

New.


AEVC/ADVC short-stroke cylinder

FESTO

Truly Festo:
A short-stroke cylinder
with style



Info 101 →→



A second generation short-stroke cylinder with style

A completely graded series with style

The largest range of diameters, strokes and variants on the market, clearly graded throughout, with standardized type designation and design.

Style – at an attractive price

Innovative production technologies in addition to improved low friction, long service life and better cushioning, have resulted in attractive pricing – a technically sound solution requiring less space.

Universal cylinder switches with style

The SM...-10 can be used for diameters of 6 to 25 mm, and either the SM...-8 or SM...-10 can be used for diameters from 32 mm. Simply insert, adjust and secure.

Worldwide service with style

Service on a global scale in over 170 countries, which permits problem-free adherence to technical works standard specifications worldwide. Naturally this is of interest to both OEM customers and end users alike.

The short-stroke cylinder with style.

**Needs very little space –
has plenty of force – and is the result of years of experience**

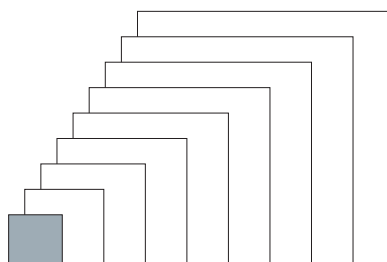
Even when saving space, you shouldn't have to forgo force. Be it single- or double-acting, what matters is whether it's doubly economical. If fit and forget is what you want, then read on.

The new generation of Festo AEVC/ADVC short-stroke cylinders is based on more than 30 years' experience in cylinder research and countless applications the world over – under any conditions. So, when we launch a new product such as the ADVC, you can be sure that it has style.

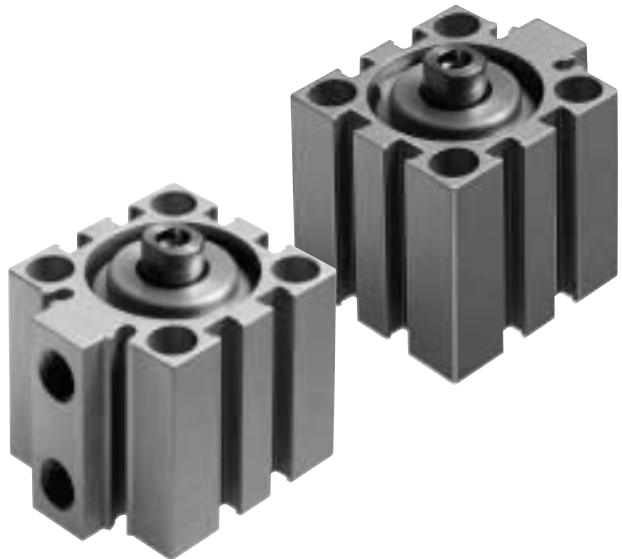
Needless to say, it has a long service life, maximum low friction and excellent cushioning behaviour far exceeding all other variants. This clearly graded series in all strokes, diameters and variants leaves nothing to be desired. The familiar end position sensors SM...-8 and -10 fit flush into the sensor slot.



You'll soon come across the AEVC/ADVC all over the world. No wonder, since Festo is represented practically everywhere.



ADVC/AEVC: Style down to the finest detail!



More choice

AEVC/ADVC cylinders are available with internal or external thread and with or without sensing (with the exception of 4 mm \varnothing).

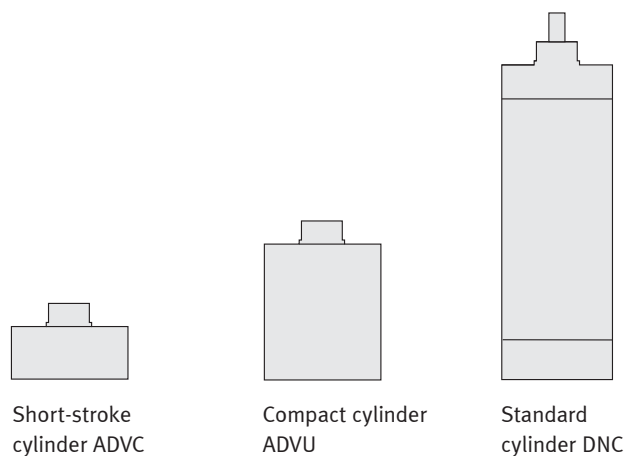
Easy to exchange

The entire range can be easily exchanged with existing Festo series – this saves time thanks to increased clarity of configuration, and thus eliminates the need for lengthy searches.

Less installation space

The new short-stroke cylinder range conforms to a systematic compact design covering all types, which has been further reduced in height. The evidence is clear when you compare the ADVC with a standard cylinder and a compact cylinder. With a 10-mm stroke, you save 74 % of installation space.

How much installation space is required for a 10-mm stroke



New cylinder switches

The universal Festo cylinder switches SM...-8 and -10 are simply inserted into the sensor slot of the cylinder, providing a seamless and flush fit, and are therefore protected against damage. Up to Ø 25 mm, AEVC/ADVC short-stroke cylinders have slots for SM...-10; from Ø 32 mm onwards, they have slots for both SM...-8 and SM...-10.

Variable mounting

With the VDMA hole pattern, a wide range of attachments from the standard range is available for diameters from 32 mm, which enable access to the DNC attachment facilities, thereby creating further synergies.

AEVC/ADVC short-stroke cylinder range										
AEVC single-acting cylinder				Piston diameter			ADVC double-acting cylinder			
				100						
				80						
				63						
				50						
				40						
				32						
				25						
				20						
				16						
				12						
				10						
				6						
				4						
25	10	5	2.5		2.5	5	10	15	20	25
Standard stroke lengths in mm										

Short-stroke cylinders ADVC/AEVC

Key features at a glance

Compact cylinders

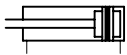
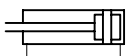


Ø 4 ... 25

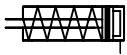
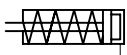
Ø 6 ... 25

Ø 32 ... 100

ADVC



AEVC



- Double-acting
- Single-acting
- Flexible cushioning rings in the end positions

⊘ - Diameter
4 ... 100 mm

┆ - Stroke length
2.5 ... 25 mm

Short-stroke cylinders are ideal for clamping tasks with short strokes, e.g. in retaining devices.

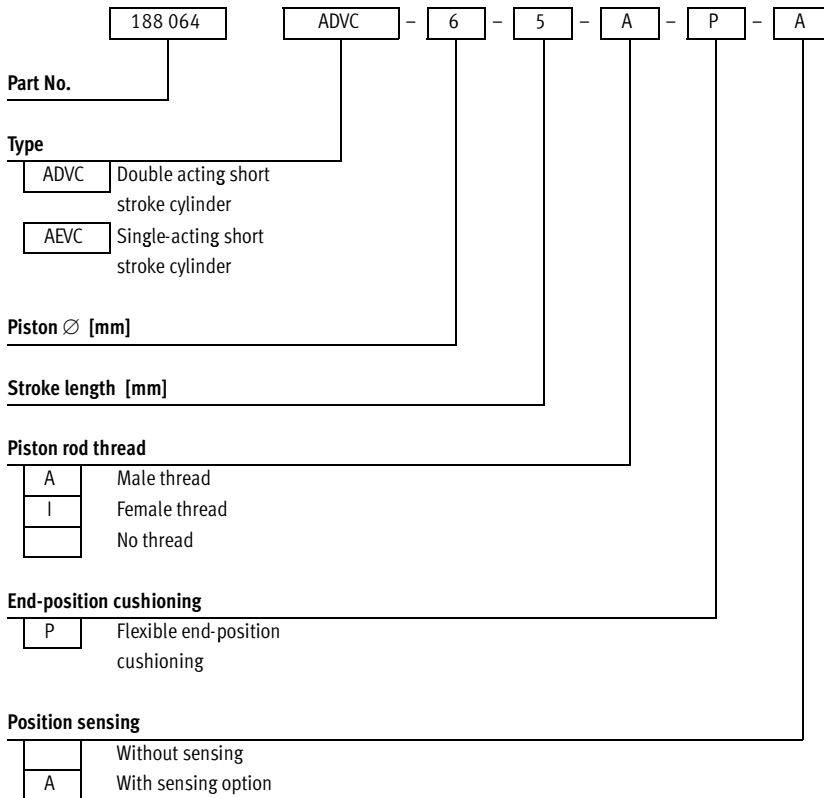
The cylinders offer:


- Rapid response with applied pressure
- Large clamping forces in comparison to their size
- Minimal installation space
- Integrated sensor slots for contacting or contactless proximity sensors
- Mounting hole pattern to VDMA 24 562 for Ø32 ... 100 mm

Short-stroke cylinders ADVC/AEVC

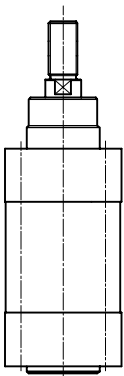
Type code

Compact cylinders

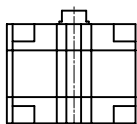


 - Note
Please specify the complete ordering code when ordering

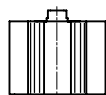
Fitting space with 10 mm stroke



100%
Standard cylinders
DNC

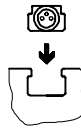


45%
Compact cylinders
ADVU

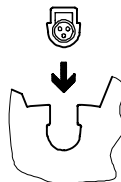


33%
Short-stroke cylinders
ADVC

Sensor slots



T-slot for proximity sensor SME/SMT-8



















Round slot for proximity sensor
SME/SMT-10

Short-stroke cylinders ADVC/AEVC

Variants

Compact cylinders

Function	Version	Type	Piston rod			Elastic end-position cushioning	Position sensing
			with external thread	with female thread	no thread		
Double-acting	Without position sensing						
		∅ 4 ... 25 ADVC-...	■	■ from ∅ 12	■ ∅ 4 ... 12	■	
		∅ 32 ... 100 ADVC-...	■	■		■	
	With position sensing						
		∅ 6 ... 25 ADVC-...-A	■	■ from ∅ 12	■ ∅ 6 ... 12	■	■
		∅ 32 ... 100 ADVC-...-A	■	■		■	■
Single-acting	Without position sensing						
		∅ 4 ... 25 AEVC-...	■	■ from ∅ 12	■ ∅ 4 ... 12	■	
		∅ 32 ... 100 AEVC-...	■	■		■	
	With position sensing						
		∅ 6 ... 25 AEVC-...-A	■	■ from ∅ 12	■ ∅ 6 ... 12	■	■
		∅ 32 ... 100 AEVC-...-A	■	■		■	■

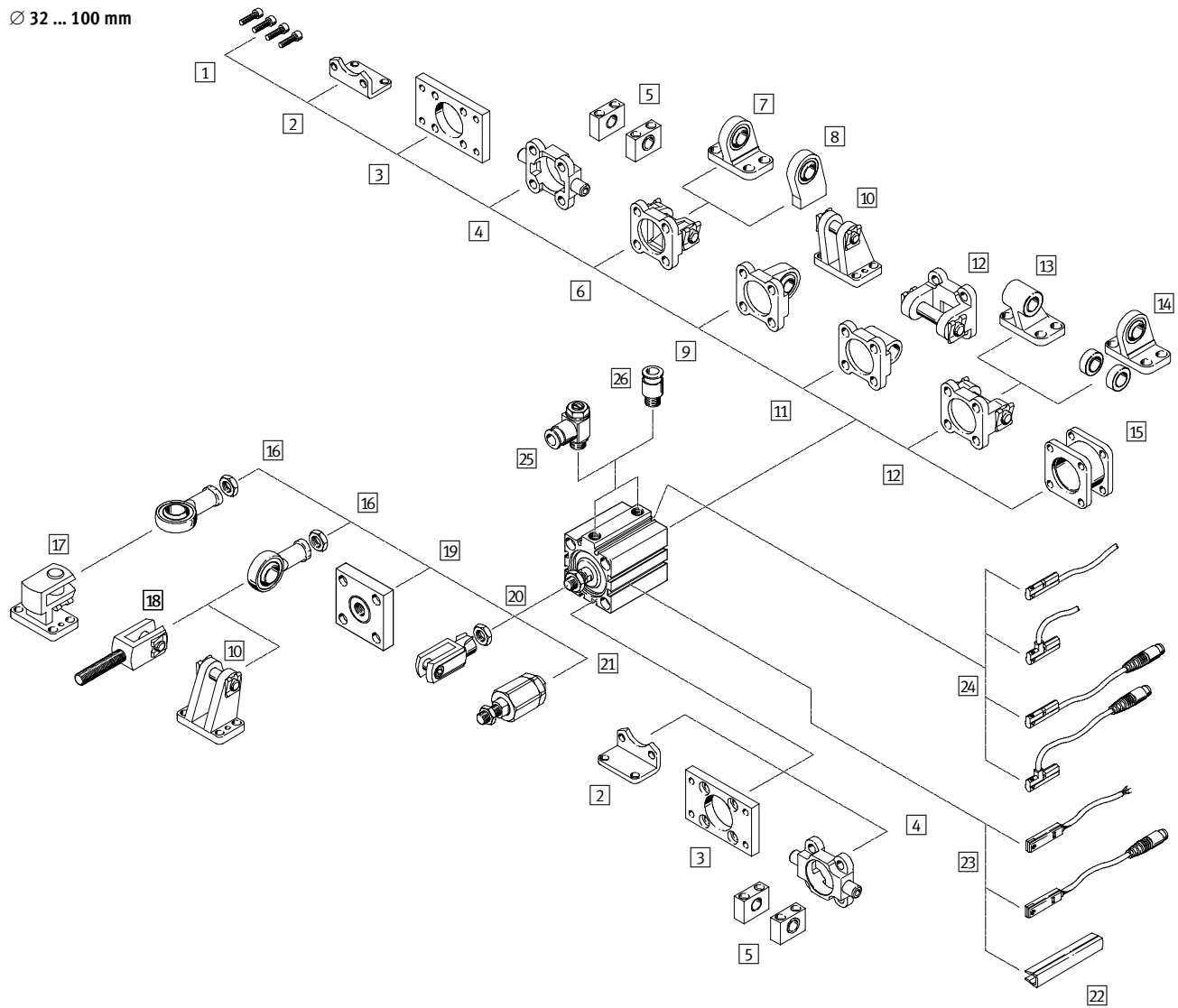
Version	Piston \varnothing [mm]	Stroke [mm]	Page
Without position sensing			
	4	2.5; 5	→ 12
	6, 10, 12	5, 10	
	16, 20, 25	5, 10, 15, 20, 25	
	32, 40	5, 10, 15, 20, 25	→ 12
	50, 63, 80, 100	10, 15, 20, 25	
With position sensing			
	6, 10, 12	5, 10	→ 17
	16, 20, 25	5, 10, 15, 20, 25	
	32, 40	5, 10, 15, 20, 25	→ 17
	50, 63, 80, 100	10, 15, 20, 25	
Without position sensing			
	4	2.5; 5	→ 22
	6, 10, 12	5, 10	
	16, 20, 25	5, 10, 25	
	32	5, 10, 25	→ 22
	40, 50, 63, 80, 100	10, 25	
With position sensing			
	6, 10, 12	5, 10	→ 27
	16, 20, 25	5, 10, 25	
	32	5, 10, 25	→ 27
	40, 50, 63, 80, 100	10, 25	

Short-stroke cylinders ADVC/AEVC

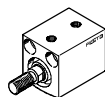
Peripherals overview

Compact cylinders

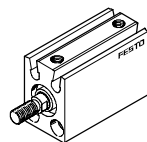
Ø 32 ... 100 mm



Ø 4 ... 25 mm
Without position sensing



Ø 6 ... 25 mm
With position sensing



Short-stroke cylinders ADVC/AEVC

Peripherals overview

Compact cylinders

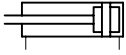
Recommended mounting attachments and accessories	Piston \varnothing			Page
	4, 6, 12	10, 16 ... 25	32 ... 100	
1 Mounting screws	■ DIN 84	■ DIN 912	■ DIN 912	→ not included in scope of delivery
2 Foot mounting HNC	⊖	⊖	■	→ 32
3 Flange mounting FNC	⊖	⊖	■	→ 33
4 Trunnion flange ZNCF	⊖	⊖	■	→ www.festo.com
5 Trunnion supports LNZG	⊖	⊖	■	→ www.festo.com
6 Swivel flange SNC	⊖	⊖	■	→ www.festo.com
7 Clevis foot LSNG	⊖	⊖	■	→ www.festo.com
8 Clevis foot LSNSG	⊖	⊖	■	→ www.festo.com
9 Swivel flange SNCS	⊖	⊖	■	→ www.festo.com
10 Clevis foot LBG	⊖	⊖	■	→ www.festo.com
11 Swivel flange SNCL	⊖	⊖	■	→ www.festo.com
12 Swivel flange SNCB	⊖	⊖	■	→ 34
13 Clevis foot LNG	⊖	⊖	■	→ 35
14 Clevis foot LSN	⊖	⊖	■	→ 35
15 Adapter kit DPNC	⊖	⊖	■	→ www.festo.com
16 Rod eye SGS	⊖	■	■	→ 36
17 Clevis foot, lateral LQG	⊖	■	■	→ www.festo.com
18 Rod clevis SGA	⊖	■	■	→ www.festo.com
19 Coupling piece KSG	⊖	⊖	■	→ www.festo.com
20 Rod clevis SG	⊖	■	■	→ 36
21 Self-aligning rod coupler FK	⊖ \varnothing 4, 6 ■ \varnothing 12	■	■	→ 37
22 Slot cover ABP-5-S	⊖	⊖	■	→ 38
23 Proximity sensors SME/SMT-8	⊖	⊖	■	→ 38
24 Proximity sensors SME/SMT-10	⊖	■	■	→ 40
25 Non-return and flow control valves GRLA	■	■	■	→ 42
26 Push-in fittings QS	■	■	■	→ www.festo.com

⊖ not recommended/not possible

Short-stroke cylinders ADVC

Double-acting – without position sensing

Compact cylinders

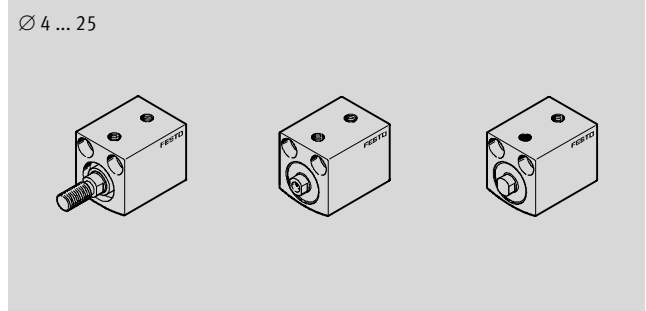


- Double-acting
- Without position sensing

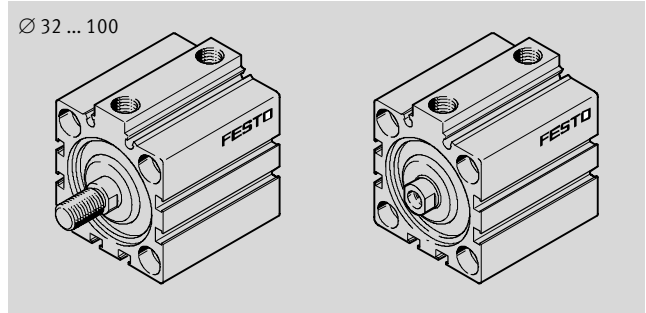
⌀ - Diameter
4 ... 100 mm

— Stroke length
2.5 ... 25 mm

⌀ 4 ... 25



⌀ 32 ... 100



Design														
	Piston ⌀ [mm]													
	4	6	10	12	16	20	25	32	40	50	63	80	100	
Design	Piston													
	Piston rod													
Cushioning	Flexible cushioning rings/plates at both ends													
Type of mounting	Via through holes							Via through holes						
	-							With accessories						
Pneumatic connections	M3	M3	M5	M5	M5	M5	M5	G1/8	G1/8	G1/8	G1/8	G1/8	G1/8	G1/4
Piston rod with female thread	-	-	-	■	■	■	■	■	■	■	■	■	■	■
Piston rod with male thread	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Piston rod without thread	■	■	■	■	-	-	-	-	-	-	-	-	-	-

Operating conditions														
	Piston ⌀ [mm]													
	4	6	10	12	16	20	25	32	40	50	63	80	100	
Operating medium	Compressed air, filtered, lubricated or unlubricated													
Operating pressure [bar]	2 ... 8	1.5 ... 8	1 ... 8	1 ... 10	0.6 ... 10									
Ambient temperature [°C]	-20 ... +80													
Corrosion resistance classification	CRC1*													

* CRC1: Corrosion resistance class to Festo standard 940 070
Components with light corrosion exposure. Protection for transport and storage. Components without significant decorative function or surface, e.g. installed out of sight internally or behind covers.

Short-stroke cylinders ADVC

Double-acting – without position sensing

Compact cylinders

Forces and impact energy													
	Piston Ø [mm]												
	4	6	10	12	16	20	25	32	40	50	63	80	100
Theoretical force at 6 bar, advancing [N]	7.5	17	47	68	121	189	295	483	754	1178	1870	3016	4712
Theoretical force at 6 bar, returning [N]	5.7	13	40	51	91	141	247	415	686	1056	1750	2847	4418
Max. impact energy at end positions [J]	0.003	0.005	0.03	0.06	0.10	0.14	0.18	0.26	0.36	0.60	0.64	0.90	1.20

Product weight [g]													
Stroke [mm]	Piston Ø [mm]												
	4	6	10	12	16	20	25	32	40	50	63	80	100
2.5	4	-	-	-	-	-	-	-	-	-	-	-	-
5	4.5	12.5	23	34	68	112	135	280	350	-	-	-	-
10	-	16	26	42	76	124	150	300	380	470	600	1570	2480
15	-	-	-	-	84	136	165	320	410	505	650	1655	2570
20	-	-	-	-	92	148	180	340	440	540	700	1740	2660
25	-	-	-	-	100	160	195	360	470	575	750	1825	2750

Weight of moving mass [g]													
Stroke [mm]	Piston Ø [mm]												
	4	6	10	12	16	20	25	32	40	50	63	80	100
2.5	0.2	-	-	-	-	-	-	-	-	-	-	-	-
5	0.25	1.2	2.8	6.6	11	22	27	46	69	-	-	-	-
10	-	1.5	3.3	7.7	13	25	30	51	74	127	178	339	719
15	-	-	-	-	15	28	33	56	79	135	186	351	739
20	-	-	-	-	17	31	36	61	84	143	194	363	759
25	-	-	-	-	19	34	39	66	89	151	202	375	779

Materials		
	Piston Ø [mm]	
	4	6 ... 100
Cylinder barrel	Anodised aluminium	Anodised aluminium
Caps	Anodised aluminium	Anodised aluminium
Circlip	Spring steel	Spring steel
Piston rod	Anodised aluminium	High-alloy steel
Rod seal	HNBR	Polyurethane

Short-stroke cylinders ADVC

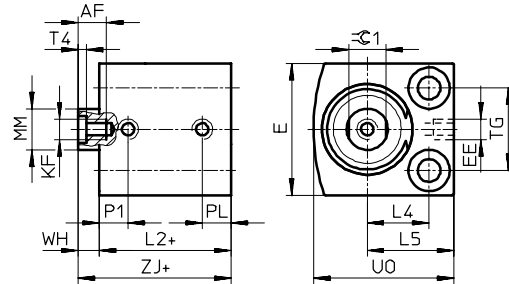
Double-acting – without position sensing

Compact cylinders

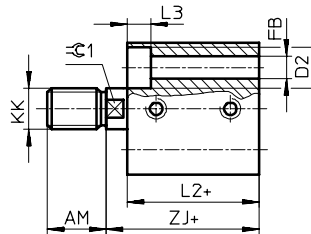
Ø 4 ... 25 mm

ADVC-4
Do not exceed the permissible screw-in depth of 3 mm and the permissible tightening torque of 0.7 Nm.

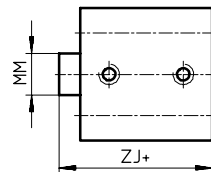
ADVC-...-I-P
Piston rod with female thread



ADVC-...-A-P
Piston rod with male thread



ADVC-...-P
Piston rod without thread



+ = plus stroke length

Ø	Stroke	AF	AM	D2	E	EE	FB	KF	KK	L2	L3	L4	L5	MM	P1	PL	T4	TG	UO	WH	ZJ	Ø1
[mm]	[mm]	min.	-0.5	Ø	max.		Ø			+0.2				Ø			±0.1	max.		±0.8		
4	2.5	-	6	3.3 +0.1	10	M3	1.8	-	M2	10.5	1.8	4	6.5	2	3.7	3.2	-	5.8	10	1	11.5	-
	5																					
6	5	-	6	5 +0.1	13	M3	2.9	-	M3	11	2.9	6	9	3	4.7	3	-	7	14	1	12	-
	10																					
10	5	-	8	5.8 +0.1	18	M5	3.4	-	M4	16	3.4	8	11.5	4	5.2	5.2	-	11	19	1.5	17.5	-
	14									6					5.5	15.5						
12	5	8	8	6 H13	20	M5	3.4	M3	M5	18	3.4	9	13	6	5.75	5.75	1.5	13	22	4	22	5
	10														9	6						
16	5	10	12	8 H13	25	M5	4.5	M4	M6	18	4.6	11.5	16.5	8	6	6	2	15	27	4	22	7
	10																					
	15																					
	20																					
	25																					
20	5	12	12	10 H13	32	M5	5.5	M5	M8	22	5.7	15	21	10	7.5	7	2	20	34	5	27	9
	10																					
	15																					
	20																					
	25																					
25	5	12	12	10 H13	38	M5	5.5	M5	M8	22.5	5.7	15.5	21.5	10	8	6.5	2	26	37	5	27.5	9
	10																					
	15																					
	20																					
	25																					

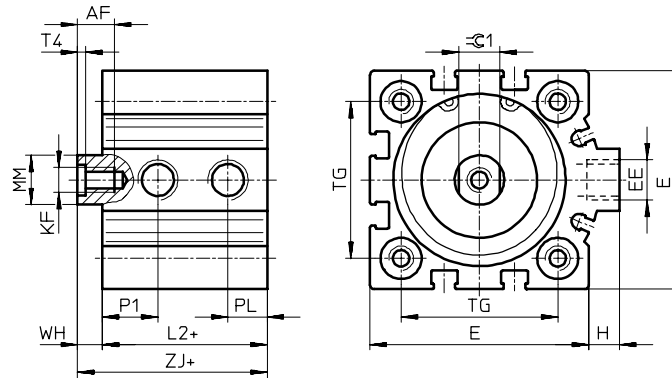
Short-stroke cylinders ADVC

Double-acting – without position sensing

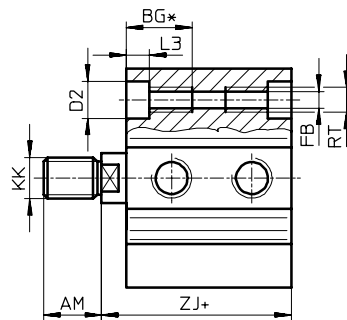
Compact cylinders

Ø 32 ... 100 mm

ADVC-...-I-P
Piston rod with female thread



ADVC-...-A-P**
Piston rod with male thread



+ = plus stroke length

Ø**	AF	AM	BG*	D2	E	EE	FB	H	KF	KK
[mm]	min.	-0.5	min.	Ø F9	max.		Ø			
32	12	14	21.7	9	45	G1/8	5.2	7	M6	M10x1.25
40	12	14	21.7	9	53.5	G1/8	5.2	7	M6	M10x1.25
50	16	16	22.8	11	63.5	G1/8	6.8	7	M8	M12x1.25
63	16	16	22.8	11	75	G1/8	6.8	7.5	M8	M12x1.25
80	20	22	25	14	93	G1/8	8.5	7	M10	M16x1.5
100	24	28	25	14	113	G1/4	8.5	13	M12	M20x1.5

Ø**	L2	L3	MM	P1	PL	RT	T4	TG	WH	ZJ	⊖C1
[mm]	+0.2		Ø					±0.1		±0.8	
32	29	5.7	12	9	8.5	M6	2.6	32.5	6	35	10
40	29.5	5.7	12	11	9	M6	2.6	38	6	35.5	10
50	28	6.8	16	11.3	9.5	M8	3.3	46.5	8	36	13
63	35	6.8	16	12.5	11.5	M8	3.3	56.5	8	43	13
80	40	9	20	15	15	M10	4.7	72	8	48	17
100	49	9	25	16.5	19	M10	6.1	89	10	59	22

* Continuous thread with short overall length

** Nut for piston rod thread included in scope of delivery



Short-stroke cylinders ADVC

Double-acting – without position sensing

Compact cylinders



ADVC-....-A-P **Order example: 188 159 ADVC-20-25-A-P**

Piston rod with male thread

	Piston Ø [mm]	Stroke [mm]					
		2.5	5	10	15	20	25
	4	188 054	188 055	–	–	–	–
	6	–	188 066	188 067	–	–	–
	10	–	188 078	188 079	–	–	–
	12	–	188 094	188 095	–	–	–
	16	–	188 123	188 124	188 125	188 126	188 127
	20	–	188 155	188 156	188 157	188 158	188 159
	25	–	188 187	188 188	188 189	188 190	188 191
	32	–	188 219	188 220	188 221	188 222	188 223
	40	–	188 247	188 248	188 249	188 250	188 251
	50	–	–	188 272	188 273	188 274	188 275
	63	–	–	188 296	188 297	188 298	188 299
	80	–	–	188 320	188 321	188 322	188 323
	100	–	–	188 344	188 345	188 346	188 347

ADVC-....-I-P **Order example: 188 210 ADVC-32-10-I-P**


Piston rod with female thread

	Piston Ø [mm]	Stroke [mm]				
		5	10	15	20	25
	12	188 090	188 091	–	–	–
	16	188 113	188 114	188 115	188 116	188 117
	20	188 145	188 146	188 147	188 148	188 149
	25	188 177	188 178	188 179	188 180	188 181
	32	188 209	188 210	188 211	188 212	188 213
	40	188 237	188 238	188 239	188 240	188 241
	50	–	188 264	188 265	188 266	188 267
	63	–	188 288	188 289	188 290	188 291
	80	–	188 312	188 313	188 314	188 315
	100	–	188 336	188 337	188 338	188 339

 New

ADVC-....-P **Order example: 526 899 ADVC-6-5-P**

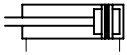
Piston rod without thread

	Piston Ø [mm]	Stroke [mm]		
		2.5	5	10
	4	526 897	526 898	–
	6	–	526 899	526 900
	10	–	526 903	526 904
	12	–	530 568	530 569

Short-stroke cylinders ADVC

Double-acting – with position sensing

Compact cylinders

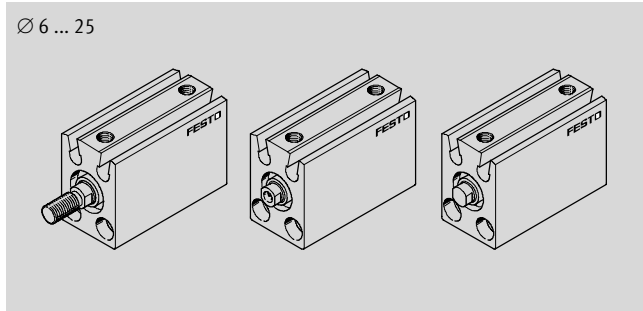


- Double-acting
- With position sensing

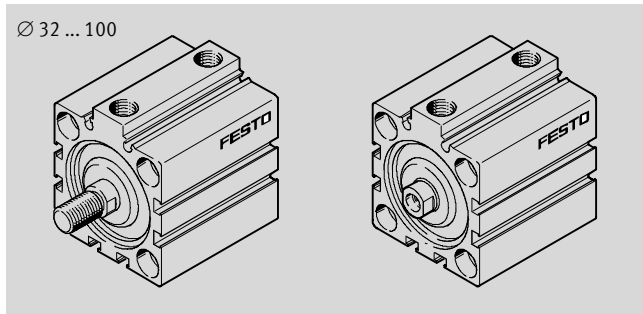
⊘ - Diameter
6 ... 100 mm

┆ - Stroke length
5 ... 25 mm

∅ 6 ... 25



∅ 32 ... 100



Design												
	Piston ∅ [mm]											
	6	10	12	16	20	25	32	40	50	63	80	100
Design	Piston											
	Piston rod											
Cushioning	Flexible cushioning rings/plates at both ends											
Position sensing	With proximity sensor											
Type of mounting	Via through holes						Via through holes					
	-						With accessories					
Pneumatic connections	M3	M5	M5	M5	M5	M5	G1/8	G1/8	G1/8	G1/8	G1/8	G1/4
Piston rod with female thread	-	-	■	■	■	■	■	■	■	■	■	■
Piston rod with male thread	■	■	■	■	■	■	■	■	■	■	■	■
Piston rod without thread	■	■	■	-	-	-	-	-	-	-	-	-

Operating conditions												
	Piston ∅ [mm]											
	6	10	12	16	20	25	32	40	50	63	80	100
Operating medium	Compressed air, filtered, lubricated or unlubricated											
Operating pressure [bar]	1.5 ... 8	1 ... 8	1 ... 10				0.6 ... 10					
Ambient temperature [°C]	-20 ... +80 (observe temperature range of proximity sensors)											
Corrosion resistance classification	CRC1*											

* CRC1: Corrosion resistance class to Festo standard 940 070
Components with light corrosion exposure. Protection for transport and storage. Components without significant decorative function or surface, e.g. installed out of sight internally or behind covers.

Short-stroke cylinders ADVC

Double-acting – with position sensing

Compact cylinders

Forces and impact energy												
	Piston Ø [mm]											
	6	10	12	16	20	25	32	40	50	63	80	100
Theoretical force at 6 bar, advancing [N]	17	47	68	121	189	295	483	754	1178	1870	3016	4712
Theoretical force at 6 bar, returning [N]	13	40	51	91	141	247	415	686	1056	1750	2847	4418
Max. impact energy at end positions [J]	0.005	0.03	0.06	0.10	0.14	0.18	0.26	0.36	0.60	0.64	0.90	1.20

Product weight [g]												
Stroke [mm]	Piston Ø [mm]											
	6	10	12	16	20	25	32	40	50	63	80	100
5	20	37	70	98	162	195	320	460	–	–	–	–
10	23	45	79	106	174	210	340	490	630	710	1940	2970
15	–	–	–	114	186	225	360	520	665	760	2025	3060
20	–	–	–	122	198	240	380	550	700	810	2110	3150
25	–	–	–	130	210	255	400	580	735	860	2195	3240

Weight of moving mass [g]												
Stroke [mm]	Piston Ø [mm]											
	6	10	12	16	20	25	32	40	50	63	80	100
5	1.7	3.2	8.5	15	26	32	50	66	–	–	–	–
10	2	3.7	9.6	17	29	35	55	71	116	158	289	555
15	–	–	–	19	32	38	60	76	124	166	301	575
20	–	–	–	21	35	41	65	81	132	174	313	595
25	–	–	–	23	38	44	70	86	140	182	325	615

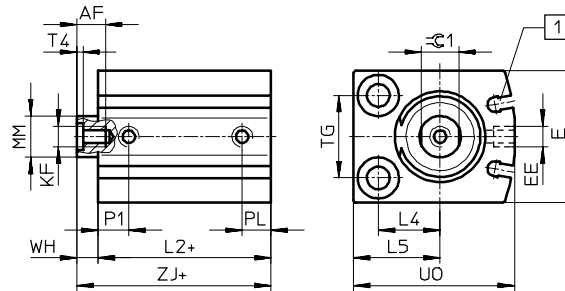
Materials	
Cylinder barrel	Anodised aluminium
Caps	Anodised aluminium
Circlip	Spring steel
Piston rod	High-alloy steel
Rod seal	Polyurethane

Short-stroke cylinders ADVC

Double-acting – with position sensing

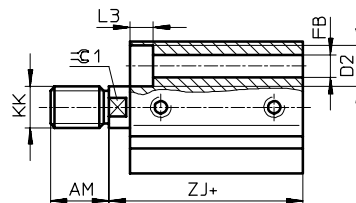
Compact cylinders

ADVC-...-I-P-A
Piston rod with female
thread

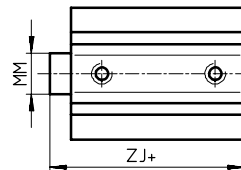


∅ 6 ... 25 mm

ADVC-...-A-P-A
Piston rod with male
thread



ADVC-...-P-A
Piston rod without
thread



+ = plus stroke length

1 Slot for proximity sensor
SME/SMT-10

∅	AF	AM	D2	E	EE	FB	KF	KK	L2	L3
[mm]	min.	-0.5	∅	max.		∅			+0.2	
6	-	6	5 +0.1	16	M3	2.9	-	M3	20.5	2.9
10	-	8	5.8 +0.1	21	M5	3.4	-	M4	22	3.4
12	8	8	6 H13	24	M5	3.4	M3	M5	31	3.4
16	10	12	8 H13	28	M5	4.5	M4	M6	30	4.6
20	12	12	10 H13	32	M5	5.5	M5	M8	32	5.7
25	12	12	10 H13	38	M5	5.5	M5	M8	32	5.7

∅	L4	L5	MM	P1	PL	T4	TG	UO	WH	ZJ	∅C1
[mm]			∅				±0.1	max.		±0.8	
6	5	8	3	5.2	3	-	10	16	1	21.5	-
10	7	10.5	4	6	6	-	14	22	1.5	23.5	-
12	8	12	6	7	6	1.5	16	26	4	35	5
16	12	17	8	8	6	2	18	32	4	34	7
20	15	21	10	7.5	7	2	20	39	5	37	9
25	15.5	21.5	10	10	6	2	26	42	5	37	9

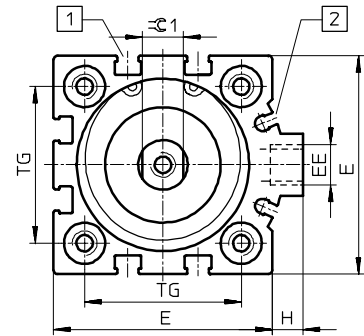
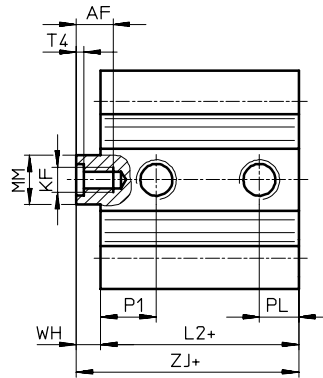
Short-stroke cylinders ADVC

Double-acting – with position sensing

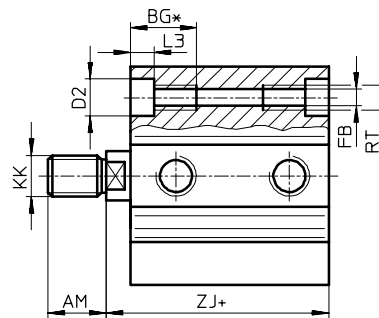
Compact cylinders

Ø 32 ... 100 mm

ADVC-...-I-P-A
Piston rod with female thread



ADVC-...-A-P-A**
Piston rod with male thread



+ = plus stroke length

- 1 Slot for proximity sensor SME/SMT-8
- 2 Slot for proximity sensor SME/SMT-10

Ø**	AF	AM	BG*	D2	E	EE	FB	H	KF	KK
[mm]	min.	-0.5	min.	Ø F9	max.		Ø			
32	12	14	21.7	9	45	G1/8	5.2	7	M6	M10x1.25
40	12	14	21.7	9	53.5	G1/8	5.2	7	M6	M10x1.25
50	16	16	22.8	11	63.5	G1/8	6.8	7	M8	M12x1.25
63	16	16	22.8	11	75	G1/8	6.8	7.5	M8	M12x1.25
80	20	22	25	14	93	G1/8	8.5	7	M10	M16x1.5
100	24	28	25	14	113	G1/4	8.5	13	M12	M20x1.5

Ø**	L2	L3	MM	P1	PL	RT	T4	TG	WH	ZJ	≈C1
[mm]	+0.2		Ø					±0.1		±0.8	
32	33	5.7	12	9	8.5	M6	2.6	32.5	6	39	10
40	38	5.7	12	13.5	9.5	M6	2.6	38	6	44	10
50	38	6.8	16	11.3	9.5	M8	3.3	46.5	8	46	13
63	41	6.8	16	12.5	10.5	M8	3.3	56.5	8	49	13
80	49	9	20	15	8.5	M10	4.7	72	8	57	17
100	58	9	25	16.5	10.5	M10	6.1	89	10	68	22



* Continuous thread with short overall length



** Nut for piston rod thread included in scope of delivery


Short-stroke cylinders ADVC

Double-acting, with position sensing

Compact cylinders

ADVC-...-...-A-P-A		Order example: 188 154 ADVC-20-25-A-P-A				
Piston rod with male thread						
	Piston Ø [mm]	Stroke [mm]				
		5	10	15	20	25
	6	188 064	188 065	–	–	–
	10	188 076	188 077	–	–	–
	12	188 092	188 093	–	–	–
	16	188 118	188 119	188 120	188 121	188 122
	20	188 150	188 151	188 152	188 153	188 154
	25	188 182	188 183	188 184	188 185	188 186
	32	188 214	188 215	188 216	188 217	188 218
	40	188 242	188 243	188 244	188 245	188 246
	50	–	188 268	188 269	188 270	188 271
	63	–	188 292	188 293	188 294	188 295
	80	–	188 316	188 317	188 318	188 319
	100	–	188 340	188 341	188 342	188 343

ADVC-...-...-I-P-A		Order example: 188 205 ADVC-32-10-I-P-A				
Piston rod with female thread						
	Piston Ø [mm]	Stroke [mm]				
		5	10	15	20	25
	12	188 088	188 089	–	–	–
	16	188 108	188 109	188 110	188 111	188 112
	20	188 140	188 141	188 142	188 143	188 144
	25	188 172	188 173	188 174	188 175	188 176
	32	188 204	188 205	188 206	188 207	188 208
	40	188 232	188 233	188 234	188 235	188 236
	50	–	188 260	188 261	188 262	188 263
	63	–	188 284	188 285	188 286	188 287
	80	–	188 308	188 309	188 310	188 311
	100	–	188 332	188 333	188 334	188 335

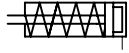
ADVC-...-...-P-A		Order example: 526 901 ADVC-6-5-P-A	
Piston rod without thread			
	Piston Ø [mm]	Stroke [mm]	
		5	10
	6	526 901	526 902
	10	526 905	526 906
	12	530 572	530 573

New 

Short-stroke cylinders AEVG

Single-acting – without position sensing

Compact cylinders

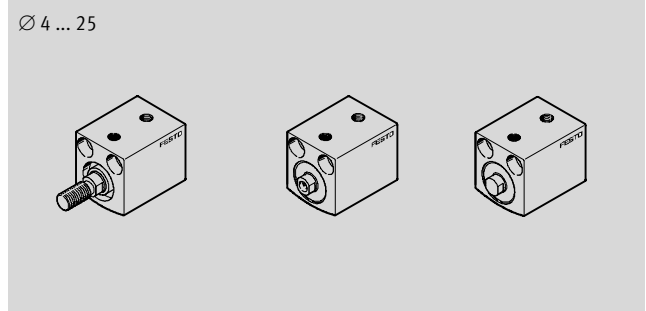


- Single-acting
- Without position sensing

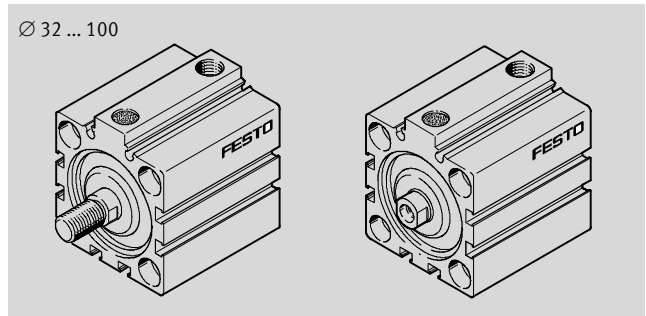
⌀ - Diameter
4 ... 100 mm

— - Stroke length
2.5 ... 25 mm

⌀ 4 ... 25



⌀ 32 ... 100



Design														
	Piston ⌀ [mm]													
	4	6	10	12	16	20	25	32	40	50	63	80	100	
Design	Piston													
	Piston rod													
Cushioning	Flexible cushioning rings/plates at both ends													
Type of mounting	Via through holes							Via through holes						
	-							With accessories						
Pneumatic connections	M3	M3	M5	M5	M5	M5	M5	G1/8	G1/8	G1/8	G1/8	G1/8	G1/4	
Piston rod with female thread	-	-	-	■	■	■	■	■	■	■	■	■	■	
Piston rod with male thread	■	■	■	■	■	■	■	■	■	■	■	■	■	
Piston rod without thread	■	■	■	■	-	-	-	-	-	-	-	-	-	

Operating conditions													
	Piston ⌀ [mm]												
	4	6	10	12	16	20	25	32	40	50	63	80	100
Operating medium	Compressed air, filtered, lubricated or unlubricated												
Operating pressure [bar]	2.5 ... 8	2 ... 8	1.5 ... 8	1.5 ... 10	1 ... 10								
Ambient temperature [°C]	-20 ... +80												
Corrosion resistance classification	CRC1*												

* CRC1: Corrosion resistance class to Festo standard 940 070
Components with light corrosion exposure. Protection for transport and storage. Components without significant decorative function or surface, e.g. installed out of sight internally or behind covers.


Short-stroke cylinders AEVC

Single-acting – without position sensing

Compact cylinders

Forces and impact energy													
	Piston Ø [mm]												
	4	6	10	12	16	20	25	32	40	50	63	80	100
Theoretical force at 6 bar, advancing [N]	5	11	41	59	105	170	270	450	700	1120	1800	2900	4500
Theoretical force at 6 bar, returning [N]	1	3	3	4	5	10*	15	22	28	40	50	85	140
Max. impact energy at end positions [J]	0.003	0.005	0.03	0.06	0.10	0.14	0.18	0.26	0.36	0.60	0.64	0.90	1.20

* AEVC-20-5-... = 5 N

 - Note The level of friction depends on the mounting position and type of load involved. Single-acting cylinders should be operated without lateral forces where possible.

Product weight [g]													
Stroke [mm]	Piston Ø [mm]												
	4	6	10	12	16	20	25	32	40	50	63	80	100
2.5	3.7	–	–	–	–	–	–	–	–	–	–	–	–
5	4.5	12	17	24	60	85	130	220	–	–	–	–	–
10	–	18	24	40	80	130	160	290	370	410	490	1900	2850
25	–	–	–	–	150	200	250	400	560	680	770	2400	3500

Weight of moving mass [g]													
Stroke [mm]	Piston Ø [mm]												
	4	6	10	12	16	20	25	32	40	50	63	80	100
2.5	0.15	–	–	–	–	–	–	–	–	–	–	–	–
5	0.2	1	2	4.4	8	14	22	40	–	–	–	–	–
10	–	1.4	2.6	6.9	11	21	25	48	65	105	157	327	678
25	–	–	–	–	19	32	37	62	83	140	191	365	739

Materials		
	Piston Ø [mm]	
	4	6 ... 100
Cylinder barrel	Anodised aluminium	
Caps	Anodised aluminium	
Circlip	Spring steel	
Piston rod	Anodised aluminium	High-alloy steel
Rod seal	HNBR	Polyurethane


Short-stroke cylinders AEVC

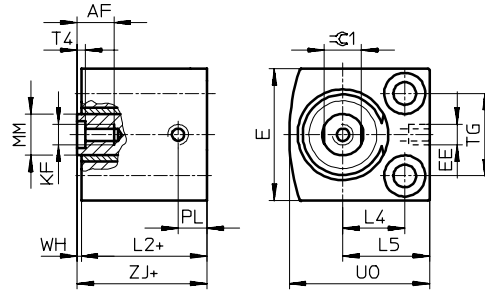
Single-acting – without position sensing

Compact cylinders

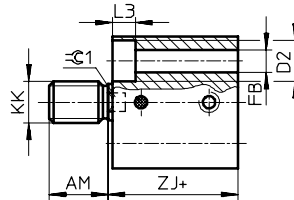
Ø 4 ... 25 mm

AEVC-...-I-P
Piston rod with female thread

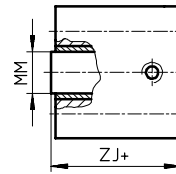
-  - Note
ADVC-4
Do not exceed the permissible screw-in depth of 3 mm and the permissible tightening torque of 0.7 Nm.



AEVC-...-A-P
Piston rod with male thread



AEVC-...-P
Piston rod without thread



+ = plus stroke length

Ø [mm]	Stroke [mm]	AF min.	AM -0.5	D2 Ø	E max.	EE	FB Ø	KF	KK	L2 +0.2	L3	L4	L5	MM Ø	PL	T4	TG ±0.1	UO max.	WH	ZJ ±0.8	±0.1
4	2.5	-	6	3.3 +0.1	10	M3	1.8	-	M2	10.5	1.8	4	6.5	2	3.2	-	5.8	10	1	11.5	-
	5																				
6	5	-	6	5 +0.1	13	M3	2.9	-	M3	11	2.9	6	9	3	3	-	7	14	1	12	-
	10									13.4										14.4	
10	5	-	8	5.8 +0.1	18	M5	3.4	-	M4	11	3.4	8	11.5	4	5.5	-	11	19	1	12	-
	10									13										14	
12	5	8	8	6 H13	20	M5	3.4	M3	M5	11	3.4	9	13	6	6	1.5	13	22	1	12	-
	10									17.5										18.5	
16	5	10	12	8 H13	25	M5	4.5	M4	M6	15	4.6	11.5	16.5	8	6	2	15	27	1	16	7
	10									17.5										18.5	
	25									22										23	
20	5	8	12	10 H13	32	M5	5.5	M5	M8	15	5.7	15	21	10	7	2	20	34	1	16	9
	10	12								20.5										21.5	
	25	12								23.5										24.5	
25	5	12	12	10 H13	38	M5	5.5	M5	M8	21.1	5.7	15.5	21.5	10	6.5	2	26	37	1	22.1	9
	10									25.2										26.2	
	25									12										26.2	

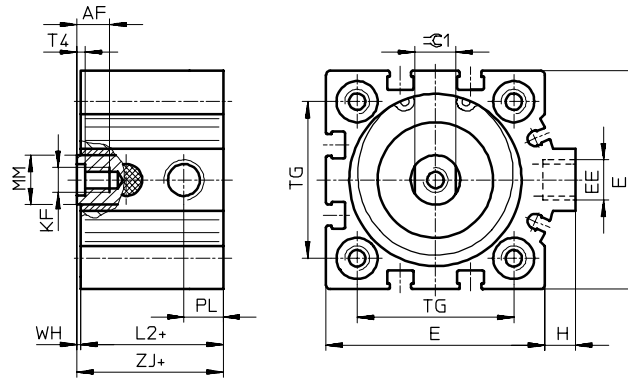
Short-stroke cylinders AEVC

Single-acting – without position sensing

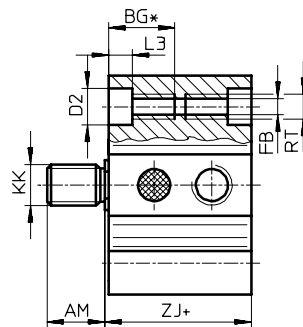
Compact cylinders

AEVC-...-I-P
Piston rod with female thread

∅ 32 ... 100 mm



AEVC-...-A-P**
Piston rod with male thread



+ = plus stroke length

∅**	Stroke	AF	AM	BG*	D2	E	EE	FB	H	KF	KK	L2	L3	MM	PL	RT	T4	TG	WH	ZJ	≈C1
[mm]	[mm]	min.	-0.5	min.	∅ F9	max.		∅				+0.2		∅				±0.1		±0.8	
32	5											21								22	10
	10	12	14	21.7	9	45	G $\frac{1}{8}$	5.2	7	M6	M10x1.25		5.7	12	9.5	M6	2.6	32.5	1	26	
	25											25									
40	10	12	14	21.7	9	53.5	G $\frac{1}{8}$	5.2	7	M6	M10x1.25	24.5	5.7	12	9.5	M6	2.6	38	1	25.5	10
	25											29.5									
50	10	16	16	22.8	11	63.5	G $\frac{1}{8}$	6.8	7	M8	M12x1.25	20.6	6.8	16	9.5	M8	3.3	46.5	0.5	21.1	13
	25											28									
63	10	16	16	22.8	11	75	G $\frac{1}{8}$	6.8	7.5	M8	M12x1.25	25	6.8	16	11.5	M8	3.3	56.5	1	26	13
	25											32									
80	10	20	22	25	14	93	G $\frac{1}{8}$	8.5	7	M10	M16x1.5	42	9	20	15	M10	4.7	72	1	43	17
	25																				
100	10	24	28	25	14	113	G $\frac{1}{4}$	8.5	13	M12	M20x1.5	49	9	25	19	M10	6.1	89	1	50	22
	25																				



* Continuous thread with short overall length



** Nut for piston rod thread included in scope of delivery



Short-stroke cylinders AEVC

Single-acting – without position sensing

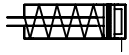
Compact cylinders

AEVC-...-...-A-P		Order example: 188 139 AEVC-20-25-A-P			
Piston rod with male thread					
	Piston Ø [mm]	Stroke [mm]			
		2.5	5	10	25
	4	188 052	188 053	–	–
	6	–	188 062	188 063	–
	10	–	188 074	188 075	–
	12	–	188 086	188 087	–
	16	–	188 105	188 106	188 107
	20	–	188 137	188 138	188 139
	25	–	188 169	188 170	188 171
	32	–	188 201	188 202	188 203
	40	–	–	188 230	188 231
	50	–	–	188 258	188 259
	63	–	–	188 282	188 283
	80	–	–	188 306	188 307
	100	–	–	188 330	188 331

AEVC-...-...-I-P		Order example: 188 196 AEVC-32-10-I-P		
Piston rod with female thread				
	Piston Ø [mm]	Stroke [mm]		
		5	10	25
	12	188 082	188 083	–
	16	188 099	188 100	188 101
	20	188 131	188 132	188 133
	25	188 163	188 164	188 165
	32	188 195	188 196	188 197
	40	–	188 226	188 227
	50	–	188 254	188 255
	63	–	188 278	188 279
	80	–	188 302	188 303
	100	–	188 326	188 327

AEVC-...-...-P		Order example: 188 058 AEVC-6-5-P			
Piston rod without thread					
	Piston Ø [mm]	Stroke [mm]			
		2.5	5	10	
	4	188 050	188 051	–	
	6	–	188 058	188 059	
	10	–	188 070	188 071	
	12	–	530 566	530 567	 New

Compact cylinders



⊘ - Diameter
6 ... 100 mm

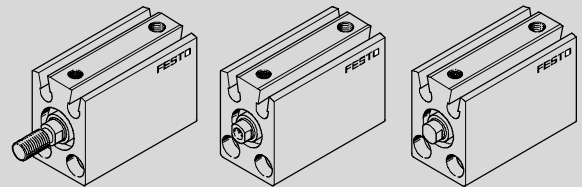
┆ - Stroke length
5 ... 25 mm

- Single-acting
- With position sensing

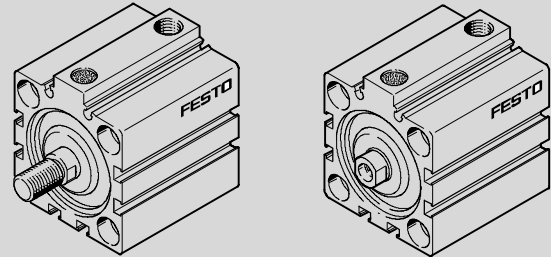
Short-stroke cylinders AEVC

Single-acting – with position sensing

∅ 6 ... 25



∅ 32 ... 100



Design												
	Piston ∅ [mm]											
	6	10	12	16	20	25	32	40	50	63	80	100
Design	Piston											
	Piston rod											
Cushioning	Flexible cushioning rings/plates at both ends											
Position sensing	With proximity sensor											
Type of mounting	Via through holes						Via through holes					
	-						With accessories					
Pneumatic connections	M3	M5	M5	M5	M5	M5	G1/8	G1/8	G1/8	G1/8	G1/8	G1/4
Piston rod with female thread	-	-	■	■	■	■	■	■	■	■	■	■
Piston rod with male thread	■	■	■	■	■	■	■	■	■	■	■	■
Piston rod without thread	■	■	■	-	-	-	-	-	-	-	-	-

Operating conditions												
	Piston ∅ [mm]											
	6	10	12	16	20	25	32	40	50	63	80	100
Operating medium	Compressed air, filtered, lubricated or unlubricated											
Operating pressure [bar]	2 ... 8	1.5 ... 8	1.5 ... 10				1 ... 10					
Ambient temperature [°C]	-20 ... +80 (observe temperature range of proximity sensors)											
Corrosion resistance classification	CRC 1*											

* CRC1: Corrosion resistance class to Festo standard 940 070
Components with light corrosion exposure. Protection for transport and storage. Components without significant decorative function or surface, e.g. installed out of sight internally or behind covers.


Short-stroke cylinders AEVC

Single-acting – with position sensing

Compact cylinders

Forces and impact energy													
	Piston Ø [mm]												
	6	10	12	16	20	25	32	40	50	63	80	100	
Theoretical force at 6 bar, advancing [N]	11	41	59	105	170	270	450	700	1120	1800	2900	4500	
Theoretical force at 6 bar, returning [N]	3	3	4	5	10**	15	22	28	40	50	85	140	
Max. impact energy at end positions [J]	0.005	0.03	0.06	0.10	0.14	0.18	0.26	0.36	0.60	0.64	0.90	1.20	

* AEVC-20-5-... = 5 N

-  - Note	The level of friction depends on the mounting position and type of load involved. Single-acting cylinders should be operated without lateral forces where possible.
--	---

Product weight [g]													
Stroke [mm]	Piston Ø [mm]												
	6	10	12	16	20	25	32	40	50	63	80	100	
5	19	37	70	95	160	195	320	–	–	–	–	–	
10	23	44	79	105	170	205	340	490	630	720	1940	2970	
25	–	–	–	130	200	250	390	580	730	870	3290	3220	

Weight of moving mass [g]													
Stroke [mm]	Piston Ø [mm]												
	6	10	12	16	20	25	32	40	50	63	80	100	
5	1.5	3	8.5	15	26	32	49	–	–	–	–	–	
10	1.8	3.5	9.5	17	29	35	54	70	116	155	284	546	
25	–	–	–	26	40	47	67	83	140	179	321	604	

Materials	
Cylinder barrel	Anodised aluminium
Caps	Anodised aluminium
Circlip	Spring steel
Piston rod	High-alloy steel
Rod seal	Polyurethane

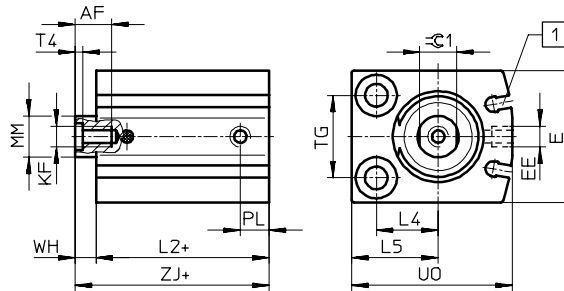
Short-stroke cylinders AEVC

Single-acting – with position sensing

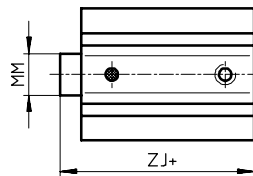
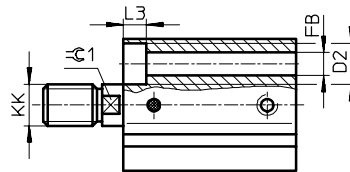
Compact cylinders

∅ 6 ... 25 mm

AEVC-...-I-P-A
Piston rod with female
thread



AEVC-...-A-P-A
Piston rod with male
thread



+ = plus stroke length

1 Slot for proximity sensor
SME/SMT-10

∅ [mm]	Stroke [mm]	AF min.	AM	D2 ∅	E max.	EE ∅	FB ∅	KF	KK	L2 +0.2	L3	L4	L5	MM ∅	PL	T4	TG ±0.1	UO max.	WH	ZJ ±0.8	∅1
6	5	-	6	5 +0.1	16	M3	2.9	-	M3	20.5	2.9	5	8	3	3	-	10	16	1	21.5	-
	10	-	8	5.8 +0.1	21	M5	3.4	-	M4	22	3.4	7	10.5	4	6	-	14	22	1.5	23.5	-
12	5	8	8	6 H13	24	M5	3.4	M3	M5	31	3.4	8	12	6	6	1.5	16	26	4	35	5
	10																				
16	5	10	12	8 H13	28	M5	4.5	M4	M6	30	4.6	12	17	8	6	2	18	32	4	34	7
	10									34.5										38.5	
	25																				
20	5	12	12	10 H13	32	M5	5.5	M5	M8	32	5.7	15	21	10	7	2	20	39	5	37	9
	10									35										40	
	25																				
25	5	12	12	10 H13	38	M5	5.5	M5	M8	32	5.7	15.5	21.5	10	6	2	26	42	5	37	9
	10									36.1										41.1	
	25																				

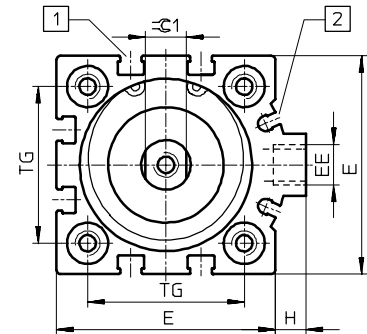
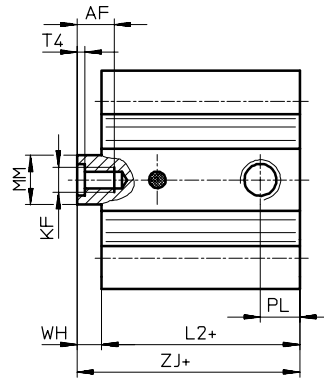
Short-stroke cylinders AEVC

Single-acting – with position sensing

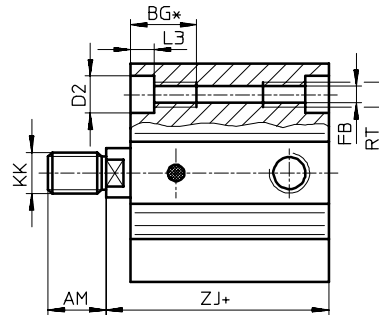
Compact cylinders

Ø 32 ... 100 mm

AEVC-...-I-P-A
Piston rod with female
thread



AEVC-...-A-P-A**
Piston rod with male
thread



+ = plus stroke length

- 1 Slot for proximity sensor SME/SMT-8
- 2 Slot for proximity sensor SME/SMT-10

Ø**	AF	AM	BG*	D2	E	EE	FB	H	KF	KK
	min.	-0.5	min.	Ø F9	max.		Ø			
32	12	14	21.7	9	45	G1/8	5.2	7	M6	M10x1.25
40	12	14	21.7	9	53.5	G1/8	5.2	7	M6	M10x1.25
50	16	16	22.8	11	63.5	G1/8	6.8	7	M8	M12x1.25
63	16	16	22.8	11	75	G1/8	6.8	7.5	M8	M12x1.25
80	20	22	25	14	93	G1/8	8.5	7	M10	M16x1.5
100	24	28	25	14	113	G1/4	8.5	13	M12	M20x1.5

Ø**	L2	L3	MM	PL	RT	T4	TG	WH	ZJ	⌀C1
	+0.2		Ø				±0.1		±0.8	
32	33	5.7	12	8.5	M6	2.6	32.5	6	39	10
40	38	5.7	12	9.5	M6	2.6	38	6	44	10
50	4	6.8	16	9.5	M8	3.3	46.5	8	48	13
63	41	6.8	16	10.5	M8	3.3	56.5	8	49	13
80	49	9	20	8.5	M10	4.7	72	8	57	17
100	58	9	25	10.5	M10	6.1	89	10	68	22

* Continuous thread with short overall length

** Nut for piston rod thread included in scope of delivery



Short-stroke cylinders AEVC

Single-acting – with position sensing

Compact cylinders



AEVC-...-...-A-P-A Order example: 188 136 AEVC-20-25-A-P-A

Piston rod with male thread

	Piston Ø [mm]	Stroke [mm]		
		5	10	25
	6	188 060	188 061	–
	10	188 072	188 073	–
	12	188 084	188 085	–
	16	188 102	188 103	188 104
	20	188 134	188 135	188 136
	25	188 166	188 167	188 168
	32	188 198	188 199	188 200
	40	–	188 228	188 229
	50	–	188 256	188 257
	63	–	188 280	188 281
	80	–	188 304	188 305
	100	–	188 328	188 329




AEVC-...-...-I-P-A Order example: 188 193 AEVC-32-10-I-P-A

Piston rod with female thread

	Piston Ø [mm]	Stroke [mm]		
		5	10	25
	12	188 080	188 081	–
	16	188 096	188 097	188 098
	20	188 128	188 129	188 130
	25	188 160	188 161	188 162
	32	188 192	188 193	188 194
	40	–	188 224	188 225
	50	–	188 252	188 253
	63	–	188 276	188 277
	80	–	188 300	188 301
	100	–	188 324	188 325

AEVC-...-...-A-P Order example: 188 056 AEVC-6-5-P-A

Piston rod without thread

	Piston Ø [mm]	Stroke [mm]	
		5	10
	6	188 056	188 057
	10	188 068	188 069
	12	530 570  New	530 571  New

Short-stroke cylinders ADVC/AEVC, accessories

Technical data

Compact cylinders

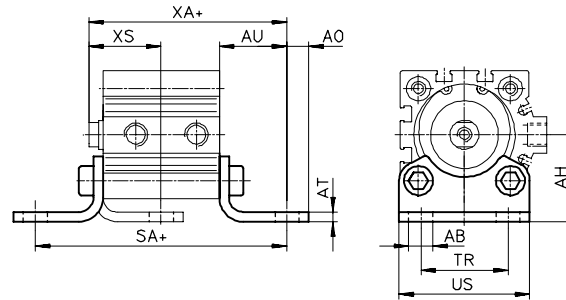
Foot mounting HNC

Scope of delivery:

2 feet, 4 mounting screws

Material:

Galvanised steel



+ = plus stroke length

∅ [mm]	AB ∅	AH	AO	AT	AU	TR	US	Weight [kg]	Part No.	Type
32	7	32	6.5	4	24	32	45	0.135	174 369	HNC-32
40	10	36	9	4	28	36	54	0.180	174 370	HNC-40
50	10	45	9.5	5	32	45	64	0.325	174 371	HNC-50
63	10	50	12.5	5	32	50	75	0.405	174 372	HNC-63
80*	12	63	15	6	41	63	93	0.820	174 373	HNC-80
100*	14.5	71	17.5	6	41	75	110	1.000	174 374	HNC-100

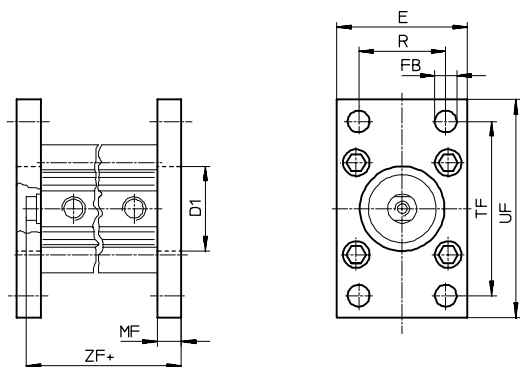
∅ [mm]	Stroke [mm]	Dimensions for ADVC						Dimensions for AEVC					
		Without position sensing			With position sensing			Without position sensing			With position sensing		
		SA	XA	XS	SA	XA	XS	SA	XA	XS	SA	XA	XS
32	5	77	59	26	81	63	26	69	46	21	81	63	26
	73							50					
40	10	85.5	63.5	30	94	72	30	80.5	53.5	25	94	72	30
	85.5							58.5					
50	10	92	68	35	102	78	35	84.6	53.1	27.5	104	80	35
	92							60.5					
63	10	99	75	35	105	81	35	89	58	28	105	81	35
	96							65					
80*	10, 25	122	89	43	131	98	43	124	84	36	131	98	43
100*	10, 25	131	100	45	140	109	45	131	91	36	140	109	45

* Observe the screw-in depth of the mounting screws

Short-stroke cylinders ADVC/AEVC, accessories

Technical data

Compact cylinders



+ = plus stroke length

Flange mounting FNC

Scope of delivery:
1 flange and 4 mounting screws

Material:
Galvanised steel

∅ [mm]	D1 ∅ H11	E	FB ∅ H13	MF	R	TF	UF	Weight [kg]	Part No.	Type
32	30	45	7	10	32	64	80	0.240	174 376	FNC-32
40	35	54	9	10	36	72	90	0.280	174 377	FNC-40
50	40	65	9	12	45	90	110	0.520	174 378	FNC-50
63	45	75	9	12	50	100	120	0.690	174 379	FNC-63
80*	45	93	12	16	63	126	150	1.650	174 380	FNC-80
100*	55	110	14	16	75	150	175	2.400	174 381	FNC-100

∅ [mm]	Stroke [mm]	Dimensions for ADVC		Dimensions for AEVC	
		Without position sensing	With position sensing	Without position sensing	With position sensing
		ZF		ZF	
32	5	45	49	32	49
	10, 25			36	
40	10	45.5	54	35.5	54
	25			40.5	
50	10	48	58	33.5	60
	25			40.5	
63	10	55	61	38	61
	25			45	
80*	10, 25	64	73	59	73
100*	10, 25	75	84	66	84

* Observe the screw-in depth of the mounting screws

Short-stroke cylinders ADVC/AEVC, accessories

Technical data

Compact cylinders

Swivel flange SNCB

for clevis foot

LNG or LSN → 35

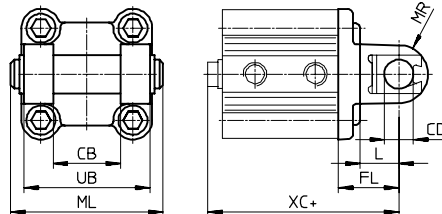
Scope of delivery:

1 flange with pivot pin and

4 mounting screws

Material:

Aluminium



+ = plus stroke length

∅ [mm]	CB	CD ∅	FL	L	ML	MR	UB	Weight [kg]	Part No.	Type
32	26	10	22	13	55	10	45	0.100	174 390	SNCB-32
40	28	12	25	16	63	12	52	0.150	174 391	SNCB-40
50	32	12	27	16	71	12	60	0.225	174 392	SNCB-50
63	40	16	32	21	83	16	70	0.365	174 393	SNCB-63
80*	50	16	36	22	103	16	90	0.610	174 394	SNCB-80
100*	60	20	41	27	127	20	110	0.925	174 395	SNCB-100

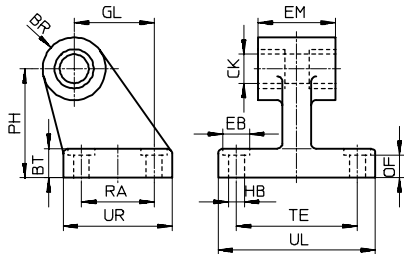
∅ [mm]	Stroke [mm]	Dimensions for ADVC		Dimensions for AEVC	
		Without position sensing	With position sensing	Without position sensing	With position sensing
		XC		XC	
32	5	57	61	44	61
	10, 25			48	
40	10	60.5	69	50.5	69
	25			55.5	
50	10	63	73	48.1	75
	25			55.5	
63	10	75	81	58	81
	25			65	
80*	10, 25	84	93	79	93
100*	10, 25	100	109	91	109

* Observe the screw-in depth of the mounting screws

Short-stroke cylinders ADVC/AEVC, accessories

Technical data

Compact cylinders



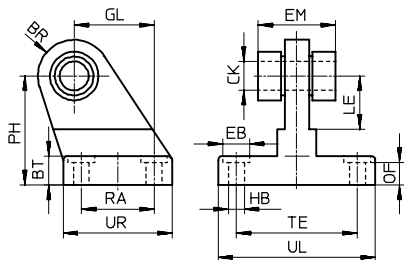
LNG clevis foot

Scope of delivery: 1 clevis foot mounting

Material LNG-32 ... 50:
High-alloy steel

Material LNG-63 ... 100:
Spheroidal graphite cast iron

Ø [mm]	BR	BT	CK Ø D11	EB Ø H13	EM	GL	HB Ø H13	OF	PH	RA	TE	UL	UR	Weight [kg]	Part No.	Type
32	10	8	10	–	25.8 ^{-0.4}	21	6.6	–	32	18	38	51	31	0.170	33 890	LNG-32
40	11	10	12	–	27.8 ^{-0.4}	24	6.6	–	36	22	41	54	35	0.190	33 891	LNG-40
50	12	12	16	–	31.8 ^{-0.4}	33	9	–	45	30	50	65	45	0.290	33 892	LNG-50
63	15	12	16	15	40 ^{c11}	37	9	10.8	50	35	52	67	50	0.450	33 893	LNG-63
80	15	14	20	18	50 ^{c11}	47	11	12.7	63	40	66	86	60	0.800	33 894	LNG-80
100	19	15	20	18	60 ^{c11}	55	11	13.7	71	50	76	96	70	1.150	33 895	LNG-100



LSN clevis foot

with spherical bearing

Scope of delivery:

1 clevis foot mounting

Material:
Spheroidal graphite cast iron

Ø [mm]	BR	BT	CK Ø	EB Ø	EM	GL	HB Ø	LE	OF	PH ±0.5	RA	TE	UL	UR	Weight [kg]	Part No.	Type
32	13	10	10 ^{-0.008}	10	25.8	21	5.5	16	4.5	32	18	38	51	31	0.160	5 561	LSN-32
40	15	10	12 ^{-0.008}	10	27.8	24	5.5	20	4.3	36	22	41	54	35	0.220	5 562	LSN-40
50	15	12	12 ^{-0.008}	11	31.8	33	6.6	22	5.2	45	30	50	65	45	0.380	5 563	LSN-50
63	20	12	16 ^{-0.008}	11	39.8	37	6.6	30	5.2	50	35	52	67	50	0.535	5 564	LSN-63
80	20	14	16 ^{-0.008}	15	49.8	47	9	31	5	63	40	66	86	60	0.850	5 565	LSN-80
100	24	15	20 ^{-0.010}	15	59.8	55	9	38	6	71	50	76	96	70	1.280	5 566	LSN-100

Short-stroke cylinders ADVC/AEVC, accessories

Technical data

Compact cylinders

Rod eye SGS

To DIN ISO 8139 and DIN 648 dimensional series K.

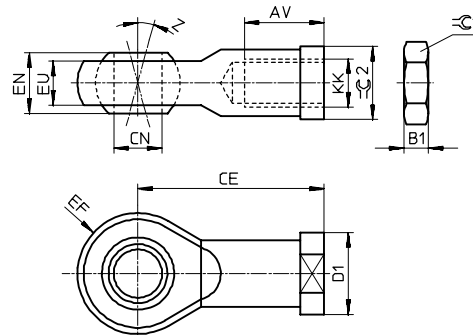
The rod eye is maintenance-free due to the material combination steel/PTFE-bronze material in the swivel bearing.

Scope of delivery:

1 rod eye and 1 nut to DIN 439

Material:

Galvanised steel



KK	AV	B1	CE	CN \varnothing H7	D1 \varnothing	EF	EN	EU	Z	$\pm C1$	$\pm C2$	Weight [kg]	Part No.	Type
M4	10	2.2	27	5	11	9	8	6	13	7	9	0.017	9 253	SGS-M4
M6	12	3.2	30	6	13	10	9	6.8	13	10	11	0.025	9 254	SGS-M6
M8	16	4	36	8	16	12	12	9	13	13	14	0.045	9 255	SGS-M8
M10x1.25	20	5	43	10	19	14	14	10.5	13	17	17	0.070	9 261	SGS-M10x1,25
M12x1,25	22	6	50	12	22	16	16	12	13	19	19	0.105	9 262	SGS-M12x1,25
M16x1.5	28	8	64	16	27	21	21	15	15	24	22	0.210	9 263	SGS-M16x1,5
M20x1,5	33	10	77	20	34	25	25	18	15	30	30	0.380	9 264	SGS-M20x1,5

Rod clevis SG

The rod clevis is fitted to the piston rod thread and permits a swivelling movement of the cylinder in one plane.

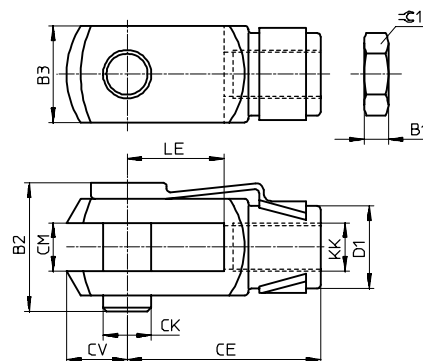
Scope of delivery:

1 rod clevis, 1 pivot pin and

1 nut to DIN 439

Material:

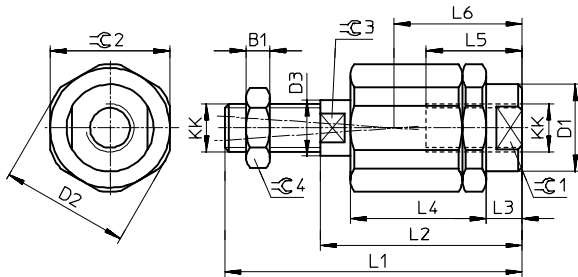
Galvanised steel



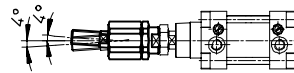
KK	B1	B2	B3	CE ± 0.4	CK \varnothing H9	CM	CV	D1 \varnothing	LE ± 0.5	$\pm C1$	Weight [kg]	Part No.	Type
M4	3.2	11	8	16	4	4	5	8	8	7	0.010	6 532	SG-M4
M6	3.2	16	12	24	6	6	7	10	12	10	0.020	3 110	SG-M6
M8	4	21.5	16	32	8	8	10	14	16	13	0.050	3 111	SG-M8
M10x1.25	5	26	20	40	10	10	12	18	20	17	0.100	6 144	SG-M10x1,25
M12x1.25	6	31	24	48	12	12	14	20	24	19	0.165	6 145	SG-M12x1,25
M16x1.5	8	39	32	64	16	16	19	26	32	24	0.356	6 146	SG-M16x1,5
M20x1.5	10	54	40	80	20	20	25	34	40	30	0.720	6 147	SG-M20x1,5

Short-stroke cylinders ADVC/AEVC, accessories

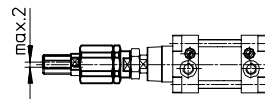
Technical data



Angle compensator



Axial compensation of central axis



Self-aligning rod coupler FK

The coupling links the piston rod end of all cylinder types to the machine parts to be moved. This permits a compensation of radial and angular deviations (misalignment).

Scope of delivery:

1 self-aligning rod coupler and

1 nut to DIN 439

Material:

Galvanised steel

KK	B1	D1 ∅	D2 ∅	D3 ∅	L1	L2	L3	L4	L5	L6	≅1	≅2
M4	2.2	-	-	3.8	33	24	4.5	16.5	12.5	16	11	11
M5	2.7	8.5	14.5	5.8	38.5	25	4.4	17.5	11.5	15.7	7	13
M6	3.2	8.5	14.5	5.8	37	25	4.4	17.5	11.5	15.7	7	13
M8	4	12.5	19	7.8	49	34	6	23.5	14	20.5	10	17
M10x1.25	5	21.8	32	13.8	69.5	49.5	9	34	23	31	19	30
M12x1.25	6	21.8	32	13.8	74.5	50.5	10	34	24	32	19	30
M16x1.5	8	33.8	45	22	103	71	10	53	32	44.5	30	41
M20x1.5	10	33.8	45	22	120	80	19	53	41	53.5	30	41

KK	≅3	≅4	Max. tensile and compressive load [N]	Radial deflection P [mm]	Weight [kg]	Part No.	Type
M4	3.2	7	750	0.5	0.015	6 528	FK-M4
M5	5	8	1200	0.5	0.020	30 984	FK-M5
M6	5	10	1200	0.5	0.023	2 061	FK-M6
M8	7	13	2500	0.5	0.050	2 062	FK-M8
M10x1.25	12	17	5000	0.7	0.210	6 140	FK-M10x1,25
M12x1.25	12	19	5000	0.7	0.215	6 141	FK-M12x1,25
M16x1.5	19	24	10 000	1	0.650	6 142	FK-M16x1,5
M20x1.5	19	30	10 000	1	0.720	6 143	FK-M20x1,5

Short-stroke cylinders ADVC/AEVC, accessories

Technical data

Compact cylinders

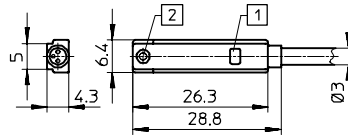
Proximity sensor SME for slot type 8

SME-8-K-LED-24

SME-8-K5-LED-24

SME-8-ZS-KL-LED-24

SME-8-K-24-S6 (without LED)



1 Yellow LED

2 Max. tightening torque 0.2 Nm

Reed switch				
Part No.	150 855	175 404	171 169	161 756
Type	SME-8-K-LED-24	SME-8-K5-LED-24	SME-8-ZS-KL-LED-24	SME-8-K-24-S6
Symbol				
Version	Three-wire, normally open contact		Two-wire, normally open contact	Heat resistant
Type of mounting	In sensor slot			
Connection	3-core cable		2-core cable	
Core cross-section	0.14 mm ²	0.14 mm ²	0.14 mm ²	0.14 mm ²
Length of connecting cable	2,500 mm	5,000 mm	2,500 mm	2,500 mm
Max. contact rating	10 W	10 W	2.2 W	10 W
Max. switching current	500 mA	500 mA	80 mA	500 mA
Operating voltage	12 ... 30 V AC/DC		12 ... 27 V DC	0 ... 30 V AC/DC
Contact resistance	0.13 Ω	0.09 Ω	0.09 Ω	0.09 Ω
Reproducible switching accuracy*	± 0.1 mm			
CE symbol ** to EMC Directive 89/336/EEC	■	–	■	–
Max. switching frequency	800 Hz			
Protection class to EN 60 529	IP 65/67			
Temperature range	Fixed cable installation	–20 ... +60 °C		–20 ... +120 °C
	Flexible cable installation	–5 ... +60 °C		–20 ... +120 °C
Materials	Housing: PET; clamp: Stainless steel			
	cable: PUR			cable: TPE-S
Weight	50 g	80 g	50 g	50 g

* Also applies for non-rotating piston rod.

** Rated operating voltage: 230 V AC / 230 V DC

Ohmic load: AC 12 (0.04 A AC) / DC12 (0.04 A AC)

Inductive load: AC 14 (0.024 A AC) / DC13 (0.04 A DC)

Accessories	Part No.	Type
Slot cover	151 680	ABP-5-S
Material	ABS	
Scope of delivery	2 x 500 mm	

Short-stroke cylinders ADVC/AEVC, accessories

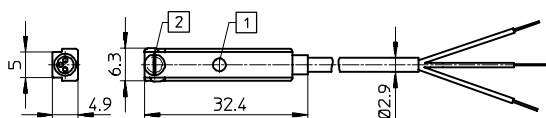
Technical data

Compact cylinders

Proximity sensor SMT for slot type 8

SMT-8-PS-K-LED-24-B

SMT-8-PS-K5-LED-24-B



1 Yellow LED

2 Max. tightening torque 0.2 Nm

Contactless	PNP	
Part No.	175 436	175 434
Type	SMT-8-PS-K-LED-24-B	SMT-8-PS-K5-LED-24-B
Symbol		
Version	Three-wire, PNP, normally open contact	
Type of mounting	In sensor slot	
Connection	3-core cable	
Core cross-section	0.14 mm ²	
Length of connecting cable	2,500 mm	5,000 mm
Max. contact rating	3 W	
Max. switching current	100 mA	
Operating voltage	10 ... 30 V DC	
Reproducible switching accuracy*	± 0.1 mm	
CE symbol to EMC Directive 89/336/EWG	■	
Switch-on/switch-off times	< 0.2 ms/< 0.5 ms	
Protection class to EN 60 529	IP 65/67	
Temperature range	Fixed cable installation	-20 ... +60 °C
	Flexible cable installation	-5 ... +60 °C
Materials	Housing: TPE-U; clamp: stainless steel; cable: PUR	
Weight	40 g	60 g

* Also applies for non-rotating piston rod.

Accessories	Part No.	Type
Slot cover	151 680	ABP-5-S
Material	ABS	
Scope of delivery	2 x 500 mm	

Short-stroke cylinders ADVC/AEVC, accessories

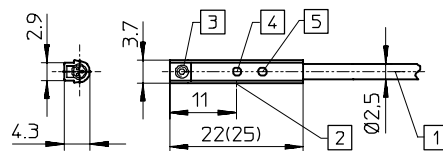
Technical data

Compact cylinders

Proximity sensor SME for type 10 slot

SME-10-KL-LED-24

SME-10-ZS-KL-LED-24



- | | | | |
|---|--|---|---------------------------------|
| 1 | 2-core cable/3-core cable | 4 | Yellow LED (positive switching) |
| 2 | Theoretical switching point | 5 | Yellow LED (negative switching) |
| 3 | Set screw DIN 913 M2x4; max. tightening torque 0.18 Nm | Dimensions in parentheses: SME-10-ZS... | |

Reed contact		173 210	173 214
Part No.		SME-10-KL-LED-24	SME-10-ZS-KL-LED-24
Type			
Symbol			
Version		Cable	
Type of mounting		In sensor slot	
Connection		3-core cable	2-core cable
Core cross-section		0.12 mm ²	
Length of connecting cable		2,500 mm	
Max. contact rating		1 W	
Max. switching current		100 mA	
Operating voltage		12 ... 27 V DC	
Contact resistance		0.1 Ω	
Reproducible switching accuracy*		± 0.1 mm	
CE symbol ** to	EMC Directive 89/336/EEC	■	
	EU Directive 73/23/EEC	-	
Max. switching frequency		500 Hz	
Protection class to EN 60 529		IP 65/67	
Temperature range	Fixed cable installation	-20 ... + 70 °C	
	Flexible cable installation	-5 ... + 70 °C	
Materials		Housing: PET; clamp: Stainless steel	
		cable: PUR	
Weight		20 g	

* Also applies for non-rotating piston rod.

** Rated operating voltage: 230 V AC / 230 V DC

Ohmic load: AC 12 (0.04 A AC) / DC 12 (0.04 A AC)

Inductive load: AC 14 (0.024 A AC) / DC 13 (0.04 A DC)

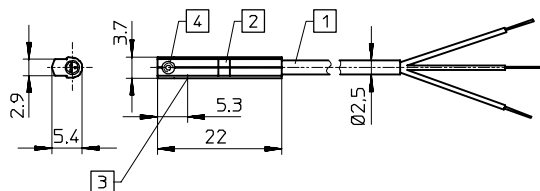
Short-stroke cylinders ADVC/AEVC, accessories

Technical data

Compact cylinders

Proximity sensor SMT for type 10 slot

SMT-10-PS-KL-LED-24



- 1 3-core cable
- 2 Yellow LED
- 3 Theoretical switching point
- 4 Set screw DIN 913 M2x4; max. tightening torque 0.18 Nm

Contactless	PNP
Part No.	173 218
Type	SMT-10-PS-KL-LED-24
Symbol	
Version	Cable, PNP
Type of mounting	In sensor slot
Connection	3-core cable
Core cross-section	0.14 mm ²
Length of connecting cable	2,500 mm
Max. contact rating	6 W
Max. switching current	200 mA
Operating voltage	10 ... 30 V
Reproducible switching accuracy*	± 0.1 mm
CE symbol** to EMC Directive 89/336/EWG	■
Switch-on/switch-off times	< 0.2 ms / < 0.5 ms
Protection class to EN 60 529	IP 65/67
Temperature range	Fixed cable installation: -20 ... + 60 °C Flexible cable installation: -5 ... + 60 °C
Materials	Housing: TPE-U; clamp: stainless steel; cable: PUR
Weight	30 g

* Also applies for non-rotating piston rod.

** Rated operating voltage: 230 V AC / 230 V DC
Ohmic load: AC 12 (0.04 A AC) / DC12 (0.04 A AC)
Inductive load: AC 14 (0.024 A AC) / DC13 (0.04 A DC)

Short-stroke cylinders ADVC/AEVC, accessories

Technical data

Compact cylinders

One-way flow control valve with exhaust air flow GRLA-M3



Operating pressure: 0.2 ... 10 bar

Materials:

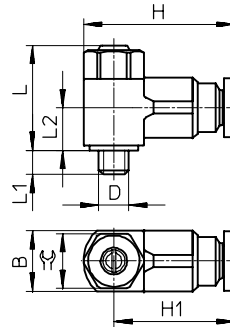
Housing: Die-cast zinc

Seals: NBR

Threaded collar: brass

Further technical data

→ www.festo.com



Threaded connection	For tubing outside \varnothing	B	D	H	H1	L	L1	L2	\approx	Weight [kg]	Slotted adjuster	
											Part No.	Type
M3	3 mm	8	M3	20	16	16.6	2.3	7	7	0.007	175 041	GRLA-M3-QS-3

One-way flow control valve with exhaust air flow GRLA



Operating pressure: 0.2 ... 10 bar

Materials:

Housing: Die-cast zinc

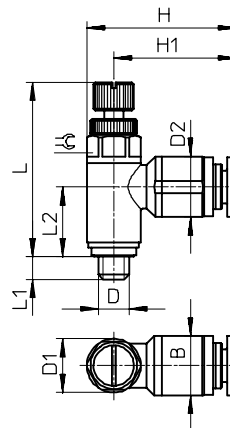
Seals: NBR

Threaded plug M5: brass

Threaded plug G $\frac{1}{8}$: Knurled aluminium alloy

Further technical data

→ www.festo.com



Threaded connection	For tubing outside \varnothing	B ± 0.2	D	D1 $\varnothing \pm 0.07$	D2 \varnothing	H	H1	L	L1 $+0.17 -0.25$	L2	\approx	Weight [kg]	Knurled adjuster	
													Part No.	Type
M5	3 mm	-	M5	8.9	8.2 ± 0.15	22.4	18	31.3	3.7	11.65	8	0.014	197 576	GRLA-M5-QS-3-RS-D
	4 mm	9.8			10 ± 0.2	24.7	20.3			197 577			GRLA-M5-QS-4-RS-D	
	6 mm	-			12 ± 0.2	26.5	22			10.65			197 578	GRLA-M5-QS-6-RS-D
G $\frac{1}{8}$	3 mm	-	G $\frac{1}{8}$	13.8	10.2 ± 0.2	31.9	25	40.4	5.1	14.4	12	0.023	197 579	GRLA- $\frac{1}{8}$ -QS-3-RS-D
	4 mm				12.5 ± 0.2	29.4	22.5			13.7			197 580	GRLA- $\frac{1}{8}$ -QS-4-RS-D
	6 mm				12.5 ± 0.2	32.6	25.7			13.7			197 581	GRLA- $\frac{1}{8}$ -QS-6-RS-D

Short-stroke cylinders ADVC/AEVC, accessories

Technical data

Compact cylinders

One-way flow control valve with exhaust air flow GRLA

Operating pressure: 0.2 ... 10 bar

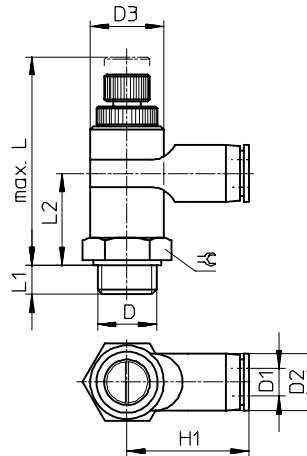
Materials:

Swivel fitting: Polymer

Seals: NBR

Further technical data

→ www.festo.com



Threaded connection	For tubing outside \varnothing	D	D1 \varnothing	D2 \varnothing	D3 \varnothing -0.2	H1	L max.	L1	L2	\approx	Weight [kg]	Knurled adjuster	
												Part No.	Type
G $\frac{1}{8}$	8 mm	G $\frac{1}{8}$	8	16	16	35.2	45.9	4.7	20.6	13	0.025	162 966	GRLA- $\frac{1}{8}$ -QS-8-RS-B
G $\frac{1}{4}$	6 mm	G $\frac{1}{4}$	6	13	16	26.7	45.4	6.3	20.1	17	0.030	162 967	GRLA- $\frac{1}{4}$ -QS-6-RS-B
	8 mm	G $\frac{1}{4}$	8	16		35.2						162 968	GRLA- $\frac{1}{4}$ -QS-8-RS-B

Further one-way flow control valves

→ www.festo.com

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All technical data subject to change according to technical update.

Build on the benefits – and take the lead

The underlying factors of Festo's product philosophy become apparent particularly when your concern is profitable automation. As always, productivity, economic efficiency and safeguarding the future are the factors which guide our decisions. See for yourself.

	Benefits for designers	Benefits for buyers
1. Graded diversity of range	<ul style="list-style-type: none"> – Greater clarity and simplified system concept – Simplified system build thanks to standardized design 	<ul style="list-style-type: none"> – Reduced costs thanks to comprehensive overall range: diameter of 4 to 100 mm and strokes of 2.5 mm to 25 mm
2. Optimized design	<ul style="list-style-type: none"> – Less installation space thanks to more compact dimensions, in particular as a result of optimized height – Increased operational reliability and service life due to improved cushioning behaviour in end positions 	<ul style="list-style-type: none"> – Reduced follow-up costs thanks to reliable Festo quality – Reduced costs from diameters of 32 mm through use of DNC attachment range – Reduced inventory as a result of just one sensor type – SM... – for all drive units
3. Greater compatibility	<ul style="list-style-type: none"> – Simple replacement with numerous existing fittings, diameters from 32mm VDMA hole pattern 	<ul style="list-style-type: none"> – Minimal costs, replacement parts identical to other Festo drives

Summary of further components

Important components in our product range

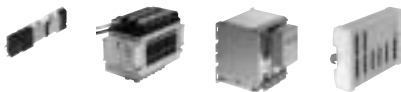
Compressed air preparation

- Service units D series



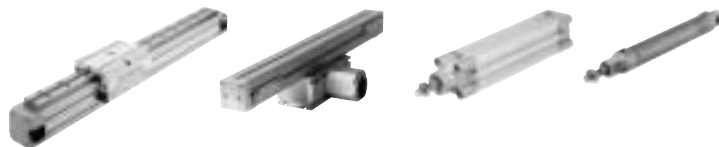
Control technology

- Individual valves type CPE
- Valve terminal type CPV
- Smart Positioning Controller type SPC200
- Front-End Controller IPC FEC Standard type FC640



Long linear movement

- Rodless cylinder type DGPL
- Electric toothed-belt drive type DGE
- Standard cylinder type DNC and type DSNU



Short linear movement

- Linear module type HMP
- Guide unit type DFM
- Mini slide type SLT
- Flat slide type SLG
- Linear module type HMPL
- Short-stroke cylinder type ADVC



Rotary movement

- Rotary drive type DRQD
- Swivel module type DSM
- Swivel/linear module type DSL



Gripping, mechanical ...

- Precision gripper type HGPP
- Micro gripper type HGWM
- Three-point gripper type HGD



... or with vacuum

- Suction gripper type ESG
- Vacuum generator type VADMI
- Vacuum generator type VAD New Line



Connecting and installing

- Basic elements
- Screw connectors
- Restrictors
- Tubing























Parts sorting and testing

- Checkbox family



Further products and details: <http://catalog.festo.com> or consult your Festo technical advisor.

Pneumatic Pictograms

	Stroke length		Service
	Flow rate		Repair service
	Voltage		Worldwide service
	Force		Hotline
	Pressure		Collection facility
	Temperature range		Delivery time
	Diameter		In stock
	Vacuum		Important
	Width		Type discontinued
			New
			Repairable