

HYDRAULIC CYLINDERS

without/with damping, double-acting, pmax. 250 bar

Description:

This double-acting hydraulic cylinder with outer piston thread is applicable also for high workload.

The construction and compact design allow flexible solutions for various installation conditions. HYDROKOMP offers this hydraulic cylinder without and with adjustable double-sided damping and with special sealings.

The hydraulic cylinder can be equipped with various accessories. Available are flange plates for head and bottom installation as well as bearing support and joint head.

The cylinder housing is made from steel. The piston is made from 20MnV6 and is hard-chromium-plated. The connection thread of the piston is a metric thread.

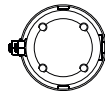
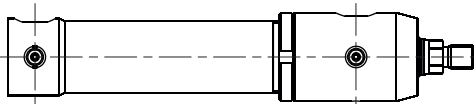
The adjustable end position damping allows a controlled prevention of a too hard jolt of the piston in the housing.

This protective function has a positive effect especially to high piston speed or to the assembly of accessory parts at the piston.

Piston speeds up to max. 5 m/s are possible. For speeds from 0.1 m/s and more we recommend the damped version.

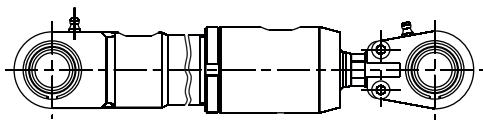
The cylinder is suitable for arbitrary installation positions. For pressure medium we recommend hydraulic oils according to DIN 51524 (HL, HLP).

Please consider the permitted shear force and buckling load (refer to page 4) when selecting a hydraulic cylinder.



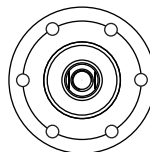
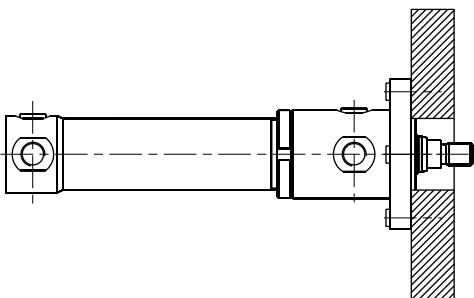
Fastening type A

Hydraulic cylinder without fastening elements



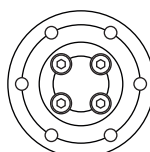
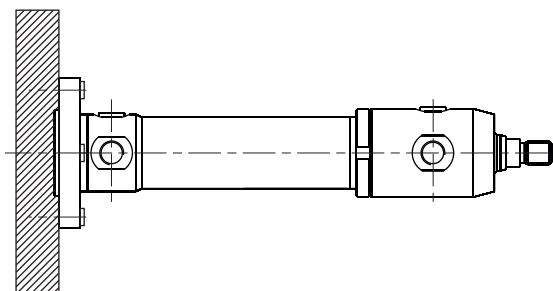
Fastening type B

Hydraulic cylinder with welded-on bearing support and screwable joint head (Accessories)



Fastening type C

Hydraulic cylinder with flange plate, head side (Accessories)



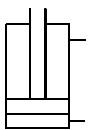
Fastening type D

Hydraulic cylinder with flange plate, bottom side (Accessories)



Webcode: 022001

We also design and manufacture special designs



Fastening types:

- ☒ Flange plate, head side
- ☒ Flange plate, bottom side
- ☒ Bearing support, welded-on and joint head, screwable

Sealing types:

- ☒ NBR, Operating temperature -20° bis +80° C
- ☒ FKM, Operating temperature up to max. 150° C

Advantages:

- ☒ Compact design
- ☒ Manifold application options
- ☒ Easy handling
- ☒ Available with adjustable damping
- ☒ Outer piston thread for accessories
- ☒ Arbitrary installation position possible



HYDROKOMP®
Hydraulische Komponenten GmbH

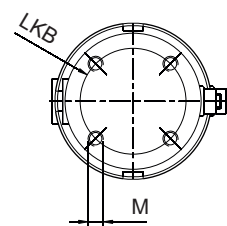
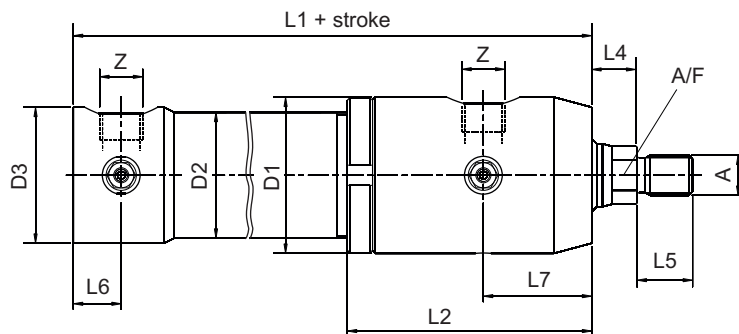
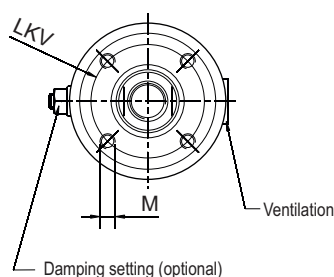
Siemensstraße 16, 35325 Mücke (Germany)
Phone: +49 6401 225999-0
Fax: +49 6401 225999-50
E-mail: info@hydrokomp.de
Internet: www.hydrokomp.de



Hydraulic cylinders / Fastening types

Fastening type A

without fastening elements



Piston Ø	[mm]	25	32	40	50	63	80	100
Rod Ø	[mm]	18	22	28	36	45	56	70
Pressure force at 100 bar	[kN]	4,9	8,0	12,6	19,6	31,2	50,3	78,5
Pull force at 100 bar	[kN]	2,9	4,9	7,7	11,6	18,6	30,6	47,4
Oil req./10 mm feed	[cm³]	4,9	8,0	12,6	19,6	31,2	50,3	78,5
Oil req./10 mm return	[cm³]	2,9	4,9	7,7	11,6	18,6	30,6	47,4
Piston surface	[cm²]	4,9	8,0	12,6	19,6	31,2	50,3	78,4
Ring surface	[cm²]	2,9	4,9	7,7	11,6	18,6	30,6	47,4
Damping distance	[mm]	16	16	20	25	32	40	50
A, Thread		M12x1,25	M16x1,5	M16x1,5	M22x1,5	M28x1,5	M35x1,5	M45x1,5
BF	[mm]	12	15	15	18	20	25	30
BSG	[mm]	17,5	19	23	28	30	35	40
BV	[mm]	12	15	15	18	20	25	30
D1	[mm]	47	52	62	72	90	115	138
D2	[mm]	35	42	50	60	75	95	120
D3	[mm]	40	45	54	64	79	99	126
DB	[mm]	6,6	6,6	9	11	13,5	17,5	17,5
DF	[mm]	80	85	105	118	140	178	205
DSG H7	[mm]	16	20	25	30	35	40	50
DV	[mm]	80	85	105	118	140	178	205
DZ (f8)	[mm]	35	40	50	60	65	90	110
DZV (f8)	[mm]	45	50	60	70	80	105	125
L1 + stroke ⁽¹⁾	[mm]	104	121	127	141	158	179	198
L1V + stroke ⁽¹⁾	[mm]	131	152	163	181	200	228	254
L2	[mm]	80	85	97	112	118	133	144
L3	[mm]	35	38	45	51	61	69	88
L4	[mm]	13	13	18	19	19	21	22
L5	[mm]	16	16	16	22	28	35	45
L6	[mm]	15	16	19	20	24	28	31
L6V	[mm]	29	33	37	41	47	56	65
L7	[mm]	36	39	43	49	51	58	62
L8	[mm]	61	63	68	79	89	106	127
L10	[mm]	16	16	21	22	22	25	26
LF1 + stroke ⁽¹⁾	[mm]	101	119	124	138	155	175	194
LK	[mm]	65	70	85	95	115	145	170
LKB	[mm]	35	35	42	50	62	75	100
LKV	[mm]	40	40	48	58	70	85	105
LSGA1 + stroke ⁽¹⁾	[mm]	198	221	238	269	306	352	411
LZ	[mm]	3	3	3	3	3	4	4
LZV	[mm]	3	3	3	3	3	4	4
M		M6	M8	M8	M10	M12	M16	M20
RGA	[mm]	22,5	28	28	32	39	47	58
RSG	[mm]	24	25	27,5	32,5	41,5	50	61,5
A/F	[mm]	13	17	19	27	36	41	55
Z (Hydraulic port)		G1/4	G1/4	G3/8	G3/8	G1/2	G3/4	G3/4

⁽¹⁾Stroke according to customers requirement (0001...1000 mm)

CETOP-dimensions on request.

Order number key for hydraulic cylinders:

Example **HZY** - **B032** - **0500** - **V1** - **001**

The order number key comprises the order numbers for the standard cylinder without fastening elements and also the fastening types as complete assembly.

Individual fastening elements are available as accessories. (Order no. see page 3)

Fastening type: A, B, C, D (see above and page 3)

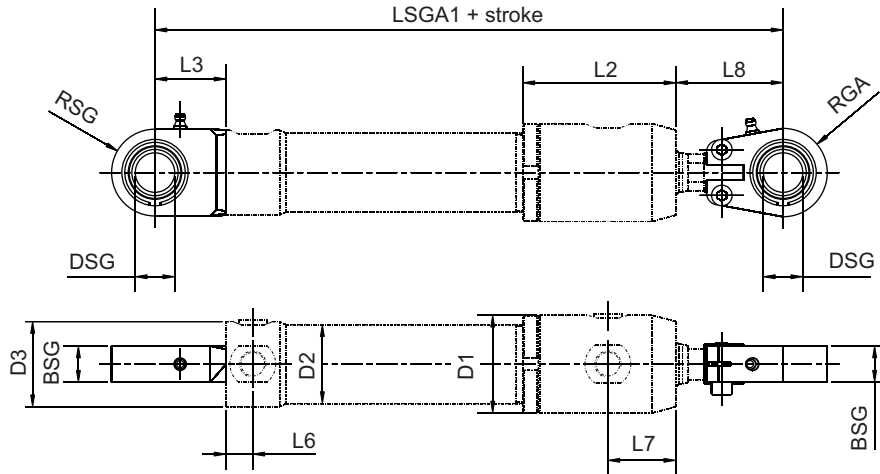
Piston Ø [mm]: 025, 032, 040, 050, 063, 080, 100

Stroke [mm]: according to customers requirements 0001...1000

Sealing: NBR = P, FKM = V

Damping: without = 0, bilateral damping = 1

Functioning: double-acting = 001



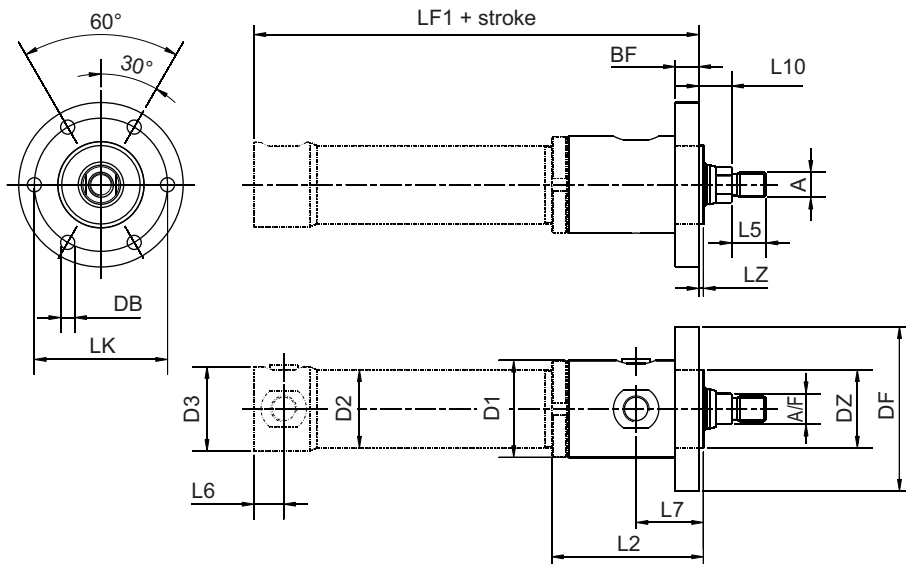
Fastening type B

Hydraulic cylinder with welded-on bearing support and screwable joint head (Accessories)

Order no. for joint heads:

Thread:	Order no.:
M12x1,25	8700-033
M16x1,5	8700-034
M22x1,5	8700-035
M28x1,5	8700-036
M35x1,5	8700-037
M45x1,5	8700-038

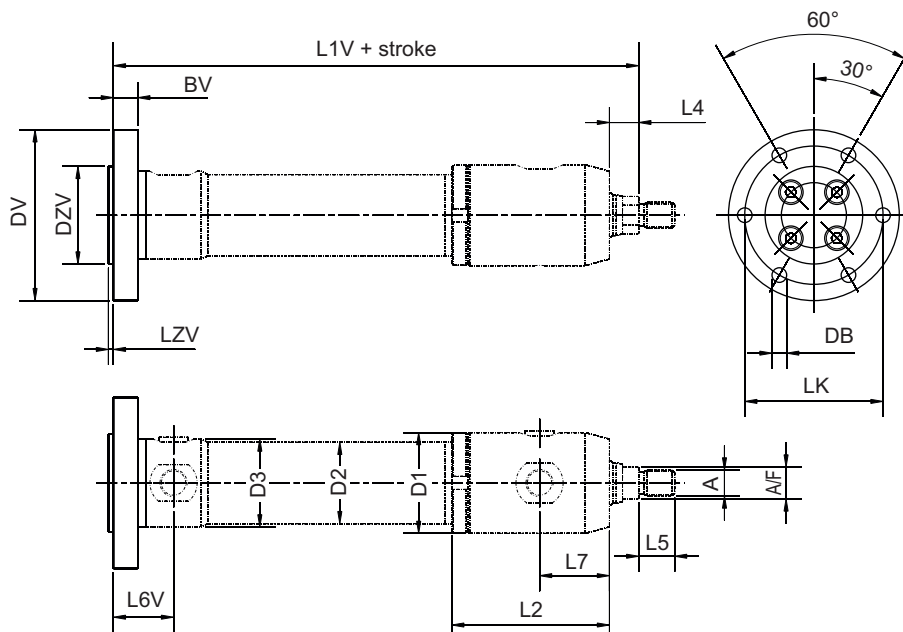
Other joint heads on request



Fastening type C

Hydraulic cylinder with flange plate, head side (Accessories)

This design is only available as a complete assembly (refer to page 2).



Fastening type D

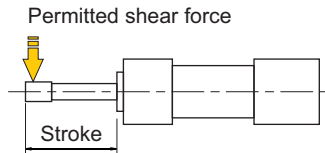
Hydraulic cylinder with flange plate, bottom side (Accessories)

Order no. for flange plates:

Piston Ø:	Order no.:
25 mm	8700-026
32 mm	8700-027
40 mm	8700-028
50 mm	8700-029
63 mm	8700-030
80 mm	8700-031
100 mm	8700-032

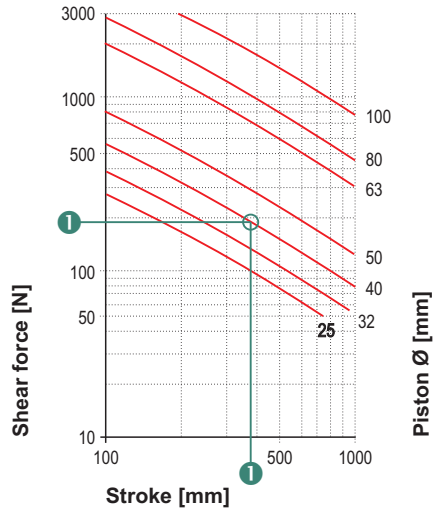
Other dimensions on request

Scope of supply includes the fastening screws.

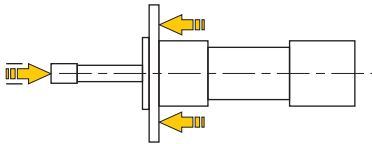


Permitted shear force with protracted piston rod

Avoid shear force if possible in order to extend the lifetime of the piston guide and the rod guide.

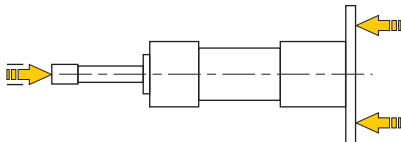
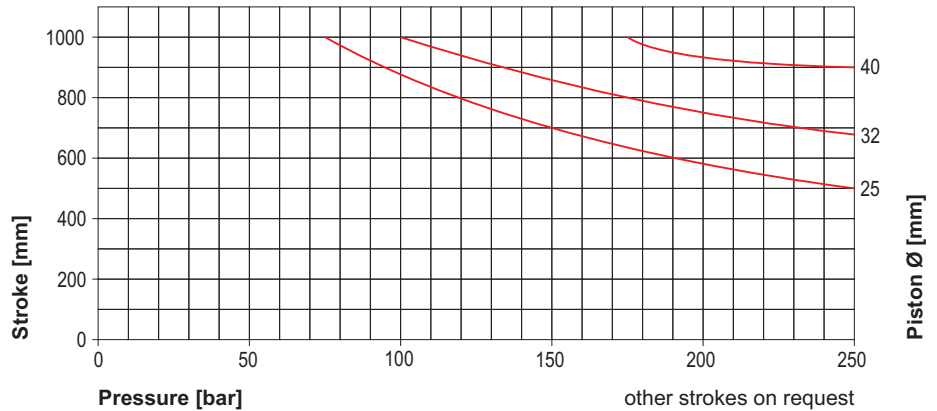


1 Example:
For a stroke of 400 mm the piston shear force of a 40 mm Ø piston may be a maximum of 180 N.



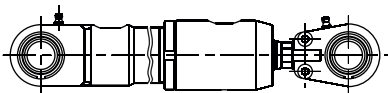
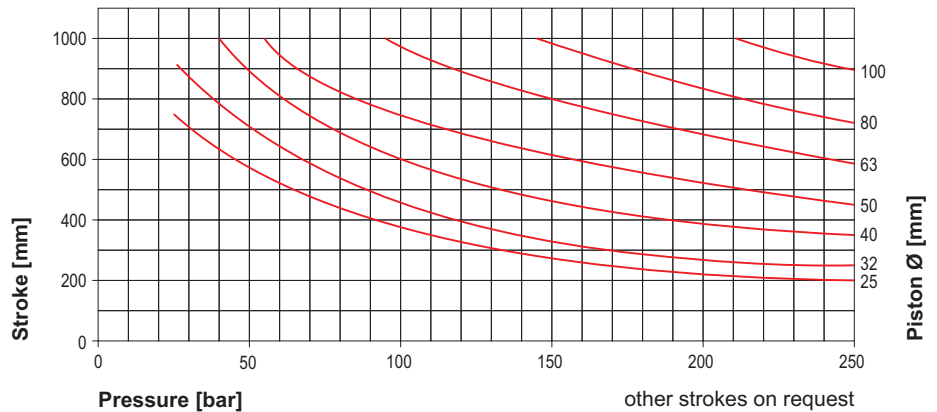
Buckling load of the piston rod with head sided flange mounting

Limiting values for operating pressure and stroke with buckling load (safety against buckling = 3.5)



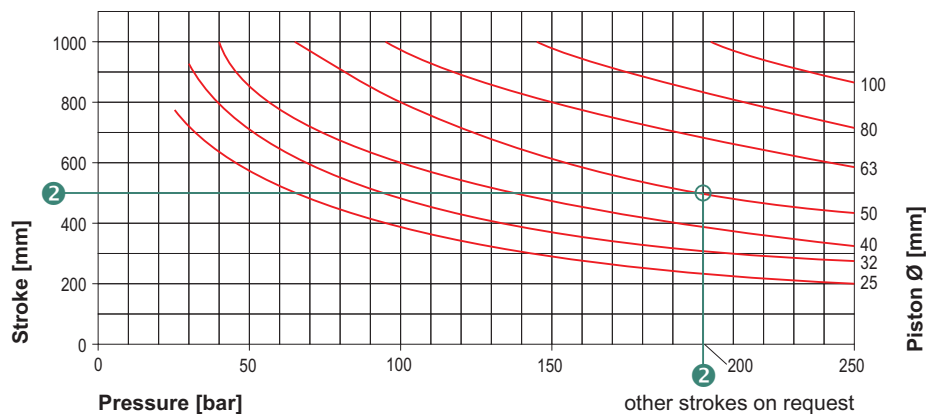
Buckling load of the piston rod with bottom sided flange mounting

Limiting values for operating pressure and stroke with buckling load (safety against buckling = 3.5)



Buckling load with joint bearings

Limiting values for operating pressure and stroke with buckling load (safety against buckling = 3.5)



2 Example:
A stroke of 500 mm permits a maximum operating pressure of 200 bar.