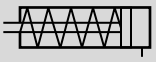
Single-Acting Polymer Cylinder

With spring return, integral flange mount and fitting.

Type EFK-...-P 

With non-rotational piston Rod

Type EFKL-...-P

Compact, corrosion-resistant, polymer cylinders have stainless steel piston rod and integral mounting flange and fitting. The cap is spin-welded to the barrel. The one-piece piston/seal acts as a cushioning ring at both ends of the stroke, reducing shock. Roll-threaded rod accepts mounting attachments. EFKL cylinders have non-rotating piston rod..

Piston Rod Accessories: (see page 812)

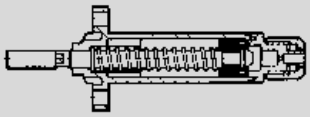
 Rod clevis, Type SG

 Rod eye, Type SGS

 Rod aligner, Type FK

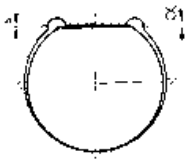
 Coupling plate, Type KSZ

Example: Type EFKL-...



Piston rod rotational tolerance with Type EFKL-...

$S_{min.}$ = 0.0012 in / 0.03 mm
$S_{max.}$ = 0.0047 in / 0.12 mm
a min. = 1°
a max. = 4°



Order Number										
Part No.	Type	Bore mm	Stroke mm	Cush-ioning	Part No.	Type	Bore mm	Stroke mm	Cush-ioning	Weight lb / kg
30252	EFK	- 8 -	10	-P	30256	EFKL	- 8 -	10	-P	0.020 / 0.009
30253	EFK	- 8 -	25	-P	30257	EFKL	- 8 -	25	-P	0.034 / 0.014
30260	EFK	- 10 -	10	-P	30254	EFKL	- 10 -	10	-P	0.047 / 0.013
30261	EFK	- 10 -	25	-P	30255	EFKL	- 10 -	25	-P	0.067 / 0.020
30262	EFK	- 10 -	40	-P	30258	EFKL	- 10 -	40	-P	0.095 / 0.028
8611	EFK	- 12 -	10	-P	8614	EFKL	- 12 -	10	-P	0.067 / 0.020
8612	EFK	- 12 -	25	-P	8615	EFKL	- 12 -	25	-P	0.095 / 0.028
8613	EFK	- 12 -	40	-P	8616	EFKL	- 12 -	40	-P	0.126 / 0.031
14100	EFK	- 16 -	10	-P	14104	EFKL	- 16 -	10	-P	0.095 / 0.028
14101	EFK	- 16 -	25	-P	14105	EFKL	- 16 -	25	-P	0.166 / 0.040
14102	EFK	- 16 -	40	-P	14106	EFKL	- 16 -	40	-P	0.218 / 0.052
14103	EFK	- 16 -	50	-P	14107	EFKL	- 16 -	50	-P	0.278 / 0.060
13736	EFK	- 20 -	10	-P	13740	EFKL	- 20 -	10	-P	0.332 / 0.054
13737	EFK	- 20 -	25	-P	13741	EFKL	- 20 -	25	-P	0.406 / 0.074
13738	EFK	- 20 -	40	-P	13742	EFKL	- 20 -	40	-P	0.501 / 0.095
13748	EFK	- 20 -	50	-P	13749	EFKL	- 20 -	50	-P	0.610 / 0.109
15003	EFK	- 25 -	10	-P	15007	EFKL	- 25 -	10	-P	0.707 / 0.097
15004	EFK	- 25 -	25	-P	15008	EFKL	- 25 -	25	-P	0.839 / 0.132
15005	EFK	- 25 -	40	-P	15009	EFKL	- 25 -	40	-P	1.005 / 0.166
15006	EFK	- 25 -	50	-P	15010	EFKL	- 25 -	50	-P	1.196 / 0.191

Order Number	Part No. (above) and Type Code: EFK or EFKL + bore (mm) + stroke length (mm) + P Example: Bore - 12 mm, stroke length - 40 mm, non-rotational Piston Rod = 8616 EFKL-12-40-P
Medium	Compressed air (filtered, lubricated or unlubricated)
Design	Piston type cylinder
Max. Allowable Operating Pressure	120 psi / 8 bar
Temperature Range	14 to 140°F / -10 to 60°C
Materials	Bearing cap, flange and cylinder barrel: Polymer. Piston rod: X20Cr13. Piston: Polyurethane.

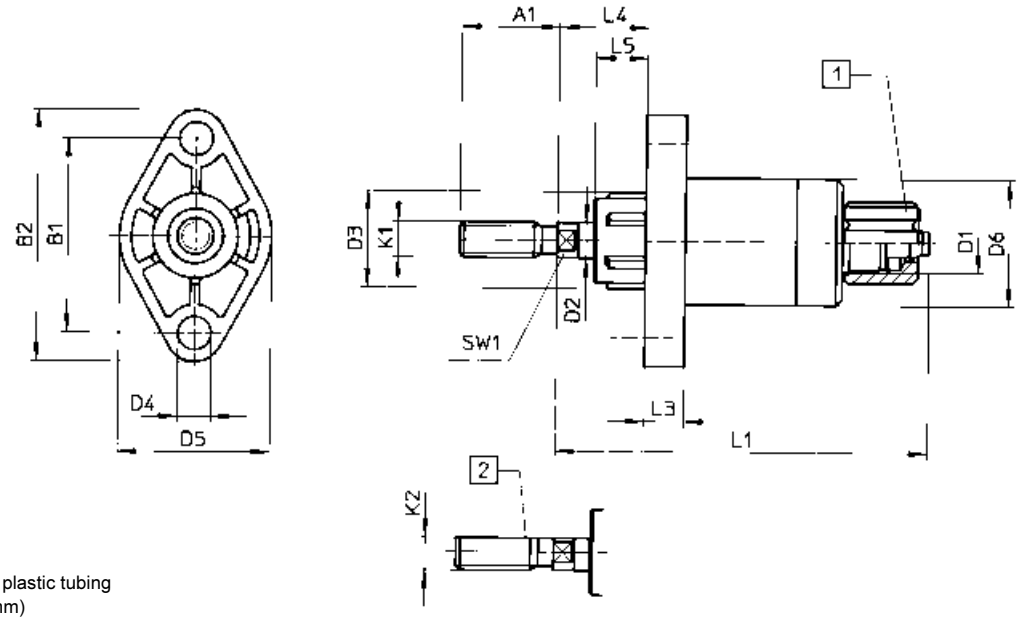
Bore	Stroke Lengths	Minimum force at 87 psi / 6 bar		Spring return force (min-max.*)				Maximum torque on EFKL piston rod at 90 psi / 6 bar				Connection
								Extending		Retracting		
mm	mm	lbf / N	≈kP	lbf / N	≈kP	lbf / N	≈kP	lb-in	Nm	lb-in	Nm	
8	10, 25	4.5 / 20	2.0	7.2 / 3.2	0.32	12.3 / 5.5	0.55	1.1	0.12	0.09	0.01	PK-3
10	10, 25, 40	7.2 / 32	3.2	10.1 / 4.5	0.45	19.7 / 7.4	0.74	1.3	0.15	0.18	0.02	
12		11.2 / 50	5.0	17.1 / 7	0.7	31.2 / 11.5	1.15	4.4	0.5	0.35	0.04	PK-4
16	10, 25,	20.2 / 90	9.0	17.1 / 7	0.7	43.7 / 12.5	1.25	5.3	0.6	0.26	0.03	
20	40, 50	33.7 / 150	15.0	30.6 / 13.5	1.35	64.5 / 20.8	2.08	12.4	1.4	0.79	0.09	
25		52.6 / 235	23.5	50.6 / 20	2.0	93.5 / 29	2.9	17.6	2.0	0.88	0.10	

* Theoretical value

Polymer Barrel Pneumatic Cylinders, Type EFK/EFKL

Dimensions

Type EFK-...
EFKL-...



1 Connection for 4 mm plastic tubing
(Bores 8, 10 mm: 3 mm)
For replacement cap, order 211291 MCK-PK-4-KU or
211289 MCK-PK-3-KU

2 Non-rotating piston rod, Type EFKL-...

SW1 = wrench size to fits flats on piston rod

Bore mm	A1 in / mm	B1 in / mm	B2 in / mm	D1 thread	D2 f_8 dia in / mm	D3 h_{12} dia in / mm	D4 in / mm	D5 in / mm	D6 dia in / mm	K1 thread
8	0.47 / 12	0.79 / 20	1.06 / 27	M6 x 0.75	0.16 / 4	0.47 / 12	0.13 / 3.4	0.59 / 15	0.42 / 10.6	M4
10	0.47 / 12	0.87 / 22	1.14 / 29	M6 x 0.75	0.20 / 5	0.47 / 12	0.13 / 3.4	0.67 / 17	0.53 / 13.4	M4
12	0.63 / 16	0.98 / 25	1.30 / 33	M10 x 1	0.24 / 6	0.63 / 16	0.18 / 4.5	0.75 / 19	0.63 / 16	M6
16	0.63 / 16	1.26 / 32	1.63 / 41.5	M10 x 1	0.24 / 6	0.63 / 16	0.22 / 5.5	0.98 / 25	0.83 / 21	M6
20	0.79 / 20	1.57 / 40	2.03 / 51.6	M10 x 1	0.31 / 8	0.87 / 22	0.26 / 6.6	1.22 / 31	1.02 / 26	M8
25	0.87 / 22	1.77 / 45	2.32 / 59	M10 x 1	0.39 / 10	0.87 / 22	0.26 / 6.6	1.50 / 38	1.26 / 32	M10 x 1.25

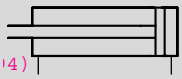
Bore	K2	L1 ± 0.006 in / 1.5 mm Stroke				L3	L4 ± 0.098 in / 2.5 mm	L5	SW1
mm	in / mm	0.39 / 10 in / mm	0.98 / 25 in / mm	1.57 / 40 in / mm	1.97 / 50 in / mm	in / mm	in / mm	in / mm	mm
8	0.14 / 3.5	1.91 / 48.4	2.85 / 72.4	—	—	0.18 / 4.5	0.33 / 8.5	0.24 / 6	—
10	0.14 / 3.5	1.96 / 49.9	2.91 / 73.9	3.89 / 98.9	—	0.18 / 4.5	0.34 / 8.7	0.24 / 6	—
12	0.21 / 5.4	2.06 / 52.4	2.97 / 75.4	3.87 / 98.4	—	0.20 / 5	0.45 / 11.5	0.26 / 6.5	5
16	0.21 / 5.4	2.16 / 54.9	3.12 / 79.2	4.09 / 103.8	4.02 / 120.2	0.26 / 6.5	0.57 / 14.5	0.33 / 8.5	5
20	0.29 / 7.3	2.39 / 60.7	3.41 / 86.7	4.44 / 112.7	5.15 / 130.7	0.31 / 8	0.63 / 16	0.39 / 10	7
25	0.35 / 9	2.97 / 75.5	4.04 / 102.7	5.08 / 129	5.82 / 147.8	0.39 / 10	0.69 / 17.5	0.39 / 10	9

(Ref. 1.118-2) (10.93) Subject to change

Double-Acting Polymer Cylinder

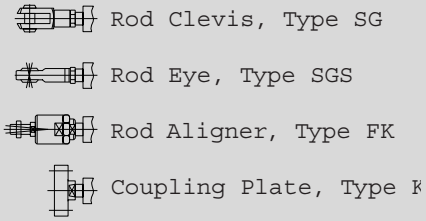
With flexible cushion rings at both ends, integral flange mount and fittings

Type DFK-…-P



Compact, corrosion-resistant, plastic cylinders have stainless steel piston rod and integral mounting flange and fitting. The cap is spin-welded to the barrel. The one-piece piston/seal acts as a cushioning ring at both ends of the stroke, reducing shock. Roll-threaded rod accepts mounting attachments.

Piston Rod Accessories (see page 812)

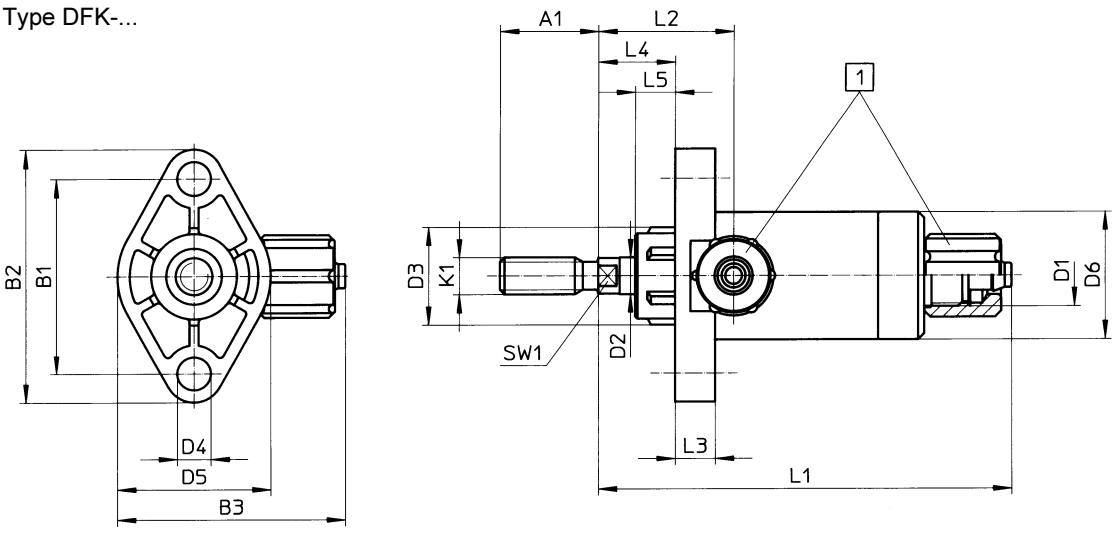


Order Number					
Part No.	Type	Bore mm	Stroke mm	Cushioning	Weight lb / kg
30268	DFK	- 8 -	10	-P	0.022 / 0.010
30269	DFK	- 8 -	25	-P	0.033 / 0.015
30270	DFK	- 8 -	40	-P	0.035 / 0.016
30272	DFK	- 10 -	10	-P	0.026 / 0.012
30273	DFK	- 10 -	25	-P	0.037 / 0.017
30274	DFK	- 10 -	40	-P	0.042 / 0.019
30275	DFK	- 10 -	50	-P	0.046 / 0.021
13991	DFK	- 12 -	10	-P	0.055 / 0.025
13992	DFK	- 12 -	25	-P	0.066 / 0.030
13993	DFK	- 12 -	40	-P	0.077 / 0.035
14762	DFK	- 12 -	50	-P	0.084 / 0.038
14337	DFK	- 16 -	10	-P	0.075 / 0.034
14338	DFK	- 16 -	25	-P	0.088 / 0.040
14339	DFK	- 16 -	40	-P	0.101 / 0.046
14520	DFK	- 16 -	50	-P	0.110 / 0.050
14521	DFK	- 20 -	10	-P	0.132 / 0.060
14522	DFK	- 20 -	25	-P	0.157 / 0.071
14523	DFK	- 20 -	40	-P	0.176 / 0.080
14524	DFK	- 20 -	50	-P	0.194 / 0.088
15011	DFK	- 25 -	10	-P	0.220 / 0.100
15012	DFK	- 25 -	25	-P	0.265 / 0.120
15013	DFK	- 25 -	40	-P	0.309 / 0.140
15014	DFK	- 25 -	50	-P	0.331 / 0.150
15015	DFK	- 25 -	80	-P	0.397 / 0.180

Order Number		Part No. (above) and Type Code: DFK + bore (mm) + stroke length (mm) + P Example: Bore - 12 mm, stroke length - 40 mm = 13993 DFK-12-40-P				
Medium		Compressed air (filtered, lubricated or unlubricated)				
Design		Piston type cylinder				
Max. Allowable Operating Pressure		120 psi / 8 bar				
Temperature Range		14 to 140°F / –10 to 60°C				
Materials		Bearing cap, flange and cylinder barrel: Polymer. Piston rod: X20Cr13. Piston: Polyurethane.				
Bore	Stroke Lengths	Force at 90 psi / 6 bar		Return Force at 90 psi / 6 bar		Connection
mm	mm	lbf / N	≈kP	lbf / N	≈kP	
8	10, 25, 40	5.4 / 24	2.4	4.7 / 21	2.10	PK-3
10	10, 25, 40, 50	8.5 / 38	3.8	7.9 / 35	3.50	
12		13.5 / 60	6.0	11.2 / 50	5.09	PK-4
16		24.7 / 110	11.0	23.1 / 103	10.36	
20		38.2 / 170	17.0	35.5 / 158	15.83	
25	10, 25, 40, 50, 80	59.5 / 265	26.5	55.5 / 247	24.77	

Polymer Barrel Pneumatic Cylinders, Type DFK
Dimensions

Type DFK-...



1 Connection for 4 mm plastic tubing
(Bores 8, 10 mm: 3 mm)
For replacement caps, order 211291 MCK-PK-4-KU or
211289 MCK-PK-3-KU
SW1 = Wrench size to fit flats on piston rod

Bore	A1	B1	B2	B3	D1	D2 f8 dia	D3 h12 dia	D4	D5	D6 dia	K1
mm	in / mm	in / mm	in / mm	in / mm	thread	in / mm	in / mm	in / mm	in / mm	in / mm	thread
8	0.47 / 12	0.79 / 20	1.06 / 27	0.96 / 24.3	M6 x 0.75	0.16 / 4	0.47 / 12	0.13 / 3.4	0.59 / 15	0.42 / 10.6	M4
10	0.47 / 12	0.87 / 22	1.14 / 29	1.04 / 26.4	M6 x 0.75	0.16 / 4	0.47 / 12	0.13 / 3.4	0.67 / 17	0.53 / 13.4	M4
12	0.63 / 16	0.98 / 25	1.30 / 33	1.25 / 31.7	M10 x 1	0.24 / 6	0.63 / 16	0.18 / 4.5	0.75 / 19	0.63 / 16	M6
16	0.63 / 16	1.26 / 32	1.63 / 41.5	1.46 / 37.2	M10 x 1	0.24 / 6	0.63 / 16	0.22 / 5.5	0.98 / 25	0.83 / 21	M6
20	0.79 / 20	1.57 / 40	2.03 / 51.6	1.68 / 42.7	M10 x 1	0.31 / 8	0.87 / 22	0.26 / 6.6	1.22 / 31	1.02 / 26	M8
25	0.87 / 22	1.77 / 45	2.32 / 59	1.94 / 49.2	M10 x 1	0.39 / 10	0.87 / 22	0.26 / 6.6	1.50 / 38	1.26 / 32	M10 x 1.25

Bore	L1 Stroke					L2 ± 0.106 in / 2.7 mm	L3	L4 ± 2.5	L5	SW1
mm	0.39 / 10 in / mm	0.98 / 25 in / mm	1.57 / 40 in / mm	1.98 / 50 in / mm	3.15 / 80 in / mm	in / mm	in / mm	in / mm	in / mm	mm
8	2.01 / 51.1	2.64 / 67.1	3.19 / 81.1	—	—	0.61 / 15.5	0.18 / 4.5	0.33 / 8.5	0.24 / 6	—
10	2.06 / 52.4	2.65 / 67.4	3.24 / 82.4	3.66 / 92.9	—	0.61 / 15.5	0.18 / 4.5	0.33 / 8.5	0.24 / 6	—
12	2.28 / 57.9	2.87 / 72.9	3.46 / 87.9	3.85 / 97.9	—	0.85 / 21.5	0.20 / 5	0.49 / 12.5	0.26 / 6.5	5
16	2.41 / 61.2	3.00 / 76.2	3.59 / 91.2	3.98 / 101.2	—	0.87 / 22	0.26 / 6.5	0.49 / 12.5	0.26 / 6.5	5
20	2.45 / 62.2	3.16 / 80.2	3.75 / 95.2	4.14 / 105.2	—	0.92 / 23.4	0.31 / 8	0.51 / 13	0.28 / 7	7
25	3.26 / 82.8	3.46 / 87.8	4.44 / 112.8	4.83 / 122.8	6.02 / 152.8	1.16 / 29.5	0.39 / 10	0.69 / 17.5	0.39 / 10	9

(Ref. 1.218-2) (10.93) Subject to change