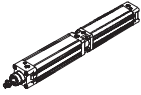
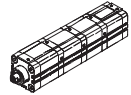
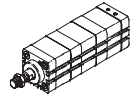


- Force multiplication
- Variant with heat-resistant seals for temperatures up to 150 °C
- Profile slots for proximity sensors

# 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			
	Tandem cylinders						
		ADVUT	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			
	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.

### ADVUT, 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.

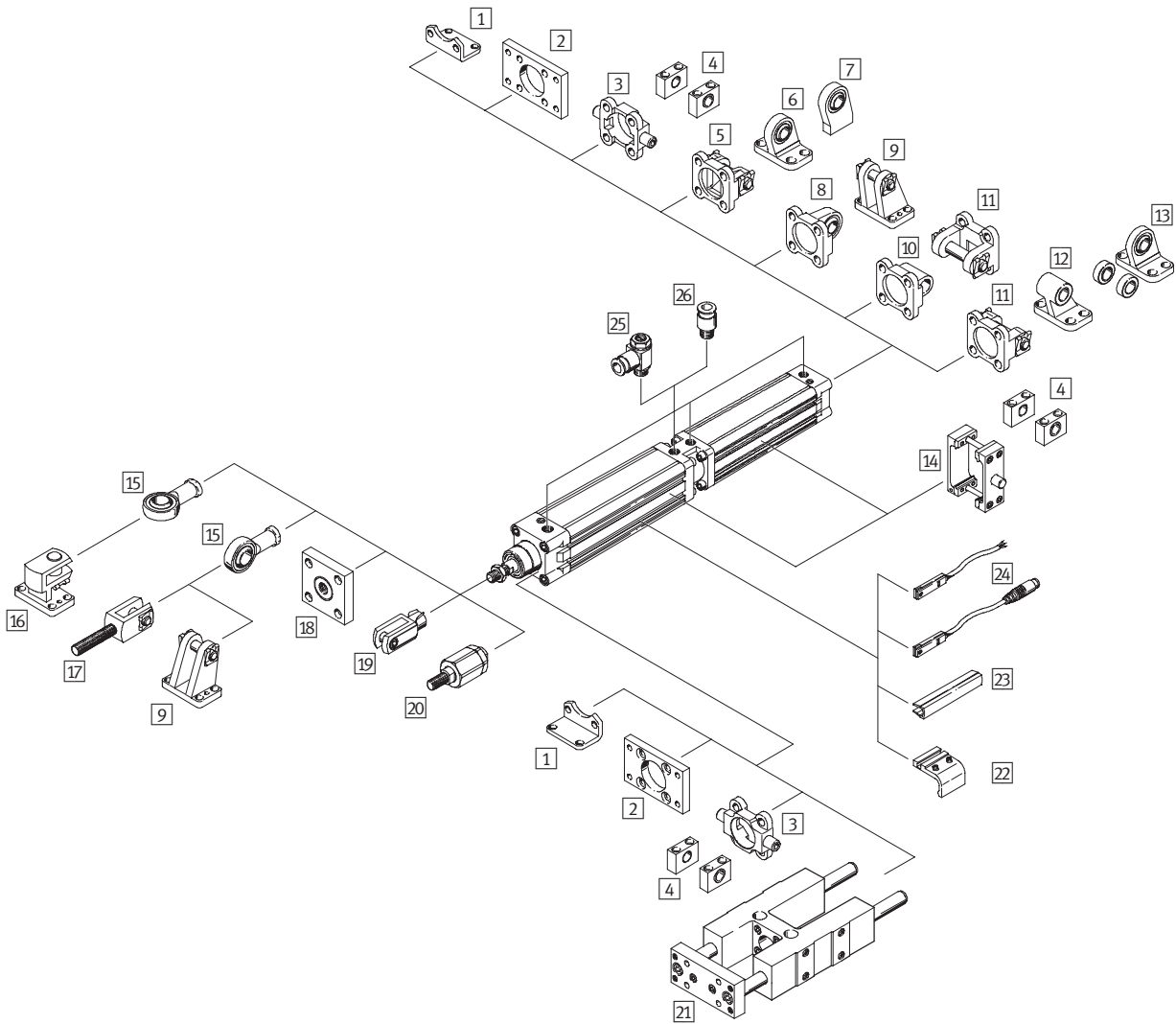
# Tandem/high-force cylinders

Product range overview

Type	Cushioning		Extended male thread K2	Special thread K5	Extended piston rod K8	Heat resistant up to 120 °C S6	→ Page
	Non-adjustable P	Adjustable PPV					
Tandem cylinders							
DNCT	-	■	-	-	-	■	1 / 5.7-4
Tandem cylinders							
ADVUT	■	-	-	-	-	■	1 / 5.7-20
High-force cylinders							
ADNH	■	-	■	■	■	■	1 / 5.7-36

# Tandem cylinders DNCT, standard port pattern

Peripherals overview



Special-function drives  
Tandem / high-force cylinders

5.7

# Tandem cylinders DNCT, standard port pattern

Peripherals overview

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Mounting attachments and accessories		
	Brief description	→ Page
1	Foot mounting HNC	For bearing and end caps 1 / 5.7-10
2	Flange mounting FNC	For bearing or end caps 1 / 5.7-10
3	Trunnion flange ZNCF	For bearing or end caps 1 / 5.7-11
4	Trunnion support LNZG	– 1 / 5.7-13
5	Swivel flange SNC	For end caps 1 / 5.7-13
6	Clevis foot LSNG	With spherical bearing 1 / 5.7-16
7	Clevis foot LSNSG	Weld-on, with spherical bearing 1 / 5.7-16
8	Swivel flange SNCS	With spherical bearing for end caps 1 / 5.7-14
9	Clevis foot LBG	– 1 / 5.7-16
10	Swivel flange SNCL	For end caps 1 / 5.7-15
11	Swivel flange SNCB	For end caps 1 / 5.7-14
12	Clevis foot LNG	– 1 / 5.7-16
13	Clevis foot LSN	With spherical bearing 1 / 5.7-16
14	Trunnion mounting kit ZNCM	For mounting anywhere on the cylinder profile barrel 1 / 5.7-12
15	Rod eye SGS	With spherical bearing 1 / 5.7-17
16	Right-angle clevis foot LQG	– 1 / 5.7-16
17	Rod clevis SGA	With male thread 1 / 5.7-17
18	Coupling piece KSG	For compensating radial deviations 1 / 5.7-17
19	Rod clevis SG	Permits a swivelling movement of the cylinder in one plane 1 / 5.7-17
20	Self-aligning rod coupler FK	For compensating radial and angular deviations 1 / 5.7-17
21	Guide unit FENG	For protecting standard cylinders from torsion at high torque loads 1 / 5.7-18
22	Mounting kit SMB-8-FENG	For proximity sensor SMT-8 when attaching to cylinders in combination with guide unit FENG 1 / 5.7-18
23	Slot cover ABP-5-S	To protect the sensor cable and keep dirt out of the sensor slots 1 / 5.7-19
24	Proximity sensor SME/SMT-8	Can be integrated in the cylinder profile barrel 1 / 5.7-19
25	One-way flow control valve GRLA	To regulate speed 1 / 5.7-17
26	Push-in fitting QS	For connecting compressed air tubing with standard external diameters Volume 3

# Tandem cylinders DNCT, standard port pattern

Type codes



DNCT - 40 - 80 - PPV - A - S6

Type	
Double-acting	
DNCT	Tandem cylinder

Piston Ø [mm]	
40	

Stroke [mm]	
80	

Cushioning	
PPV	Pneumatic cushioning adjustable at both ends

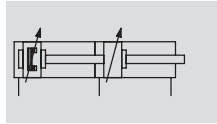
Position sensing	
A	For proximity sensing

Variant	
S6	Heat-resistant up to 120 °C

# Tandem cylinders DNCT, standard port pattern

Technical data

## Function



- Ø - Diameter  
32 ... 125 mm

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

Ø 63 ... 125:  
3 ... 500 mm

-  - [www.festo.com/en/Spare\\_parts\\_service](http://www.festo.com/en/Spare_parts_service)

## 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	Filtered compressed air, lubricated or unlubricated						
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 Ø	32	40	50	63	80	100	125
Theoretical force at 6 bar, advancing	898	1,387	2,168	3,552	5,737	9,130	14,244
Theoretical force at 6 bar, retracting	830	1,266	1,980	3,364	5,442	8,836	13,762
Max. impact energy at end positions	0.1	0.2	0.2	0.5	0.9	1.2	5

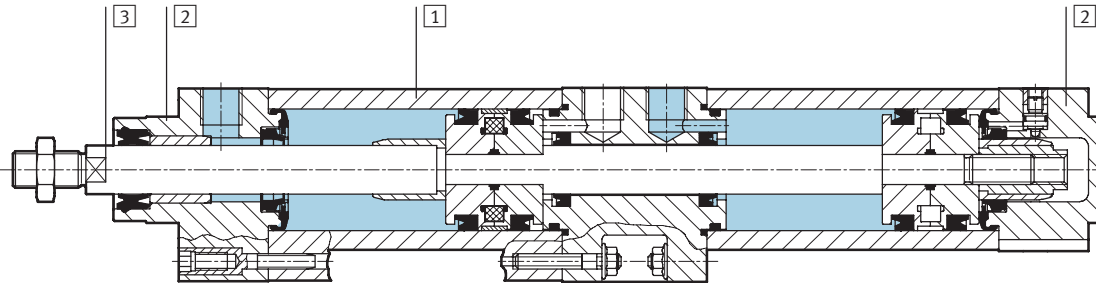
# Tandem cylinders DNCT, standard port pattern

Technical data



## Materials

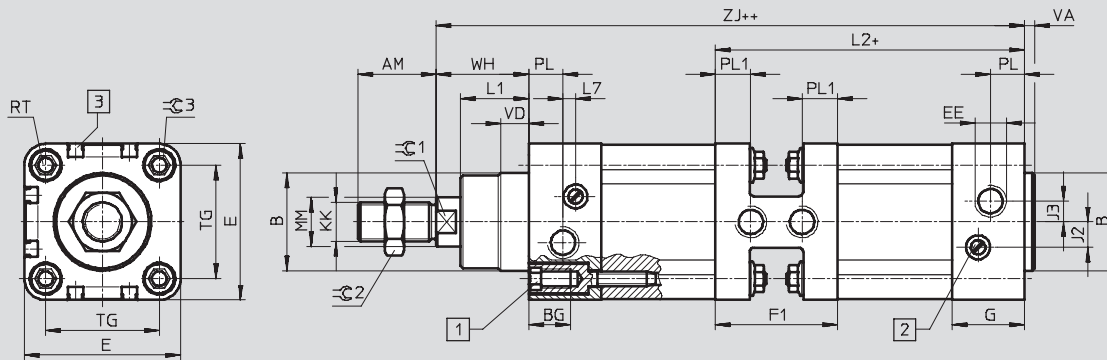
Sectional view



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

## Dimensions

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



- 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

FESTO

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>

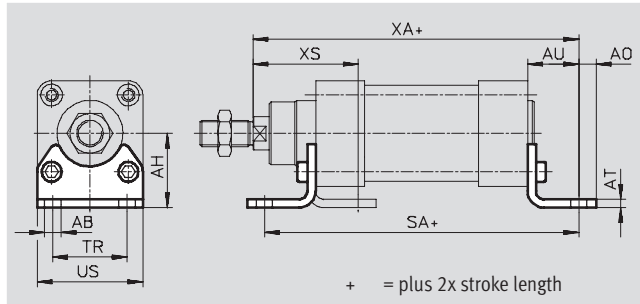
# Tandem cylinders DNCT, standard port pattern

Accessories



## Foot mounting HNC

Material:  
Galvanised steel  
Free of copper, PTFE and silicone

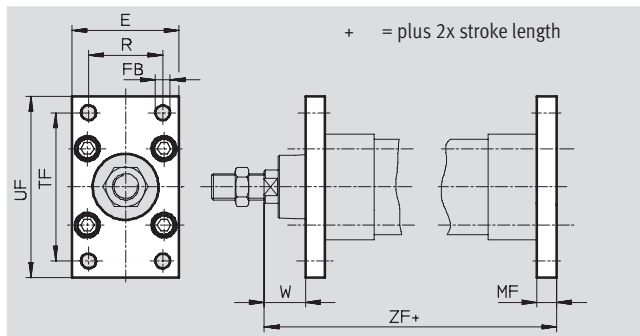


Dimensions and ordering data														
For $\varnothing$	AB	AH	AO	AT	AU	SA	TR	US	XA	XS	CRC <sup>1)</sup>	Weight	Part No.	Type
[mm]	$\varnothing$											[g]		
32	7	32	6.5	4	24	221.4	32	45	223.6	45	2	135	174 369	HNC-32
40	10	36	9	4	28	255.4	36	54	257.4	53	2	180	174 370	HNC-40
50	10	45	9.5	5	32	267.4	45	64	273.1	62	2	325	174 371	HNC-50
63	10	50	12.5	5	32	299.7	50	75	305.9	63	2	405	174 372	HNC-63
80	12	63	15	6	41	337.4	63	93	342.6	81	2	820	174 373	HNC-80
100	14.5	71	17.5	6	41	363.2	75	110	372.3	86	2	1 000	174 374	HNC-100
125	16.5	90	22	8	45	397	90	131	417.3	102	2	1 840	174 375	HNC-125

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

## Flange mounting FNC

Material:  
Galvanised steel  
Free of copper, PTFE and silicone



Dimensions and ordering data													
For $\varnothing$	E	FB	MF	R	TF	UF	W	ZF	CRC <sup>1)</sup>	Weight	Part No.	Type	
[mm]		$\varnothing$ H13								[g]			
32	45	7	10	32	64	80	16	209.6	2	240	174 376	FNC-32	
40	54	9	10	36	72	90	20	239.4	2	280	174 377	FNC-40	
50	65	9	12	45	90	110	25	253.1	2	520	174 378	FNC-50	
63	75	9	12	50	100	120	25	285.9	2	690	174 379	FNC-63	
80	93	12	16	63	126	150	30	317.6	2	1 650	174 380	FNC-80	
100	110	14	16	75	150	175	35	347.3	2	2 400	174 381	FNC-100	
125	132	16	20	90	180	210	45	392.3	2	3 750	174 382	FNC-125	

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

Special-function drives  
Tandem/high-force cylinders

5.7

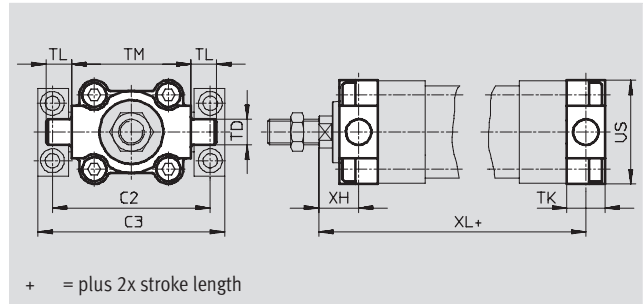
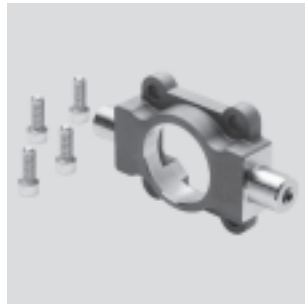
# Tandem cylinders DNCT, standard port pattern

Accessories



## Trunnion flange ZNCF

Material:  
Corrosion resistant cast steel  
Free of copper, PTFE and silicone



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	130	174 411	ZNCF-32
40	87	105	16	20	16	63	54	20	239.4	2	240	174 412	ZNCF-40
50	99	117	16	24	16	75	64	25	253.1	2	390	174 413	ZNCF-50
63	116	136	20	24	20	90	75	25	285.9	2	600	174 414	ZNCF-63
80	136	156	20	28	20	110	93	32	315.6	2	1 150	174 415	ZNCF-80
100	164	189	25	38	25	132	110	32	350.3	2	2 030	174 416	ZNCF-100
125	192	217	25	50	25	160	131	40	397.3	2	3 490	174 417	ZNCF-125

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

# Tandem cylinders DNCT, standard port pattern

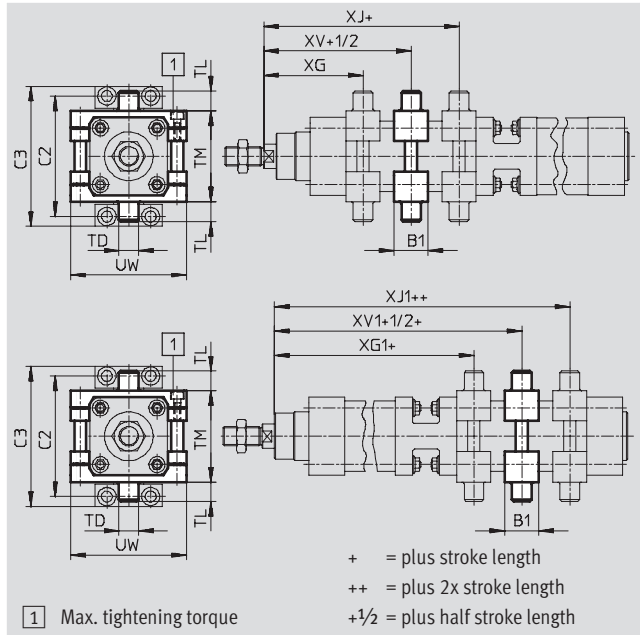
Accessories



## Trunnion mounting kit ZNCM

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

Material:  
Tempered steel



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 [Nm]	CRC <sup>1)</sup>	Weight [g]	Part No.	Type
[mm]									
32	80.4	159.5	73.4	152.5	4+1	2	210	163 525	ZNCM-32
40	89.9	183.8	82.8	176.7	8+1	2	385	163 526	ZNCM-40
50	97.4	194.5	90.9	188	8+2	2	595	163 527	ZNCM-50
63	103.4	217.8	98.9	213.3	18+2	2	890	163 528	ZNCM-63
80	117.9	243.7	111	236.8	28+2	2	1 450	163 529	ZNCM-80
100	129.2	268.5	121.1	260.4	28+2	2	2 045	163 530	ZNCM-100
125	158.8	302.6	146.9	290.7	40+2	2	2 940	163 531	ZNCM-125

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

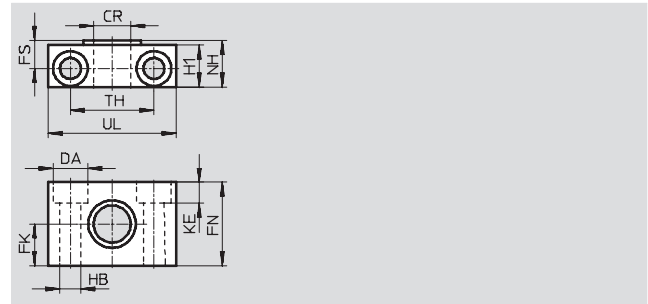
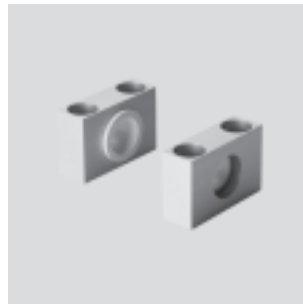
# Tandem cylinders DNCT, standard port pattern



Accessories

## Trunnion support LNZG

Material:  
Trunnion support:  
Anodised aluminium  
Plain bearing: Plastic  
Free of copper, PTFE and silicone

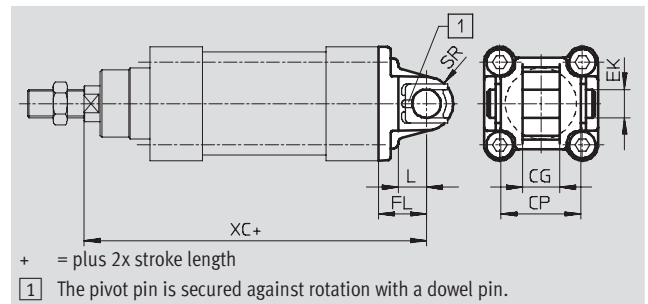


Dimensions and ordering data														Weight	Part No.	Type
For $\varnothing$	CR	DA	FK	FN	FS	H1	HB	KE	NH	TH	UL	CRC <sup>1)</sup>	Weight	Part No.	Type	
[mm]	$\varnothing$ D11	$\varnothing$ H13	$\varnothing$ $\pm 0.1$				$\varnothing$ H13			$\pm 0.2$			[g]			
32	12	11	15	30	10.5	15	6.6	6.8	18	32	46	2	125	32 959	LNZG-32	
40, 50	16	15	18	36	12	18	9	9	21	36	55	2	400	32 960	LNZG-40/50	
63, 80	20	18	20	40	13	20	11	11	23	42	65	2	480	32 961	LNZG-63/80	
100, 125	25	20	25	50	16	24.5	14	13	28.5	50	75	2	960	32 962	LNZG-100/125	

1) Corrosion resistance class 2 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

## Swivel flange SNC

Material:  
Die-cast aluminium



Dimensions and ordering data										Weight	Part No.	Type
For $\varnothing$	CG	CP	EK	FL	L	SR	XC	CRC <sup>1)</sup>	Weight	Part No.	Type	
[mm]	H14	h14	$\varnothing$ h9	$\pm 0.2$					[g]			
32	14	34	10	22	13	10	221.6	2	90	174 383	SNC-32	
40	16	40	12	25	16	12	254.4	2	120	174 384	SNC-40	
50	21	45	16	27	16	12	268.1	2	240	174 385	SNC-50	
63	21	51	16	32	21	16	305.9	2	320	174 386	SNC-63	
80	25	65	20	36	22	16	337.6	2	625	174 387	SNC-80	
100	25	75	20	41	27	20	372.3	2	830	174 388	SNC-100	
125	37	97	30	50	30	25	422.3	2	1 785	174 389	SNC-125	

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

Special-function drives  
Tandem/high-force cylinders  
**5.7**

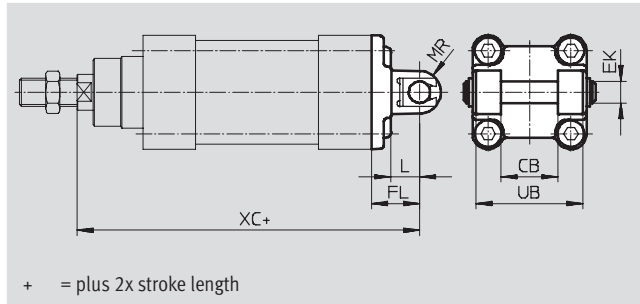
# Tandem cylinders DNCT, standard port pattern

Accessories



## Swivel flange SNCB

Material:  
Die-cast aluminium  
Free of copper, PTFE and silicone

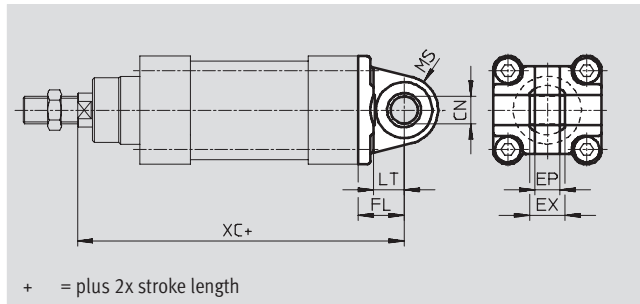
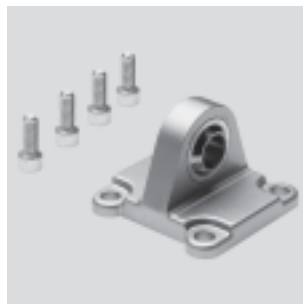


Dimensions and ordering data												
For $\varnothing$	CB	EK	FL	L	ML	MR	UB	XC	CRC <sup>1)</sup>	Weight	Part No.	Type
[mm]	H14	$\varnothing$ e8	$\pm 0.2$				h14			[g]		
32	26	10	22	13	55	8.5	45	221.6	2	100	174 390	SNCB-32
40	28	12	25	16	63	12	52	254.4	2	150	174 391	SNCB-40
50	32	12	27	16	71	12	60	268.1	2	225	174 392	SNCB-50
63	40	16	32	21	83	16	70	305.9	2	365	174 393	SNCB-63
80	50	16	36	22	103	16	90	337.6	2	610	174 394	SNCB-80
100	60	20	41	27	127	20	110	372.3	2	925	174 395	SNCB-100
125	70	25	50	30	148	25	130	422.3	2	1 785	174 396	SNCB-125

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

## Swivel flange SNCS

Material:  
Die-cast aluminium



Dimensions and ordering data											
For $\varnothing$	CN	EP	EX	FL	LT	MS	XC	CRC <sup>1)</sup>	Weight	Part No.	Type
[mm]	$\varnothing$ H7	$\pm 0.2$		$\pm 0.2$					[g]		
32	10	10.5	14	22	13	15	221.6	2	85	174 397	SNCS-32
40	12	12	16	25	16	17	254.4	2	125	174 398	SNCS-40
50	16	15	21	27	16	20	268.1	2	210	174 399	SNCS-50
63	16	15	21	32	21	22	305.9	2	280	174 400	SNCS-63
80	20	18	25	36	22	27	337.6	2	540	174 401	SNCS-80
100	20	18	25	41	27	29	372.3	2	700	174 402	SNCS-100
125	30	25	37	50	30	39	422.3	2	1 410	174 403	SNCS-125

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

Special-function drives  
Tandem/high-force cylinders  
5.7

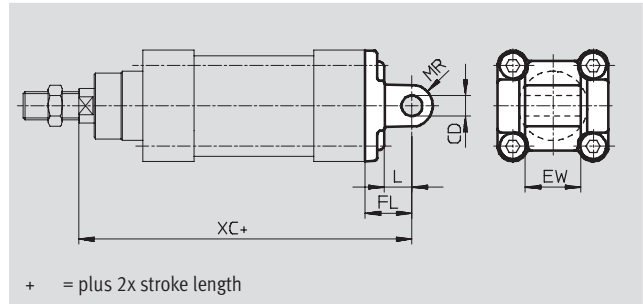
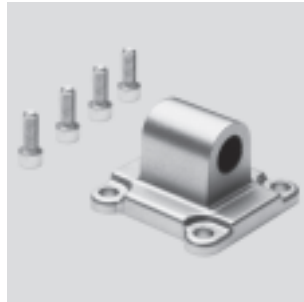
# Tandem cylinders DNCT, standard port pattern

Accessories



## Swivel flange SNCL

Material:  
Die-cast aluminium  
Free of copper, PTFE and silicone



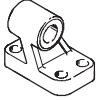
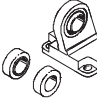
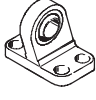

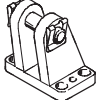
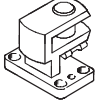
Dimensions and ordering data										
For Ø	CD	EW	FL	L	MR	XC	CRC <sup>1)</sup>	Weight	Part No.	Type
[mm]	Ø	-0.2/-0.6	±0.2					[g]		
32	10	26	22	13	10	221.6	2	75	174 404	SNCL-32
40	12	28	25	16	12	254.4	2	100	174 405	SNCL-40
50	12	32	27	16	12	268.1	2	160	174 406	SNCL-50
63	16	40	32	21	16	305.9	2	250	174 407	SNCL-63
80	16	50	36	22	16	337.6	2	405	174 408	SNCL-80
100	20	60	41	27	20	372.3	2	655	174 409	SNCL-100
125	25	70	50	30	20	422.3	2	1 245	174 410	SNCL-125

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

# Tandem cylinders DNCT, standard port pattern

Accessories

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


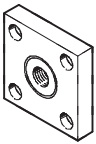
Ordering data – Mounting attachments				Technical data → 1 / 10.1-2			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
<b>Clevis foot LNG</b>				<b>Clevis foot LSN</b>			
	32	33 890	LNG-32		32	5 561	LSN-32
	40	33 891	LNG-40		40	5 562	LSN-40
	50	33 892	LNG-50		50	5 563	LSN-50
	63	33 893	LNG-63		63	5 564	LSN-63
	80	33 894	LNG-80		80	5 565	LSN-80
	100	33 895	LNG-100		100	5 566	LSN-100
	125	33 896	LNG-125		125	6 987	LSN-125
<b>Clevis foot LSNG</b>				<b>Clevis foot LSNSG</b>			
	32	31 740	LSNG-32		32	31 747	LSNSG-32
	40	31 741	LSNG-40		40	31 748	LSNSG-40
	50	31 742	LSNG-50		50	31 749	LSNSG-50
	63	31 743	LSNG-63		63	31 750	LSNSG-63
	80	31 744	LSNG-80		80	31 751	LSNSG-80
	100	31 745	LSNG-100		100	31 752	LSNSG-100
	125	31 746	LSNG-125		125	31 753	LSNSG-125
<b>Clevis foot LBG</b>				<b>Right-angle clevis foot LQG</b>			
	32	31 761	LBG-32		32	31 768	LQG-32
	40	31 762	LBG-40		40	31 769	LQG-40
	50	31 763	LBG-50		50	31 770	LQG-50
	63	31 764	LBG-63		63	31 771	LQG-63
	80	31 765	LBG-80		80	31 772	LQG-80
	100	31 766	LBG-100		100	31 773	LQG-100
	125	31 767	LBG-125		125	31 774	LQG-125

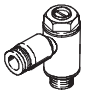


# Tandem cylinders DNCT, standard port pattern

Accessories

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Ordering data – Piston rod attachments				Technical data → 1 / 10.3-2			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
<b>Rod eye SGS</b>				<b>Rod clevis SGA</b>			
	32	9 261	SGS-M10x1,25		32	32 954	SGA-M10x1,25
	40	9 262	SGS-M12x1,25		40	10 767	SGA-M12x1,25
	50	9 263	SGS-M16x1,5		50	10 768	SGA-M16x1,5
	63				63		
	80	9 264	SGS-M20x1,5		80	10 769	SGA-M20x1,5
	100				100		
	125	10 774	SGS-M27x2		125	10 770	SGA-M27x2
<b>Rod clevis SG</b>				<b>Self-aligning rod coupler FK</b>			
	32	6 144	SG-M10x1,25		32	6 140	FK-M10x1,25
	40	6 145	SG-M12x1,25		40	6 141	FK-M12x1,25
	50	6 146	SG-M16x1,5		50	6 142	FK-M16x1,5
	63				63		
	80	6 147	SG-M20x1,5		80	6 143	FK-M20x1,5
	100				100		
	125	14 987	SG-M27x2-B		125	10 485	FK-M27x2
<b>Coupling piece KSG</b>							
	32	32 963	KSG-M10x1,25				
	40	32 964	KSG-M12x1,25				
	50	32 965	KSG-M16x1,5				
	63						
	80	32 966	KSG-M20x1,5				
	100						
	125	32 967	KSG-M27x2				

Ordering data – One-way flow control valves				Technical data → Volume 2	
	Connection		Material	Part No.	Type
	Thread	For tubing O.D.			
	G <sup>1</sup> / <sub>8</sub>	3	Metal design	193 142	GRLA- <sup>1</sup> / <sub>8</sub> -QS-3-D
		4		193 143	GRLA- <sup>1</sup> / <sub>8</sub> -QS-4-D
		6		193 144	GRLA- <sup>1</sup> / <sub>8</sub> -QS-6-D
		8		193 145	GRLA- <sup>1</sup> / <sub>8</sub> -QS-8-D
	G <sup>1</sup> / <sub>4</sub>	6		193 146	GRLA- <sup>1</sup> / <sub>4</sub> -QS-6-D
		8		193 147	GRLA- <sup>1</sup> / <sub>4</sub> -QS-8-D
		10		193 148	GRLA- <sup>1</sup> / <sub>4</sub> -QS-10-D
	G <sup>3</sup> / <sub>8</sub>	6		193 149	GRLA- <sup>3</sup> / <sub>8</sub> -QS-6-D
		8		193 150	GRLA- <sup>3</sup> / <sub>8</sub> -QS-8-D
		10		193 151	GRLA- <sup>3</sup> / <sub>8</sub> -QS-10-D
	G <sup>1</sup> / <sub>2</sub>	12		193 152	GRLA- <sup>1</sup> / <sub>2</sub> -QS-12-D

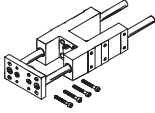
Special-function drives  
Tandem/high-force cylinders

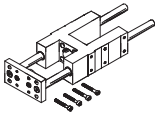
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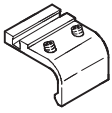
# Tandem cylinders DNCT, standard port pattern

Accessories

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Ordering data – Guide units for fixed strokes (recirculating ball bearing guide only)				Technical data → 1 / 10.4-2		
	Stroke [mm]	Part No.	Type	Stroke [mm]	Part No.	Type
	For Ø 32 mm			For Ø 40 mm		
	10 ... 50	34 493	FENG-32-50-KF	10 ... 50	34 499	FENG-40-50-KF
	10 ... 100	34 494	FENG-32-100-KF	10 ... 100	34 500	FENG-40-100-KF
	10 ... 160	34 495	FENG-32-160-KF	10 ... 160	34 501	FENG-40-160-KF
	10 ... 200	34 496	FENG-32-200-KF	10 ... 200	34 502	FENG-40-200-KF
	10 ... 250	150 289	FENG-32-250-KF	10 ... 250	34 503	FENG-40-250-KF
	10 ... 320	34 497	FENG-32-320-KF	10 ... 320	34 504	FENG-40-320-KF
	10 ... 400	150 290	FENG-32-400-KF	10 ... 400	150 291	FENG-40-400-KF
	10 ... 500	34 498	FENG-32-500-KF	10 ... 500	34 505	FENG-40-500-KF
	For Ø 50 mm			For Ø 63 mm		
	10 ... 50	34 506	FENG-50-50-KF	10 ... 50	34 513	FENG-63-50-KF
	10 ... 100	34 507	FENG-50-100-KF	10 ... 100	34 514	FENG-63-100-KF
	10 ... 160	34 508	FENG-50-160-KF	10 ... 160	34 515	FENG-63-160-KF
	10 ... 200	34 509	FENG-50-200-KF	10 ... 200	34 516	FENG-63-200-KF
	10 ... 250	34 510	FENG-50-250-KF	10 ... 250	34 517	FENG-63-250-KF
	10 ... 320	34 511	FENG-50-320-KF	10 ... 320	34 518	FENG-63-320-KF
	10 ... 400	150 292	FENG-50-400-KF	10 ... 400	34 519	FENG-63-400-KF
	10 ... 500	34 512	FENG-50-500-KF	10 ... 500	34 520	FENG-63-500-KF
	For Ø 80 mm			For Ø 100 mm		
	10 ... 50	34 521	FENG-80-50-KF	10 ... 50	34 529	FENG-100-50-KF
	10 ... 100	34 522	FENG-80-100-KF	10 ... 100	34 530	FENG-100-100-KF
	10 ... 160	34 523	FENG-80-160-KF	10 ... 160	34 531	FENG-100-160-KF
	10 ... 200	34 524	FENG-80-200-KF	10 ... 200	34 532	FENG-100-200-KF
	10 ... 250	34 525	FENG-80-250-KF	10 ... 250	34 533	FENG-100-250-KF
	10 ... 320	34 526	FENG-80-320-KF	10 ... 320	34 534	FENG-100-320-KF
	10 ... 400	34 527	FENG-80-400-KF	10 ... 400	34 535	FENG-100-400-KF
	10 ... 500	34 528	FENG-80-500-KF	10 ... 500	34 536	FENG-100-500-KF

Ordering data – Guide units for variable strokes				Technical data → 1 / 10.4-2		
	For Ø [mm]	Stroke [mm]	With recirculating ball bearing guide	With plain bearing guide		
			Part No.	Type	Part No.	Type
	32	10 ... 500	34 487	FENG-32-...-KF	34 481	FENG-32-...
	40	10 ... 500	34 488	FENG-40-...-KF	34 482	FENG-40-...
	50	10 ... 500	34 489	FENG-50-...-KF	34 483	FENG-50-...
	63	10 ... 500	34 490	FENG-63-...-KF	34 484	FENG-63-...
	80	10 ... 500	34 491	FENG-80-...-KF	34 485	FENG-80-...
	100	10 ... 500	34 492	FENG-100-...-KF	34 486	FENG-100-...

Ordering data – Mounting kits for proximity sensors SMT-8		Technical data → <a href="http://www.festo.com/catalogue/smb">www.festo.com/catalogue/smb</a>	
	For Ø [mm]	Part No.	Type
	32	175 705	SMB-8-FENG-32/40
	40		
	50	175 706	SMB-8-FENG-50/63
	63		
	80	175 707	SMB-8-FENG-80/100
	100		

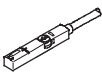

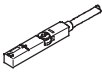
Special-function drives  
Tandem/high-force cylinders

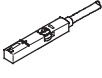


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# Tandem cylinders DNCT, standard port pattern

Accessories

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Ordering data – Proximity sensors for T-slot, magneto-resistive					Technical data → <a href="http://www.festo.com/catalogue/sm">www.festo.com/catalogue/sm</a>	
	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	PNP	Cable, 3-wire	2.5	<b>543 867</b>	<b>SMT-8M-PS-24V-K-2,5-OE</b>
			Plug M8x1, 3-pin	0.3	<b>543 866</b>	<b>SMT-8M-PS-24V-K-0,3-M8D</b>
			Plug M12x1, 3-pin	0.3	<b>543 869</b>	<b>SMT-8M-PS-24V-K-0,3-M12</b>
		NPN	Cable, 3-wire	2.5	<b>543 870</b>	<b>SMT-8M-NS-24V-K-2,5-OE</b>
Plug M8x1, 3-pin	0.3		<b>543 871</b>	<b>SMT-8M-NS-24V-K-0,3-M8D</b>		
	Insertable in the slot lengthwise, flush with the cylinder profile	PNP	Cable, 3-wire	2.5	<b>175 436</b>	<b>SMT-8-PS-K-LED-24-B</b>
			Plug M8x1, 3-pin	0.3	<b>175 484</b>	<b>SMT-8-PS-S-LED-24-B</b>
<b>N/C contact</b>						
	Insertable in the slot from above, flush with cylinder profile	PNP	Cable, 3-wire	7.5	<b>543 873</b>	<b>SMT-8M-PO-24V-K7,5-OE</b>

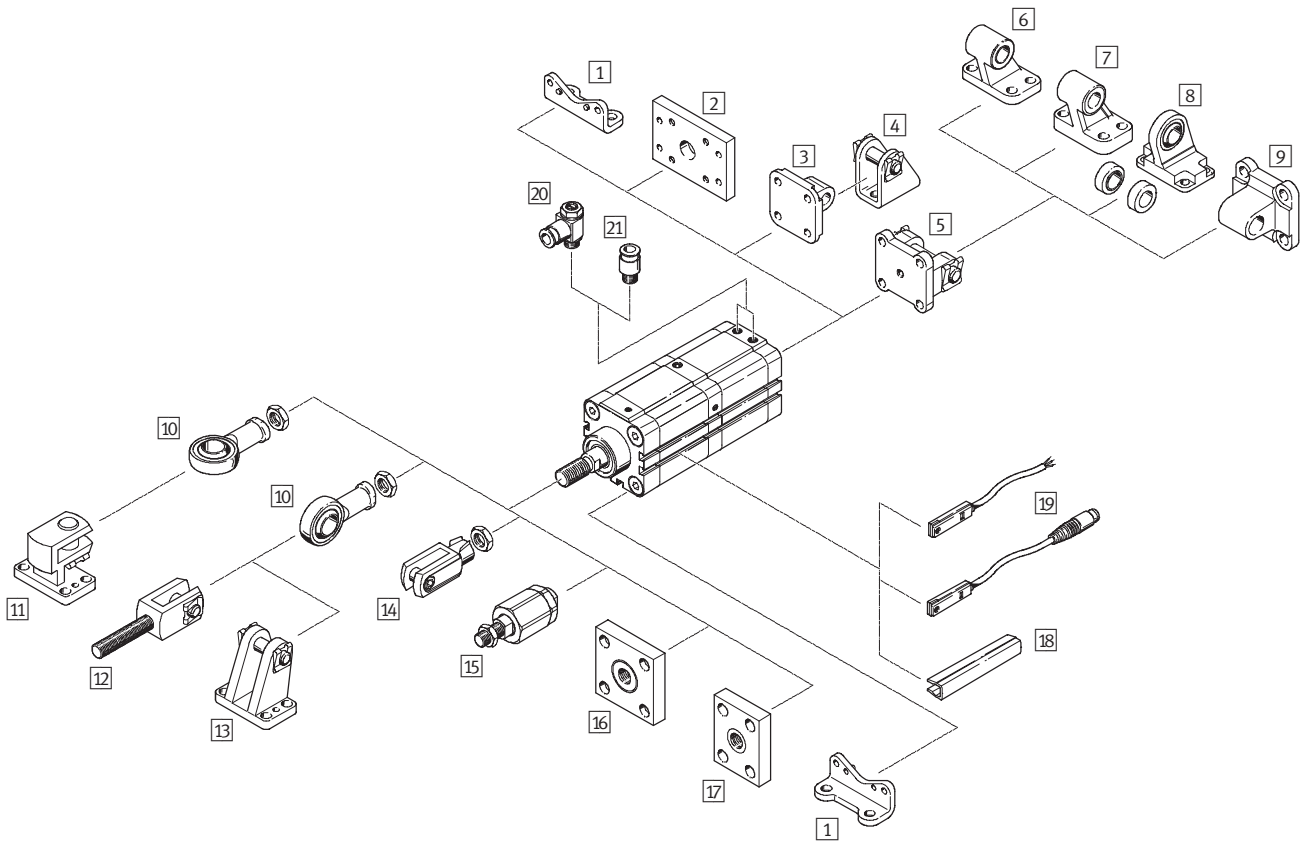
Ordering data – Proximity sensors for T-slot, magnetic reed					Technical data → <a href="http://www.festo.com/catalogue/sm">www.festo.com/catalogue/sm</a>		
	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type	
<b>N/O contact</b>							
	Insertable in the slot from above, flush with cylinder profile	Contacting	Cable, 3-wire	2.5	<b>543 862</b>	<b>SME-8M-DS-24V-K-2,5-OE</b>	
				5.0	<b>543 863</b>	<b>SME-8M-DS-24V-K-5,0-OE</b>	
			Plug M8x1, 3-pin	Cable, 3-wire	2.5	<b>543 872</b>	<b>SME-8M-ZS-24V-K-2,5-OE</b>
				0.3	<b>543 861</b>	<b>SME-8M-DS-24V-K-0,3-M8D</b>	
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	<b>150 855</b>	<b>SME-8-K-LED-24</b>	
				0.3	<b>150 857</b>	<b>SME-8-S-LED-24</b>	
<b>N/C contact</b>							
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	7.5	<b>160 251</b>	<b>SME-8-0-K-LED-24</b>	

Ordering data – Connecting cables				Technical data → <a href="http://www.festo.com/catalogue/nebu">www.festo.com/catalogue/nebu</a>	
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part No.	Type
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	<b>541 333</b>	<b>NEBU-M8G3-K-2.5-LE3</b>
			5	<b>541 334</b>	<b>NEBU-M8G3-K-5-LE3</b>
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	<b>541 363</b>	<b>NEBU-M12G5-K-2.5-LE3</b>
			5	<b>541 364</b>	<b>NEBU-M12G5-K-5-LE3</b>
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	<b>541 338</b>	<b>NEBU-M8W3-K-2.5-LE3</b>
			5	<b>541 341</b>	<b>NEBU-M8W3-K-5-LE3</b>
	Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	<b>541 367</b>	<b>NEBU-M12W5-K-2.5-LE3</b>
			5	<b>541 370</b>	<b>NEBU-M12W5-K-5-LE3</b>

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

# Tandem cylinders ADVUT

Peripherals overview



# Tandem cylinders ADVUT

Peripherals overview

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Mounting attachments and accessories					
	Brief description	Ø 25	Ø 40, 63, 100	→ Page	
1	Foot mounting HUA	For bearing and end caps	-	■	1 / 5.7-29
2	Flange mounting FUA	For end caps	■	■	1 / 5.7-30
3	Swivel flange SUA for Ø 25	For end caps	■	-	1 / 5.7-31
4	Clevis foot LBN	-	■	■	1 / 5.7-32
5	Swivel flange SUA for Ø 40, 63, 100	For end caps	-	■	1 / 5.7-31
6	Clevis foot LN	-	-	■	1 / 5.7-32
7	Clevis foot LNG	-	-	■	1 / 5.7-32
8	Clevis foot LSN	With spherical bearing	-	■	1 / 5.7-32
9	Swivel flange SNCL	-	-	■	1 / 5.7-32
10	Rod eye SGS	With spherical bearing	■	■	1 / 5.7-32
11	Right-angle clevis foot LQG	-	-	■	1 / 5.7-32
12	Rod clevis SGA	With male thread	■	■	1 / 5.7-32
13	Clevis foot LBG	-	-	■	1 / 5.7-32
14	Rod clevis SG	Permits a swivelling movement of the cylinder in one plane	■	■	1 / 5.7-32
15	Self-aligning rod coupler FK	For compensating radial and angular deviations	■	■	1 / 5.7-32
16	Coupling piece KSG	For compensating radial deviations	■	■	1 / 5.7-32
17	Coupling piece KSZ	For cylinders with a non-rotating piston rod to compensate for radial deviations	■	■	1 / 5.7-32
18	Slot cover ABP-5-S	To protect the sensor cable and keep dirt out of the sensor slots	■	■	1 / 5.7-33
19	Proximity sensor SME/SMT-8	Can be integrated in the cylinder profile barrel	■	■	1 / 5.7-33
20	One-way flow control valve GRLA	To regulate speed	■	■	1 / 5.7-35
21	Push-in fitting QS	For connecting compressed air tubing with standard external diameters	■	■	Volume 3

# Tandem cylinders ADVUT

Type codes



ADVUT - 40 - 80 - A - P - A -

Type	
Double-acting	
ADVUT	Tandem cylinders

Piston Ø [mm]	
40	

Stroke [mm]	
80	

Piston rod thread	
I	Female thread
A	Male thread

Cushioning	
P	Flexible cushioning rings/plates at both ends

Position sensing	
A	For proximity sensing

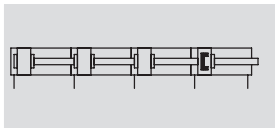
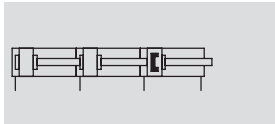
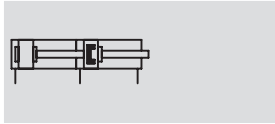
Variant	
S6	Heat-resistant up to 120 °C

# Tandem cylinders ADVUT

Technical data

FESTO

## Function



## Variants



S6



- - Diameter  
25 ... 100 mm

- - Stroke length  
1 ... 150 mm

- - [www.festo.com/en/  
Spare\\_parts\\_service](http://www.festo.com/en/Spare_parts_service)

General technical data					
Piston Ø		25	40	63	100
Pneumatic connection		M5	M5	G $\frac{1}{8}$	G $\frac{1}{4}$
End of piston rod	Female thread	M5	M8	M10	M12
	Male thread	M10x1.25	M12x1.25	M16x1.5	M20x1.5
Constructional design		Piston			
		Piston rod			
		Cylinder barrel			
Cushioning		Flexible cushioning rings/plates at both ends			
Position sensing		For proximity sensing			
Type of mounting		With female thread			
		Via accessories			
Mounting position		Any			

Operating conditions					
Piston Ø		25	40	63	100
Operating medium		Filtered compressed air, lubricated or unlubricated			
Operating pressure [bar]	2 cylinders	1.1 ... 10		0.9 ... 10	
	3 cylinders	1.4 ... 10		1.2 ... 10	
	4 cylinders	1.7 ... 10		1.5 ... 10	

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

# Tandem cylinders ADVUT

Technical data

FESTO

Forces [N] and impact energy [J]					
Piston Ø		25	40	63	100
Theoretical force at 6 bar, advancing <sup>1)</sup>	2 cylinders	542	1 387	3 552	9 130
	3 cylinders	789	2 020	5 234	13 548
	4 cylinders	1 037	2 653	6 916	17 966
Theoretical force at 6 bar, retracting		247	633	1 682	4 418
Max. impact energy at end positions		0.10	0.52	0.70	1.00

1) The force of the cylinders is only available up to 3 mm before the end position

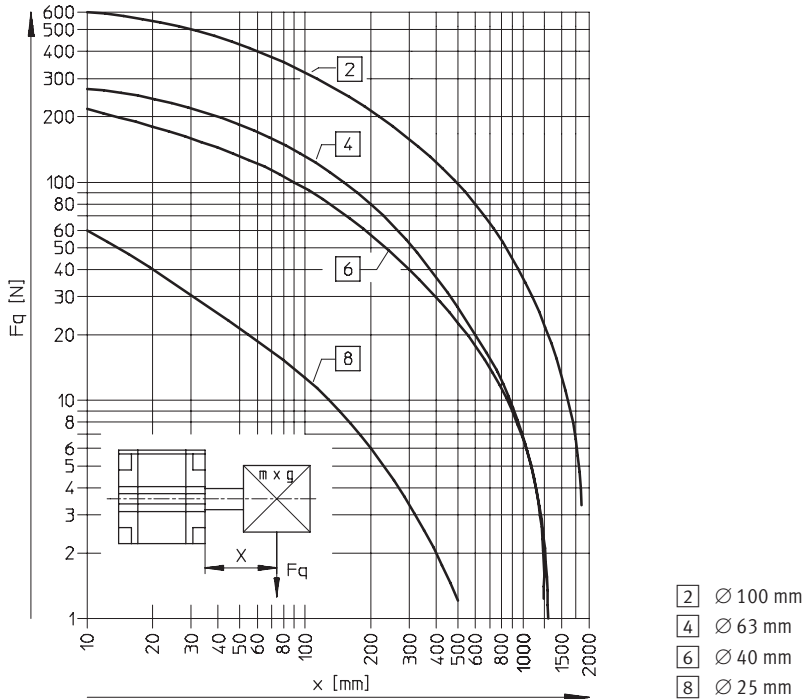
Weights [g]					
Piston Ø		25	40	63	100
<b>2 cylinders</b>					
Product weight at 0 mm stroke		375	825	1 200	5 250
Additional weight per 10 mm stroke		36	70	136	200
Moving load at 0 mm stroke		52	126	268	1 228
Additional load per 10 mm stroke		6	12	21	38
<b>3 cylinders</b>					
Product weight at 0 mm stroke		500	1 100	1 600	7 000
Additional weight per 10 mm stroke		36	69	134	200
Moving load at 0 mm stroke		78	189	402	1 842
Additional load per 10 mm stroke		6	11	19	38
<b>4 cylinders</b>					
Product weight at 0 mm stroke		625	1 375	2 000	8 750
Additional weight per 10 mm stroke		36	69	133	200
Moving load at 0 mm stroke		104	252	536	2 456
Additional load per 10 mm stroke		6	11	18	38



# Tandem cylinders ADVUT

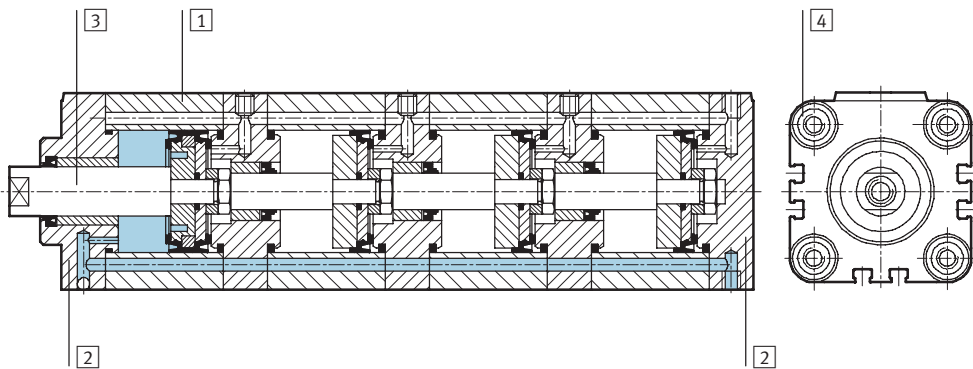
Technical data

## Max. lateral force $F_q$ as a function of projection $x$



## Materials

Sectional view



Tandem cylinder	Basic version	S6
1 Cylinder barrel	Wrought aluminium alloy	Wrought aluminium alloy
2 Bearing and end cap	Wrought aluminium alloy	Wrought aluminium alloy
3 Piston rod	$\varnothing$ 25: High-alloy stainless steel $\varnothing$ 40, 63, 100: High-alloy steel	High-alloy stainless steel High-alloy steel
4 Flange screws	Tempered steel	Tempered steel
- Seals	Polyurethane, nitrile rubber	Fluorocarbon rubber

# Tandem cylinders ADVUT

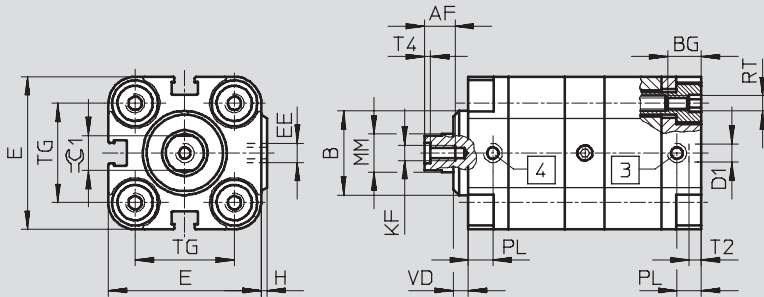
Technical data

FESTO

## Dimensions – Basic cylinders

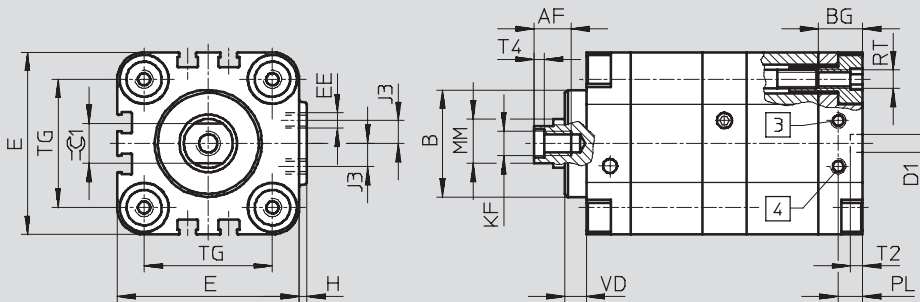
Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

Ø 25



- 3 Connection for cylinder advancing
- 4 Connection for cylinder retracting

Ø 40, 63, 100



- 3 Connection for cylinder advancing
- 4 Connection for cylinder retracting

Ø	AF	B Ø	BG	D1 Ø H9	E	EE	H	J3	KF
25	10	22	19±0.5	6	40	M5	1.5	–	M5
40	12	35	22.2±0.5	6	60	M5	2.5	7.5	M8
63	16	42	26.5±0.5	8	87	G1/8	4	10.5	M10
100	20	55	33±0.5	8	128	G1/4	5	14.5	M12

Ø	MM Ø	PL	RT	T2	T4	TG	VD	≈C1 h13
25	10	8	M5	4	2	26	4	9
40	16	8	M6	4	3.3	42	7	13
63	20	8	M10	4	4.7	62	11.5	17
100	25	10.5	M10	4	6.1	103	15	22

# Tandem cylinders ADVUT

Technical data

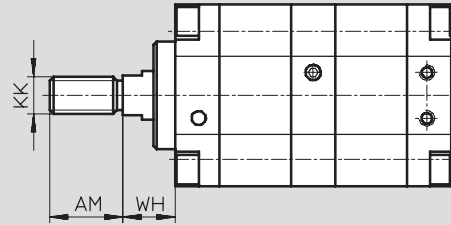
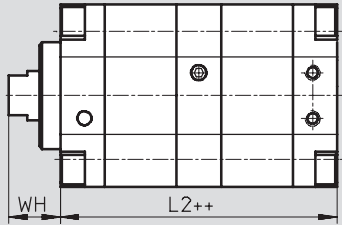


## Dimensions – Variants

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

2 cylinders

With male thread



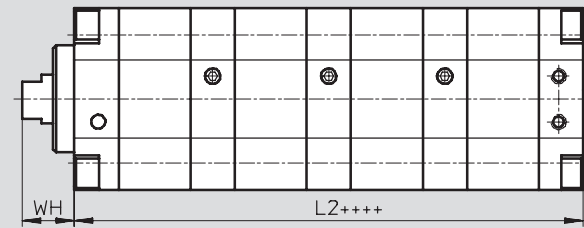
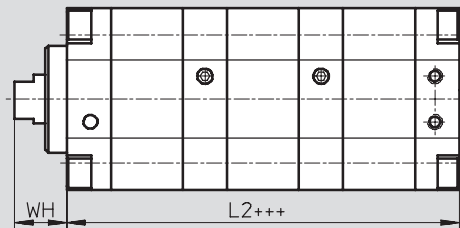
++ = plus 2x stroke length

- - Note

The piston rod with male thread is also available for the ADVUT variants comprising 3 or 4 cylinders.

3 cylinders

4 cylinders



+++ = plus 3x stroke length

++++ = plus 4x stroke length

∅ [mm]	AM	KK	L2			WH
			2 cylinders	3 cylinders	4 cylinders	
25	22	M10x1.25	78	110.5	143	11.5
40	24	M12x1.25	90.5	128.5	166.5	16.5
63	32	M16x1.5	100.5	143	185.5	21.5
100	40	M20x1.5	135.5	193.5	251.5	27

- - Note

When using high force cylinders with serial connection of two, three or four cylinders of the same piston diameter and stroke length, the thrust is



increased substantially. When ensuring this thrust over the entire nominal stroke, the safety margins within the components can result in

positive stroke deviations of several millimetres.

# Tandem cylinders ADVUT

Technical data

FESTO

Ordering data							
Type	Piston Ø [mm]	Stroke [mm]	Piston rod with female thread		Piston rod with male thread		
			Part No.	Type <sup>1)</sup>	Part No.	Type <sup>1)</sup>	
<b>Basic version</b>							
	2x 25	1 ... 150	161 138	ADVUT-25x2-...-P-A	197 265	ADVUT-25x2-...-A-P-A	
	3x 25	1 ... 150	161 139	ADVUT-25x3-...-P-A	197 266	ADVUT-25x3-...-A-P-A	
	4x 25	1 ... 150	161 140	ADVUT-25x4-...-P-A	197 267	ADVUT-25x4-...-A-P-A	
	2x 40	1 ... 150	159 491	ADVUT-40x2-...-P-A	197 268	ADVUT-40x2-...-A-P-A	
	3x 40	1 ... 150	159 492	ADVUT-40x3-...-P-A	197 269	ADVUT-40x3-...-A-P-A	
	4x 40	1 ... 150	159 493	ADVUT-40x4-...-P-A	197 270	ADVUT-40x4-...-A-P-A	
	2x 63	1 ... 150	161 141	ADVUT-63x2-...-P-A	197 271	ADVUT-63x2-...-A-P-A	
	3x 63	1 ... 150	161 142	ADVUT-63x3-...-P-A	197 272	ADVUT-63x3-...-A-P-A	
	4x 63	1 ... 150	161 143	ADVUT-63x4-...-P-A	197 273	ADVUT-63x4-...-A-P-A	
	2x 100	1 ... 150	161 144	ADVUT-100x2-...-P-A	197 274	ADVUT-100x2-...-A-P-A	
	3x 100	1 ... 150	161 145	ADVUT-100x3-...-P-A	197 275	ADVUT-100x3-...-A-P-A	
	4x 100	1 ... 150	161 146	ADVUT-100x4-...-P-A	197 276	ADVUT-100x4-...-A-P-A	
	<b>S6 – Heat-resistant up to 120 °C</b>						
		2x 25	1 ... 150	197 281	ADVUT-25x2-...-P-A-S6	197 297	ADVUT-25x2-...-A-P-A-S6
3x 25		1 ... 150	197 282	ADVUT-25x3-...-P-A-S6	197 298	ADVUT-25x3-...-A-P-A-S6	
4x 25		1 ... 150	197 283	ADVUT-25x4-...-P-A-S6	197 299	ADVUT-25x4-...-A-P-A-S6	
2x 40		1 ... 150	197 284	ADVUT-40x2-...-P-A-S6	197 300	ADVUT-40x2-...-A-P-A-S6	
3x 40		1 ... 150	197 285	ADVUT-40x3-...-P-A-S6	197 301	ADVUT-40x3-...-A-P-A-S6	
4x 40		1 ... 150	197 286	ADVUT-40x4-...-P-A-S6	197 302	ADVUT-40x4-...-A-P-A-S6	
2x 63		1 ... 150	197 287	ADVUT-63x2-...-P-A-S6	197 303	ADVUT-63x2-...-A-P-A-S6	
3x 63		1 ... 150	197 288	ADVUT-63x3-...-P-A-S6	197 304	ADVUT-63x3-...-A-P-A-S6	
4x 63		1 ... 150	197 289	ADVUT-63x4-...-P-A-S6	197 305	ADVUT-63x4-...-A-P-A-S6	
2x 100		1 ... 150	197 290	ADVUT-100x2-...-P-A-S6	197 306	ADVUT-100x2-...-A-P-A-S6	
3x 100		1 ... 150	197 291	ADVUT-100x3-...-P-A-S6	197 307	ADVUT-100x3-...-A-P-A-S6	
4x 100		1 ... 150	197 292	ADVUT-100x4-...-P-A-S6	197 308	ADVUT-100x4-...-A-P-A-S6	

1) Nut for piston rod thread included in scope of delivery

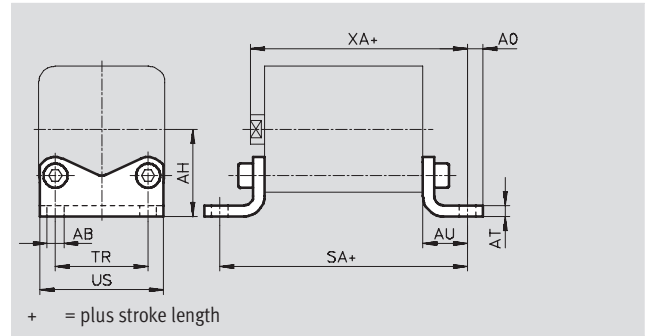
# Tandem cylinders ADVUT

Accessories



## Foot mounting HUA

Material:  
Galvanised steel  
Free of copper, PTFE and silicone



Dimensions and ordering data									
For $\varnothing$	AB $\varnothing$	AH	AO	AT	AU	SA			TR
						2 cylinders <sup>1)</sup>	3 cylinders <sup>2)</sup>	4 cylinders <sup>3)</sup>	
25	6,6	29	6,25	4	16	110	142,5	175	26
40	9	40,5	8,25	5	20	130,5	168,5	206,5	42
63	11	56.5	11.75	6	27	154.5	197	239.5	62
100	13.5	81	11.75	8	33	201.5	259.5	317.5	103

For $\varnothing$	US	XA			CRC <sup>4)</sup>	Weight [g]	Part No.	Type
		2 cylinders <sup>1)</sup>	3 cylinders <sup>2)</sup>	4 cylinders <sup>3)</sup>				
25	38	105,5	138	170,5	2	90	157 311	HUA-25
40	58	127	165	203	2	201	157 313	HUA-40
63	85	149	191.5	234	2	550	157 315	HUA-63
100	126	195.5	253.5	311.5	2	1 050	157 317	HUA-100

- 1) plus 2x stroke length
- 2) plus 3x stroke length
- 3) plus 4x stroke length
- 4) 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

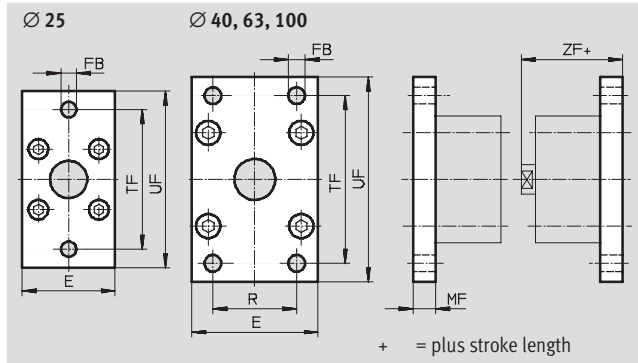
# Tandem cylinders ADVUT

Accessories



## Flange mounting FUA

Material:  
Clear anodised aluminium



### Dimensions and ordering data

For $\varnothing$	E	FB $\varnothing$	MF	R	TF	UF	ZF			CRC <sup>4)</sup>	Weight [g]	Part No.	Type
							2 cylinders <sup>1)</sup>	3 cylinders <sup>2)</sup>	4 cylinders <sup>3)</sup>				
25	40	6.6	10	–	60	76	99.5	132	164.5	2	87	157 301	FUA-25
40	60	9	10	36	82	102	117	155	193	2	180	157 303	FUA-40
63	87	9	15	50	110	130	137	179.5	222	2	550	157 305	FUA-63
100	128	14	15	75	163	190	177.5	235.5	293.5	2	1 035	157 307	FUA-100

- 1) plus 2x stroke length
- 2) plus 3x stroke length
- 3) plus 4x stroke length

4) 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

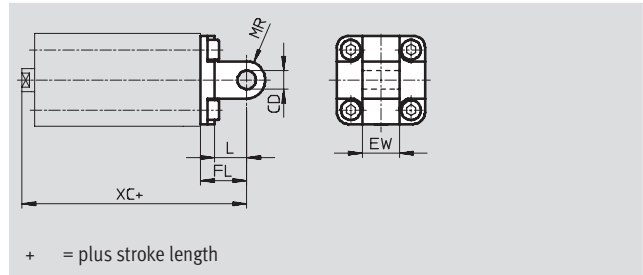
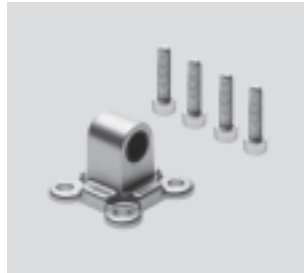
# Tandem cylinders ADVUT

Accessories



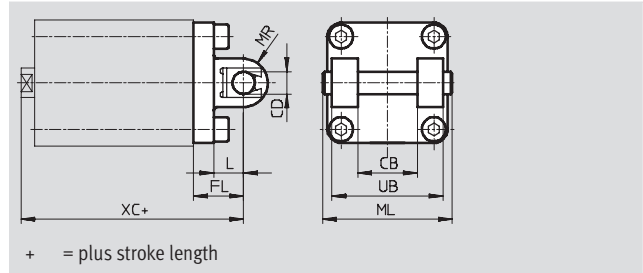
## Swivel flange SUA for piston $\varnothing$ 25 mm

Material:  
Anodised aluminium  
Free of copper, PTFE and silicone



## for piston $\varnothing$ 40, 63, 100 mm

Material:  
Anodised aluminium  
Free of copper, PTFE and silicone



Dimensions and ordering data								
For $\varnothing$	CB	CD $\varnothing$	EW	FL	L	ML	MR	UB
25	-	8	16	20	14	-	8	-
40	28	12	-	25	16	62	12	52
63	40	16	-	32	21	82	16	70
100	60	20	-	41	26	126	20	110

For $\varnothing$	XC			Weight [g]	Part No.	Type
	2 cylinders <sup>1)</sup>	3 cylinders <sup>2)</sup>	4 cylinders <sup>3)</sup>			
25	109.5	142	174.5	86	157 321	SUA-25
40	132	170	208	320	157 323	SUA-40
63	154	196.5	239	760	157 325	SUA-63
100	203.5	261.5	319.5	1 900	157 327	SUA-100

- 1) plus 2x stroke length
- 2) plus 3x stroke length
- 3) plus 4x stroke length

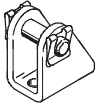
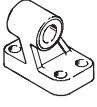
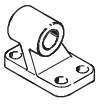
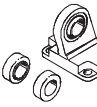
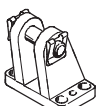
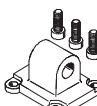
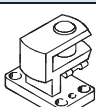
Note  
The maximum stroke length may not be exceeded when combining cylinders and swivel flanges.





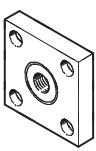
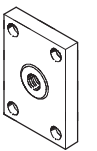
For $\varnothing$	Max. stroke length [mm]
25	50
40	100
63	100
100	150

# Tandem cylinders ADVUT

Accessories

FESTO

Ordering data – Mounting attachments				Technical data → 1 / 10.1-2			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
<b>Clevis foot LBN</b>				<b>Clevis foot LNG</b>			
	25	6 059	LBN-20/25		40	33 891	LNG-40
	40	195 861	LBN-40		63	33 893	LNG-63
	63	195 862	LBN-50/63		100	33 895	LNG-100
<b>Clevis foot LN</b>				<b>Clevis foot LSN</b>			
	40	5 148	LN-40		40	5 562	LSN-40
	63	5 150	LN-63		63	5 564	LSN-63
	100	5 152	LN-100		100	5 566	LSN-100
<b>Clevis foot LBG</b>				<b>Swivel flange SNCL</b>			
	40	31 762	LBG-40		40	174 405	SNCL-40
	63	31 764	LBG-63		63	174 407	SNCL-63
	100	31 766	LBG-100		100	174 409	SNCL-100
<b>Right-angle clevis foot LQG</b>							
	40	31 769	LQG-40				
	63	31 771	LQG-63				
	100	31 773	LQG-100				

Ordering data – Piston rod attachments				Technical data → 1 / 10.3-3			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
<b>Rod eye SGS</b>				<b>Rod clevis SGA</b>			
	25	9 261	SGS-M10x1,25		25	32 954	SGA-M10x1,25
	40	9 262	SGS-M12x1,25		40	10 767	SGA-M12x1,25
	63	9 263	SGS-M16x1,5		63	10 768	SGA-M16x1,5
	100	9 264	SGS-M20x1,5		100	10 769	SGA-M20x1,5
<b>Rod clevis SG</b>				<b>Self-aligning rod coupler FK</b>			
	25	6 144	SG-M10x1,25		25	6 140	FK-M10x1,25
	40	6 145	SG-M12x1,25		40	6 141	FK-M12x1,25
	63	6 146	SG-M16x1,5		63	6 142	FK-M16x1,5
	100	6 147	SG-M20x1,5		100	6 143	FK-M20x1,5
<b>Coupling piece KSG</b>				<b>Coupling piece KSZ</b>			
	25	32 963	KSG-M10x1,25		25	36 125	KSZ-M10x1,25
	40	32 964	KSG-M12x1,25		40	36 126	KSZ-M12x1,25
	63	32 965	KSG-M16x1,5		63	36 127	KSZ-M16x1,5
	100	32 966	KSG-M20x1,5		100	36 128	KSZ-M20x1,5

Special-function drives  
Tandem/high-force cylinders

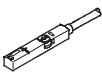

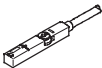
5.7

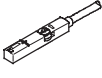




# Tandem cylinders ADVUT

Accessories

**FESTO**



Ordering data – Proximity sensors for T-slot, magneto-resistive					Technical data → <a href="http://www.festo.com/catalogue/sm">www.festo.com/catalogue/sm</a>	
	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	PNP	Cable, 3-wire	2.5	<b>543 867</b>	<b>SMT-8M-PS-24V-K-2,5-OE</b>
			Plug M8x1, 3-pin	0.3	<b>543 866</b>	<b>SMT-8M-PS-24V-K-0,3-M8D</b>
			Plug M12x1, 3-pin	0.3	<b>543 869</b>	<b>SMT-8M-PS-24V-K-0,3-M12</b>
		NPN	Cable, 3-wire	2.5	<b>543 870</b>	<b>SMT-8M-NS-24V-K-2,5-OE</b>
Plug M8x1, 3-pin	0.3		<b>543 871</b>	<b>SMT-8M-NS-24V-K-0,3-M8D</b>		
	Insertable in the slot lengthwise, flush with the cylinder profile	PNP	Cable, 3-wire	2.5	<b>175 436</b>	<b>SMT-8-PS-K-LED-24-B</b>
			Plug M8x1, 3-pin	0.3	<b>175 484</b>	<b>SMT-8-PS-S-LED-24-B</b>
<b>N/C contact</b>						
	Insertable in the slot from above, flush with cylinder profile	PNP	Cable, 3-wire	7.5	<b>543 873</b>	<b>SMT-8M-PO-24V-K7,5-OE</b>


Ordering data – Proximity sensors for T-slot, magnetic reed					Technical data → <a href="http://www.festo.com/catalogue/sm">www.festo.com/catalogue/sm</a>		
	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	<b>543 862</b>	<b>SME-8M-DS-24V-K-2,5-OE</b>	
				5.0	<b>543 863</b>	<b>SME-8M-DS-24V-K-5,0-OE</b>	
			Plug M8x1, 3-pin	Cable, 3-wire	2.5	<b>543 872</b>	<b>SME-8M-ZS-24V-K-2,5-OE</b>
				0.3	<b>543 861</b>	<b>SME-8M-DS-24V-K-0,3-M8D</b>	
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	<b>150 855</b>	<b>SME-8-K-LED-24</b>	
			Plug M8x1, 3-pin	0.3	<b>150 857</b>	<b>SME-8-S-LED-24</b>	
<b>N/C contact</b>							
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	7.5	<b>160 251</b>	<b>SME-8-O-K-LED-24</b>	

# Tandem cylinders ADVUT

Accessories

**FESTO**


Ordering data – Connecting cables				Technical data → <a href="http://www.festo.com/catalogue/nebu">www.festo.com/catalogue/nebu</a>	
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part No.	Type
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541 333	NEBU-M8G3-K-2.5-LE3
			5	541 334	NEBU-M8G3-K-5-LE3
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541 363	NEBU-M12G5-K-2.5-LE3
			5	541 364	NEBU-M12G5-K-5-LE3
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	541 338	NEBU-M8W3-K-2.5-LE3
			5	541 341	NEBU-M8W3-K-5-LE3
	Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541 367	NEBU-M12W5-K-2.5-LE3
			5	541 370	NEBU-M12W5-K-5-LE3

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

# Tandem cylinders ADVUT

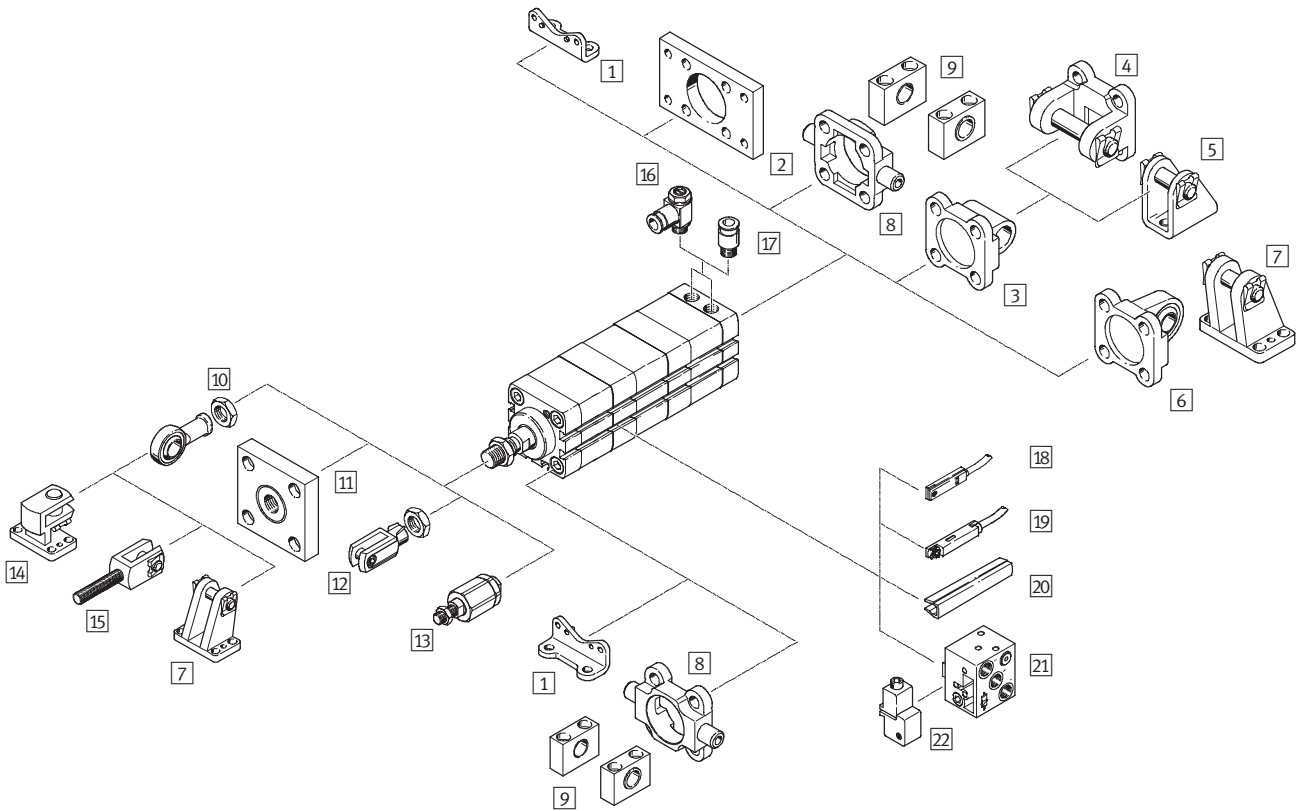
Accessories

**FESTO**

Ordering data – One-way flow control valves			Technical data → Volume 2		
	Connection		Material	Part No.	Type
	Thread	For tubing O.D.			
	M5	3	Metal design	193 137	GRLA-M5-QS-3-D
		4		193 138	GRLA-M5-QS-4-D
		6		193 139	GRLA-M5-QS-6-D
	G1/8	3		193 142	GRLA-1/8-QS-3-D
		4		193 143	GRLA-1/8-QS-4-D
		6		193 144	GRLA-1/8-QS-6-D
		8		193 145	GRLA-1/8-QS-8-D
		10		193 146	GRLA-1/4-QS-6-D
	G1/4	6		193 147	GRLA-1/4-QS-8-D
		8		193 148	GRLA-1/4-QS-10-D

# High-force cylinders ADNH, standard port pattern

Peripherals overview



Special-function drives  
Tandem / high-force cylinders

5.7

# High-force cylinders ADNH, standard port pattern

Peripherals overview

FESTO

Mounting attachments and accessories					
	Brief description	Ø 25	Ø 40, 63, 100	→ Page	
1	Foot mounting HNA	For bearing and end caps	■	■	1 / 5.7-46
2	Flange mounting FNC	For end caps	■	■	1 / 5.7-47
3	Swivel flange SNCL	For end caps	■	■	1 / 5.7-48
4	Swivel flange SNCB	For swivel flange SNCL	-	■	1 / 5.7-50
5	Clevis foot LBN/CRLBN	For swivel flange SNCL	■	-	1 / 5.7-49
6	Swivel flange SNCS	For end caps	-	■	1 / 5.7-48
7	Clevis foot LBG	For swivel flange SNCS	-	■	1 / 5.7-52
8	Trunnion flange ZNCF/CRZNG	For end caps	-	■	1 / 5.7-51
9	Trunnion support LNZG	For trunnion flange ZNCF/CRZNG	-	■	1 / 5.7-51
10	Rod eye SGS/CRSGS	With spherical bearing	■	■	1 / 5.7-52
11	Coupling piece KSG	For compensating radial deviations	■	■	1 / 5.7-52
12	Rod clevis SG/CRSG	Permits a swivelling movement of the cylinder in one plane	■	■	1 / 5.7-52
13	Self-aligning rod coupler FK	For compensating radial and angular deviations	■	■	1 / 5.7-52
14	Right-angle clevis foot LQG	For rod eye SGS	-	■	1 / 5.7-52
15	Rod clevis SGA	With male thread	-	■	1 / 5.7-52
16	One-way flow control valve GRLA	For speed regulation	■	■	1 / 5.7-52
17	Push-in fitting QS	For connecting compressed air tubing with standard external diameters	■	■	Volume 3
18	Proximity sensor SME/SMT-8	Can be integrated in the sensor slot of the cylinder profile barrel	■	■	1 / 5.7-53
19	Proximity sensor SME/SMT-8M	Can be integrated in the sensor slot of the cylinder profile barrel	■	■	1 / 5.7-53
20	Slot cover ABP-5-S	For protecting the sensor cable and keeping dirt out of the sensor slots	■	■	1 / 5.7-54
21	Proximity sensor SMPO-8E	Pneumatic output signal	■	■	1 / 5.7-54
22	Mounting kit SMB-8E	For proximity sensor SMPO-8E	■	■	1 / 5.7-54

Special-function drives  
Tandem/high-force cylinders

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# 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)

Special-function drives  
Tandem/high-force cylinders

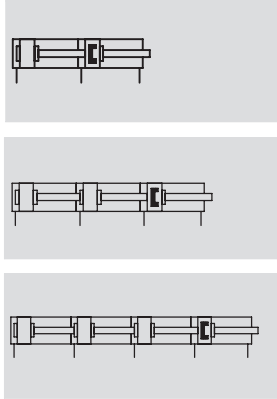
5.7

# High-force cylinders ADNH, standard port pattern

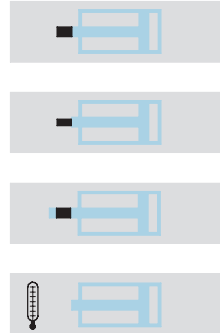
FESTO

Technical data

## Function



## Variants

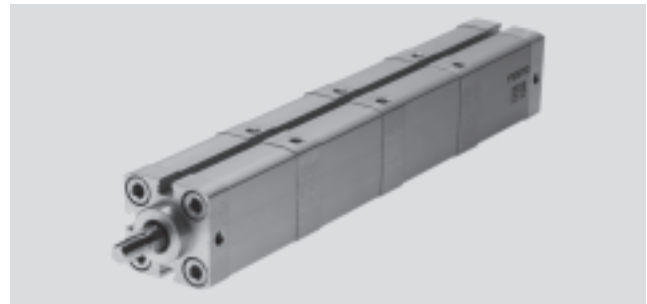


K2

K5

K8

S6



- $\varnothing$  - Diameter  
25 ... 100 mm
- | - Stroke length  
1 ... 150 mm

General technical data				
Piston $\varnothing$	25	40	63	100
Pneumatic connection	M5	M5	G $\frac{1}{8}$	G $\frac{1}{8}$
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 $\varnothing$	25	40	63	100
Operating medium	Filtered compressed air, lubricated or unlubricated			
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 2 to Festo standard 940 070

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

# High-force cylinders ADNH, standard port pattern

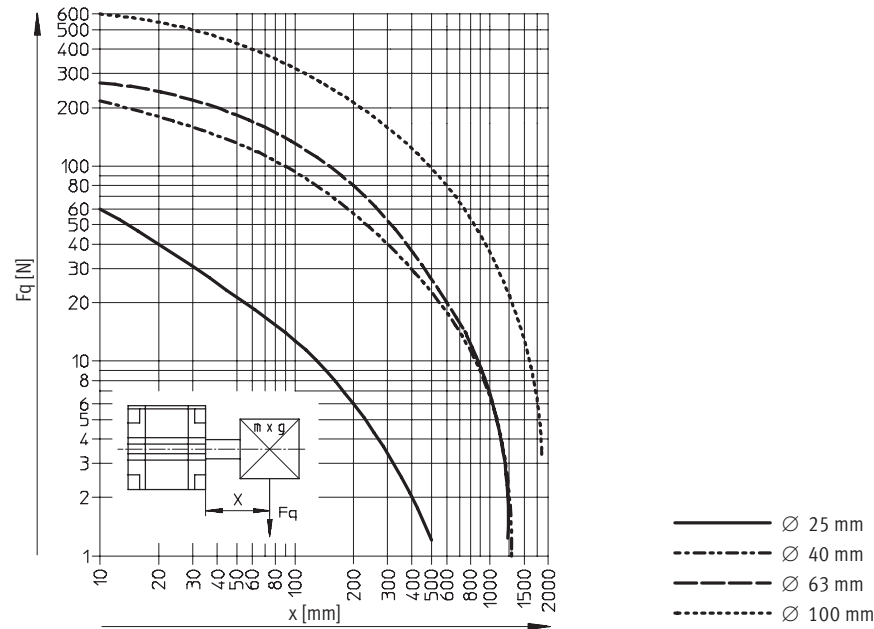
Technical data



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 $x$



Special-function drives  
Tandem/high-force cylinders

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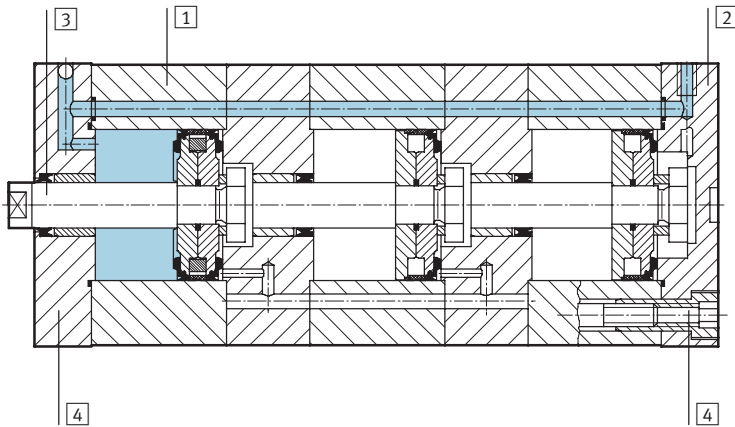


# High-force cylinders ADNH, standard port pattern

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

# High-force cylinders ADNH, standard port pattern

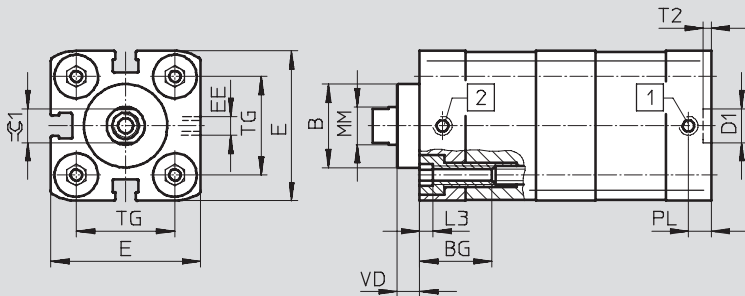
Technical data



## Dimensions – Basic version

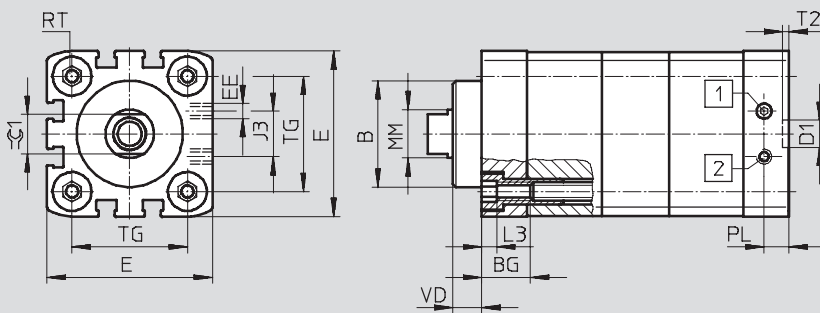
Download CAD data → [www.festo.com/en/engineering](http://www.festo.com/en/engineering)

∅ 25



- 1 Air connection cylinder advancing
- 2 Air connection cylinder retracting

∅ 40 ... 100



- 1 Air connection cylinder advancing
- 2 Air connection cylinder retracting

∅	B	BG	D1	E	EE	J3	L3
[mm]	∅ f8	min.	∅ H9	+0.3			
25	22	15	9	39.5	M5	–	5
40	35	16	9	54.5	M5	15	5
63	42	16	12	75.5	G $\frac{3}{8}$	23	5
100	55	17	12	113.5	G $\frac{1}{8}$	40	5

∅	MM	PL	RT	T2	TG	VD	∅ 1
[mm]	∅						
25	10	6	M5	2.1	26	6	9
40	16	8.2	M6	2.1	38	9.5	13
63	20	8.2	M8	2.6	56.5	12	17
100	25	10.5	M10	2.6	89	15.5	21

# High-force cylinders ADNH, standard port pattern

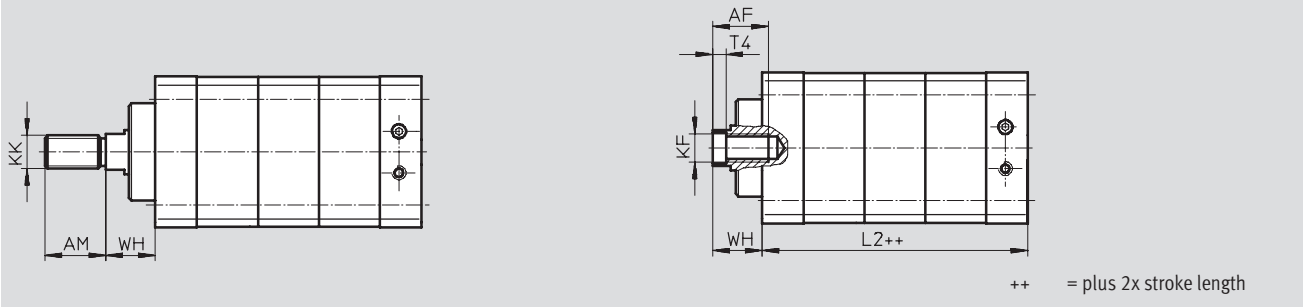
Technical data



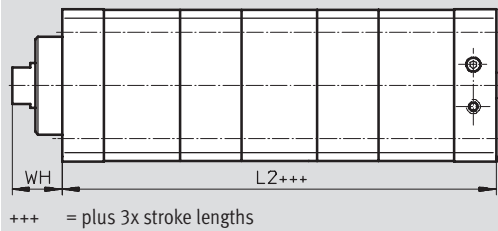
## Dimensions – Variants

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

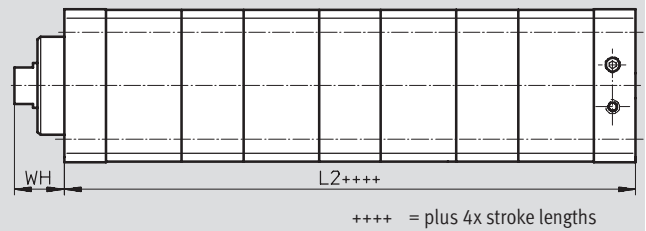
### Basic version



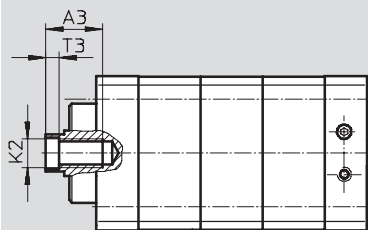
### 3N – 3 cylinders



### 4N – 4 cylinders



### K5 – Special piston rod thread



∅ [mm]	A3	AF	AM	K2	KF	KK	L2 Number of cylinders			T3	T4	WH
	min.	min.	-0.5				2	3	4			+1.3
25	12	14	16	M5	M6	M8	76	110	144	2	2.6	11.65
40	16	20	22	M8	M10	M12x1.25	86	125	165	3.3	4.7	17.75
63	20	20	28	M10	M12	M16x1.5	93	136	178	4.7	6.1	21
100	-	25	40	-	M16	M20x1.5	121	173	225	-	7	26.3

Note

When using high-force cylinders, the parallel connection of two, three or four cylinders of the same piston diameter and stroke length results in

a substantial increase in the thrust. The safety margins within the components needed to ensure this thrust at least over the entire nominal stroke

can result in positive stroke deviations of several millimetres.

# 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
539 691	ADNH	25	1 ... 150	A	P	A	2N
539 692		40		I			3N
539 693		63		4N			
539 694		100					
<b>Order example</b>							
539 694	ADNH	- 100	- 120	- A	- P	- A	- 4N

Ordering table							
Size	25	40	63	100	Condi- tions	Code	Enter code
<b>M</b> Module No.	539 691	539 692	539 693	539 694			
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		

Special-function drives  
Tandem/high-force cylinders

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Transfer order code

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

# 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
- 25K2	- "M16x1.5"K5	-	- S6	-

Ordering table							
Size	25	40	63	100	Condi- tions	Code	Enter code
0 Male thread extended [mm]	Extended male piston rod thread					-...K2	
	1 ... 20	1 ... 20	1 ... 20	1 ... 30			
	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 [mm]	Extended piston rod					-...K8	
	1 ... 150	1 ... 150	1 ... 150	1 ... 150	3		
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 port pattern

Accessories



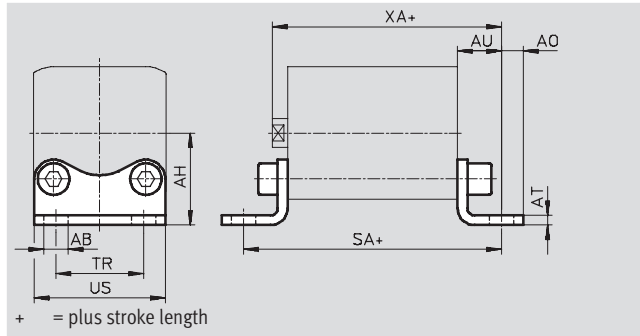
## Foot mounting HNA

Material:

HNA: Galvanised steel

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

Free of copper, PTFE and silicone



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

For $\varnothing$	Basic version				R3 – High corrosion protection			
	CRC <sup>1)</sup>	Weight [g]	Part No.	Type	CRC <sup>1)</sup>	Weight [g]	Part No.	Type
[mm]								
25	2	55	537 240	HNA-25	3	55	537 255	HNA-25-R3
40	2	90	537 242	HNA-40	3	90	537 257	HNA-40-R3
63	2	180	537 244	HNA-63	3	180	537 259	HNA-63-R3
100	2	470	537 250	HNA-100	3	470	537 261	HNA-100-R3

1) Corrosion resistance class 2 to Festo standard 940 070

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

Corrosion resistance class 3 to Festo standard 940 070

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

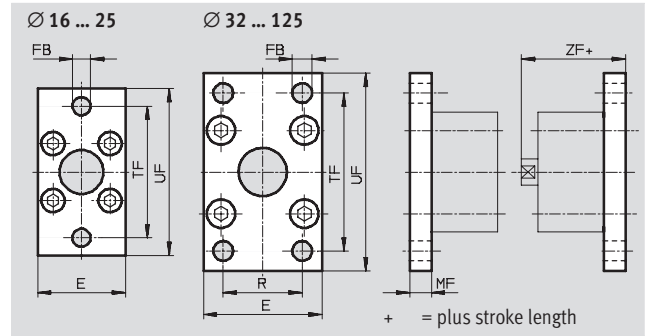
# High-force cylinders ADNH, standard port pattern

Accessories



## Flange mounting FNC

Material:  
Galvanised steel  
Free of copper, PTFE and silicone



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

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

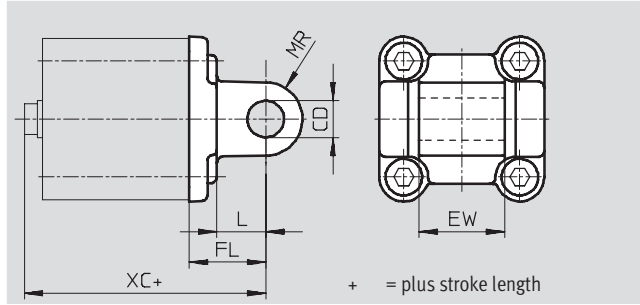
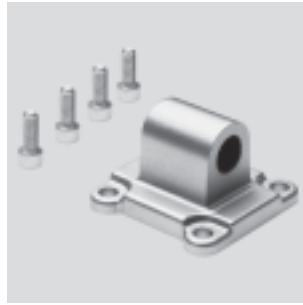
# High-force cylinders ADNH, standard port pattern

Accessories



## Swivel flange SNCL

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



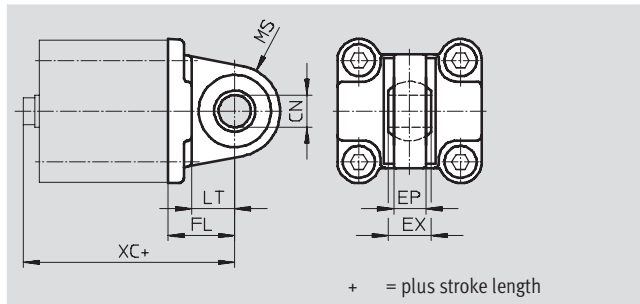
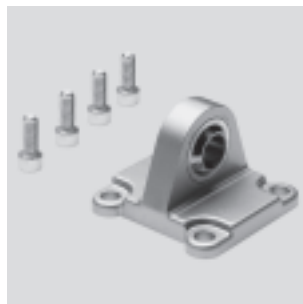
Dimensions and ordering data						
For Ø	CD	EW	FL	L	MR	XC
[mm]	Ø		±0.2			
	H9					
25	8	16 <sub>h12</sub>	20	14	8	65
40	12	28 <sub>-0.2/-0.6</sub>	25	16	12	76
63	16	40 <sub>-0.2/-0.6</sub>	32	21	16	89
100	20	60 <sub>-0.2/-0.6</sub>	41	27	20	117

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

- 1) Corrosion resistance class 2 to Festo standard 940 070  
 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.  
 Corrosion resistance class 3 to Festo standard 940 070  
 Components requiring higher corrosion resistance. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface

## Swivel flange SNCS

Material:  
 Die-cast aluminium



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

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

Special-function drives Tandem/high-force cylinders 5.7

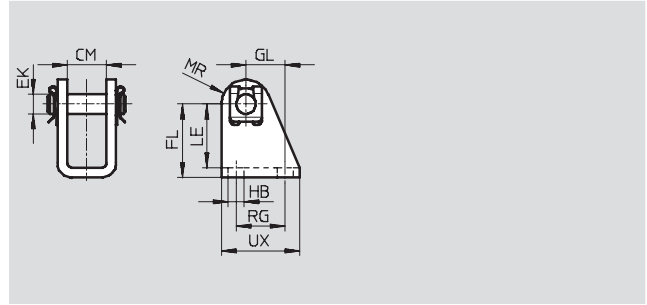


# High-force cylinders ADNH, standard port pattern

Accessories

## Clevis foot LBN

Material:  
Galvanised steel  
Free of copper, PTFE and silicone

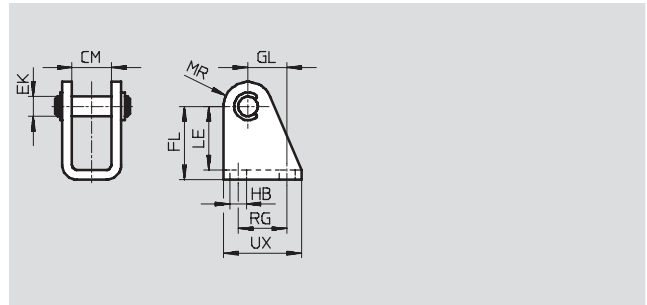


Dimensions and ordering data													
For Ø	CM	EK	FL	GL	HB	LE	MR	RG	UX	CRC <sup>1)</sup>	Weight	Part No.	Type
[mm]		Ø			Ø						[g]		
25	16.1	8	30 +0.4/-0.2	16	6.6	26	10	20	32	2	81	<b>6 059</b>	<b>LBN-20/25</b>

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

## Clevis foot CRLBN, stainless steel

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



Dimensions and ordering data													
For Ø	CM	EK	FL	GL	HB	LE	MR	RG	UX	CRC <sup>1)</sup>	Weight	Part No.	Type
[mm]		Ø									[g]		
25	16.1	8	30 +0.4/-0.2	16	6.6	26	10	20	32	4	62	<b>161 863</b>	<b>CRLBN-20/25</b>

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

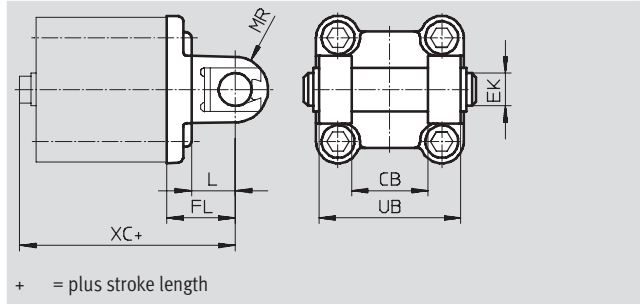
# High-force cylinders ADNH, standard port pattern

Accessories



## Swivel flange SNCB/SNCB-...-R3

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



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

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

1) Corrosion resistance class 2 to Festo standard 940 070  
 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.  
 Corrosion resistance class 3 to Festo standard 940 070  
 Components requiring higher corrosion resistance. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface

Special-function drives  
Tandem/high-force cylinders

5.7

# High-force cylinders ADNH, standard port pattern

Accessories

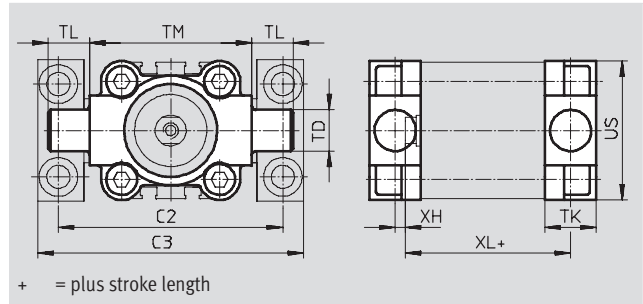
## Trunnion flange ZNCF/CRZNG

Material:

ZNCF: Special steel casting

CRZNG: Electrolytically polished special steel casting

Free of copper, PTFE and silicone



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

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

1) Corrosion resistance class 2 to Festo standard 940 070  
 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.  
 Corrosion resistance class 4 to Festo standard 940 070  
 Components requiring higher corrosion resistance. Parts used with aggressive media, e.g. food or chemical industry. These applications should be supported with special tests with the media if required

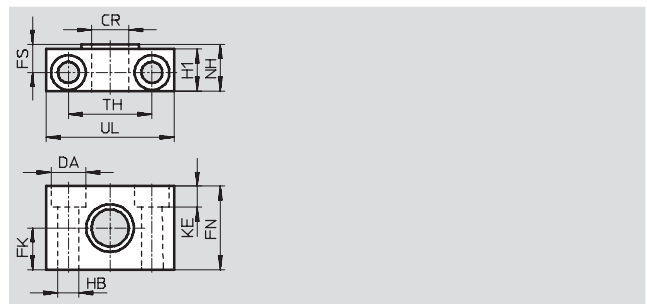
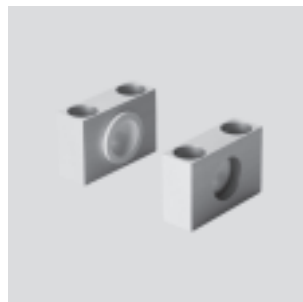
## Trunnion support LNZG

Material:

Trunnion support: Anodised aluminium

Plain bearing: Plastic

Free of copper, PTFE and silicone








Dimensions and ordering data															
For 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	400	<b>32 960</b>	<b>LNZG-40/50</b>
63	20	18	20	40	13	20	11	11	23	42	65	2	480	<b>32 961</b>	<b>LNZG-63/80</b>
100	25	20	25	50	16	24.5	14	13	28.5	50	75	2	960	<b>32 962</b>	<b>LNZG-100/125</b>



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


# High-force cylinders ADNH, standard port pattern

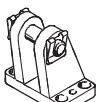
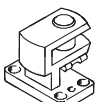
Accessories

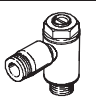


Ordering data – Piston rod attachments				Technical data → 1 / 10.3-2			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
<b>Rod eye SGS</b>				<b>Rod clevis SGA for rod eye SGS</b>			
	25	9 255	SGS-M8		25	–	
	40	9 262	SGS-M12x1,25		40	10 767	SGA-M12x1,25
	63	9 263	SGS-M16x1,5		63	10 768	SGA-M16x1,5
	100	9 264	SGS-M20x1,5		100	10 769	SGA-M20x1,5
<b>Rod clevis SG</b>				<b>Self-aligning rod coupler FK</b>			
	25	3 111	SG-M8		25	2 062	FK-M8
	40	6 145	SG-M12x1,25		40	6 141	FK-M12x1,25
	63	6 146	SG-M16x1,5		63	6 142	FK-M16x1,5
	100	6 147	SG-M20x1,5		100	6 143	FK-M20x1,5
<b>Coupling piece KSG</b>							
	25	–					
	40	32 964	KSG-M12x1,25				
	63	32 965	KSG-M16x1,5				
	100	32 966	KSG-M20x1,5				

Ordering data – Corrosion and acid resistant piston rod attachments				Technical data → 1 / 10.3-2			
Designation	For Ø	Part No.	Type	Designation	For Ø	Part No.	Type
<b>Rod eye CRSGS</b>				<b>Rod clevis CRSG</b>			
	25	195 581	CRSGS-M8		25	13 568	CRSG-M8
	40	195 583	CRSGS-M12x1,25		40	13 570	CRSG-M12x1,25
	63	195 584	CRSGS-M16x1,5		63	13 571	CRSG-M16x1,5
	100	195 585	CRSGS-M20x1,5		100	13 572	CRSG-M20x1,5

-  - Note  
 Piston rod attachments for cylinders with special piston rod thread (variant K5) → Chapter 10.3

Ordering data – Mounting attachments				Technical data → 1 / 10.1-2			
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	31 762	LBG-40		40	31 769	LQG-40
	63	31 764	LBG-63		63	31 771	LQG-63
	100	31 766	LBG-100		100	31 773	LQG-100

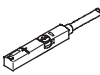

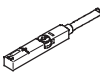
Ordering data – One-way flow control valves				Technical data → Volume 2	
	Connection		Material	Part No.	Type
	For Ø	For tubing O.D.			
<b>For exhaust air</b>					
	25, 40	3	Metal design	193 137	GRLA-M5-QS-3-D
		4		193 138	GRLA-M5-QS-4-D
	63, 100	4		193 143	GRLA-1/8-QS-4-D
		6		193 144	GRLA-1/8-QS-6-D
		8		193 145	GRLA-1/8-QS-8-D

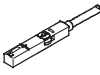


Special-function drives  
Tandem/high-force cylinders  
5.7



# High-force cylinders ADNH, standard port pattern

Accessories

**FESTO**

Ordering data – Proximity sensors for T-slot, magneto-resistive					Technical data → <a href="http://www.festo.com/catalogue/sm">www.festo.com/catalogue/sm</a>	
	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	PNP	Cable, 3-wire	2.5	<b>543 867</b>	<b>SMT-8M-PS-24V-K-2,5-OE</b>
			Plug M8x1, 3-pin	0.3	<b>543 866</b>	<b>SMT-8M-PS-24V-K-0,3-M8D</b>
			Plug M12x1, 3-pin	0.3	<b>543 869</b>	<b>SMT-8M-PS-24V-K-0,3-M12</b>
		NPN	Cable, 3-wire	2.5	<b>543 870</b>	<b>SMT-8M-NS-24V-K-2,5-OE</b>
Plug M8x1, 3-pin	0.3		<b>543 871</b>	<b>SMT-8M-NS-24V-K-0,3-M8D</b>		
	Insertable in the slot lengthwise, flush with the cylinder profile	PNP	Cable, 3-wire	2.5	<b>175 436</b>	<b>SMT-8-PS-K-LED-24-B</b>
			Plug M8x1, 3-pin	0.3	<b>175 484</b>	<b>SMT-8-PS-S-LED-24-B</b>
<b>N/C contact</b>						
	Insertable in the slot from above, flush with cylinder profile	PNP	Cable, 3-wire	7.5	<b>543 873</b>	<b>SMT-8M-PO-24V-K7,5-OE</b>

Ordering data – Proximity sensors for T-slot, magnetic reed					Technical data → <a href="http://www.festo.com/catalogue/sm">www.festo.com/catalogue/sm</a>		
	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	<b>543 862</b>	<b>SME-8M-DS-24V-K-2,5-OE</b>	
				5.0	<b>543 863</b>	<b>SME-8M-DS-24V-K-5,0-OE</b>	
			Plug M8x1, 3-pin	Cable, 3-wire	2.5	<b>543 872</b>	<b>SME-8M-ZS-24V-K-2,5-OE</b>
				0.3	<b>543 861</b>	<b>SME-8M-DS-24V-K-0,3-M8D</b>	
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	<b>150 855</b>	<b>SME-8-K-LED-24</b>	
				0.3	<b>150 857</b>	<b>SME-8-S-LED-24</b>	
<b>N/C contact</b>							
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	7.5	<b>160 251</b>	<b>SME-8-0-K-LED-24</b>	

Ordering data – Connecting cables				Technical data → <a href="http://www.festo.com/catalogue/nebu">www.festo.com/catalogue/nebu</a>	
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part No.	Type
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	<b>541 333</b>	<b>NEBU-M8G3-K-2.5-LE3</b>
			5	<b>541 334</b>	<b>NEBU-M8G3-K-5-LE3</b>
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	<b>541 363</b>	<b>NEBU-M12G5-K-2.5-LE3</b>
			5	<b>541 364</b>	<b>NEBU-M12G5-K-5-LE3</b>
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	<b>541 338</b>	<b>NEBU-M8W3-K-2.5-LE3</b>
			5	<b>541 341</b>	<b>NEBU-M8W3-K-5-LE3</b>
	Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	<b>541 367</b>	<b>NEBU-M12W5-K-2.5-LE3</b>
			5	<b>541 370</b>	<b>NEBU-M12W5-K-5-LE3</b>


Special-function drives  
Tandem/high-force cylinders

**5.7**


# High-force cylinders ADNH, standard port pattern




Accessories

Ordering data – Rectangular proximity sensors, pneumatic		Technical data → <a href="http://www.festo.com/catalogue/sm">www.festo.com/catalogue/sm</a>	
Assembly	Length	Part No.	Type
Pneumatic connection			
3/2-way valve, normally closed			
	Female thread M5	178 563	SMPO-8E

Ordering data – Mounting kit for proximity sensors SMPO-8E		Technical data → <a href="http://www.festo.com/catalogue/smb">www.festo.com/catalogue/smb</a>	
Assembly	Length	Part No.	Type
Clamped in T-slot			
		178 230	SMB-8E

Ordering data – Slot cover for T-slot		Technical data → <a href="http://www.festo.com/catalogue/smb">www.festo.com/catalogue/smb</a>	
Assembly	Length	Part No.	Type
Insertable from above			
	2x 0.5 m	151 680	ABP-5-S