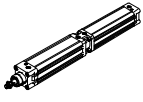
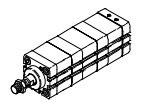


# Tandem/high-force cylinders



# Tandem/high-force cylinders

Product range overview

Function	Version	Type	Piston Ø [mm]	Stroke [mm]	Position sensing A	Piston rod		
						With male thread	With female 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	DNCT	ADNH
<p>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.</p>	<ul style="list-style-type: none"> <li>• A maximum of 2 cylinders can be combined.</li> <li>• Like the thrust, the force in the return stroke is double that of a single cylinder with corresponding piston diameter.</li> </ul>	<ul style="list-style-type: none"> <li>• A maximum of 4 cylinders can be combined.</li> <li>• The internal distribution of compressed air means that only 2 connections are required to pressurise all cylinders.</li> <li>• The force in the return stroke corresponds to that of a single cylinder with corresponding piston diameter.</li> </ul>

# Tandem/high-force cylinders

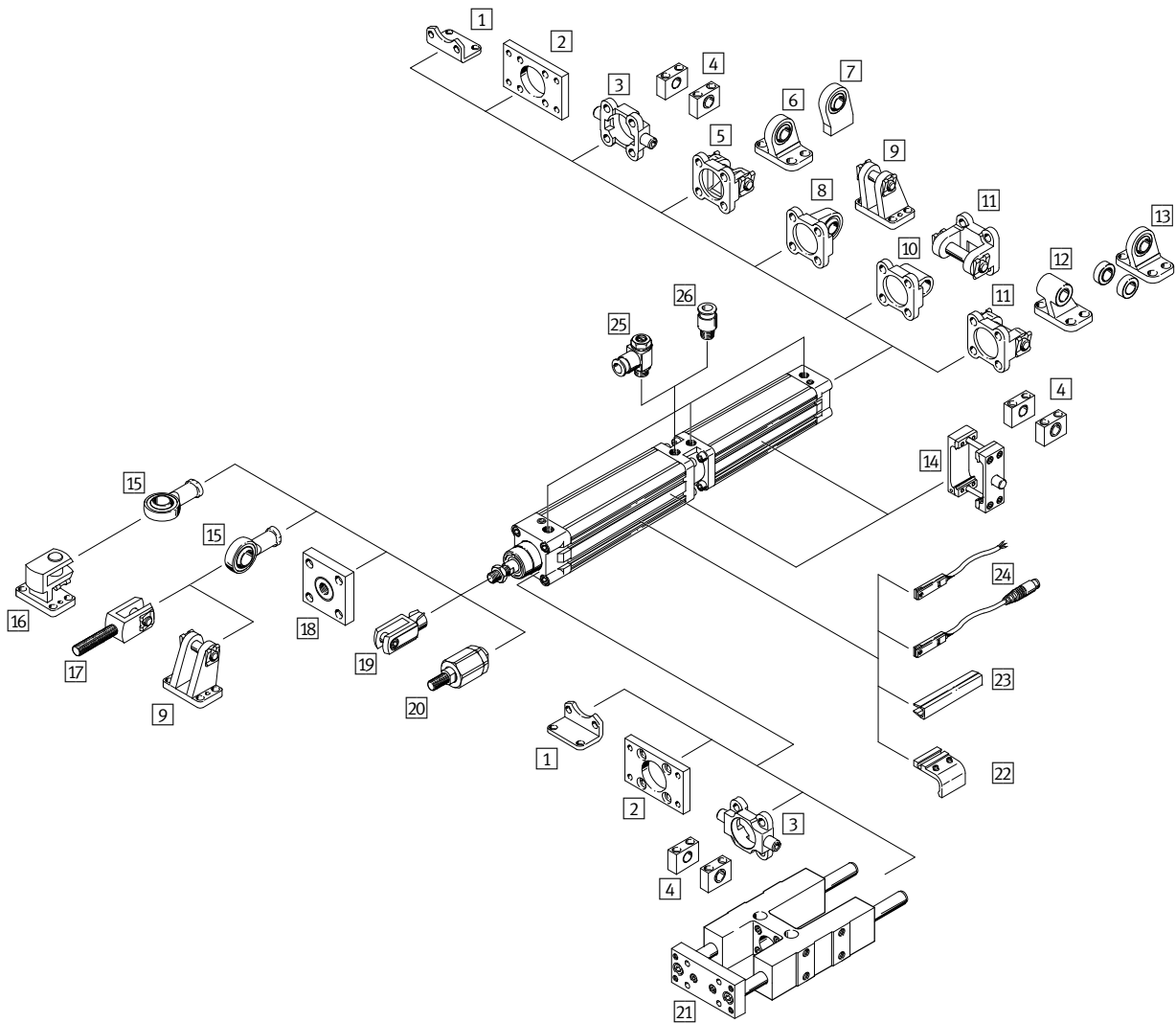
Product range overview

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							
<b>DNCT</b>	-	■	-	-	-	■	4
High-force cylinders							
<b>ADNH</b>	■	-	■	■	■	■	20

# Tandem cylinders DNCT, standard port pattern

Peripherals overview

FESTO



# Tandem cylinders DNCT, standard port pattern

Peripherals overview

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 quick star

# Tandem cylinders DNCT, standard port pattern

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
---	-----------------------

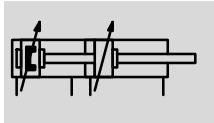
**Variant**

S6	Heat-resistant up to 120 °C
----	-----------------------------

# Tandem cylinders DNCT, standard port pattern

Technical data

## Function



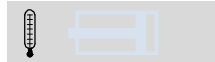
-  $\varnothing$  - Diameter  
32 ... 125 mm

- | - Stroke length  
 $\varnothing$  32 ... 50:  
2 ... 500 mm

$\varnothing$  63 ... 125:  
3 ... 500 mm

-  - www.festo.com

## Variants



S6

Based on standard

- DIN ISO 6431
- VDMA 24562



General technical data							
Piston $\varnothing$	32	40	50	63	80	100	125
Pneumatic connection	G1/8	G1/4	G1/4	G3/8	G3/8	G1/2	G1/2
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 $\varnothing$	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 <sup>1)</sup> [°C]	-20 ... +80	0 ... +120
Corrosion resistance class CRC <sup>2)</sup>	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

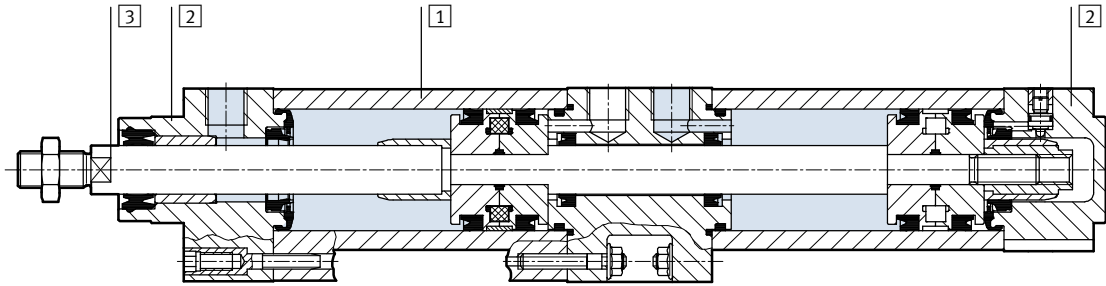
Forces [N] and impact energy [J]							
Piston $\varnothing$	32	40	50	63	80	100	125
Theoretical force at 6 bar, advancing	898	1387	2168	3552	5737	9130	14244
Theoretical force at 6 bar, retracting	830	1266	1980	3364	5442	8836	13762
Max. impact energy at end positions	0.1	0.2	0.2	0.5	0.9	1.2	5

# Tandem cylinders DNCT, standard port pattern

Technical data

## Materials

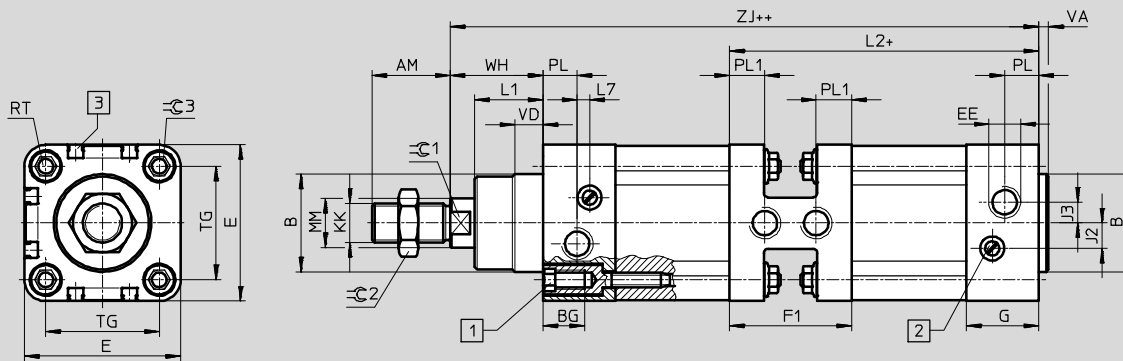
Sectional view



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



- 1 Socket head screw with female thread for mounting attachments
  - 2 Regulating screw for adjustable end position cushioning
  - 3 Sensor slot for proximity sensor
- + = plus stroke length  
++ = plus 2x stroke length



∅	AM	B	BG	E	EE	F1	G	J2	J3	KK	L1	L2	L7
[mm]		∅ d11											
32	22	30	16	45.5	G $\frac{3}{8}$	35	25.1	6	5.2	M10x1.25	18	104.2	3.3
40	24	35	16	54	G $\frac{1}{4}$	47.6	29.6	8	6	M12x1.25	21.5	123.5	3.6
50	32	40	17	64	G $\frac{1}{4}$	50	29.6	10.4	8.5	M16x1.5	28	126.7	5.1
63	32	45	17	75	G $\frac{3}{8}$	64.4	35.6	12.4	10	M16x1.5	28.5	150	6.6
80	40	45	17	93	G $\frac{3}{8}$	68	35.9	12.5	8	M20x1.5	34.7	161.7	10.5
100	40	55	17	110	G $\frac{1}{2}$	75	38.8	12	10	M20x1.5	38.2	178.1	8
125	54	60	22	134	G $\frac{1}{2}$	70	44.7	13	8	M27x2	46	188.5	14

∅	MM	PL	PL1	RT	TG	VA	VD	WH	ZJ	∅C1	∅C2	∅C3
[mm]	∅											
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

Technical data

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

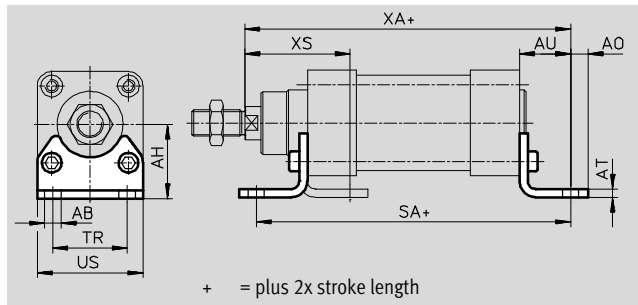
# Tandem cylinders DNCT, standard port pattern



Accessories

## Foot mounting HNC

Material:  
Galvanised steel  
Free of copper and PTFE

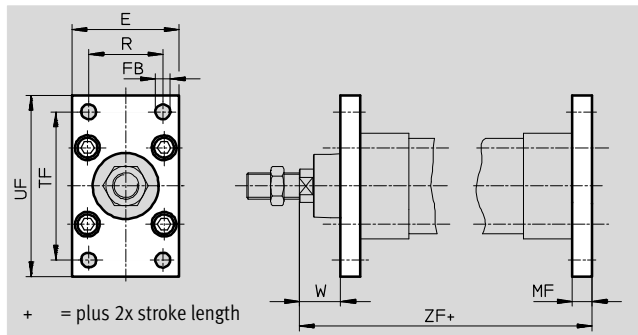


Dimensions and ordering data														
For Ø	AB	AH	AO	AT	AU	SA	TR	US	XA	XS	CRC <sup>1)</sup>	Weight	Part No.	Type
[mm]	Ø											[g]		
32	7	32	6.5	4	24	221.4	32	45	223.6	45	2	144	<b>174369</b>	<b>HNC-32</b>
40	10	36	9	4	28	255.4	36	54	257.4	53	2	193	<b>174370</b>	<b>HNC-40</b>
50	10	45	9.5	5	32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

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

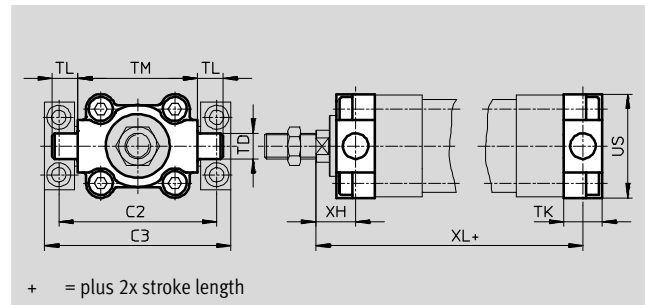
1) CRC2: Corrosion resistance class to Festo standard 940 070  
Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

# Tandem cylinders DNCT, standard port pattern

Accessories

## Trunnion flange ZNCF

Material:  
Corrosion resistant cast steel  
Free of copper and PTFE  
RoHS-compliant



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

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

## Trunnion mounting kit DAMT

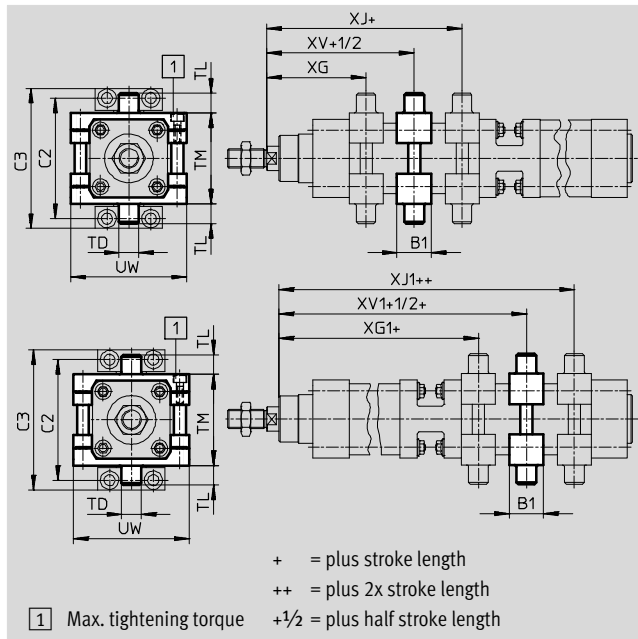
The mounting kit can be attached at any position along the profile barrel of the cylinder.

Material:

Tempered steel

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data									
For Ø	B1	C2	C3	TD	TL	TM	UW	XG	XG1
[mm]				Ø e9					
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	CRC <sup>1)</sup>	Weight	Part No.	Type
[mm]					[Nm]		[g]		
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

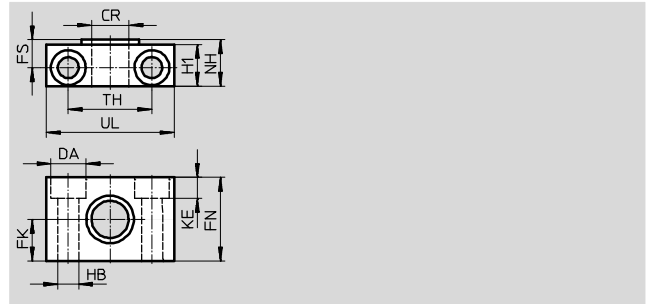
1) CRC2: Corrosion resistance class to Festo standard 940 070  
Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

# Tandem cylinders DNCT, standard port pattern

Accessories

## Trunnion support LNZG

Material:  
Trunnion support:  
Anodised aluminium  
Plain bearing: Plastic  
Free of copper and PTFE  
RoHS-compliant

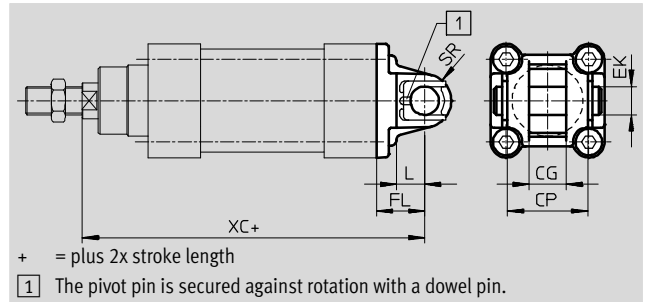


Dimensions and ordering data														Weight	Part No.	Type
For $\varnothing$	CR	DA	FK	FN	FS	H1	HB	KE	NH	TH	UL	CRC <sup>1)</sup>				
[mm]	$\varnothing$ D11	$\varnothing$ H13	$\varnothing$ $\pm 0.1$				$\varnothing$ H13			$\pm 0.2$				[g]		
32	12	11	15	30	10.5	15	6.6	6.8	18	32	46	2		83	<b>32959</b>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

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

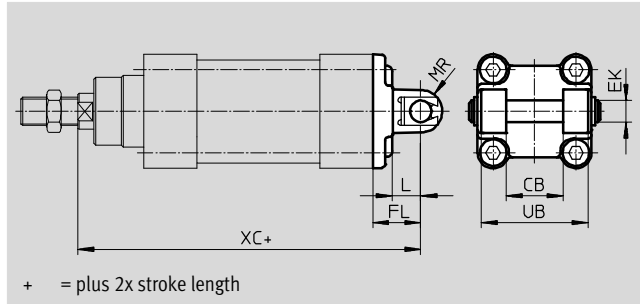
1) CRC2: Corrosion resistance class to Festo standard 940 070  
Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

# Tandem cylinders DNCT, standard port pattern

Accessories

## Swivel flange SNCB

Material:  
Die-cast aluminium  
Free of copper and PTFE  
RoHS-compliant

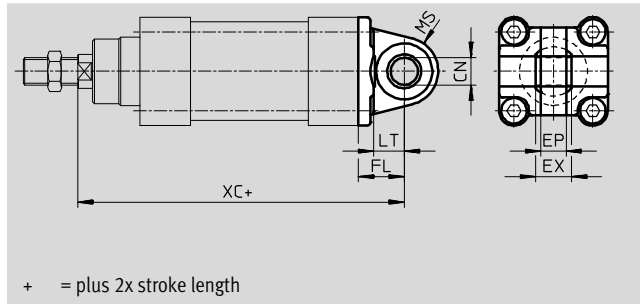
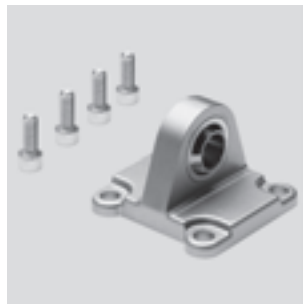


Dimensions and ordering data												
For Ø	CB	EK	FL	L	ML	MR	UB	XC	CRC <sup>1)</sup>	Weight	Part No.	Type
[mm]	H14	Ø e8	±0.2				h14			[g]		
32	26	10	22	13	55	8.5	45	221.6	2	103	<b>174390</b>	<b>SNCB-32</b>
40	28	12	25	16	63	12	52	254.4	2	155	<b>174391</b>	<b>SNCB-40</b>
50	32	12	27	16	71	12	60	268.1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

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

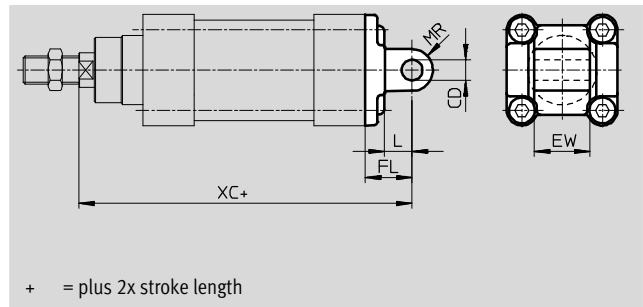
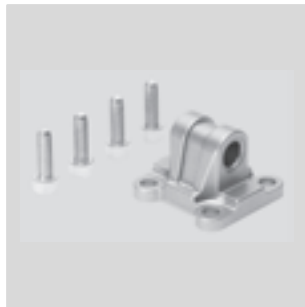
1) CRC2: Corrosion resistance class to Festo standard 940 070  
Components with medium corrosion exposure. Externally visible components with significant decorative function in direct contact with normal industrial atmosphere or media such as coolants and lubricants.

# Tandem cylinders DNCT, standard port pattern

Accessories

## Swivel flange SNCL

Material:  
Die-cast aluminium  
Free of copper and PTFE  
RoHS-compliant



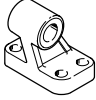
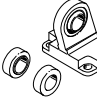




Dimensions and ordering data										
For $\varnothing$	CD	EW	FL	L	MR	XC	CRC <sup>1)</sup>	Weight	Part No.	Type
[mm]	$\varnothing$ H9	-0.2/-0.6	$\pm 0.2$					[g]		
32	10	26	22	13	10	221.6	2	71	<b>174404</b>	<b>SNCL-32</b>
40	12	28	25	16	12	254.4	2	95	<b>174405</b>	<b>SNCL-40</b>
50	12	32	27	16	12	268.1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

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

FESTO

Accessories







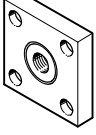
Ordering data – Mounting attachments				Technical data → Internet: mounting attachment			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
<b>Clevis foot LNG</b>				<b>Clevis foot LSN</b>			
	32	33890	LNG-32		32	5561	LSN-32
	40	33891	LNG-40		40	5562	LSN-40
	50	33892	LNG-50		50	5563	LSN-50
	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
<b>Clevis foot LSNG</b>				<b>Clevis foot LSNSG</b>			
	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
<b>Clevis foot LBG</b>				<b>Right-angle clevis foot LQG</b>			
	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

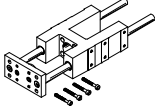
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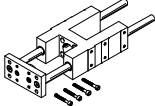
Ordering data – Piston rod attachments				Technical data → Internet: piston rod attachment			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
<b>Rod eye SGS</b>				<b>Rod clevis SGA</b>			
	32	9261	SGS-M10x1,25		32	32954	SGA-M10x1,25
	40	9262	SGS-M12x1,25		40	10767	SGA-M12x1,25
	50	9263	SGS-M16x1,5		50	10768	SGA-M16x1,5
	63						
	80	9264	SGS-M20x1,5		80	10769	SGA-M20x1,5
	100	10774	SGS-M27x2		100	10770	SGA-M27x2
	125						
<b>Rod clevis SG</b>				<b>Self-aligning rod coupler FK</b>			
	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						
	80	6147	SG-M20x1,5	80	6143	FK-M20x1,5 <sup>1)</sup>	
	100						
	125			14987			SG-M27x2-B
<b>Coupling piece KSG</b>				 Note <sup>1)</sup> 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		

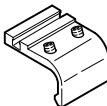
Ordering data – One-way flow control valves				Technical data → Internet: grla	
Connection	Thread	For tubing O.D.	Material	Part No.	Type
					G <sup>1</sup> / <sub>8</sub>
4	193143	GRLA- <sup>1</sup> / <sub>8</sub> -QS-4-D			
6	193144	GRLA- <sup>1</sup> / <sub>8</sub> -QS-6-D			
8	193145	GRLA- <sup>1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

# Tandem cylinders DNCT, standard port pattern

Accessories

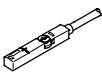
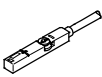
Ordering data – Guide units for fixed strokes (recirculating ball bearing guide only)				Technical data → Internet: feng		
	Stroke [mm]	Part No.	Type	Stroke [mm]	Part No.	Type
	For Ø 32 mm			For Ø 40 mm		
	10 ... 50	34493	FENG-32-50-KF	10 ... 50	34499	FENG-40-50-KF
	10 ... 100	34494	FENG-32-100-KF	10 ... 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

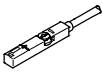


Ordering data – Guide units for variable strokes				Technical data → Internet: feng		
	For Ø [mm]	Stroke [mm]	With recirculating ball bearing guide Part No. Type	With plain bearing guide Part No. Type		
	32	10 ... 500	34487 FENG-32-...-KF	34481	FENG-32-...-GF	
	40	10 ... 500	34488 FENG-40-...-KF	34482	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	


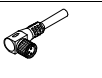
Ordering data – Mounting kits for proximity sensors SMT-8		Technical data → Internet: smb	
	For Ø [mm]	Part No.	Type
	32	175705	SMB-8-FENG-32/40
	40	175706	SMB-8-FENG-50/63
	50		
	63	175707	SMB-8-FENG-80/100
	80		
100			

# Tandem cylinders DNCT, standard port pattern

Accessories

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

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

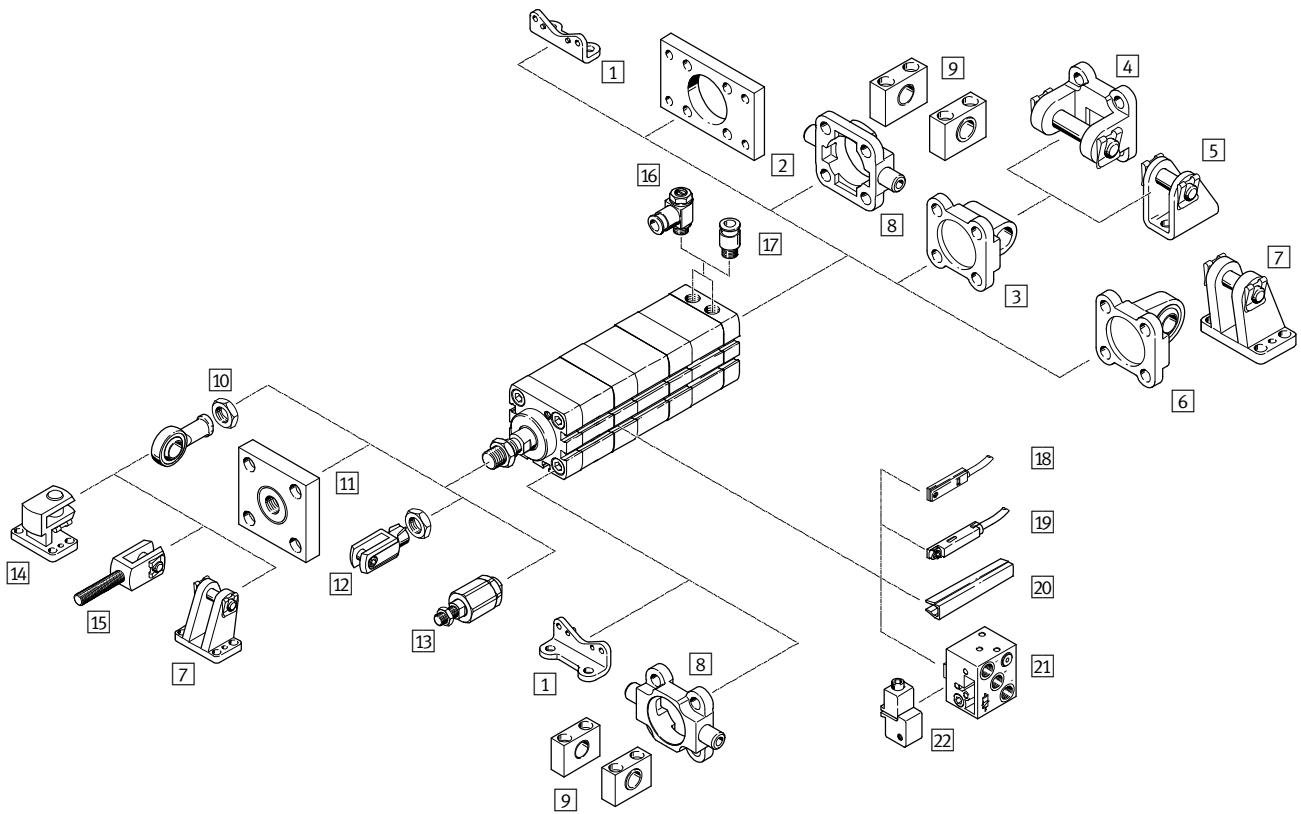
Ordering data – Connecting cables					Technical data → Internet: nebu	
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part No.	Type	
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541333	NEBU-M8G3-K-2.5-LE3	
			5	541334	NEBU-M8G3-K-5-LE3	
	Straight socket, M12x1,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

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

Mounting attachments and accessories					
	Description	∅ 25	∅ 40, 63, 100	→ Page/Internet	
1	Foot mounting HNA	For bearing and end caps	■	■	30
2	Flange mounting FNC	For end caps	■	■	31
3	Swivel flange SNCL	For end caps	■	■	32
4	Swivel flange SNCB	For swivel flange SNCL	-	■	35
5	Clevis foot LBN/CRLBN	For swivel flange SNCL	■	-	34
6	Swivel flange SNCS	For end caps	-	■	32
7	Clevis foot LBG	For swivel flange SNCS	-	■	37
8	Trunnion flange ZNCF/CRZNG	For end caps	-	■	36
9	Trunnion support LNZG	For trunnion flange ZNCF/CRZNG	-	■	36
10	Rod eye SGS/CRSGS	With spherical bearing	■	■	37
11	Coupling piece KSG	For compensating radial deviations	■	■	37
12	Rod clevis SG/CRSG	Permits a swivelling movement of the cylinder in one plane	■	■	37
13	Self-aligning rod coupler FK/CRFK	For compensating radial and angular deviations	■	■	37
14	Right-angle clevis foot LQG	For rod eye SGS	-	■	37
15	Rod clevis SGA	With male thread	-	■	37
16	One-way flow control valve GRLA	For speed regulation	■	■	37
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	■	■	38
19	Proximity sensor SME/SMT-8M	Can be integrated in the sensor slot of the cylinder profile barrel	■	■	38
20	Slot cover ABP-5-S	For protecting the sensor cable and keeping dirt out of the sensor slots	■	■	39
21	Proximity sensor SMPO-8E	Pneumatic output signal	■	■	39
22	Mounting kit SMB-8E	For proximity sensor SMPO-8E	■	■	39

# High-force cylinders ADNH, standard port pattern

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

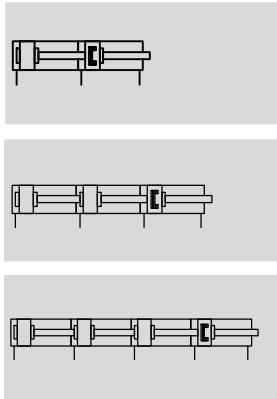
**Variant**

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

Technical data

Function



Variants

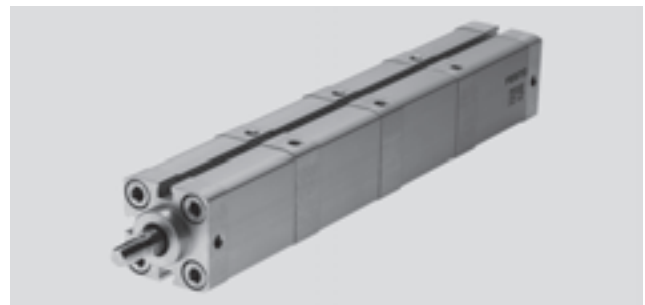




K2

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	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 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 <sup>1)</sup> [°C]		-20 ... +80			
	S6	0 ... +120			
Corrosion resistance class CRC <sup>2)</sup>		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.

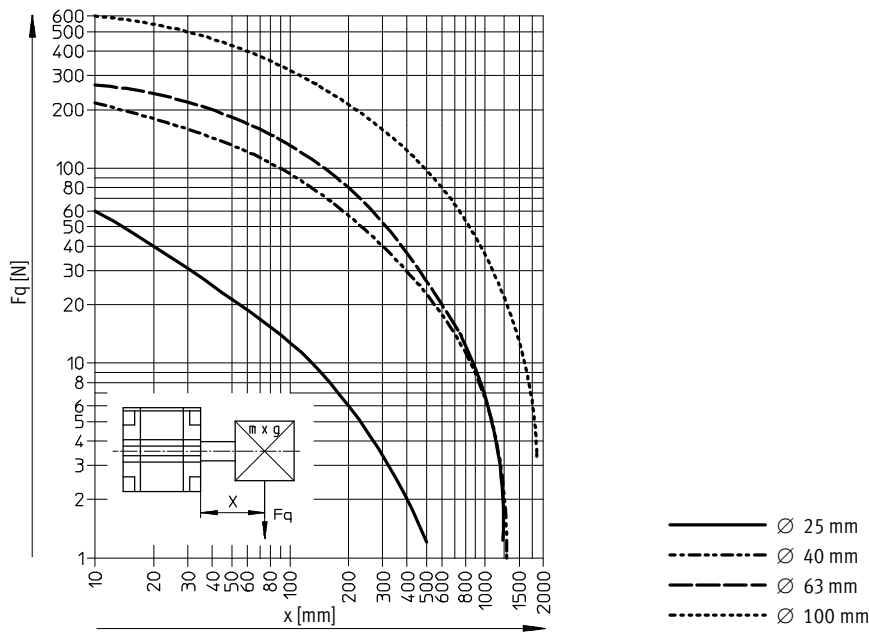
# High-force cylinders ADNH, standard port pattern

Technical data

Forces [N] and impact energy [J]					
Piston $\varnothing$		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 <sup>1)</sup>		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 $x$



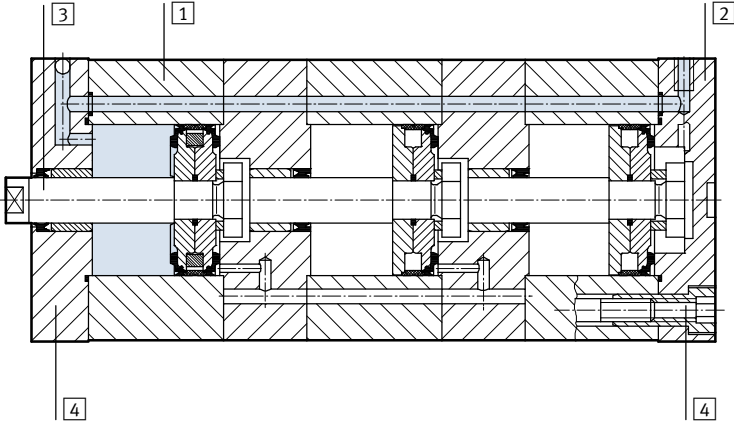


# High-force cylinders ADNH, standard port pattern

Technical data

## 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

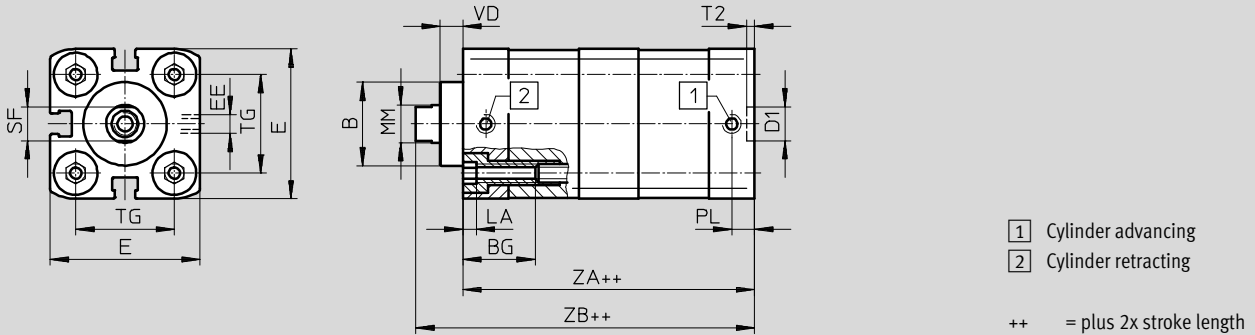
Technical data



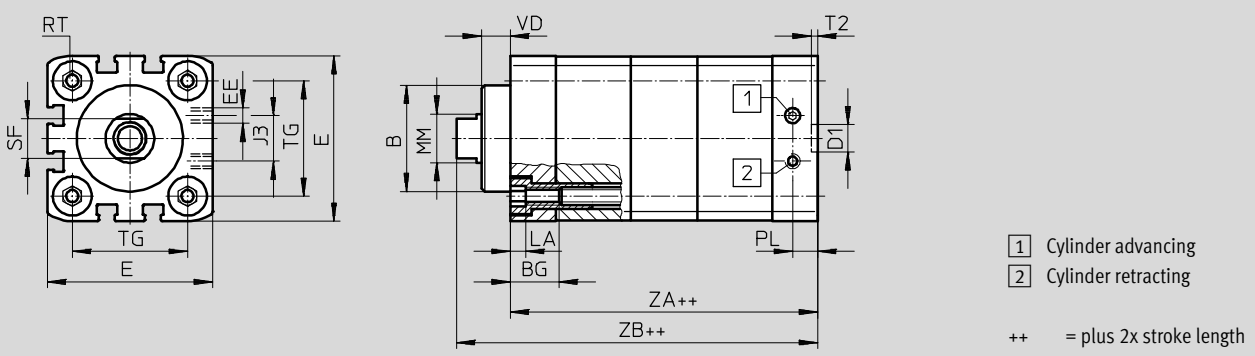
## Dimensions – Basic version

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

∅ 25/2N – 2 cylinders

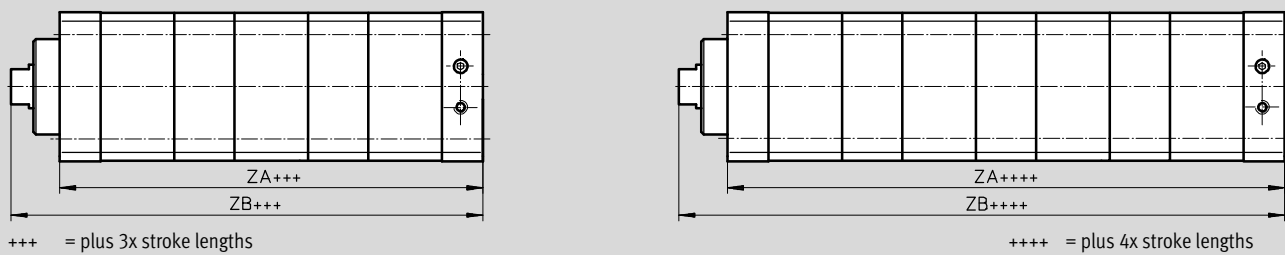


∅ 40 ... 100/2N – 2 cylinders



3N – 3 cylinders

4N – 4 cylinders



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

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

# High-force cylinders ADNH, standard port pattern

Technical data

## Dimensions – Variants

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

Basic version

1 Hex nut to DIN 439-B only with  $\varnothing$  40 ... 100

### K2 – Extended male piston rod thread

1 Hex nut to DIN 439-B only with  $\varnothing$  40 ... 100

### K5 – Special piston rod thread

### K8 – Extended piston rod

1 Hex nut to DIN 439-B only with  $\varnothing$  40 ... 100

$\varnothing$	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	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

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					
<b>Order example</b>							
<b>539694</b>	<b>ADNH</b>	- <b>100</b>	- <b>120</b>	- <b>A</b>	- <b>P</b>	- <b>A</b>	- <b>4N</b>

**Ordering table**

Size	25	40	63	100	Condi- tions	Code	Enter code
<b>M</b> Module No.	<b>539691</b>	<b>539692</b>	<b>539693</b>	<b>539694</b>			
Function	Compact tandem cylinder, based on ISO 21287					<b>ADNH</b>	ADNH
Size [mm]	25	40	63	100		-...	
Stroke [mm]	1 ... 150					-...	
Type of thread	Male thread					<b>-A</b>	
	Female thread					<b>-I</b>	
Cushioning	Flexible cushioning rings/pads at both ends					<b>-P</b>	-P
Position sensing	Via proximity sensor					<b>-A</b>	-A
Number of cylinders	2 cylinders for twice the force					<b>-2N</b>	- ... N
	3 cylinders for three times the force					<b>-3N</b>	
	4 cylinders for four times the force					<b>-4N</b>	

Transfer order code

	<b>ADNH</b>	-		-		-	<b>P</b>	-	<b>A</b>	-	<b>...N</b>
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# High-force cylinders ADNH, standard port pattern

Ordering data – Modular products

→ **0 Options**

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

Ordering table							
Size	25	40	63	100	Condi- tions	Code	Enter code
<b>0</b> Male thread extended [mm]	Extended male piston rod thread					-...K2	
Special piston rod thread	M10x1.25	M10x1.25	M12x1.25	M16x1.5	<b>1</b>	-"..."K5	
	M5	M8	M10	-	<b>2</b>		
Piston rod extended [mm]	Extended piston rod					-...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 ADNH, standard hole pattern



Accessories

## Foot mounting HNA

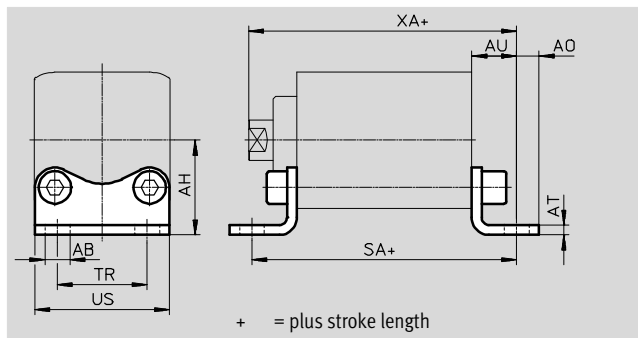
Material:

HNA: Galvanised steel

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

Free of copper and PTFE

RoHS-compliant



Dimensions and ordering data								
For $\varnothing$ [mm]	AB $\varnothing$ H14	AH JS14	AO	AT $\pm 0.5$	AU $\pm 0.2$	SA <sup>1)</sup>		
						2	3	4
25	7	29	6.25	4	16	108.3	142.5	176.7
40	10	38	9		18	122.2	161.5	200.8
63		50	8	5	21	135.6	177.7	220.1
100	14.5	74	12.5	6	27	174.9	226.8	278.7

For $\varnothing$ [mm]	TR $\pm 0.2$	US -0.5	XA <sup>1)</sup>		
			2	3	4
25	26	38.5	104.5	138.7	172.9
40	36	54	122.6	161.9	201.2
63	50	75	135.6	178.0	220.4
100	75	110	174.9	226.8	272.7

For $\varnothing$ [mm]	Basic version				R3 – High corrosion protection			
	CRC <sup>2)</sup>	Weight [g]	Part No.	Type	CRC <sup>2)</sup>	Weight [g]	Part No.	Type
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

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).

3) Corrosion resistance class CRC 3 to Festo standard FN 940070

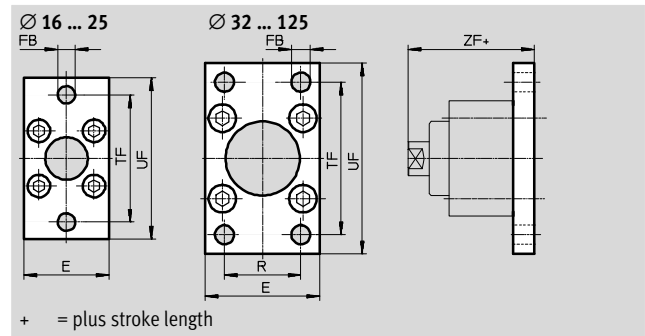
High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and which are in direct contact with a normal industrial environment.

# High-force cylinders ADNH, standard hole pattern

Accessories

## Flange mounting FNC

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



Dimensions and ordering data						
For Ø	E	FB	MF	R	TF	UF
[mm]		Ø				±1
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	ZF <sup>1)</sup>			CRC <sup>2)</sup>	Weight	Part No.	Type
	2	3	4				
[mm]					[g]		
25	96.5	130.7	164.9	1	165	<b>537248</b>	<b>FNC-25</b>
40	114.6	153.9	193.2	1	291	<b>174377</b>	<b>FNC-40</b>
63	126.6	169.0	211.4	1	679	<b>174379</b>	<b>FNC-63</b>
100	163.9	215.8	267.7	1	2041	<b>174381</b>	<b>FNC-100</b>

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

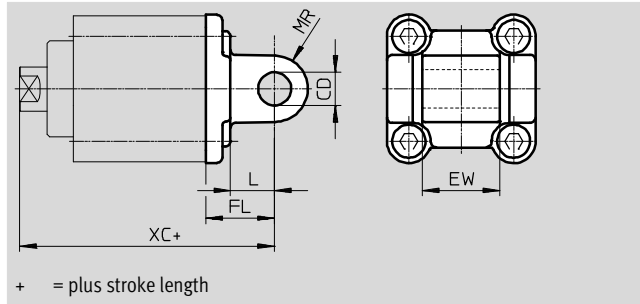
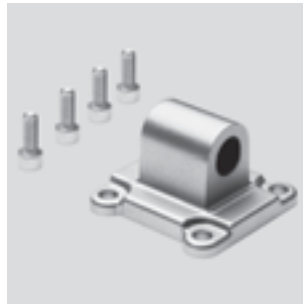
# High-force cylinders ADNH, standard hole pattern

Accessories



## Swivel flange SNCL

Material:  
 SNCL: Die-cast aluminium  
 SNCL...-R3: Die-cast aluminium with protective coating  
 Free of copper and PTFE  
 RoHS-compliant



Dimensions and ordering data								
For $\varnothing$ [mm]	CD $\varnothing$ H9	EW h12	FL $\pm 0.2$	L	MR	XC <sup>1)</sup>		
						2	3	4
25	8	16	20	14	8	108.5	142.7	176.9
40	12	28	25	16	12	129.6	168.9	208.2
63	16	40	32	21	16	146.6	189.0	231.4
100	20	60	41	27	20	188.9	240.8	292.7

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

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

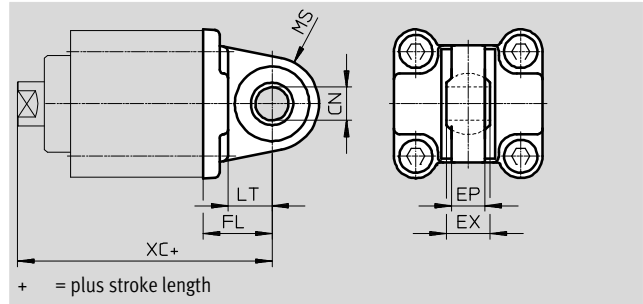
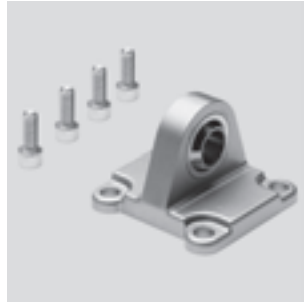


# High-force cylinders ADNH, standard hole pattern

Accessories

## Swivel flange SNCS

Material:  
Die-cast aluminium  
Free of copper and PTFE  
RoHS-compliant



Dimensions and ordering data						
For $\varnothing$	CN	EP	EX	FL	LT	MS
[mm]	H7	$\pm 0.2$	$\pm 0.2$			
40	12	12	16	25	16	17
63	16	15	21	32	21	22
100	20	18	25	41	27	29

For $\varnothing$	XC <sup>1)</sup>			CRC <sup>2)</sup>	Weight	Part No.	Type
	2	3	4				
[mm]					[g]		
40	129.6	168.9	208.2	2	122	<b>174398</b>	<b>SNCS-40</b>
63	146.6	189.0	231.4	2	281	<b>174400</b>	<b>SNCS-63</b>
100	188.9	240.8	292.7	2	683	<b>174402</b>	<b>SNCS-100</b>

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

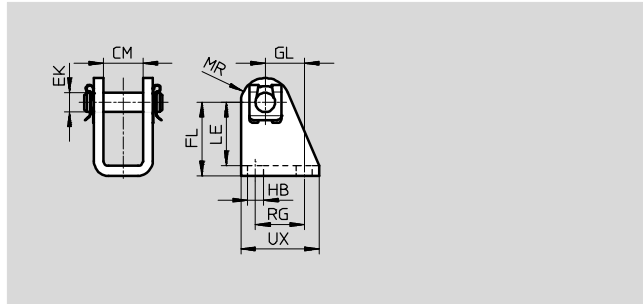
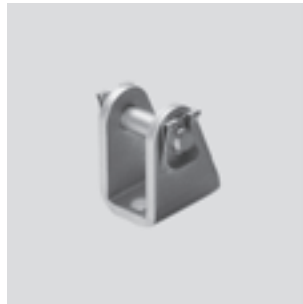
# High-force cylinders ADNH, standard hole pattern

Accessories

FESTO

## Clevis foot LBN

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

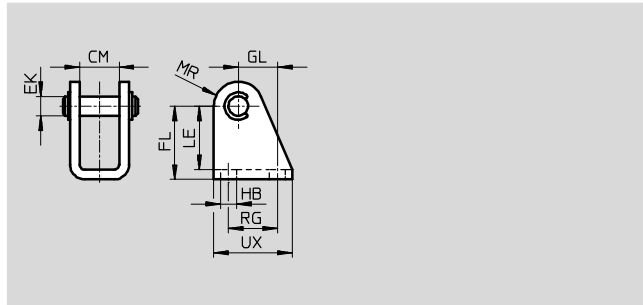
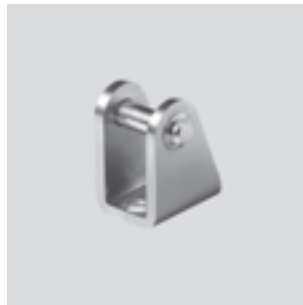


Dimensions and ordering data													Part No.	Type
For $\varnothing$	CM	EK $\varnothing$	FL	GL	HB $\varnothing$	LE	MR	RG	UX	CRC <sup>1)</sup>	Weight [g]			
[mm]														
25	16.1	8	30 +0.4/-0.2	16	6.6	26	10	20	32	1	84	<b>6059</b>	<b>LBN-20/25</b>	

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													Part No.	Type
For $\varnothing$	CM	EK $\varnothing$	FL	GL	HB $\varnothing$	LE	MR	RG	UX	CRC <sup>1)</sup>	Weight [g]			
[mm]														
25	16.1	8	30 +0.4/-0.2	16	6.6	26	10	20	32	4	82	<b>161863</b>	<b>CRLBN-20/25</b>	

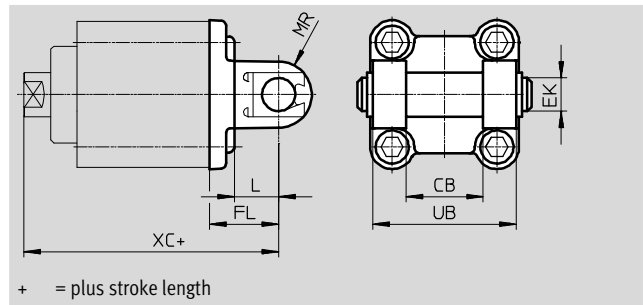
1) Corrosion resistance class CRC 4 to Festo standard FN 940070  
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.

# High-force cylinders ADNH, standard hole pattern

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 and PTFE  
 RoHS-compliant



Dimensions and ordering data									
For $\varnothing$	CB	EK	FL	L	MR	UB	XC <sup>1)</sup>		
[mm]	H14	$\varnothing$ e8	$\pm 0.2$			h14	2	3	4
40	28	12	25	16	12	52	129.6	168.9	208.2
63	40	16	32	21	16	70	146.6	189.0	231.4
100	60	20	41	27	20	110	188.9	240.8	292.7

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

- Number of stroke lengths  
 2 = 2x stroke length  
 3 = 3x stroke length  
 4 = 4x stroke length
- 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

Accessories

FESTO

## Trunnion flange ZNCF/CRZNG

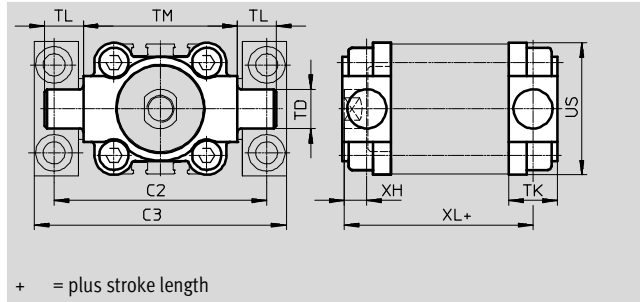
Material:

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	TK	TL	TM	US	XH	XL <sup>1)</sup>		
[mm]			Ø						2	3	4
40	87	105	16	20	16	63	54	8.4±1	114.6	153.9	193.2
63	116	136	20	24	20	90	75	9.3±1.2	126.6	169.0	211.4
100	164	189	25	38	25	132	110	8±1.2	166.9	218.8	270.7

For Ø	Basic version				R3 – High corrosion protection			
	CRC <sup>2)</sup>	Weight	Part No.	Type	CRC <sup>2)</sup>	Weight	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

- Number of stroke lengths  
 2 = 2x stroke length  
 3 = 3x stroke length  
 4 = 4x stroke length
- 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:

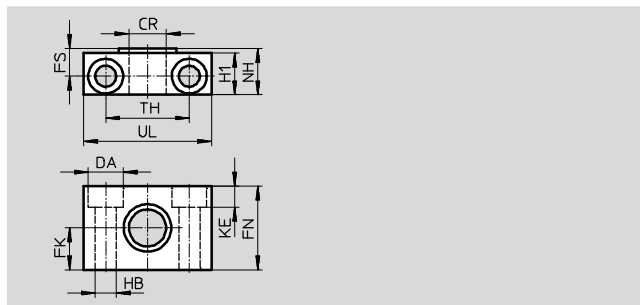
Trunnion support:

Anodised aluminium

Plain bearing: Plastic

Free of copper and PTFE

RoHS-compliant






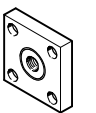





Dimensions and ordering data															
For Ø	CR	DA	FK	FN	FS	H1	HB	KE	NH	TH	UL	CRC <sup>1)</sup>	Weight	Part No.	Type
[mm]	Ø	Ø	Ø				Ø			±0.2			[g]		
40	16	15	18	36	12	18	9	9	21	36	55	2	129	32960	LNZG-40/50
63	20	18	20	40	13	20	11	11	23	42	65	2	178	32961	LNZG-63/80
100	25	20	25	50	16	24.5	14	13	28.5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


- 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.

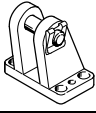
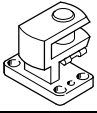
# High-force cylinders ADNH, standard hole pattern

Accessories

Ordering data – Piston rod attachments				Technical data → Internet: piston rod attachment			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
<b>Rod eye SGS</b>				<b>Rod clevis SGA for rod eye SGS</b>			
	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
<b>Rod clevis SG</b>				<b>Self-aligning rod coupler FK</b>			
	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 <sup>1)</sup>
100	6147	SG-M20x1,5	100		6143	FK-M20x1,5 <sup>1)</sup>	
<b>Coupling piece KSG</b>				 Note <sup>1)</sup> 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
<b>Rod eye CRSGS</b>				<b>Rod clevis CRSG</b>			
	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
<b>Self-aligning rod coupler CRFK</b>							
	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](http://www.festo.com)

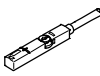
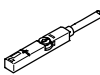
Ordering data – Mounting attachments				Technical data → Internet: clevis foot			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
<b>Clevis foot LBG for rod eye SGS</b>				<b>Right-angle clevis foot LQG for rod eye SGS</b>			
	25	–			25	–	
	40	31762	LBG-40		40	31769	LQG-40
	63	31764	LBG-63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

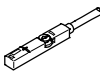


# High-force cylinders ADNH, standard hole pattern



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	
			Plug M8x1, 3-pin	Cable, 2-wire	2.5	543872	SME-8M-ZS-24V-K-2,5-OE
				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

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

## Product Range and Company Overview

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