45	16	27	16	12	268.1	2	234	174385	SNC-50
63	21	51	16	32	21	16	305.9	2	331	174386	SNC-63
80	25	65	20	36	22	16	337.6	2	618	174387	SNC-80
100	25	75	20	41	27	20	372.3	2	865	174388	SNC-100
125	37	97	30	50	30	25	422.3	2	1728	174389	SNC-125

1) CRC2: Corrosion resistance class to Festo standard 940 070

Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

Tandem cylinders DNCT, standard port pattern

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Accessories

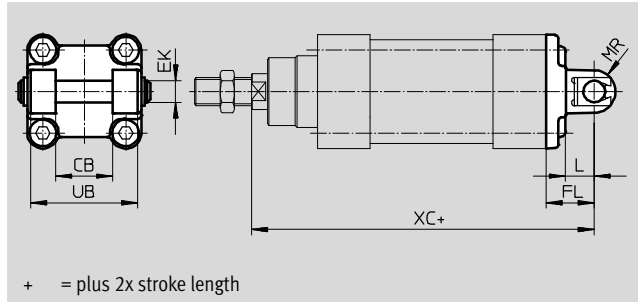
Swivel flange SNCB

Material:

Die-cast aluminium

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data											
For Ø	CB	EK Ø	FL	L	ML	MR	UB	XC	CRC ¹⁾	Weight	Part No. Type
[mm]	H14	e8	±0.2				h14			[g]	
32	26	10	22	13	55	8.5	45	221.6	2	103	174390 SNCB-32
40	28	12	25	16	63	12	52	254.4	2	155	174391 SNCB-40
50	32	12	27	16	71	12	60	268.1	2	232	174392 SNCB-50
63	40	16	32	21	83	16	70	305.9	2	375	174393 SNCB-63
80	50	16	36	22	103	16	90	337.6	2	636	174394 SNCB-80
100	60	20	41	27	127	20	110	372.3	2	1035	174395 SNCB-100
125	70	25	50	30	148	25	130	422.3	2	1860	174396 SNCB-125

1) CRC2: Corrosion resistance class to Festo standard 940 070

Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

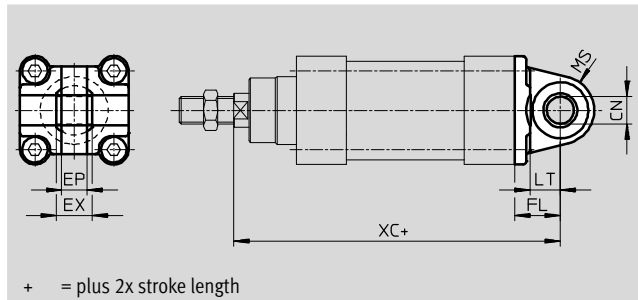
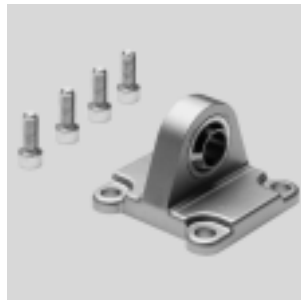
Swivel flange SNCS

Material:

Die-cast aluminium

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data											
For Ø	CN Ø	EP	EX	FL	LT	MS	XC	CRC ¹⁾	Weight	Part No.	Type
[mm]	H7	±0.2		±0.2					[g]		
32	10	10.5	14	22	13	15	221.6	2	86	174397	SNCS-32
40	12	12	16	25	16	17	254.4	2	122	174398	SNCS-40
50	16	15	21	27	16	20	268.1	2	216	174399	SNCS-50
63	16	15	21	32	21	22	305.9	2	281	174400	SNCS-63
80	20	18	25	36	22	27	337.6	2	557	174401	SNCS-80
100	20	18	25	41	27	29	372.3	2	690	174402	SNCS-100
125	30	25	37	50	30	39	422.3	2	1375	174403	SNCS-125

1) CRC2: Corrosion resistance class to Festo standard 940 070

Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

Tandem cylinders DNCT, standard port pattern

Accessories

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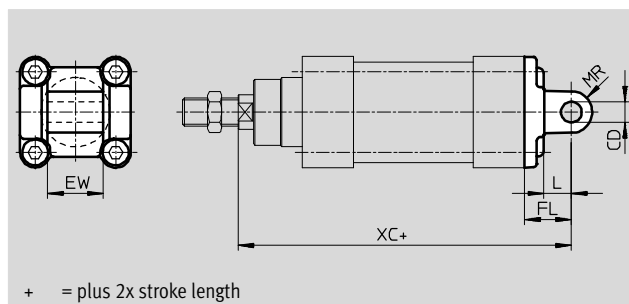
Swivel flange SNCL

Material:

Die-cast aluminium

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data

For Ø	CD Ø	EW	FL	L	MR	XC	CRC ¹⁾	Weight [g]	Part No.	Type
[mm]	H9	-0.2/-0.6	±0.2							
32	10	26	22	13	10	221.6	2	71	174404	SNCL-32
40	12	28	25	16	12	254.4	2	95	174405	SNCL-40
50	12	32	27	16	12	268.1	2	158	174406	SNCL-50
63	16	40	32	21	16	305.9	2	225	174407	SNCL-63
80	16	50	36	22	16	337.6	2	436	174408	SNCL-80
100	20	60	41	27	20	372.3	2	606	174409	SNCL-100
125	25	70	50	30	25	422.3	2	1135	174410	SNCL-125

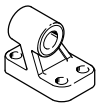
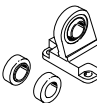
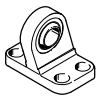
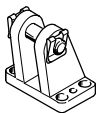
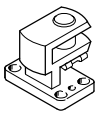
1) CRC2: Corrosion resistance class to Festo standard 940 070

Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

Tandem cylinders DNCT, standard port pattern

Accessories

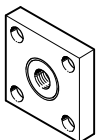
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Ordering data – Mounting attachments				Technical data → Internet: mounting attachment			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Clevis foot LNG				Clevis foot LSN			
	32	33890	LNG-32		32	5561	LSN-32
	40	33891	LNG-40		40	5562	LSN-40
	50	33892	LNG-50		50	5563	LSN-50
	63	33893	LNG-63		63	5564	LSN-63
	80	33894	LNG-80		80	5565	LSN-80
	100	33895	LNG-100		100	5566	LSN-100
	125	33896	LNG-125		125	6987	LSN-125
Clevis foot LSNG				Clevis foot LSNSG			
	32	31740	LSNG-32		32	31747	LSNSG-32
	40	31741	LSNG-40		40	31748	LSNSG-40
	50	31742	LSNG-50		50	31749	LSNSG-50
	63	31743	LSNG-63		63	31750	LSNSG-63
	80	31744	LSNG-80		80	31751	LSNSG-80
	100	31745	LSNG-100		100	31752	LSNSG-100
	125	31746	LSNG-125		125	31753	LSNSG-125
Clevis foot LBG				Right-angle clevis foot LQG			
	32	31761	LBG-32		32	31768	LQG-32
	40	31762	LBG-40		40	31769	LQG-40
	50	31763	LBG-50		50	31770	LQG-50
	63	31764	LBG-63		63	31771	LQG-63
	80	31765	LBG-80		80	31772	LQG-80
	100	31766	LBG-100		100	31773	LQG-100
	125	31767	LBG-125		125	31774	LQG-125

Tandem cylinders DNCT, standard port pattern

Accessories

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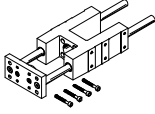
Ordering data – Piston rod attachments				Technical data → Internet: piston rod attachment			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Rod eye SGS				Rod clevis SGA			
	32	9261	SGS-M10x1,25		32	32954	SGA-M10x1,25
	40	9262	SGS-M12x1,25		40	10767	SGA-M12x1,25
	50	9263	SGS-M16x1,5		50	10768	SGA-M16x1,5
	63				63		
	80	9264	SGS-M20x1,5		80	10769	SGA-M20x1,5
	100				100		
	125	10774	SGS-M27x2		125	10770	SGA-M27x2
Rod clevis SG				Self-aligning rod coupler FK			
	32	6144	SG-M10x1,25		32	6140	FK-M10x1,25
	40	6145	SG-M12x1,25		40	6141	FK-M12x1,25
	50	6146	SG-M16x1,5		50	6142	FK-M16x1,5
	63				63		
	80	6147	SG-M20x1,5		80	6143	FK-M20x1,5 ¹⁾
	100				100		
	125	14987	SG-M27x2-B		125	10485	FK-M27x2
Coupling piece KSG				 - Note ¹⁾ If these piston-rod attachments are used, the maximum force of 10000 N must not be exceeded.			
	32	32963	KSG-M10x1,25				
	40	32964	KSG-M12x1,25				
	50	32965	KSG-M16x1,5				
	63						
	80	32966	KSG-M20x1,5				
	100						
	125	32967	KSG-M27x2				

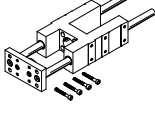
Ordering data – One-way flow control valves				Technical data → Internet: grla	
	Connection		Material	Part No.	Type
	Thread	For tubing O.D.			
	G ¹ / ₈	3	Metal design	193142	GRLA- ¹ / ₈ -QS-3-D
		4		193143	GRLA- ¹ / ₈ -QS-4-D
		6		193144	GRLA- ¹ / ₈ -QS-6-D
		8		193145	GRLA- ¹ / ₈ -QS-8-D
	G ¹ / ₄	6		193146	GRLA- ¹ / ₄ -QS-6-D
		8		193147	GRLA- ¹ / ₄ -QS-8-D
		10		193148	GRLA- ¹ / ₄ -QS-10-D
		12		193149	GRLA- ³ / ₈ -QS-6-D
	G ³ / ₈	6		193150	GRLA- ³ / ₈ -QS-8-D
		8		193151	GRLA- ³ / ₈ -QS-10-D
		10		193152	GRLA- ¹ / ₂ -QS-12-D
		12			
	G ¹ / ₂	12			

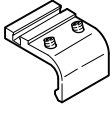
Tandem cylinders DNCT, standard port pattern

Accessories

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Ordering data – Guide units for fixed strokes (recirculating ball bearing guide only)				Technical data → Internet: feng		
	Stroke [mm]	Part No.	Type	Stroke [mm]	Part No.	Type
	For Ø 32 mm			For Ø 40 mm		
	10 ... 50	34493	FENG-32-50-KF	10 ... 50	34499	FENG-40-50-KF
	10 ... 100	34494	FENG-32-100-KF	10 ... 100	34500	FENG-40-100-KF
	10 ... 160	34495	FENG-32-160-KF	10 ... 160	34501	FENG-40-160-KF
	10 ... 200	34496	FENG-32-200-KF	10 ... 200	34502	FENG-40-200-KF
	10 ... 250	150289	FENG-32-250-KF	10 ... 250	34503	FENG-40-250-KF
	10 ... 320	34497	FENG-32-320-KF	10 ... 320	34504	FENG-40-320-KF
	10 ... 400	150290	FENG-32-400-KF	10 ... 400	150291	FENG-40-400-KF
	10 ... 500	34498	FENG-32-500-KF	10 ... 500	34505	FENG-40-500-KF
	For Ø 50 mm			For Ø 63 mm		
	10 ... 50	34506	FENG-50-50-KF	10 ... 50	34513	FENG-63-50-KF
	10 ... 100	34507	FENG-50-100-KF	10 ... 100	34514	FENG-63-100-KF
	10 ... 160	34508	FENG-50-160-KF	10 ... 160	34515	FENG-63-160-KF
	10 ... 200	34509	FENG-50-200-KF	10 ... 200	34516	FENG-63-200-KF
	10 ... 250	34510	FENG-50-250-KF	10 ... 250	34517	FENG-63-250-KF
	10 ... 320	34511	FENG-50-320-KF	10 ... 320	34518	FENG-63-320-KF
	10 ... 400	150292	FENG-50-400-KF	10 ... 400	34519	FENG-63-400-KF
	10 ... 500	34512	FENG-50-500-KF	10 ... 500	34520	FENG-63-500-KF
	For Ø 80 mm			For Ø 100 mm		
	10 ... 50	34521	FENG-80-50-KF	10 ... 50	34529	FENG-100-50-KF
	10 ... 100	34522	FENG-80-100-KF	10 ... 100	34530	FENG-100-100-KF
	10 ... 160	34523	FENG-80-160-KF	10 ... 160	34531	FENG-100-160-KF
	10 ... 200	34524	FENG-80-200-KF	10 ... 200	34532	FENG-100-200-KF
	10 ... 250	34525	FENG-80-250-KF	10 ... 250	34533	FENG-100-250-KF
	10 ... 320	34526	FENG-80-320-KF	10 ... 320	34534	FENG-100-320-KF
	10 ... 400	34527	FENG-80-400-KF	10 ... 400	34535	FENG-100-400-KF
	10 ... 500	34528	FENG-80-500-KF	10 ... 500	34536	FENG-100-500-KF

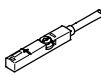
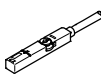
Ordering data – Guide units for variable strokes				Technical data → Internet: feng	
	For Ø [mm]	Stroke [mm]	With recirculating ball bearing guide Part No. Type	With plain bearing guide Part No. Type	
	32	10 ... 500	34487 FENG-32-...-KF	34481 FENG-32-...-GF	
	40	10 ... 500	34488 FENG-40-...-KF	34482 FENG-40-...-GF	
	50	10 ... 500	34489 FENG-50-...-KF	34483 FENG-50-...-GF	
	63	10 ... 500	34490 FENG-63-...-KF	34484 FENG-63-...-GF	
	80	10 ... 500	34491 FENG-80-...-KF	34485 FENG-80-...-GF	
	100	10 ... 500	34492 FENG-100-...-KF	34486 FENG-100-...-GF	

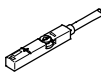
Ordering data – Mounting kits for proximity sensors SMT-8		Technical data → Internet: smb	
	For Ø [mm]	Part No.	Type
	32	175705	SMB-8-FENG-32/40
	40		
	50	175706	SMB-8-FENG-50/63
	63		
	80	175707	SMB-8-FENG-80/100
	100		

Tandem cylinders DNCT, standard port pattern

Accessories

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Ordering data – Proximity sensors for T-slot, magneto-resistive					Technical data → Internet: smt	
	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with cylinder profile, short design	PNP	Cable, 3-wire	2.5	574335	SMT-8M-A-PS-24V-E-2,5-OE
			Plug M8x1, 3-pin	0.3	574334	SMT-8M-A-PS-24V-E-0,3-M8D
			Plug M12x1, 3-pin	0.3	574337	SMT-8M-A-PS-24V-E-0,3-M12
		NPN	Cable, 3-wire	2.5	574338	SMT-8M-A-NS-24V-E-2,5-OE
			Plug M8x1, 3-pin	0.3	574339	SMT-8M-A-NS-24V-E-0,3-M8D
N/C contact						
	Insertable in the slot from above, flush with cylinder profile, short design	PNP	Cable, 3-wire	7.5	574340	SMT-8M-A-PO-24V-E-7,5-OE

Ordering data – Proximity sensors for T-slot, magnetic reed					Technical data → Internet: sme	
	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with cylinder profile	Contacting	Cable, 3-wire	2.5	543862	SME-8M-DS-24V-K-2,5-OE
				5.0	543863	SME-8M-DS-24V-K-5,0-OE
			Cable, 2-wire	2.5	543872	SME-8M-ZS-24V-K-2,5-OE
			Plug M8x1, 3-pin	0.3	543861	SME-8M-DS-24V-K-0,3-M8D
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	150855	SME-8-K-LED-24
			Plug M8x1, 3-pin	0.3	150857	SME-8-S-LED-24
N/C contact						
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	7.5	160251	SME-8-O-K-LED-24

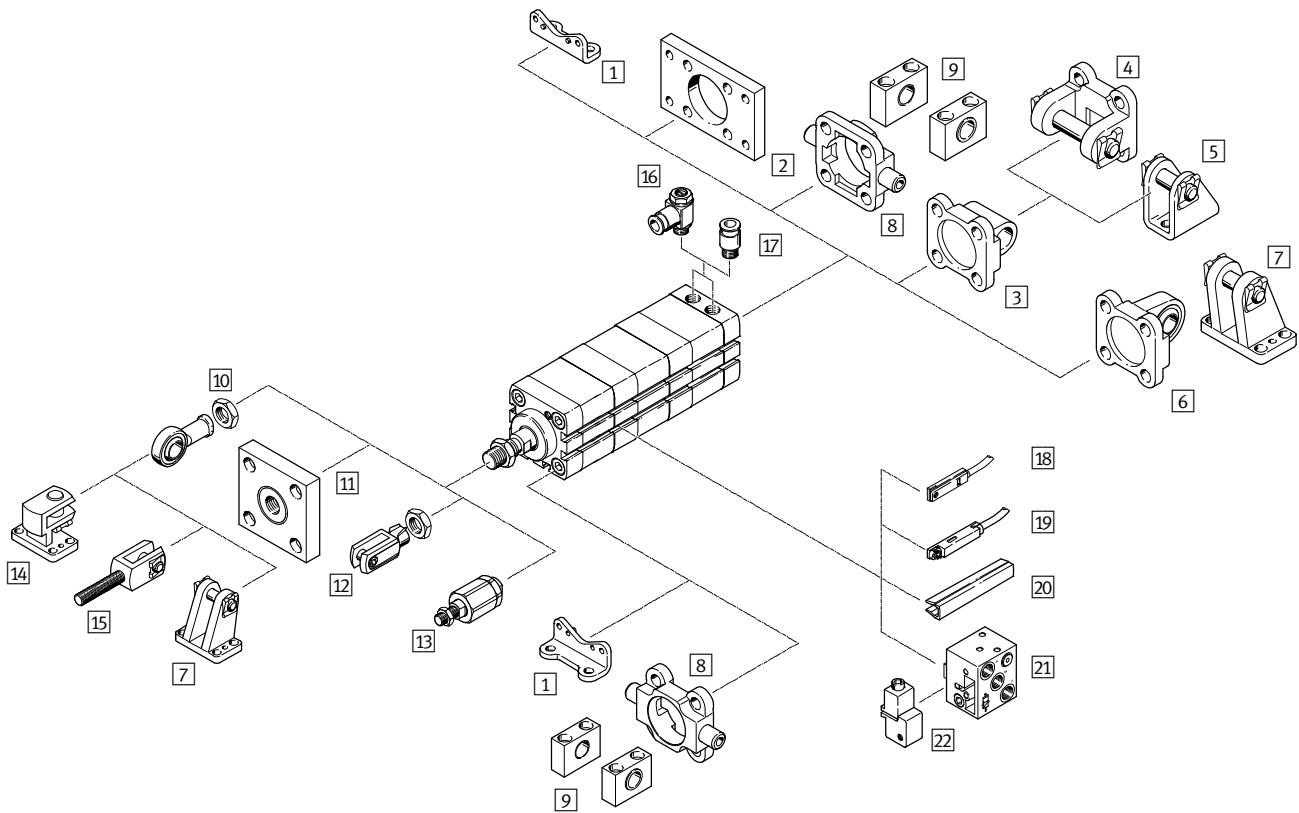
Ordering data – Connecting cables				Technical data → Internet: nebu	
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part No.	Type
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541333	NEBU-M8G3-K-2.5-LE3
			5	541334	NEBU-M8G3-K-5-LE3
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541363	NEBU-M12G5-K-2.5-LE3
			5	541364	NEBU-M12G5-K-5-LE3
			5	541364	NEBU-M12G5-K-5-LE3
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541338	NEBU-M8W3-K-2.5-LE3
			5	541341	NEBU-M8W3-K-5-LE3
	Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541367	NEBU-M12W5-K-2.5-LE3
			5	541367	NEBU-M12W5-K-2.5-LE3
			5	541370	NEBU-M12W5-K-5-LE3

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

High-force cylinders ADNH, standard port pattern

Peripherals overview

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High-force cylinders ADNH, standard port pattern

Peripherals overview

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Mounting attachments and accessories				
	Description	Ø 25	Ø 40, 63, 100	→ Page/Internet
1	Foot mounting HNA/HNA-...-R3	■	■	30
2	Flange mounting FNC	■	■	31
3	Swivel flange SNCL/SNCL-...-R3	■	■	32
4	Swivel flange SNCB/SNCB-...-R3	–	■	35
5	Clevis foot LBN/CRLBN	■	–	34
6	Swivel flange SNCS/CRSNCS/SNCS-...-R3	–	■	32
7	Clevis foot LBG/LBG-...-R3	–	■	37
8	Trunnion flange ZNCF/CRZNG	–	■	36
9	Trunnion support LNZG	–	■	36
10	Rod eye SGS/CRSGS	■	■	37
11	Coupling piece KSG	■	■	37
12	Rod clevis SG/CRSG	■	■	37
13	Self-aligning rod coupler FK/CRFK	■	■	37
14	Right-angle clevis foot LQG	–	■	37
15	Rod clevis SGA	–	■	37
16	One-way flow control valve GRLA	■	■	37
17	Push-in fitting QS	■	■	qs
18	Proximity sensor SME/SMT-8	■	■	38
19	Proximity sensor SME/SMT-8M	■	■	38
20	Slot cover ABP-5-S	■	■	39
21	Proximity sensor SMPO-8E	■	■	39
22	Mounting kit SMB-8E	■	■	39

High-force cylinders ADNH, standard port pattern

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Type codes

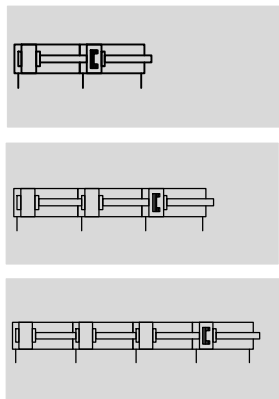
		ADNH	-	40	-	80	-	A	-	P	-	A	-	2N	-	K2
Type																
Double-acting																
ADNH	High-force cylinder															
Piston Ø [mm]																
Stroke [mm]																
Piston rod thread																
A	Male thread															
I	Female thread															
Cushioning																
P	Flexible cushioning rings/pads at both ends															
Position sensing																
A	Via proximity sensor															
Number of cylinders																
2N	2 cylinders for twice the force															
3N	3 cylinders for three times the force															
4N	4 cylinders for four times the force															
Variant																
K2	Extended male piston rod thread															
K5	Special piston rod thread															
K8	Extended piston rod															
S6	Heat-resistant seals up to max. 120 °C															
TL	Captive rating plate (laser etched)															

High-force cylinders ADNH, standard port pattern

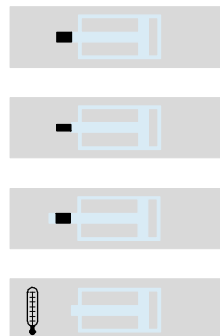
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Technical data

Function



Variants



K2

K5

K8

S6



-  - Diameter
25 ... 100 mm
-  - Stroke length
1 ... 150 mm

General technical data				
Piston Ø	25	40	63	100
Pneumatic connection	M5	M5	G1/8	G1/8
Piston rod thread	Female	M6	M10	M12
	Male	M8	M12x1.25	M16x1.5
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 Ø	25	40	63	100
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [7:4:4]			
Note on operating/pilot medium	Operation with lubricated medium possible (in which case lubricated operation will always be required)			
Operating pressure [bar]	2 cylinders	0.8 ... 10	0.6 ... 10	
	3 cylinders	1.1 ... 10	0.9 ... 10	
	4 cylinders	1.4 ... 10	1.2 ... 10	
Ambient temperature ¹⁾ [°C]		-20 ... +80		
	S6	0 ... +120		
Corrosion resistance class CRC ²⁾	2			

1) Note operating range of proximity sensors

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

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

High-force cylinders ADNH, standard port pattern

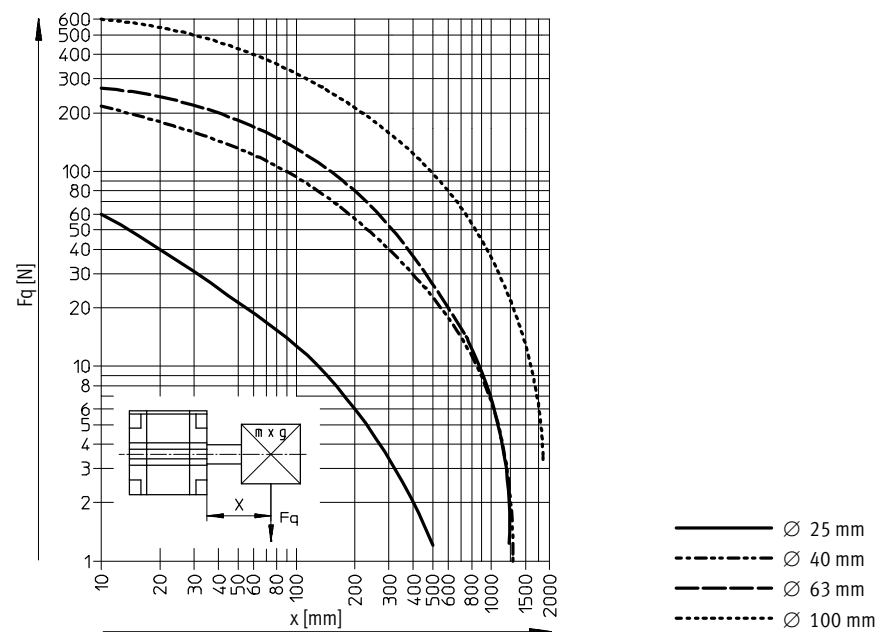
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Technical data

Forces [N] and impact energy [J]					
Piston Ø		25	40	63	100
Theoretical force at 6 bar, advancing	2 cylinders	542	1440	3619	9235
	3 cylinders	789	2126	5369	13758
	4 cylinders	1036	2812	7120	18281
Theoretical force at 6 bar, retracting ¹⁾		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

1) During retraction only the force of one cylinder is available

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



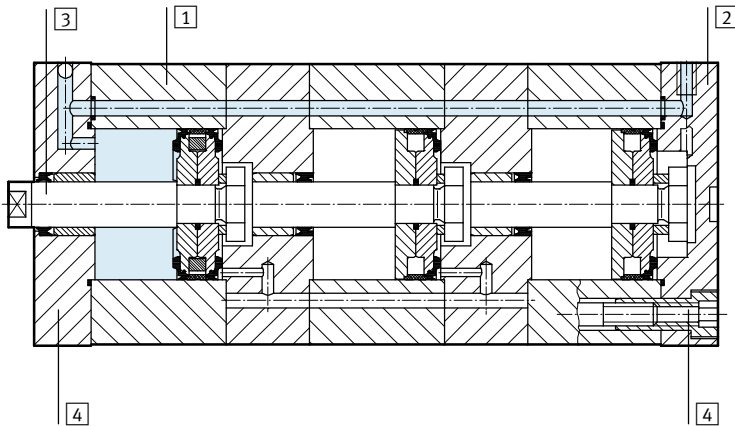
High-force cylinders ADNH, standard port pattern

Technical data

FESTO

Materials

Sectional view



High-force 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, nitrile rubber	Fluoro elastomer
Notes on materials	RoHS compliant	

High-force cylinders ADNH, standard port pattern

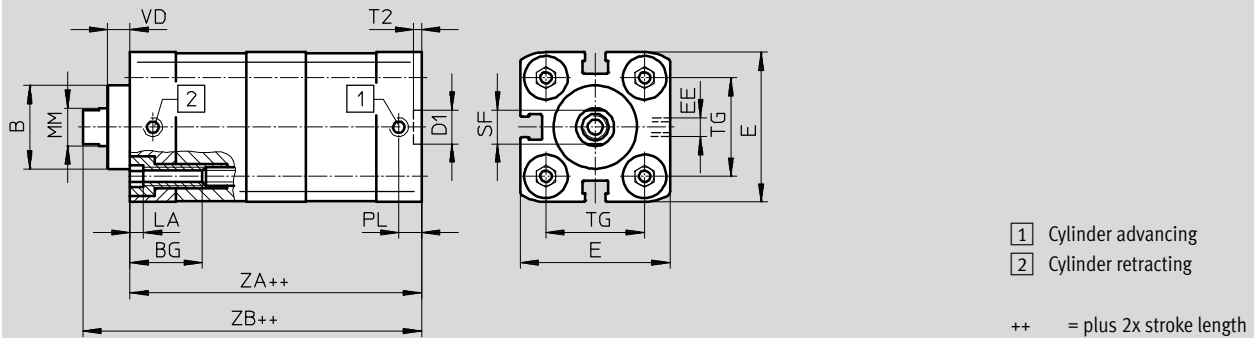
FESTO

Technical data

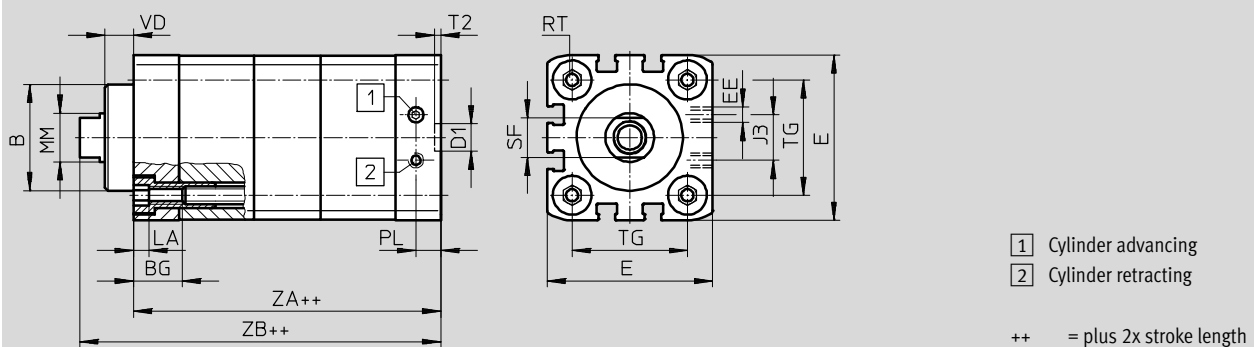
Dimensions – Basic version

Download CAD data → www.festo.com

Ø 25/2N – 2 cylinders

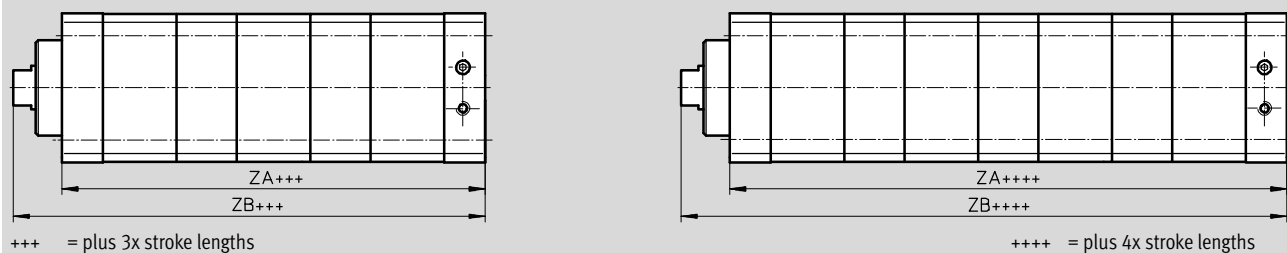


Ø 40 ... 100/2N – 2 cylinders



3N – 3 cylinders

4N – 4 cylinders



Ø	B	BG	D1	E	EE	J3	LA	MM	PL	RT
[mm]	Ø f8	min.	Ø H9	+0.3			+0.2	Ø h9	+0.2	
25	22	15	9	39.5	M5	–		10	6	M5
40	35	16		54.5		15	5	16	8.2	M6
63	42		12	75.5	G1/8	23		20		M8
100	55	17		113.5		40		25	10.5	M10

Ø	SF	T2	TG	VD	ZA			ZB		
[mm]		+0.1	±0.2		Number of cylinders			Number of cylinders		
					2	3	4	2	3	4
25	9	2.1	26	6	76.3 ^{+1.2}	110.5 ^{+1.8}	144.7 ^{+2.4}	88.5 ^{+1.6}	122.7 ^{+2.2}	156.9 ^{+2.8}
40	13		38	9.5	86.2 ^{+1.2}	125.5 ^{+1.8}	164.8 ^{+2.4}	104.6 ^{+1.6}	143.9 ^{+2.2}	183.2 ^{+2.8}
63	17	2.6	56.5	12	93.3 ^{+1.2}	135.7 ^{+1.8}	178.1 ^{+2.4}	114.6 ^{+1.6}	157 ^{+2.2}	199.4 ^{+2.8}
100	21		89	15.5	120.9 ^{+1.2}	172.8 ^{+1.8}	224.7 ^{+2.4}	147.9 ^{+1.6}	199.8 ^{+2.2}	251.7 ^{+2.8}

High-force cylinders ADN_H, standard port pattern

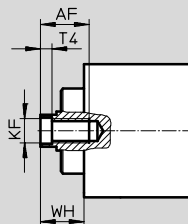
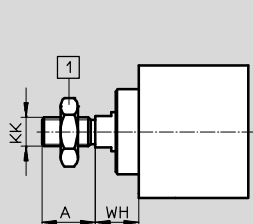
FESTO

Technical data

Dimensions – Variants

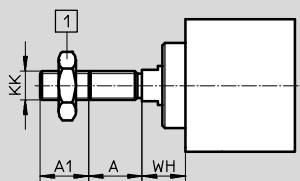
Download CAD data → www.festo.com

Basic version



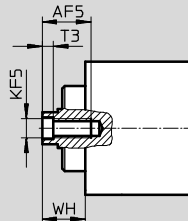
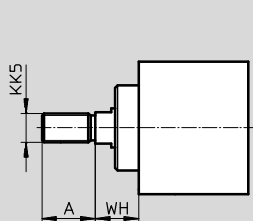
1 Hex nut to DIN 439-B
only with Ø 40 ... 100

K2 – Extended male piston rod thread

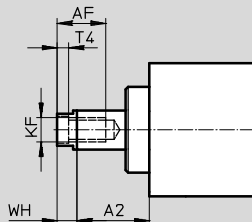
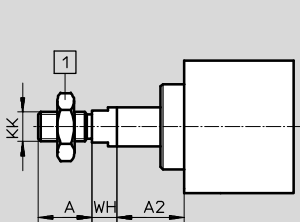


1 Hex nut to DIN 439-B
only with Ø 40 ... 100

K5 – Special piston rod thread



K8 – Extended piston rod



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

Ø	A	A1	A2	AF	AF5	KF	KF5	KK	KK5	T3	T4	WH
[mm]	-0.5			min.	min.							+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

High-force cylinders ADNH, standard port pattern

FESTO

Ordering data – Modular products

M Mandatory data →							
Module No.	Function	Size	Stroke	Type of thread	Cushioning	Position sensing	Number of cylinders
539691	ADNH	25	1 ... 150	A	P	A	2N
539692		40		I			3N
539693		63					4N
539694		100					
Order example							
539694	ADNH	- 100	- 120	- A	- P	- A	- 4N

Ordering table							
Size	25	40	63	100	Condi- tions	Code	Enter code
M Module No.	539691	539692	539693	539694			
Function	Compact tandem cylinder, based on ISO 21287					ADNH	ADNH
Size [mm]	25	40	63	100		-...	
Stroke [mm]	1 ... 150					-...	
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
Number of cylinders	2 cylinders for twice the force					-2N	- ... N
	3 cylinders for three times the force					-3N	
	4 cylinders for four times the force					-4N	

Transfer order code

	ADNH	-		-		-	P	-	A	-	...N
--	------	---	--	---	--	---	---	---	---	---	------

High-force cylinders ADNH, standard port pattern

Ordering data – Modular products

FESTO

→ **0 Options**

Male thread extended	Special thread	Piston rod extended	Temperature resistance	Captive rating plate
...K2	"..."K5	...K8	S6	TL
- 25K2	- "M16x1.5"K5	-	- S6	-

Ordering table							
Size	25	40	63	100	Condi- tions	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	M10x1.25	M12x1.25	M16x1.5	[1]	-..."K5	
	M10	M12	M16	M20			
	M5	M8	M10	-	[2]		
Piston rod extended	Extended piston rod						
[mm]	1 ... 150	1 ... 150	1 ... 150	1 ... 150	[3]	-...K8	
Temperature resistance	Heat-resistant seals up to max. 120 °C					-S6	
Captive rating plate	Laser etched rating plate					-TL	

- [1] **K5** Only with piston rod thread A (male thread)
 [2] **K5** Only with piston rod thread I (female thread)

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

Transfer order code

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

High-force cylinders ADN, standard hole pattern

FESTO

Accessories

Foot mounting HNA/HNA-...-R3

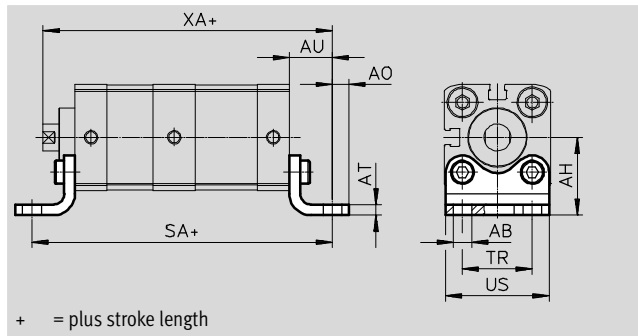
Material:

HNA: Galvanised steel

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

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data									
For Ø	AB Ø	AH	AO	AT	AU	SA ¹⁾			
[mm]	H14					2	3	4	5
25	7	29	6.3	4	16	108.3	142.5	176.7	210.9
40	10	38	9		18	122.2	161.5	202.9	245.9
63		50	8	5	21	135.6	177.7	222.2	268.3
100	14.5	74	12.5	6	27	174.9	226.8	281	336.8

For Ø	TR	US	XA ¹⁾			
[mm]		-0.5	2	3	4	5
25	26	38.5	104.5	138.7	172.9	207.1
40	36	54	122.6	161.9	203.2	246.2
63	50	75	135.6	178.0	222.4	268.5
100	75	110	174.9	226.8	280.9	336.7

For Ø	Basic version				R3 – High corrosion protection			
	CRC ²⁾	Weight [g]	Part No.	Type	CRC ²⁾	Weight [g]	Part No.	Type
[mm]								
25	1	90	537240	HNA-25	3	90	537255	HNA-25-R3
40	1	157	537242	HNA-40	3	157	537257	HNA-40-R3
63	1	328	537244	HNA-63	3	328	537259	HNA-63-R3
100	1	814	537250	HNA-100	3	814	537261	HNA-100-R3

1) Number of stroke lengths

2 = 2x stroke length

3 = 3x stroke length

4 = 4x stroke length

5 = 5x stroke length

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

Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and which are in direct contact with a normal industrial environment.

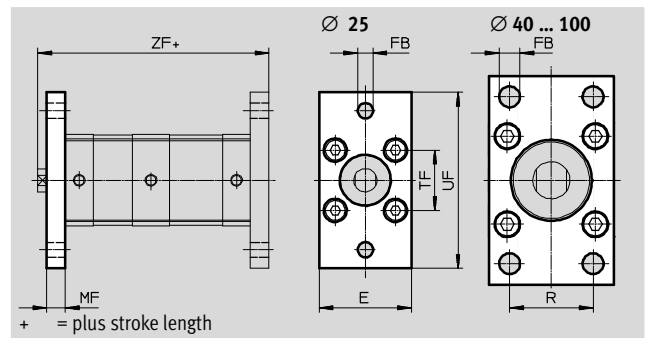
High-force cylinders ADNH, standard hole pattern

FESTO

Accessories

Flange mounting FNC

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



Dimensions and ordering data						
For Ø	E	FB Ø	MF	R	TF	UF
[mm]						
25	40	6.6	8	–	60	76
40	54	9	10	36	72	90
63	75		12	50	100	120
100	110	14	16	75	150	175

For Ø [mm]	ZF ¹⁾				CRC ²⁾	Weight [g]	Part No.	Type
	2	3	4	5				
25	96.5	130.7	164.9	199.1	1	165	537248	FNC-25
40	114.6	153.9	195.2	238.2	1	291	174377	FNC-40
63	126.6	169.0	213.4	259.5	1	679	174379	FNC-63
100	163.9	215.8	269.9	325.7	1	2041	174381	FNC-100

- 1) Number of stroke lengths
 2 = 2x stroke length
 3 = 3x stroke length
 4 = 4x stroke length
 5 = 5x stroke length

- 2) Corrosion resistance class CRC 1 to Festo standard FN 940070
 Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

High-force cylinders ADNH, standard hole pattern

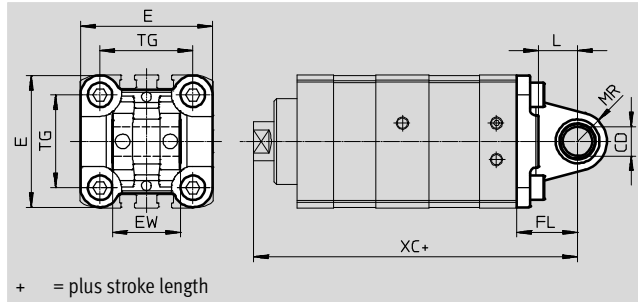
Accessories

FESTO

Swivel flange SNCL/SNCL-...-R3

Material:

SNCL 25: Wrought aluminium alloy
 SNCL 40 ... 63: Die-cast aluminium
 SNCL-...-R3: Wrought aluminium alloy
 with protective coating
 Free of copper and PTFE
 RoHS-compliant



Dimensions and ordering data											
For Ø	CD	E	EW	FL	L	MR	TG	XC ¹⁾			
[mm]	Ø H9			±0.2				2	3	4	5
25	8	38.5 _{-0.6}	16 h12	20	14	8	26	108.5	142.7	176.9	211.1
40	12	54 _{-0.5}	28 _{-0.2/-0.6}	25	16	12	38.5	129.6	168.9	210.2	253.2
63	16	75 _{-0.6}	40 _{-0.2/-0.6}	32	21	16	56.5	146.6	189.0	231.4	279.5
100	20	110 _{+0.3/-0.8}	60 _{-0.2/-0.6}	41	27	20	89	188.9	240.8	294.9	350.7

For Ø [mm]	Basic version				R3 – High corrosion protection			
	CRC ²⁾	Weight [g]	Part No.	Type	CRC ²⁾	Weight [g]	Part No.	Type
25	2	41	537793	SNCL-25	3	41	537797	SNCL-25-R3
40	2	95	174405	SNCL-40	–	–	–	–
63	2	225	174407	SNCL-63	–	–	–	–
100	2	606	174409	SNCL-100	–	–	–	–

- 1) Number of stroke lengths
 2 = 2x stroke length
 3 = 3x stroke length
 4 = 4x stroke length
 5 = 5x stroke length

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

High-force cylinders ADNH, standard hole pattern

FESTO

Accessories

Swivel flange

SNCS/CRSNCS/SNCS-...-R3

Material:

SNCS 40 ... 63: Die-cast aluminium

SNCS 100: Wrought aluminium alloy

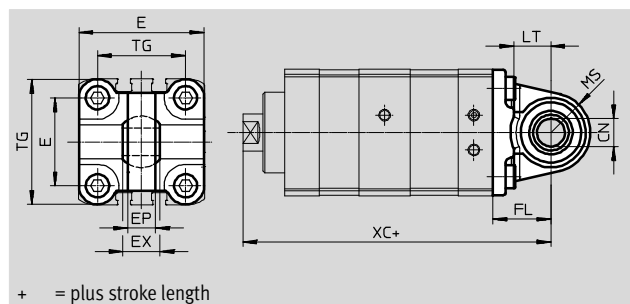
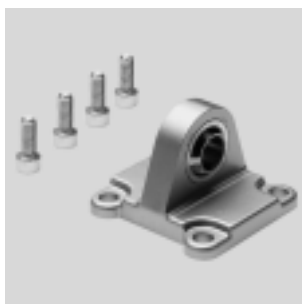
CRSNCS 40 ... 63:

High-alloy stainless steel

SNCS-...-R3 100: Wrought aluminium

alloy with protective coating

RoHS-compliant



Dimensions and ordering data

For Ø	CN Ø		E		EP	EX	FL	LT
[mm]	ADNH-...	ADNH-...-R3	ADNH-...	ADNH-...-R3	±0.2		±0.2	
40	12 ^{+0.015}	12 ^{+0.018/-0.04}	54 _{-0.5}	54 _{-0.5}	12	16	25	16
63	16 ^{+0.015}	16 ^{+0.018/-0.04}	75 _{-0.6}	75 _{-0.6}	15	21	32	21
100	20 ^{+0.018}	20 ^{+0.021/-0.04}	109 ^{+1/-0.7}	109 ^{+1/-0.7}	18	25	41	27

For Ø	MS		TG	XC ¹⁾			
[mm]	ADNH-...	ADNH-...-R3		2	3	4	5
40	17 ^{+0.5}	17 ^{+0.5}	38	129.6	168.9	210.2	253.2
63	23 _{-0.5}	22 ^{+0.5}	56.5	146.6	189.0	233.4	279.5
100	30 ^{+0.5}	30 ^{+0.5}	89	188.9	240.8	294.9	350.7

For Ø	Basic version				High corrosion protection			
[mm]	CRC ²⁾	Weight [g]	Part No.	Type	CRC ²⁾	Weight [g]	Part No.	Type
40	2	122	174398	SNCS-40	4	239	2895921	CRSNCS-40
63	2	281	174400	SNCS-63	4	576	2895923	CRSNCS-63
100	2	683	174402	SNCS-100	3	684	2895925	SNCS-100-R3

1) Number of positions

2 = + pos. Z1 + pos. Z2

3 = + pos. Z1 + pos. Z2 + pos. Z3

4 = + pos. Z1 + pos. Z2 + pos. Z3 + pos. Z4

5 = + pos. Z1 + pos. Z2 + pos. Z3 + pos. Z4 + pos. Z5

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

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

Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and which are in direct contact with a normal industrial environment.

Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, for instance in the chemical or food industries. These applications may need to be supported by special tests (➔ also FN 940082) using appropriate media.

High-force cylinders ADN, standard hole pattern

FESTO

Accessories

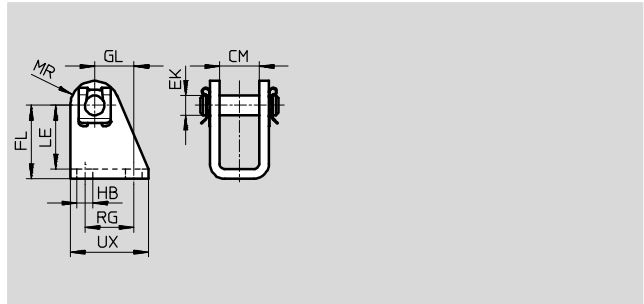
Clevis foot LBN

Material:

Galvanised steel

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data													
For Ø	CM	EK Ø	FL	GL	HB Ø	LE	MR	RG	UX	CRC ¹⁾	Weight	Part No.	Type
[mm]											[g]		
25	16.1	8	30 +0.4/-0.2	16	6.6	26	10	20	32	1	84	6059	LBN-20/25

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

Low corrosion stress. For dry indoor applications or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

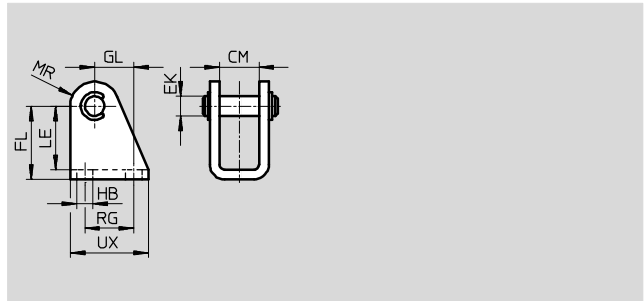
Clevis foot CRLBN, stainless steel

Material:

High-alloy steel

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data													
For Ø	CM	EK Ø	FL	GL	HB	LE	MR	RG	UX	CRC ¹⁾	Weight	Part No.	Type
[mm]											[g]		
25	16.1	8	30 +0.4/-0.2	16	6.6	26	10	20	32	4	82	161863	CRLBN-20/25

1) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.

High-force cylinders ADNH, standard hole pattern

FESTO

Accessories

Swivel flange

SNCB/SNCB-...-R3

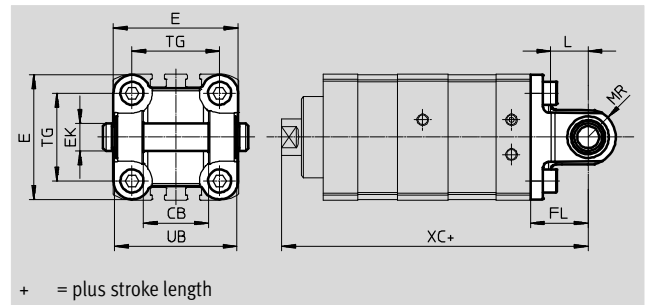
Material:

SNCB: Die-cast aluminium

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

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data												
For Ø	CB	E	EK Ø	FL	L	MR	TG	UB	XC ¹⁾			
[mm]	H14		H9/e8	±0.2		-0.5		h14	2	3	4	5
40	28	54	12	25	16	12	38	52	129.6	168.9	210.2	253.2
63	40	75	16	32	21	16	56.5	70	146.6	189.0	233.4	279.5
100	60	110	20	41	27	20	89	110	188.9	240.8	294.9	350.7

For Ø	Basic version				R3 – High corrosion protection			
	CRC ²⁾	Weight [g]	Part No.	Type	CRC ²⁾	Weight [g]	Part No.	Type
[mm]								
40	2	155	174391	SNCB-40	3	151	176945	SNCB-40-R3
63	2	375	174393	SNCB-63	3	371	176947	SNCB-63-R3
100	2	1035	174395	SNCB-100	3	986	176949	SNCB-100-R3

1) Number of positions

2 = + pos. Z1 + pos. Z2

3 = + pos. Z1 + pos. Z2 + pos. Z3

4 = + pos. Z1 + pos. Z2 + pos. Z3 + pos. Z4

5 = + pos. Z1 + pos. Z2 + pos. Z3 + pos. Z4 + pos. Z5

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

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

Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and which are in direct contact with a normal industrial environment.

High-force cylinders ADN, standard hole pattern

Accessories

FESTO

Trunnion flange ZNCF/CRZNG

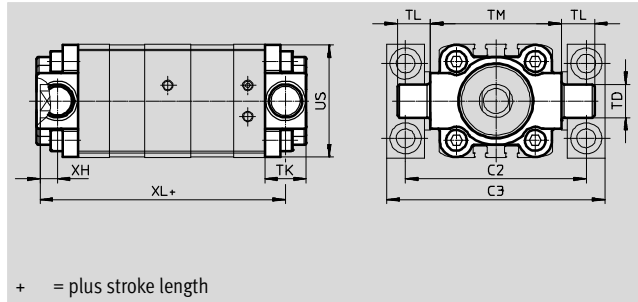
Material:

ZNCF: Stainless steel casting

CRZNG: Electropolished stainless steel casting

Free of copper and PTFE

RoHS-compliant



+ = plus stroke length

Dimensions and ordering data

For Ø	C2	C3	TD Ø	TK max.	TL	TM	US	XH	XL ¹⁾			
[mm]			e9			h14			2	3	4	5
40	87	105	16	20	16 h14	63	54	8.4±1	114.6	153.9	195.2	238.2
63	116	136	20	24	20 h14	90	75	9.3±1.2	126.6	169.0	213.4	259.5
100	164	189	25	38	24.5 +0.5/-0.7	132	110	8±1.2	166.9	218.8	272.9	328.7

For Ø [mm]	Basic version				Corrosion resistant			
	CRC ²⁾	Weight [g]	Part No.	Type	CRC ²⁾	Weight [g]	Part No.	Type
40	2	285	174412	ZNCF-40	4	285	161853	CRZNG-40
63	2	687	174414	ZNCF-63	4	687	161855	CRZNG-63
100	2	2254	174416	ZNCF-100	4	2254	161857	CRZNG-100

- 1) Number of positions
 2 = + pos. Z1 + pos. Z2
 3 = + pos. Z1 + pos. Z2 + pos. Z3
 4 = + pos. Z1 + pos. Z2 + pos. Z3 + pos. Z4
 5 = + pos. Z1 + pos. Z2 + pos. Z3 + pos. Z4 + pos. Z5

- 2) Corrosion resistance class CRC 2 to Festo standard FN 940070
 Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.
 Corrosion resistance class CRC 4 to Festo standard FN 940070
 Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.

Trunnion support LNZG

Material:

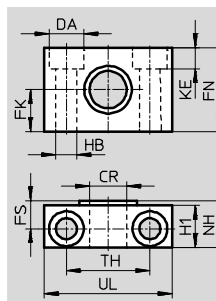
Trunnion support:

Anodised aluminium

Plain bearing: Plastic

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data

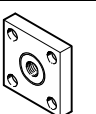
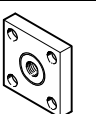
For Ø	CR	DA	FK	FN	FS	H1	HB	KE	NH	TH	UL	CRC ¹⁾	Weight	Part No.	Type
[mm]	Ø	Ø	Ø				Ø			±0.2			[g]		
40	16	15	18	36	12	18	9	9	21	36	55	2	129	32960	LNZG-40/50
63	20	18	20	40	13	20	11	11	23	42	65	2	178	32961	LNZG-63/80
100	25	20	25	50	16	24.5	14	13	28.5	50	75	2	306	32962	LNZG-100/125

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

High-force cylinders ADNH, standard hole pattern

FESTO

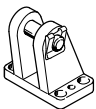
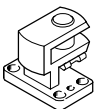
Accessories

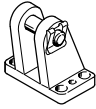
Ordering data – Piston rod attachments				Technical data → Internet: piston rod attachment			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Rod eye SGS				Rod clevis SGA for rod eye SGS			
	25	9255	SGS-M8		25	–	
	40	9262	SGS-M12x1,25		40	10767	SGA-M12x1,25
	63	9263	SGS-M16x1,5		63	10768	SGA-M16x1,5
	100	9264	SGS-M20x1,5		100	10769	SGA-M20x1,5
Rod clevis SG				Self-aligning rod coupler FK			
	25	3111	SG-M8		25	2062	FK-M8
	40	6145	SG-M12x1,25		40	6141	FK-M12x1,25
	63	6146	SG-M16x1,5		63	6142	FK-M16x1,5 ¹⁾
	100	6147	SG-M20x1,5		100	6143	FK-M20x1,5 ¹⁾
Coupling piece KSG				 Note 1) The max. force of 10000 N must not be exceeded when using these piston rod attachments.			
	25	–					
	40	32964	KSG-M12x1,25				
	63	32965	KSG-M16x1,5				
	100	32966	KSG-M20x1,5				

Ordering data – Corrosion and acid-resistant piston rod attachments				Technical data → Internet: piston rod attachment			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Rod eye CRS GS				Rod clevis CRS G			
	25	195581	CRSGS-M8		25	13568	CRSG-M8
	40	195583	CRSGS-M12x1,25		40	13570	CRSG-M12x1,25
	63	195584	CRSGS-M16x1,5		63	13571	CRSG-M16x1,5
	100	195585	CRSGS-M20x1,5		100	13572	CRSG-M20x1,5
Self-aligning rod coupler CRFK							
	40	2305779	CRFK-M12x1,25				
	63	2490673	CRFK-M16x1,5				
	100	2545677	CRFK-M20x1,5				

 Note

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

Ordering data – Mounting attachments				Technical data → Internet: clevis foot			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
Clevis foot LBG for rod eye SGS				Right-angle clevis foot LQG for rod eye SGS			
	25	–			25	–	
	40	31762	LBG-40		40	31769	LQG-40
	63	31764	LBG-63		63	31771	LQG-63
	100	31766	LBG-100		100	31773	LQG-100

Ordering data – Mounting attachments, high corrosion protection							
Designation	For Ø	Part No.	Type				
Clevis foot LBG-R3 for rod eye SGS							
	40						
	63						
	100						

High-force cylinders ADNH, standard hole pattern

Accessories

FESTO

Ordering data – One-way flow control valves				Technical data → Internet: grla	
	Connection		Material	Part No.	Type
	For Ø	For tubing O.D.			
For exhaust air					
	25, 40	3	Metal design	193137	GRLA-M5-QS-3-D
		4		193138	GRLA-M5-QS-4-D
	63, 100	4		193143	GRLA-1/8-QS-4-D
		6		193144	GRLA-1/8-QS-6-D
		8		193145	GRLA-1/8-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, short design	PNP	Cable, 3-wire	2.5	574335	SMT-8M-A-PS-24V-E-2,5-OE
			Plug M8x1, 3-pin	0.3	574334	SMT-8M-A-PS-24V-E-0,3-M8D
			Plug M12x1, 3-pin	0.3	574337	SMT-8M-A-PS-24V-E-0,3-M12
		NPN	Cable, 3-wire	2.5	574338	SMT-8M-A-NS-24V-E-2,5-OE
			Plug M8x1, 3-pin	0.3	574339	SMT-8M-A-NS-24V-E-0,3-M8D
N/C contact						
	Insertable in the slot from above, flush with cylinder profile, short design	PNP	Cable, 3-wire	7.5	574340	SMT-8M-A-PO-24V-E-7,5-OE

Ordering data – Proximity sensors for T-slot, magnetic reed					Technical data → Internet: sme	
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	543862	SME-8M-DS-24V-K-2,5-OE
				5.0	543863	SME-8M-DS-24V-K-5,0-OE
			Cable, 2-wire	2.5	543872	SME-8M-ZS-24V-K-2,5-OE
			Plug M8x1, 3-pin	0.3	543861	SME-8M-DS-24V-K-0,3-M8D
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	150855	SME-8-K-LED-24
			Plug M8x1, 3-pin	0.3	150857	SME-8-S-LED-24
N/C contact						
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	7.5	160251	SME-8-O-K-LED-24

Ordering data – Connecting cables				Technical data → Internet: nebu	
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part No.	Type
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541333	NEBU-M8G3-K-2.5-LE3
			5	541334	NEBU-M8G3-K-5-LE3
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541363	NEBU-M12G5-K-2.5-LE3
			5	541364	NEBU-M12G5-K-5-LE3
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541338	NEBU-M8W3-K-2.5-LE3
			5	541341	NEBU-M8W3-K-5-LE3
	Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541367	NEBU-M12W5-K-2.5-LE3
			5	541370	NEBU-M12W5-K-5-LE3

High-force cylinders ADNH, standard hole pattern

FESTO

Accessories

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

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

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