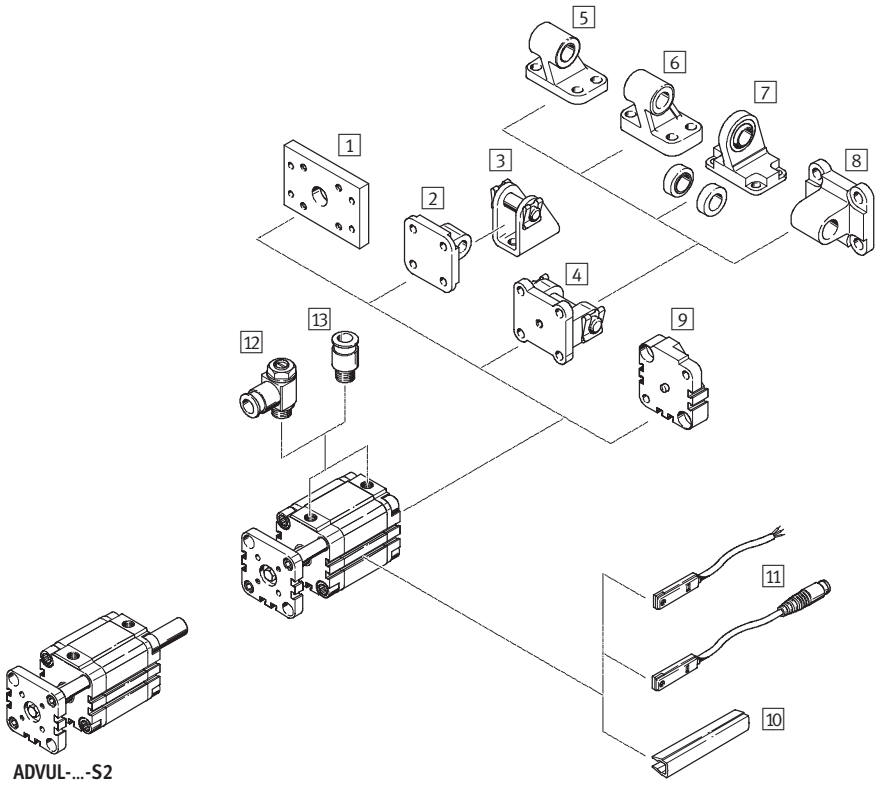
Compact cylinders ADVUL

- Piston rod secured against rotation by means of guide rods and yoke plate
- Profile slots for proximity sensors
- Extensive range of accessories

Specified types in accordance with ATEX directive for potentially explosive atmospheres
➔ www.festo.com/en/ex

Compact cylinders ADVUL

Peripherals overview

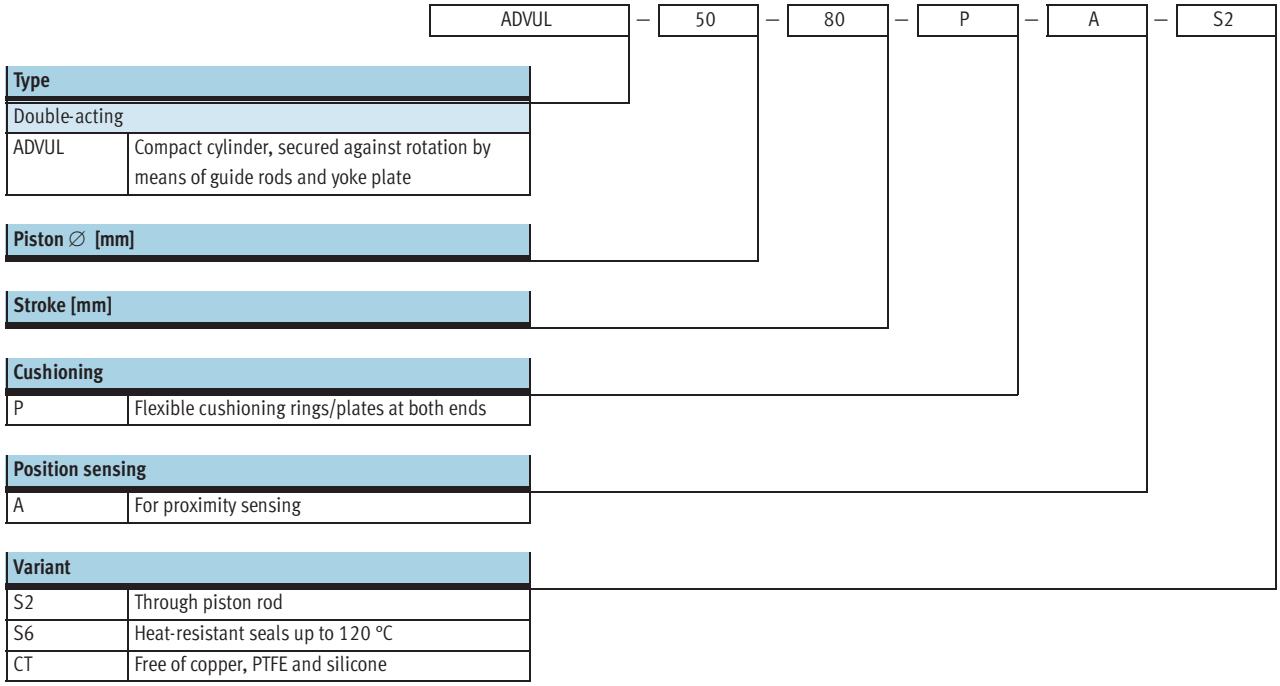


ADVUL-...-S2

Mounting attachments and accessories					
		Brief description	ADVUL		→ Page
				S2	
1	Flange mounting FUA	For end caps	■	■	1 / 6.2-48
2	Swivel flange SUA for ∅ 12 ... 25	For end caps	■	–	1 / 6.2-49
3	Clevis foot LBN	–	■	–	1 / 6.2-51
4	Swivel flange SUA for ∅ 32 ... 100	For end caps	■	–	1 / 6.2-49
5	Clevis foot LN	–	■	–	1 / 6.2-51
6	Clevis foot LNG	–	■	–	1 / 6.2-51
7	Clevis foot LSN	With spherical bearing	■	–	1 / 6.2-51
8	Swivel flange SNCL	–	■	–	1 / 6.2-51
9	Adapter kit DPVU	For connecting two cylinders with identical piston diameter to form a multi-position cylinder	■	–	1 / 6.2-50
10	Slot cover ABP-5-S	To protect the sensor cable and keep dirt out of the sensor slots	■	■	1 / 6.2-52
11	Proximity sensor SME/SMT-8	Can be integrated in the cylinder profile barrel	■	■	1 / 6.2-52
12	One-way flow control valve GRLA	To regulate speed	■	■	1 / 6.2-51
13	Push-in fitting QS	For connecting compressed air tubing with standard external diameters	■	■	Volume 3

Compact cylinders ADVUL

Type codes

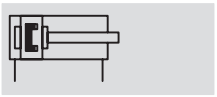


Compact cylinders ADVUL

Technical data

FESTO

Function



Diameter
12 ... 100 mm

Stroke length
1 ... 400 mm

www.festo.com/en/
Spare_parts_service

Wearing parts kits, see
➔ 1 / 6.2-47

Variants

S2

S6

CT

ADVUL-...-...-P-A

ADVUL-...-...-P-A-S2

General technical data										
Piston ∅	12	16	20	25	32	40	50	63	80	100
Pneumatic connection	M5	M5	M5	M5	G⅛	G⅛	G⅛	G⅛	G⅛	G¼
Operating medium	Filtered compressed air, lubricated or unlubricated									
Constructional design	Piston									
	Piston rod									
	Cylinder barrel									
Cushioning	Flexible cushioning rings/plates at both ends									
Position sensing	For proximity sensing									
Type of mounting	Via through-holes									
	With female thread									
	Via accessories									
Mounting position	Any									

Operating pressure [bar]										
Piston ∅	12	16	20	25	32	40	50	63	80	100
Piston rod at one end	1.2 ... 10		1.0 ... 10							
Through piston rod S2	1.5 ... 10				1.0 ... 10					

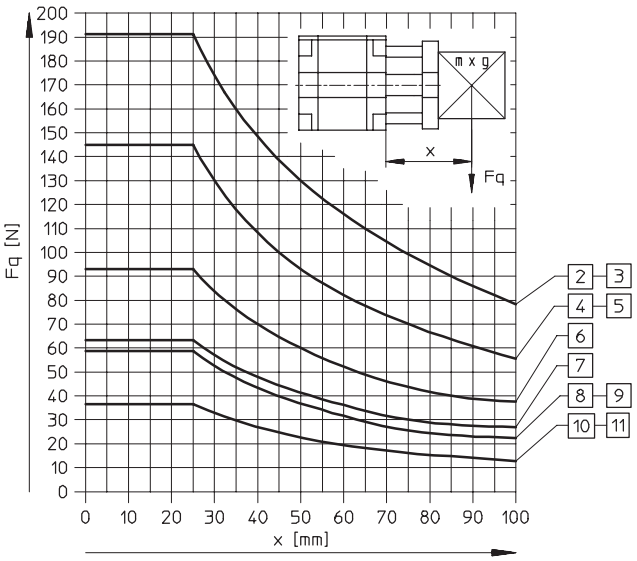
Ambient conditions			
Compact cylinder	Basic version	S6	CT
Ambient temperature[1] [°C]	–20 ... +80	0 ... +120	–5 ... +60
Corrosion resistance class CRC[2]	2	2	2

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

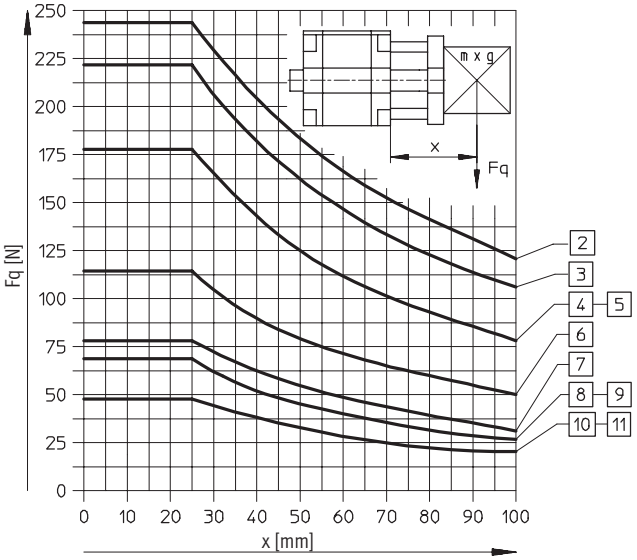
Forces [N] and impact energy [J]										
Piston ∅		12	16	20	25	32	40	50	63	80	100
Theoretical force at 6 bar, advancing		68	121	188	295	483	754	1 178	1 870	3 016	4 712
	S2	51	90	141	247	415	686	1 057	1 750	2 827	4 418
Theoretical force at 6 bar, retracting		51	90	141	247	415	686	1 057	1 750	2 827	4 418
	S2	51	90	141	247	415	686	1 057	1 750	2 827	4 418
Max. impact energy at end positions		0.09	0.10	0.14	0.10	0.40	0.52	0.64	0.70	0.75	1.00

Max. lateral force Fq as a function of projection x

Piston rod at one end

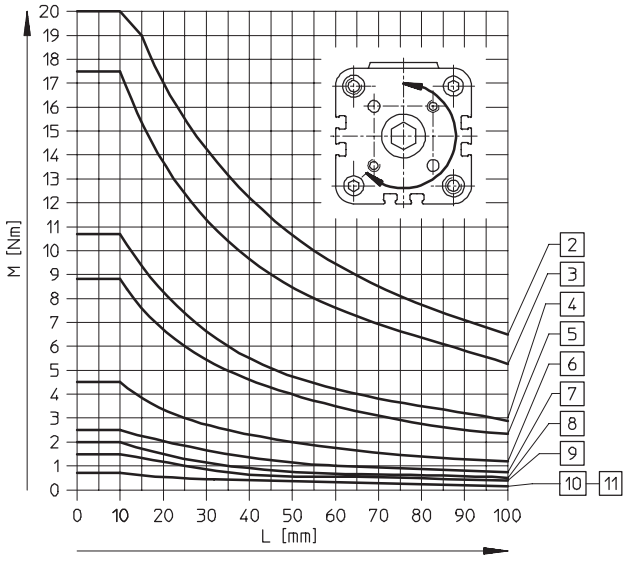


Through piston rod



2 ∅ 100 mm
3 ∅ 80 mm
4 ∅ 63 mm
5 ∅ 50 mm
6 ∅ 40 mm
7 ∅ 32 mm
8 ∅ 25 mm
9 ∅ 20 mm
10 ∅ 16 mm
11 ∅ 12 mm

Torque M in relation to stroke length L



2 ∅ 100 mm
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6 ∅ 40 mm
7 ∅ 32 mm
8 ∅ 25 mm
9 ∅ 20 mm
10 ∅ 16 mm
11 ∅ 12 mm

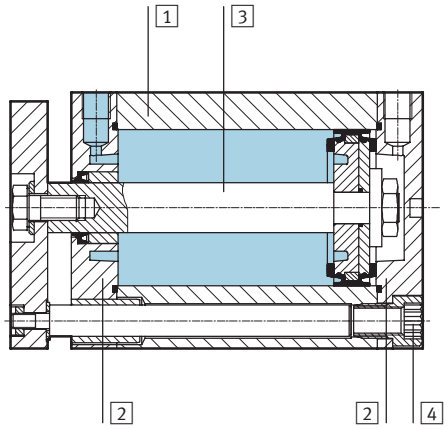
Compact cylinders ADVUL

Technical data

FESTO

Materials

Sectional view

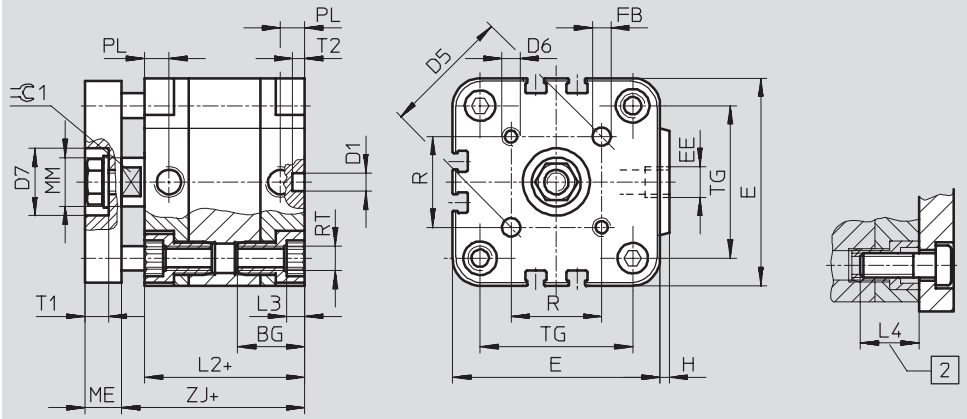


Compact cylinder			Basic version	S6	CT
1	Cylinder barrel		Wrought aluminium alloy	Wrought aluminium alloy	Wrought aluminium alloy
2	Bearing and end cap		Wrought aluminium alloy	Wrought aluminium alloy	Wrought aluminium alloy
3	Piston rod	∅ 12 ... 32	High-alloy stainless steel	High-alloy stainless steel	High-alloy stainless steel
		∅ 40 ... 100	High-alloy steel	High-alloy steel	High-alloy steel
4	Flange screws	∅ 12 ... 16	High-alloy stainless steel	High-alloy stainless steel	High-alloy stainless steel
		∅ 20 ... 100	Tempered steel	Tempered steel	Tempered steel
–	Seals		Polyurethane, nitrile rubber	Fluorocaoutchouc	Polyurethane, nitrile rubber

Compact cylinders ADVUL

Technical data

Dimensions – Basic cylinders Download CAD data ➔ **www.festo.com/en/engineering**



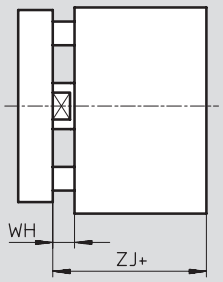
∅ [mm]	BG[1]	D1 ∅ H9	D5	D6	D7 ∅ H9	E	EE	FB ∅ H8	H	L2	L3
12	18.5	6	14	M3	–	29	M5	3	1	38	3
16	18.5	6	14	M3	–	29	M5	3	1	38	3
20	18.5	6	17	M4	–	36	M5	4	1.5	38	4
25	18.5	6	22	M5	14	40	M5	5	1.5	39.5	4
32	21.5	6	28	M5	17	50	G⅛	5	2	44.5	5
40	21.5	6	33	M5	17	60	G⅛	5	2.5	45.5	5
50	22	6	42	M6	22	68	G⅛	6	3	45.5	6
63	24.5	8	50	M6	22	87	G⅛	6	4	50	8
80	27.5	8	65	M8	28	107	G⅛	8	4	56	8
100	32.5	8	80	M10	30	128	G¼	10	5	66.5	8

∅ [mm]	L4	ME	MM ∅	PL	R	RT	T1 +0.2	T2 –0.2	TG	⌀C1 h13
12	16	6	6	8	9.9	M4	–	4	18	5
16	16	6	8	8	9.9	M4	–	4	18	7
20	18	8	10	8	12	M5	–	4	22	9
25	18	8	10	8	15.6	M5	4.8	4	26	9
32	20	10	12	8	19.8	M6	6.1	4	32	10
40	20	10	12	8	23.3	M6	6.1	4	42	10
50	20	12	16	8	29.7	M8	7.6	4	50	13
63	25	12	16	8	35.4	M10	7.6	4	62	13
80	25	14	20	8.5	46	M10	8.7	4	82	17
100	25	14	25	10.5	56.6	M10	10.3	4	103	22

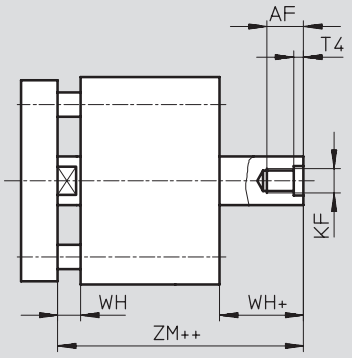
1) Do not exceed screw-in depth

Dimensions – Variants Download CAD data ➔ **www.festo.com/en/engineering**

Piston rod at one end



Through piston rod



∅ [mm]	AF	KF	T4	WH	ZJ	ZM
12	8	M3	1.5	4.5	42.5	47
16	10	M4	1.5	4.5	42.5	47
20	12	M5	2	4.5	42.5	47
25	12	M5	2	5.5	45	50.5
32	14	M6	2.6	6	50.5	56.5
40	14	M6	2.6	6.5	52	58.5
50	16	M8	3.3	7.5	53	60.5
63	16	M8	3.3	7.5	57.5	65
80	20[1)]	M10	4.7	8	64	72
100	24[1)]	M12	6.1	10	76.5	86.5

1) With a stroke < 5 mm, the maximum screw-in depth is reduced by 5 mm

Ordering data – Basic version

Type	Stroke [mm]	Part No.	Type		Stroke [mm]	Part No.	Type
	Piston ∅ 12 mm				Piston ∅ 16 mm		
	5	**156 844**	**ADVUL-12-5-P-A**		5	**156 851**	**ADVUL-16-5-P-A**
	10	**156 845**	**ADVUL-12-10-P-A**		10	**156 852**	**ADVUL-16-10-P-A**
	15	**156 846**	**ADVUL-12-15-P-A**		15	**156 853**	**ADVUL-16-15-P-A**
	20	**156 847**	**ADVUL-12-20-P-A**		20	**156 854**	**ADVUL-16-20-P-A**
	25	**156 848**	**ADVUL-12-25-P-A**		25	**156 855**	**ADVUL-16-25-P-A**
	30	**156 849**	**ADVUL-12-30-P-A**		30	**156 856**	**ADVUL-16-30-P-A**
	40	**156 850**	**ADVUL-12-40-P-A**		40	**156 857**	**ADVUL-16-40-P-A**
	Piston ∅ 20 mm				Piston ∅ 25 mm		
	5	**156 858**	**ADVUL-20-5-P-A**		5	**156 866**	**ADVUL-25-5-P-A**
	10	**156 859**	**ADVUL-20-10-P-A**		10	**156 867**	**ADVUL-25-10-P-A**
	15	**156 860**	**ADVUL-20-15-P-A**		15	**156 868**	**ADVUL-25-15-P-A**
	20	**156 861**	**ADVUL-20-20-P-A**		20	**156 869**	**ADVUL-25-20-P-A**
	25	**156 862**	**ADVUL-20-25-P-A**		25	**156 870**	**ADVUL-25-25-P-A**
	30	**156 863**	**ADVUL-20-30-P-A**		30	**156 871**	**ADVUL-25-30-P-A**
	40	**156 864**	**ADVUL-20-40-P-A**		40	**156 872**	**ADVUL-25-40-P-A**
	50	**156 865**	**ADVUL-20-50-P-A**		50	**156 873**	**ADVUL-25-50-P-A**
	Piston ∅ 32 mm				Piston ∅ 40 mm		
	5	**156 874**	**ADVUL-32-5-P-A**		5	**156 884**	**ADVUL-40-5-P-A**
	10	**156 875**	**ADVUL-32-10-P-A**		10	**156 885**	**ADVUL-40-10-P-A**
	15	**156 876**	**ADVUL-32-15-P-A**		15	**156 886**	**ADVUL-40-15-P-A**
	20	**156 877**	**ADVUL-32-20-P-A**		20	**156 887**	**ADVUL-40-20-P-A**
	25	**156 878**	**ADVUL-32-25-P-A**		25	**156 888**	**ADVUL-40-25-P-A**
	30	**156 879**	**ADVUL-32-30-P-A**		30	**156 889**	**ADVUL-40-30-P-A**
	40	**156 880**	**ADVUL-32-40-P-A**		40	**156 890**	**ADVUL-40-40-P-A**
	50	**156 881**	**ADVUL-32-50-P-A**		50	**156 891**	**ADVUL-40-50-P-A**
	60	**156 882**	**ADVUL-32-60-P-A**		60	**156 892**	**ADVUL-40-60-P-A**
	80	**156 883**	**ADVUL-32-80-P-A**		80	**156 893**	**ADVUL-40-80-P-A**
	Piston ∅ 50 mm				Piston ∅ 63 mm		
	10	**156 894**	**ADVUL-50-10-P-A**		10	**156 903**	**ADVUL-63-10-P-A**
	15	**156 895**	**ADVUL-50-15-P-A**		15	**156 904**	**ADVUL-63-15-P-A**
	20	**156 896**	**ADVUL-50-20-P-A**		20	**156 905**	**ADVUL-63-20-P-A**
	25	**156 897**	**ADVUL-50-25-P-A**		25	**156 906**	**ADVUL-63-25-P-A**
	30	**156 898**	**ADVUL-50-30-P-A**		30	**156 907**	**ADVUL-63-30-P-A**
	40	**156 899**	**ADVUL-50-40-P-A**		40	**156 908**	**ADVUL-63-40-P-A**
	50	**156 900**	**ADVUL-50-50-P-A**		50	**156 909**	**ADVUL-63-50-P-A**
	60	**156 901**	**ADVUL-50-60-P-A**		60	**156 910**	**ADVUL-63-60-P-A**
	80	**156 902**	**ADVUL-50-80-P-A**		80	**156 911**	**ADVUL-63-80-P-A**
	Piston ∅ 80 mm				Piston ∅ 100 mm		
	10	**156 912**	**ADVUL-80-10-P-A**		10	**156 921**	**ADVUL-100-10-P-A**
	15	**156 913**	**ADVUL-80-15-P-A**		15	**156 922**	**ADVUL-100-15-P-A**
	20	**156 914**	**ADVUL-80-20-P-A**		20	**156 923**	**ADVUL-100-20-P-A**
	25	**156 915**	**ADVUL-80-25-P-A**		25	**156 924**	**ADVUL-100-25-P-A**
	30	**156 916**	**ADVUL-80-30-P-A**		30	**156 925**	**ADVUL-100-30-P-A**
	40	**156 917**	**ADVUL-80-40-P-A**		40	**156 926**	**ADVUL-100-40-P-A**
	50	**156 918**	**ADVUL-80-50-P-A**		50	**156 927**	**ADVUL-100-50-P-A**
	60	**156 919**	**ADVUL-80-60-P-A**		60	**156 928**	**ADVUL-100-60-P-A**
	80	**156 920**	**ADVUL-80-80-P-A**		80	**156 929**	**ADVUL-100-80-P-A**

Compact cylinders ADVUL

Technical data

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Ordering data – CT with fixed stroke						
Type	Stroke [mm]	Part No.	Type	Stroke [mm]	Part No.	Type
	Piston ∅ 12 mm			Piston ∅ 16 mm		
	5	183 383	ADVUL-12-5-P-A-CT	5	183 388	ADVUL-16-5-P-A-CT
	10	183 384	ADVUL-12-10-P-A-CT	10	183 389	ADVUL-16-10-P-A-CT
	15	183 385	ADVUL-12-15-P-A-CT	15	183 390	ADVUL-16-15-P-A-CT
	20	183 386	ADVUL-12-20-P-A-CT	20	183 391	ADVUL-16-20-P-A-CT
	Piston ∅ 20 mm			Piston ∅ 25 mm		
	5	183 393	ADVUL-20-5-P-A-CT	5	183 398	ADVUL-25-5-P-A-CT
	10	183 394	ADVUL-20-10-P-A-CT	10	183 399	ADVUL-25-10-P-A-CT
	15	183 395	ADVUL-20-15-P-A-CT	15	183 400	ADVUL-25-15-P-A-CT
	20	183 396	ADVUL-20-20-P-A-CT	20	183 401	ADVUL-25-20-P-A-CT
	Piston ∅ 32 mm			Piston ∅ 40 mm		
	5	183 403	ADVUL-32-5-P-A-CT	5	183 408	ADVUL-40-5-P-A-CT
	10	183 404	ADVUL-32-10-P-A-CT	10	183 409	ADVUL-40-10-P-A-CT
	15	183 405	ADVUL-32-15-P-A-CT	15	183 410	ADVUL-40-15-P-A-CT
	20	183 406	ADVUL-32-20-P-A-CT	20	183 411	ADVUL-40-20-P-A-CT

Ordering data – Variants				
Type	Piston ∅ [mm]	Stroke [mm]	Part No.	Type
Variable stroke				
	12	1 ... 200	156 200	ADVUL-12-...-P-A
	16	1 ... 200	156 201	ADVUL-16-...-P-A
	20	1 ... 200	156 202	ADVUL-20-...-P-A
	25	1 ... 200	156 203	ADVUL-25-...-P-A
	32	1 ... 300	156 204	ADVUL-32-...-P-A
	40	1 ... 300	156 205	ADVUL-40-...-P-A
	50	1 ... 300	156 206	ADVUL-50-...-P-A
	63	1 ... 300	156 207	ADVUL-63-...-P-A
	80	1 ... 400	156 208	ADVUL-80-...-P-A
	100	1 ... 400	156 209	ADVUL-100-...-P-A
S2 – Through piston rod, variable stroke				
	12	1 ... 200	165 089	ADVUL-12-...-P-A-S2
	16	1 ... 200	165 090	ADVUL-16-...-P-A-S2
	20	1 ... 200	165 091	ADVUL-20-...-P-A-S2
	25	1 ... 200	165 092	ADVUL-25-...-P-A-S2
	32	1 ... 300	165 093	ADVUL-32-...-P-A-S2
	40	1 ... 300	165 094	ADVUL-40-...-P-A-S2
	50	1 ... 300	165 095	ADVUL-50-...-P-A-S2
	63	1 ... 300	165 096	ADVUL-63-...-P-A-S2
	80	1 ... 400	165 097	ADVUL-80-...-P-A-S2
	100	1 ... 400	165 098	ADVUL-100-...-P-A-S2

Compact cylinders ADVUL

Technical data

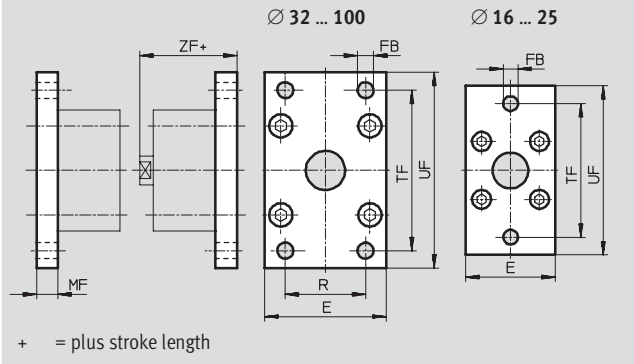
Ordering data – Variants				
Type	Piston ∅ [mm]	Stroke [mm]	Part No.	Type
S6 – Heat-resistant up to 120 °C, variable stroke				
	12	1 … 200	**156 210**	**ADVUL-12-…-P-A-S6**
	16	1 … 200	**156 211**	**ADVUL-16-…-P-A-S6**
	20	1 … 200	**156 212**	**ADVUL-20-…-P-A-S6**
	25	1 … 200	**156 213**	**ADVUL-25-…-P-A-S6**
	32	1 … 300	**156 214**	**ADVUL-32-…-P-A-S6**
	40	1 … 300	**156 215**	**ADVUL-40-…-P-A-S6**
	50	1 … 300	**156 216**	**ADVUL-50-…-P-A-S6**
	63	1 … 300	**156 217**	**ADVUL-63-…-P-A-S6**
	80	1 … 400	**156 218**	**ADVUL-80-…-P-A-S6**
	100	1 … 400	**156 219**	**ADVUL-100-…-P-A-S6**
CT – Free of copper, PTFE and silicone, variable stroke				
	12	1 … 200	**183 382**	**ADVUL-12-…-P-A-CT**
	16	1 … 200	**183 387**	**ADVUL-16-…-P-A-CT**
	20	1 … 200	**183 392**	**ADVUL-20-…-P-A-CT**
	25	1 … 200	**183 397**	**ADVUL-25-…-P-A-CT**
	32	1 … 300	**183 402**	**ADVUL-32-…-P-A-CT**
	40	1 … 300	**183 407**	**ADVUL-40-…-P-A-CT**

Ordering data – Wearing parts kits				
	Part No.	Type	Part No.	Type
Piston ∅	Basic version		S6 – Heat-resistant up to 120 °C	
12	**121 115**	**ADVUL-12-…-P-A**[1]	**383 559**	**ADVUL-12-…-P-A-S6**[2]
16	**121 116**	**ADVUL-16-…-P-A**[1]	**383 560**	**ADVUL-16-…-P-A-S6**[2]
20	**121 117**	**ADVUL-20-…-P-A**[1]	**383 561**	**ADVUL-20-…-P-A-S6**[2]
25	**121 118**	**ADVUL-25-…-P-A**[1]	**383 562**	**ADVUL-25-…-P-A-S6**[2]
32	**121 119**	**ADVUL-32-…-P-A**[1]	**383 563**	**ADVUL-32-…-P-A-S6**[1]
40	**121 120**	**ADVUL-40-…-P-A**[1]	**383 564**	**ADVUL-40-…-P-A-S6**[1]
50	**121 121**	**ADVUL-50-…-P-A**[1]	**383 565**	**ADVUL-50-…-P-A-S6**[1]
63	**121 122**	**ADVUL-63-…-P-A**[1]	**383 566**	**ADVUL-63-…-P-A-S6**[1]
80	**121 123**	**ADVUL-80-…-P-A**[1]	**383 567**	**ADVUL-80-…-P-A-S6**[1]
100	**121 124**	**ADVUL-100-…-P-A**[1]	**383 568**	**ADVUL-100-…-P-A-S6**[1]

1) Assembly grease included in scope of delivery
2) Assembly grease not included in scope of delivery. If required, please order separately under part no. 329 555 (20 ml)

Flange mounting FUA

Material:
Clear anodised aluminium



Dimensions and ordering data

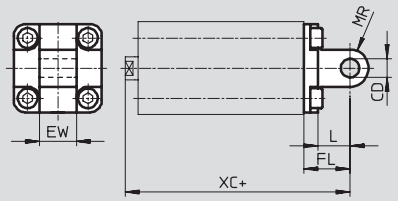
For ∅ [mm]	E	FB ∅	MF	R	TF	UF	ZF	CRC[1)]	Weight [g]	Part No.	Type
12/16	29	5.5	10	–	43	55	52.5	2	48	**157 299**	**FUA-12/16**
20	36	6.6	10	–	55	70	52.5	2	72	**157 300**	**FUA-20**
25	40	6.6	10	–	60	76	55	2	87	**157 301**	**FUA-25**
32	50	7	10	32	65	80	60.5	2	117	**157 302**	**FUA-32**
40	60	9	10	36	82	102	62	2	180	**157 303**	**FUA-40**
50	68	9	12	45	90	110	65	2	266	**157 304**	**FUA-50**
63	87	9	15	50	110	130	72.5	2	550	**157 305**	**FUA-63**
80	107	12	15	63	135	160	76	2	745	**157 306**	**FUA-80**
100	128	14	15	75	163	190	91.5	2	1.035	**157 307**	**FUA-100**

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

Swivel flange SUA
for piston ∅ 12 ... 25 mm

Material:
Anodised aluminium
Free of copper, PTFE and silicone

∅ **12 ... 25 mm**

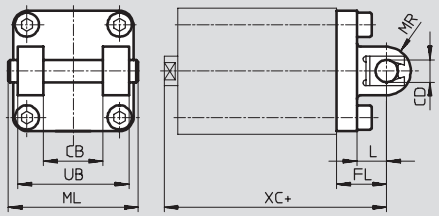


\+ = plus stroke length

for piston ∅ 32 ... 100 mm

Material:
Anodised aluminium
Free of copper, PTFE and silicone

∅ **32 ... 100 mm**



\+ = plus stroke length

Dimensions and ordering data

For ∅ [mm]	CB	CD ∅	EW	FL	L	ML	MR	UB	XC	Weight [g]	Part No.	Type
12/16	–	6	12	16	10	–	6	–	58.5	43	**157 319**	**SUA-12/16**
20	–	8	16	20	14	–	8	–	62.5	78	**157 320**	**SUA-20**
25	–	8	16	20	14	–	8	–	64	86	**157 321**	**SUA-25**
32	26	10	–	22	13	54	10	45	72.5	208	**157 322**	**SUA-32**
40	28	12	–	25	16	62	12	52	77	320	**157 323**	**SUA-40**
50	32	12	–	27	16	70	12	60	80	437	**157 324**	**SUA-50**
63	40	16	–	32	21	82	16	70	89.5	760	**157 325**	**SUA-63**
80	50	16	–	36	23	102	16	90	100	1 190	**157 326**	**SUA-80**
100	60	20	–	41	26	126	20	110	117.5	1 900	**157 327**	**SUA-100**

Note

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

For ∅	Max. stroke length [mm]
12	50
16	50
20	50
25	50
32	100

For ∅	Max. stroke length [mm]
40	100
50	100
63	100
80	150
100	150

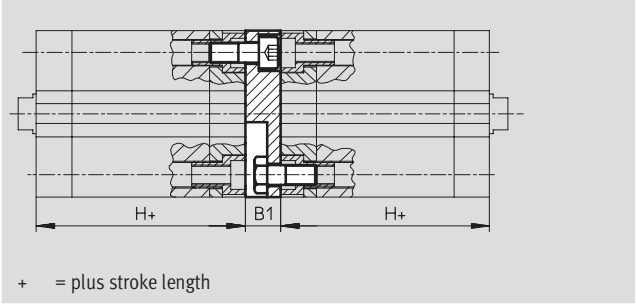
Compact cylinders ADVUL

Accessories

FESTO

Adapter kit DPVU

Material:
Aluminium
Free of copper, PTFE and silicone



\+ = plus stroke length

Dimensions and ordering data

For ∅ [mm]	B1	H	Max. overall stroke length [mm]	CRC[1]	Weight [g]	Part No.	Type
12/16	12.5	38	400	2	22	**161 194**	**DPVU-12/16**
20	12.5	38	400	2	36	**161 195**	**DPVU-20**
25	13	39.5	400	2	44	**161 196**	**DPVU-25**
32	14.5	44.5	600	2	90	**161 197**	**DPVU-32**
40	14.5	45.5	600	2	137	**161 198**	**DPVU-40**
50	14.5	45.5	600	2	177	**161 199**	**DPVU-50**
63	14.5	50	600	2	308	**161 200**	**DPVU-63**
80	16.5	56	800	2	495	**161 201**	**DPVU-80**
100	19.5	66.5	800	2	859	**161 202**	**DPVU-100**

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

Note

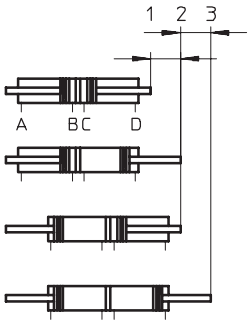
The maximum overall stroke length may not be exceeded when combining cylinders and the multi-position adapter kit.

Connecting two cylinders with identical piston diameter as a 3 or 4-position cylinder

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

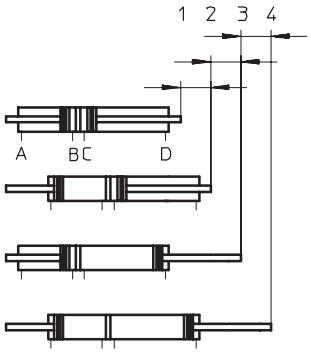
Implementing 3 positions

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

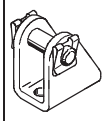
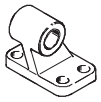
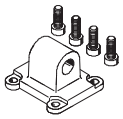


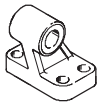
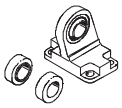
Implementing 4 positions

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



Ordering data – Mounting attachments — Technical data➔ 1 / 10.1-2

Designation	For ∅	Part No.	Type
Clevis foot LBN			
	12	**6 058**	**LBN-12/16**
	16	**6 058**	**LBN-12/16**
	20	**6 059**	**LBN-20/25**
	25	**6 059**	**LBN-20/25**
Clevis foot LN			
	32	**5 147**	**LN-32**
	40	**5 148**	**LN-40**
	50	**5 149**	**LN-50**
	63	**5 150**	**LN-63**
	80	**5 151**	**LN-80**
	100	**5 152**	**LN-100**
Swivel flange SNCL			
	32	**174 404**	**SNCL-32**
	40	**174 405**	**SNCL-40**
	50	**174 406**	**SNCL-50**
	63	**174 407**	**SNCL-63**
	80	**174 408**	**SNCL-80**
	100	**174 409**	**SNCL-100**

Designation	For ∅	Part No.	Type
Clevis foot LNG			
	32	**33 890**	**LNG-32**
	40	**33 891**	**LNG-40**
	50	**33 892**	**LNG-50**
	63	**33 893**	**LNG-63**
	80	**33 894**	**LNG-80**
	100	**33 895**	**LNG-100**
Clevis foot LSN			
	32	**5 561**	**LSN-32**
	40	**5 562**	**LSN-40**
	50	**5 563**	**LSN-50**
	63	**5 564**	**LSN-63**
	80	**5 565**	**LSN-80**
	100	**5 566**	**LSN-100**

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**
	G⅛	3		**193 142**	**GRLA-⅛-QS-3-D**
		4		**193 143**	**GRLA-⅛-QS-4-D**
		6		**193 144**	**GRLA-⅛-QS-6-D**
		8		**193 145**	**GRLA-⅛-QS-8-D**
	G¼	6		**193 146**	**GRLA-¼-QS-6-D**
		8		**193 147**	**GRLA-¼-QS-8-D**
		10		**193 148**	**GRLA-¼-QS-10-D**

Ordering data – Proximity sensor for T-slot, magneto-resistive — Technical data → 1 / 10.2-13

	Mounting	Switch output	Electrical connection: Cable	M8 plug	M12 plug	Cable length [m]	Part No.	Type
NO contact								
	Insertable from above	PNP	3-core	–	–	2.5	**525 898**	**SMT-8F-PS-24V-K2,5-OE**
		NPN					**525 909**	**SMT-8F-NS-24V-K2,5-OE**
		–	2-core	–	–	2.5	**525 908**	**SMT-8F-ZS-24V-K2,5-OE**
		PNP	–	3-pin	–	0.3	**525 899**	**SMT-8F-PS-24V-K0,3-M8D**
		NPN					**525 910**	**SMT-8F-NS-24V-K0,3-M8D**
		PNP	–	–	3-pin	0.3	**525 900**	**SMT-8F-PS-24V-K0,3-M12**
	Insertable from end, flush with the cylinder profile	PNP	3-core	–	–	2.5	**175 436**	**SMT-8-PS-K-LED-24-B**
			–	3-pin	–	0.3	**175 484**	**SMT-8-PS-S-LED-24-B**
NC contact								
	Insertable from above	PNP	3-core	–	–	7.5	**525 911**	**SMT-8F-PO-24V-K7,5-OE**

Ordering data – Proximity sensor for T-slot, magnetic reed — Technical data → 1 / 10.2-18

	Mounting	Electrical connection: Cable	M8 plug	Cable length [m]	Part No.	Type
NO contact						
	Insertable from above	3-core	–	2.5	**525 895**	**SME-8F-DS-24V-K2,5-OE**
				5.0	**525 897**	**SME-8F-DS-24V-K5,0-OE**
		2-core	–	2.5	**525 907**	**SME-8F-ZS-24V-K2,5-OE**
		–	3-pin	0.3	**525 896**	**SME-8F-DS-24V-K0,3-M8D**
	Insertable from end, flush with the cylinder profile	3-core	–	2.5	**150 855**	**SME-8-K-LED-24**
		–	3-pin	0.3	**150 857**	**SME-8-S-LED-24**
NC contact						
	Insertable from end, flush with the cylinder profile	3-wire	–	7.5	**160 251**	**SME-8-O-K-LED-24**

Ordering data – Plug sockets with cable — Technical data → 1 / 10.2-114

	Mounting	Switch output: PNP	NPN	Connection	Cable length [m]	Part No.	Type
Straight socket							
	M8 union nut	■	■	3-pin	2.5	**159 420**	**SIM-M8-3GD-2,5-PU**
					5	**159 421**	**SIM-M8-3GD-5-PU**
	M12 union nut	■	■	3-pin	2.5	**159 428**	**SIM-M12-3GD-2,5-PU**
					5	**159 429**	**SIM-M12-3GD-5-PU**
Angled socket							
	M8 union nut	■	■	3-pin	2.5	**159 422**	**SIM-M8-3WD-2,5-PU**
					5	**159 423**	**SIM-M8-3WD-5-PU**
	M12 union nut	■	■	3-pin	2.5	**159 430**	**SIM-M12-3WD-2,5-PU**
					5	**159 431**	**SIM-M12-3WD-5-PU**

Ordering data – Slot cover for T-slot

	Mounting	Length	Part No.	Type
	Insertable from above	2x 0.5 m	**151 680**	**ABP-5-S**