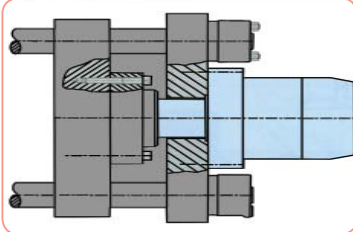




### Hydraulic Cylinder - Round Type

Code: THS



Dimension	Formula	Unit
Force (Newton)	F	N
Length	s	m
Speed (Stroke)	v	m / s
Pressure	p	bar
Area (Piston)	A	cm <sup>2</sup>
Volume	V	m <sup>3</sup>
Flow Rate	Q	m <sup>3</sup> / s
Efficiency	η	-
Performance	P	kW

The information is advisory.

**Cylinder Force:**

$$F (N) = p (\text{bar}) \times A (\text{cm}^2) \times 10$$

A = Effective piston area

**Required Flow Rate:**

$$Q (\text{L} / \text{min.}) = A (\text{cm}^2) \times v (\frac{\text{m}}{\text{s}}) \times 6$$

**Repulse and Return Speed:**

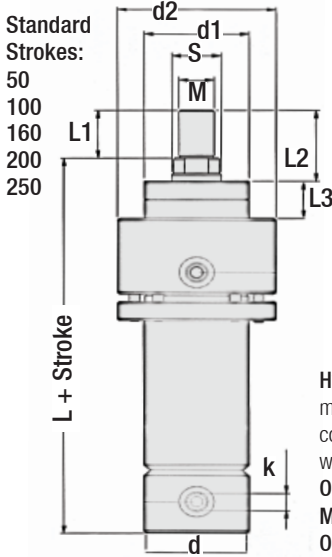
$$v (\frac{\text{m}}{\text{s}}) = \frac{Q (\text{L} / \text{min.})}{A (\text{cm}^2)} \times \frac{1}{6}$$

Q = Flow Rate

**Required Pump Capacity:**

$$P (\text{kW}) = \frac{Q (\text{L} / \text{min.}) \times p (\text{bar})}{\eta} \times \frac{1}{600}$$

η = Pump Efficiency



Motion Type: Double Action  
Sealing: Polyurethane + NBR

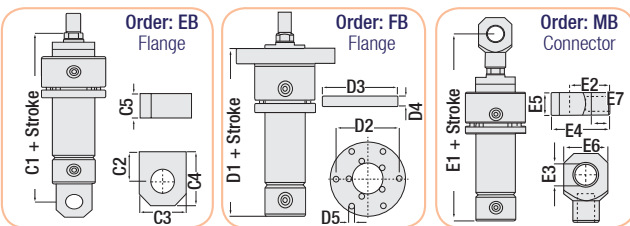
**Hydraulic Cylinders:** Used in injection moulds for waste water and for other cores / lifters. Piston motion is provided with joints in injection machine.

Operating: Hydraulic Oil  
Max. Operating Pressure: 160 Bar  
Operating Temp.: -20 / +80°  
Stroke Inaccuracy : ± 0.3mm  
Shaft: C45 / Hard Chrome Coated

Code: THS

Order	d	d1	d2	S	M	k	L	L1	L2	L3
THS.40	50	50	80	22	M.16 x 1.5	1/4	160	22	35	20
THS.50	60	60	95	28	M.20 x 1.5	1/4	194	31	46	25
THS.63	75	70	125	36	M.27 x 2.0	3/8	208	39	55	25
THS.80	95	85	130	45	M.33 x 2.0	3/8	235	47	65	30
THS.100	115	109	160	56	M.42 x 2.0	1/2	244	60	80	30
THS.125	145	130	195	70	M.48 x 2.0	1/2	276	67	90	37

### Hydraulic Cylinders Joint Types:

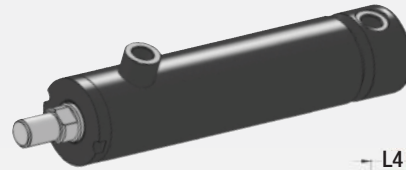


Hoses for Hydraulic Cylinder:  
"as per request" Order: PB..

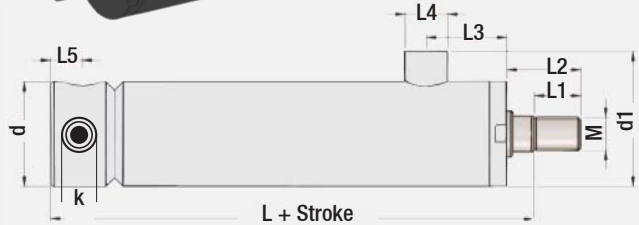


### Hydraulic Cylinder - Tube Type

Code: TBTHS



Flange joint as per request  
(Code: EB)



Order	d	d1	M	k	L	L1	L2	L3	L4	L5
TBTHS.40	50	65	M.16 x 1.5	1/4	125	22	35	40	20	15
TBTHS.50	60	75	M.20 x 1.5	1/4	152	31	46	43	20	21
TBTHS.63	75	90	M.27 x 2.0	3/8	163	39	55	50	25	23
TBTHS.80	95	110	M.33 x 2.0	3/8	209	47	65	60	20	29
TBTHS.100	115	135	M.42 x 2.0	1/2	211	60	80	82	30	27
TBTHS.125	145	165	M.48 x 2.0	1/2	229	67	90	82	30	30



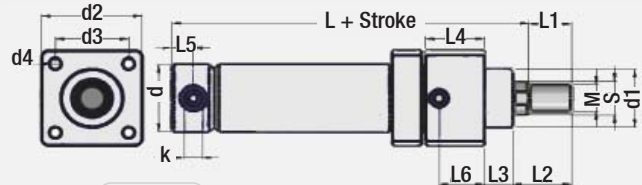
**Custom-made Production (for all Hydraulic Cylinders):**

- For too hot environments, special piston with Viton Felt (180°C).
- Single action (spring converter).
- Shaft material & dimensions can be produced acc.. to your demand.

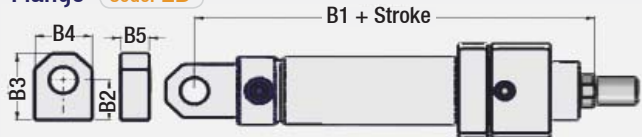


### Hydraulic Cylinder Square Type

Code: THKS



### Flange Code: EB



Order	d	d1	d2	d3	d4	S	M	k
THKS.40	50	43	70	51	M.10	25	M.20 x 1.5	1/4
THKS.50	60	62	78	56	M.10	28	M.20 x 1.5	1/4
THKS.63	75	70	95	70	M.10	36	M.27 x 2.0	3/8
THKS.80	95	85	115	90	M.12	45	M.33 x 2.0	3/8

L	L1	L2	L3	L4	L5	L6	B1	B2	B3	B4	B5
170	30	41	20	41	15	31.5	200	30	50	40	20
178	26	39	25	37	21	26	208	30	55	50	25
189	39	51	30	41	22.5	28	229	40	70	60	30
235	47	65	30	68	29	41	280	45	80	70	35