

Hydraulic screw-in cylinder, single action

Operating pressure max. 350 bar / min 100 bar

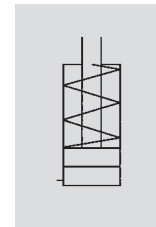
These hydraulic crew-in cylinder are single acting and with spring retraction. They can be used in clamping fixtures for positioning, clamping and gripping of workpieces.

Technical characteristics

- Only suitable for operating pressures starting from 100 bar
- Use for pipe connections and for integrated oil supply (sealing on the cylinder's base with a seal which is delivered with the unit)
- External thread along the whole length of the housing
- Narrow distances between the cylinders are possible when the cylinders are mounted in groups
- Spring retraction
- Slide ring seals with high wear resistance
- No stick-slip effect
- Hardened piston rod
- An extended piston rod guide assures high stability when the piston is exposed to transversal forces
- Piston rods with internal thread on all models starting from model 721E16121-1 onwards



Symbol



CUSTOMER DESIGNED MODELS

If you need a special cylinder for your application – customer designed models are available. **PLEASE LET US KNOW!**

Included accessories

DELTRIN seal ring

Recommended accessories (separate order)

- Hexagonal nut DIN 936
- Groove nut DIN 1804
- Straight screw-connection D8S-R1/8
- Straight screw-connection D8S-R1/4

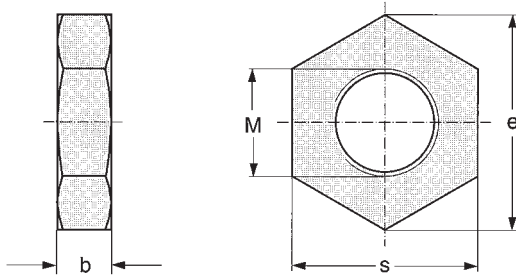
Important Note

The maximum spring retraction force has been taken into account in the clamping force values diagram.

The operating pressure should not exceed 150 bar if the piston is actuated without a counter force.

Model no.	Clamping force		Seal kit	Piston-Ø [mm]	Stroke* S max. [mm]	Piston surface [cm²]	Oil- consumption/ stroke [cm³]	Spring retracting force min. [daN]	Connection G	Weight ~ [kg]
	at 100 bar [daN]	at 350 bar [daN]								
721E08101-1	42	147	–	8	10	0,50	0,50	3,9	–	0,03
721E12101-1	106	371	720V12-0001	12	10	1,13	1,13	2,5	G1/8	0,25
721E16121-1	193	675	720V16-0002	16	12	2,01	2,41	6,0	G1/8	0,32
721E20161-1	280	980	720V20-0001	20	16	3,14	5,02	6,2	G1/4	0,40
721E20401-1	270	945	720V20-0001	20	40	3,14	12,57	6,6	G1/4	0,60
721E25161-1	465	1627	720V25-0003	25	16	4,91	7,85	11,7	G1/4	0,60
721E25401-1	456	1596	720V25-0003	25	40	4,91	19,63	11,5	G1/4	0,90
721E32161-1	780	2730	720V32-0003	32	16	8,04	12,87	9,8	G1/4	0,95
721E40161-1	1224	4284	720V40-0003	40	16	12,57	20,11	20,1	G1/4	1,45
721E40401-1	1204	4214	720V40-0003	40	40	12,57	50,28	28,0	G1/4	2,40
721E50251-1	1906	6671	720V50-0002	50	25	19,63	49,09	23,9	G1/4	3,30

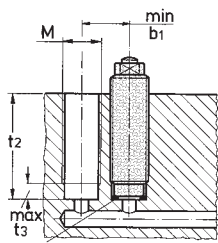
* Other strokes on request



Special accessories (separate order) hexagonal nut, DIN 936

order no.	b	e	S	weight ~ [kg]
M				
M22 x 1,5	10	35,72	32	0,04
M27 x 1,5	12	45,63	41	0,09
M33 x 1,5	14	55,8	50	0,155
M38 x 1,5	16	66,96	60	0,2
M48 x 1,5	18	83,9	75	0,46
M56 x 1,5N	groove nut DIN 1804, see p. 23.6			
M68 x 1,5N	groove nut DIN 1804, see p. 23.6			

Installation example for all models



Seal ring (standard)

Installation instructions

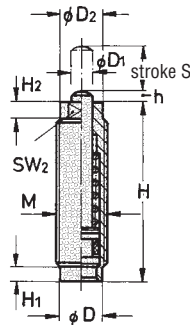
For installation of the cylinder take into account the dimension "t2", of the threaded bore in the clamping fixture.

This threaded bore is sealed with the Delrin seal which is supplied along with the unit.

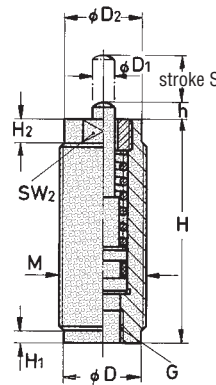
For the maximum torque see table on this page.

For further installation examples for the models 721E12101-1 to 721E50251-1 see p. 21.3

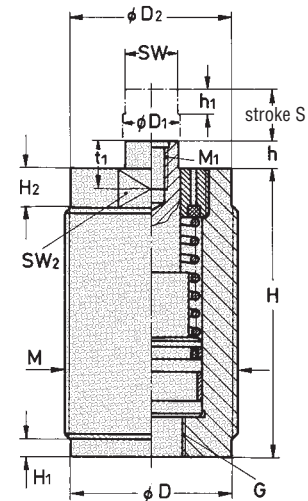
model 721E08101-1



model 721E12101-1



all other models



Model no.	b1	ØD	ØD1	ØD2	H	H1	H2	h	h1	M	M1	SW	SW2	t1	t2	t3	Max. torque [Nm]
721E08101-1	15	10	5	10	42	3	4	1.9	-	M12x1,5	-	-	9	-	18	3	10
721E12101-1	25	20	6	20	58	3	6	4	-	M22x1,5	-	-	19	-	30	3	70
721E16121-1	30	24	10	25	75	3	6,5	7	5,5	M27x1,5	M 5	8	22	10	36	3	130
721E20161-1	38	30	10	31	84,5	3	8	7	5,5	M33x1,5	M 5	8	27	10	42	3	230
721E20401-1	38	30	10	31	140	3	8	7	5,5	M33x1,5	M 5	8	27	10	42	3	230
721E25161-1	43	35	12	36	95	5	12	7	5,5	M38x1,5	M 6	9	32	12	52	5	370
721E25401-1	43	35	12	36	137	5	12	7	5,5	M38x1,5	M 6	9	32	12	52	5	370
721E32161-1	53	46	18	46	91	5	12	10	8	M48x1,5	M 10	15	42	15	61	5	750
721E40161-1	61	53	22	54	99	5	12	10	8	M56x1,5	M 12	19	50	18	71	5	1200
721E40401-1	61	53	22	54	173	5	12	10	8	M56x1,5	M 12	19	50	18	71	5	1200
721E50251-1	73	65	32	65	116	5	15	10	8	M68x1,5	M 20	27	60	30	85	5	2000

Hydraulic screw-in cylinder, single action

Operating pressure max. 250 bar

These hydraulic screw-in cylinders are single acting and with spring retraction. They can be used in clamping fixtures for positioning, clamping and gripping of workpieces. Flexible applicable because of the radial and axial ports.

Technical characteristics

- Suitable even for operating pressures under 100 bar
- 1 oil port radial, one axial
- External thread along the whole housing
- Spring retraction
- O-ring-seal
- Piston rod with internal thread
- Screw-in cap out of steel



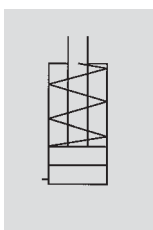
CUSTOMER DESIGNED MODELS

If you need a special cylinder for your application – customer designed models are available. **PLEASE LET US KNOW!**

Recommended accessories (separate order)

- Hexagonal nut DIN 936
- Straight screw-connection D8S-R1/8
- Straight screw-connection D8S-R1/4

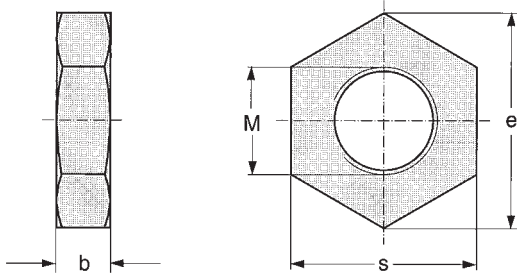
Symbol



Model no.	Clamping force		Seal kit	Piston-Ø [mm]	Stroke* S max. [mm]	Piston surface [cm²]	Oil- consumption/ stroke [cm³]	Spring retracting force min. [daN]	Connection G	Weight ~ [kg]
	at 100 bar [daN]	at 250 bar [daN]								
721E25155-1	465	1162	720V25-0006-1	25	15	4,91	7,37	6	G1/8	0,6
721E25255-1	460	1150	720V25-0006-1	25	20	4,91	12,28	7	G1/8	0,7
721E25405-1	456	1140	720V25-0006-1	25	40	4,91	19,63	11	G1/8	0,9
721E38125-1	1091	2727	720V38-0001	38	12,5	11,34	14,18	20	G1/8	1,4
721E38255-1	1085	2712	720V38-0001	38	25	11,34	28,35	22	G1/8	1,8
721E38505-1	1080	2700	720V38-0001	38	50	11,34	56,7	28	G1/8	2,5
721E50255-1	1906	4765	720V50-0008	50,8	25	19,95	49,87	20	G1/4	3,4

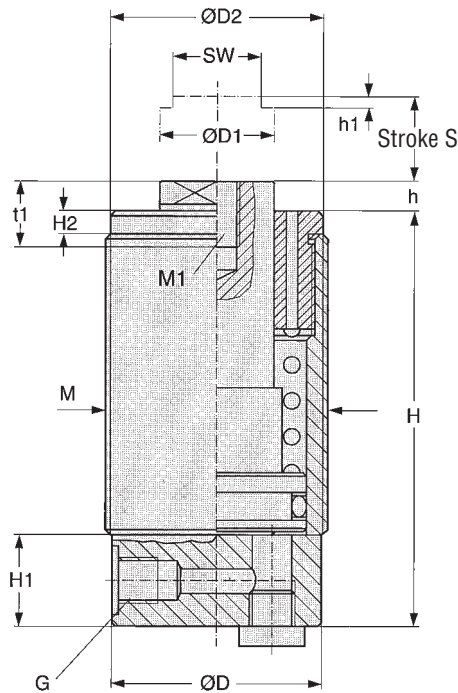
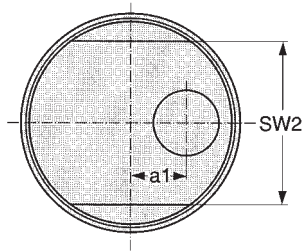
* Other strokes on request

Special accessories (separate order)



Hexagonal nut, DIN 936

order no.	b	e	S	weight ~ [kg]
M				
M33 x 1.5	14	55,8	50	0,155
M48 x 1.5	18	83,9	75	0,46



Model no.	a1	ØD	ØD1	ØD2	H	H1	H2	h	h1	M	M1	SW	SW2	t1
721E25155-1	7	30	14	30	80	21	5	5	5	M33x1,5	M8	11	24	10
721E25255-1	7	30	14	30	98	21	5	5	5	M33x1,5	M8	11	24	10
721E25405-1	7	30	14	30	126	21	5	5	5	M33x1,5	M8	11	24	10
721E38125-1	12	45	24	45,8	85	19	5	5	5	M48x1,5	M10	19	36	14
721E38255-1	12	45	24	45,8	122,5	19	5	5	5	M48x1,5	M10	19	36	14
721E38505-1	12	45	24	45,8	177	19	5	5	5	M48x1,5	M10	19	36	14

Hydraulic screw-in cylinder, double action

Operating pressure **min. 100 bar**
 max. 350 bar

These hydraulic crew-in cylinder are double acting. They can be used in clamping fixtures for positioning, clamping and gripping of workpieces. Such cylinder should be used if rapid and precise stroke speeds are required or when high retraction forces are needed.

Technical characteristics

- Hydraulic ports at the cylinder bottom
- External thread along the whole housing
- Glide ring seal with high wear resistance
- No stick-slip-effect
- Double piston-rod seal
- An extended piston rod guide assures high stability when transversal forces occur
- Piston rod with internal thread

CUSTOMER DESIGNED MODELS

If you need a special cylinder for your application – customer designed models are available.

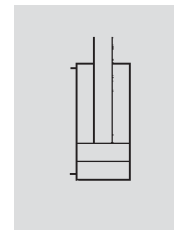
PLEASE LET US KNOW!

Recommended accessories (separate order)

- Groove nut DIN 1804
- 2 x straight screw connection D8S-R1/4



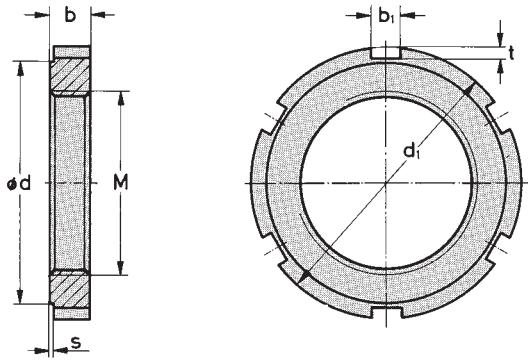
Symbol



Model no.	Clamping force at 100 bar		Seal kit	Piston Ø [mm]	Stroke* S max. [mm]	Piston surface		Oil consumption/ stroke		Connection G 2x	Weight ~ [kg]
	forward stroke [daN]	back- stroke [daN]				forward stroke [cm²]	back- stroke [cm²]	forward stroke [cm³]	back- stroke [cm³]		
721D25501-1	480	284	720V25-0002	25	50	4,90	2,90	24,50	14,50	G1/4	2,5
721D32501-1	788	480	720V32-0002	32	50	8,04	4,90	40,20	24,50	G1/4	2,90
721D40501-1	1232	751	720V40-0002	40	50	12,56	7,66	62,80	38,30	G1/4	3,50
721D50501-1	1925	1136	720V50-0001	50	50	19,63	11,59	98,15	57,95	G1/4	4,50

* Other strokes on request

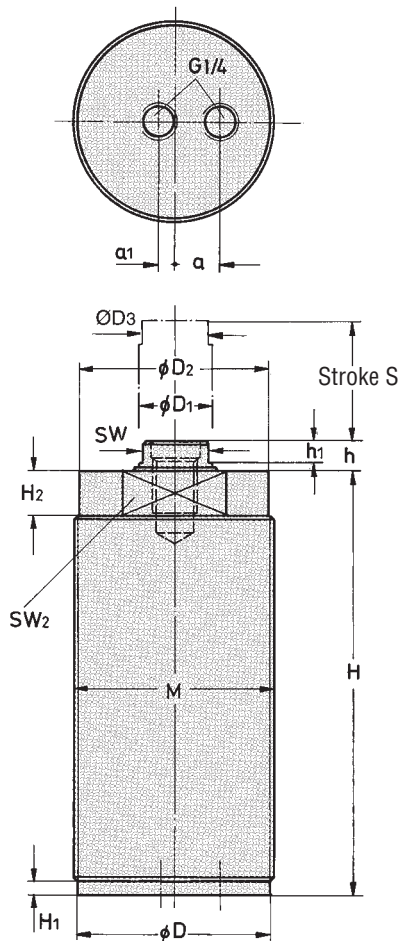
Special accessories (separate order)



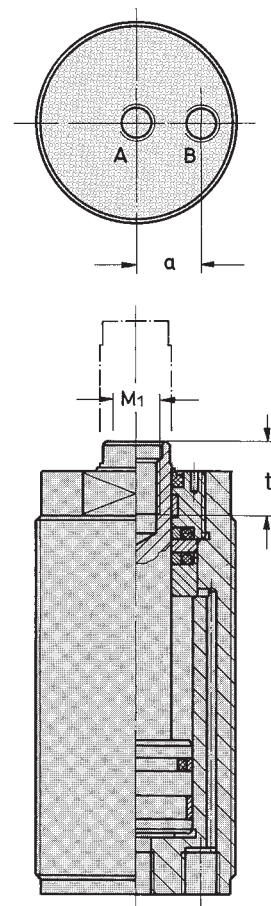
Grooved nut, DIN 1804

order no.	b	b1	Ød	Ød1	s	t	weight ~ [kg]
M							
M50 x 1,5N	13	8	67	75	0,5	3,5	0,24
M56 x 1,5N	13	10	70	80	0,5	4	0,25
M68 x 1,5N	14	10	90	100	0,5	4	0,45
M80 x 2 N	16	10	105	115	1	4	0,58

Model 721D25501-1 to 721D40501-1



Model 721D50501-1



A = forward stroke
B = backstroke

Model no.	a	a1	ØD	ØD1	ØD2	ØD3	H	H1	H2	h	h1	m	M1	SW	SW2	t
721D25501-1	14	10	48	16	47	15	133,5	5	15	9,5	5,5	M50x1,5	M10	13	41	20
721D32501-1	17	10	54	20	52	19	138	5	15	10	7	M56x1,5	M12	17	46	24
721D40501-1	22,5	5	65	25	64	24	144	5	15	11	8	M68x1,5	M16	21	55	32
721D50501-1	28	-	76	32	76	31	145,5	5	15	12	8	M80x2	M20	27	65	38

Hydraulic short stroke cylinder, double action

Operating pressure **min. 100 bar**
 max. 350 bar

These double action hydraulic short-stroke cylinders are primarily used for operating double action hydraulic punching, notching and cutting units. Furthermore, they can be used as clamping cylinders. The double action version allows rapid stroke speeds. The cylinders are mounted to the hydraulic punching units with the help of mounting flanges. Adequate mounting flanges available on request.

Technical characteristics

- Compact design
- Optimal piston rod guide; hardened piston rod for protection against corrosion and wear and for better gliding.
- Fine-grinded, polished slide faces for the lip seal and the piston rod improve the service life and the function of the seals.
- All seals with standard sizes
- Lateral oil ports, additional advance stroke connection on the cylinder base
- Model 725D80151-1 provided with G3/8 oil ports

CUSTOMER DESIGNED MODELS

If you need a special cylinder for your application – customer designed models are available.

PLEASE LET US KNOW!

Included accessories

- 2 x reducing nipples GWR-3/8-1/4 (only 725D80151-1)

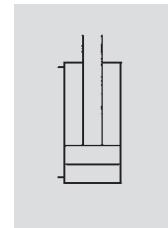
Recommended accessories (separate order)

- 2 x straight screw connectors D8S-R1/4
- Mounting flange
- Grooved or hexagonal nut (see page 23.2 and 23.6)



Hydraulic short-stroke cylinders for DE-STA-CO punching units in a series punching fixture

Symbol

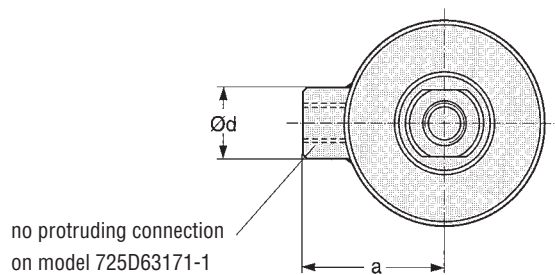
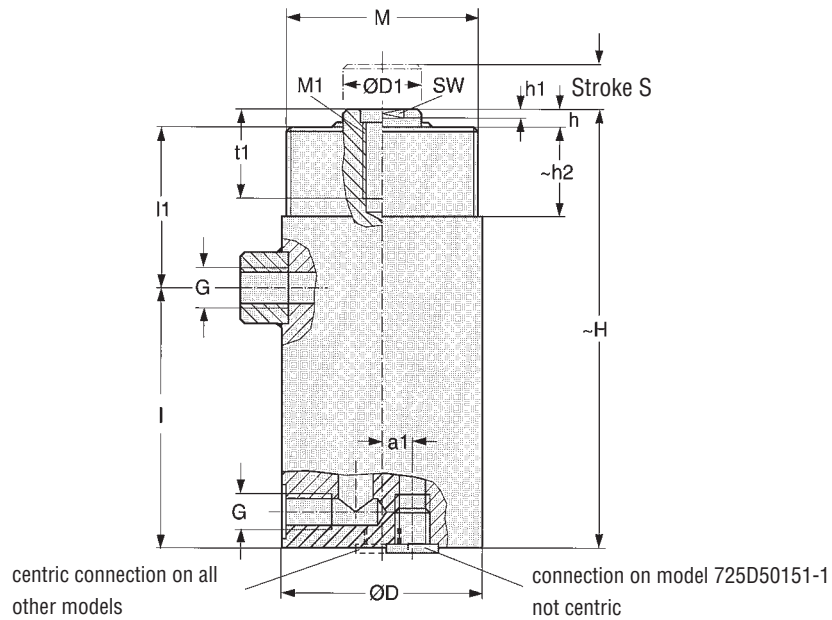
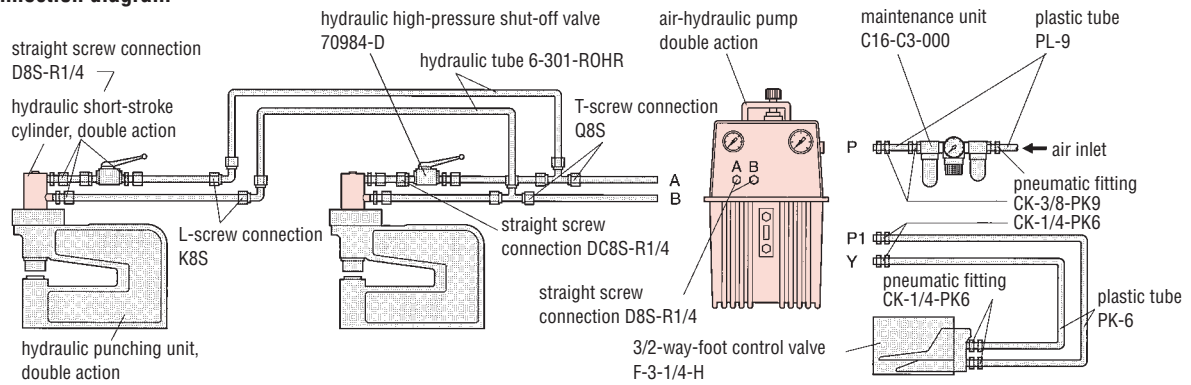


Model no.	Clamping force at 100 bar		Seal kit	Piston Ø [mm]	Stroke* S max. [mm]	Piston surface		Oil consumption/ stroke		Connection G	Weight ~ [kg]
	forward stroke [daN]	back- stroke [daN]				forward stroke [cm²]	back- stroke [cm²]	forward stroke [cm³]	back- stroke [cm³]		
725D35151-2	962	647	720V35-0001	35	15	9,62	6,47	14,40	9,70	G1/4	1,9
725D50151-1	1963	1472	720V50-0005	50	15	19,63	14,72	29,50	22,10	G1/4	3,0
725D63171-1	3117	2267	720V63-0001	63	17	31,17	23,13	53,00	39,30	G1/4	4,5
725D80151-1	5026	3769	720V80-0001	80	15	50,26	37,69	75,40	56,60	G3/8	10,0

* Sonderhübe auf Anfrage lieferbar

Hydraulic short-stroke cylinder, double action

Connection diagram



Model no.	a	a1	Ød	ØD	ØD1	h	h1	h2	~H	l	l1	M	M1	SW	t1
725D35151-2	40	-	25	50	20	9	7	30	159	98	52	M48x1,5	M10	17	25
725D50151-1	47	9,5	25	65	25	6	7	30	145	85	54	M64x1,5	M12	20	30
725D63171-1	-	-	-	97	32	9	7	32	150	96	45	M80x2	M16	27	30
725D80151-1	65	-	28	105	40	9	7	29,5	183,5	102	72,5	M80x2	M16	36	31

Hydraulic block cylinder, single action

Operating pressure **min. 100 bar**
 max. 500 bar

This hydraulic block cylinder are single acting with spring retraction. Due to their block shape design, hydraulic block cylinders can be used in a wide range of applications, e.g. clamping, punching, pressing, aligning.

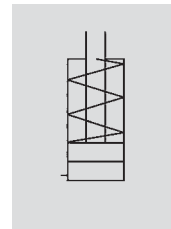
The factory made mounting holes allow easy and quick mounting of the cylinder in the horizontal or vertical position.

Technical characteristics

- Suitable for operating pressures starting from 100 bar onwards.
- Lateral hydraulic connection
- Spring retraction
- Convertible to a double action cylinder
- Glide ring seal with high wear resistance
- No stick-slip effect
- Hardened piston rod
- An extended piston rod guide gives high stability when transversal forces occur
- Piston rod with internal thread



Symbol



CUSTOMER DESIGNED MODELS

If you need a special cylinder for your application – customer designed models are available.

PLEASE LET US KNOW!

Important Note

The maximum spring retraction force has been taken into account in the clamping force values diagram.

The operating pressure should not exceed 150 bar if the piston is actuated without a counter force.

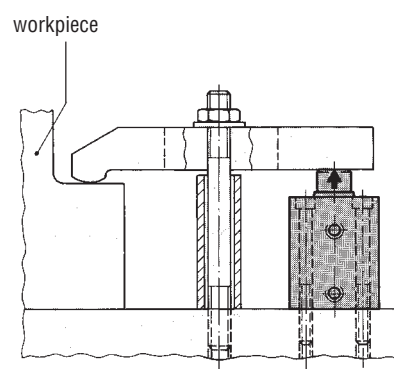
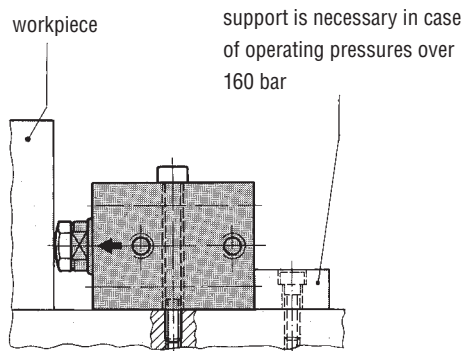
Recommended accessories (separate order)

1 straight screw connectors D8S-R1/4

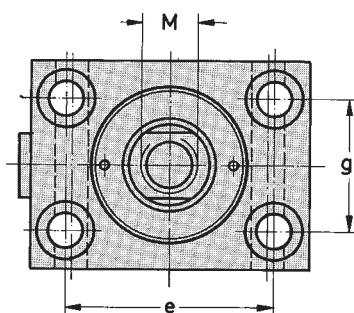
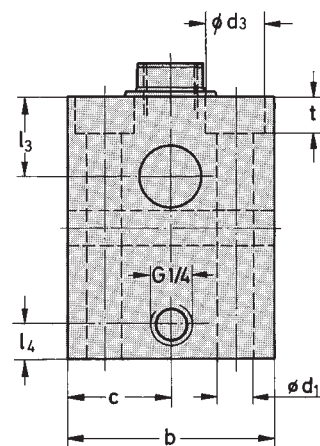
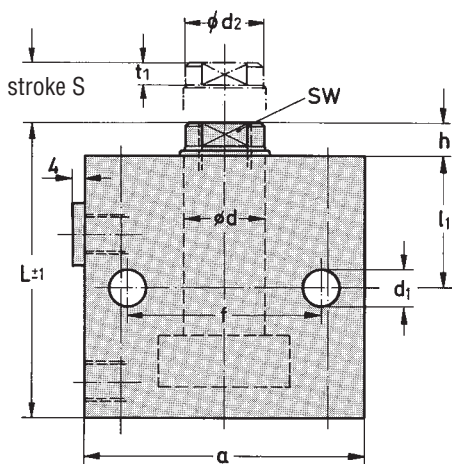
Model no.	Clamping force		Seal kit	Piston Ø [mm]	Stroke* S max. [mm]	Piston surface [cm²]	Oil consumption/ stroke [cm³]	Spring retracting force min. [daN]	Connection G	Weight ~ [kg]
	at 100 bar [daN]	at 500 bar [daN]								
722E16202-1	193	965	720V16-0003	16	20	2,01	4,02	5,0	G1/4	1,0
722E25202-1	457	2285	720V25-0005	25	20	4,91	9,82	10,4	G1/4	2,0
722E32202-1	767	3835	720V32-0005	32	20	8,04	16,08	20,0	G1/4	3,0
722E40202-1	1195	5975	720V40-0005	40	20	12,56	25,12	27,0	G1/4	3,7
722E50202-1	1889	9445	720V50-0004	50	20	19,64	39,27	46,0	G1/4	5,7

* Other strokes on request

Application examples



for further mounting options see p. 23.12



Model no.	a	b	c	ϕd	ϕd_1	ϕd_2	ϕd_3	e	f	g	h	L	l1	l3	l4	M x depth	SW	t	t1
722E16202-1	60	35	17,5	10	6,5	9	11	40	40	22	6	111	44	30,5	11	M 6x15	8	6,8	4,5
722E25202-1	65	45	22,5	16	8,5	15	13,5	50	50	30	7	114	46	32	11	M10x15	13	9	5,5
722E32202-1	75	55	27,5	20	10,5	19	18	55	55	35	10	122	50	34	11	M12x18	17	11	7
722E40202-1	85	63	31,5	25	10,5	24	18	63	63	40	10	123	49	33	11	M16x25	21	11	7
722E50202-1	100	75	37,5	32	13	31	20	76	76	45	10	135	54	38	13	M20x30	27	13	8

Hydraulic block cylinder, double action

Operating pressure **min. 100 bar**
 max. 500 bar

Hydraulic double acting block cylinders are particularly suited for applications requiring frequent cycles and rapid stroke speeds. The block design allows a wide range of applications such as clamping, pressing, aligning and punching.

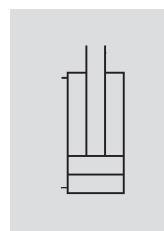
The mounting boreholes are a further advantage which allow quick and easy mounting in the horizontal or vertical position.

Technical characteristics

- Lateral hydraulic connections
- Glide ring seal with high wear resistance
- No stick-slip effect
- Double piston rod seal
- Hardened piston rod
- An extended piston rod guide assures high stability when transversal forces occur on the piston.
- Piston rod with internal thread
- 2 models with strokes up to 100 mm available



Symbol



CUSTOMER DESIGNED MODELS

If you need a special cylinder for your application – customer designed models are available.

PLEASE LET US KNOW!

Recommended accessories (separate order)

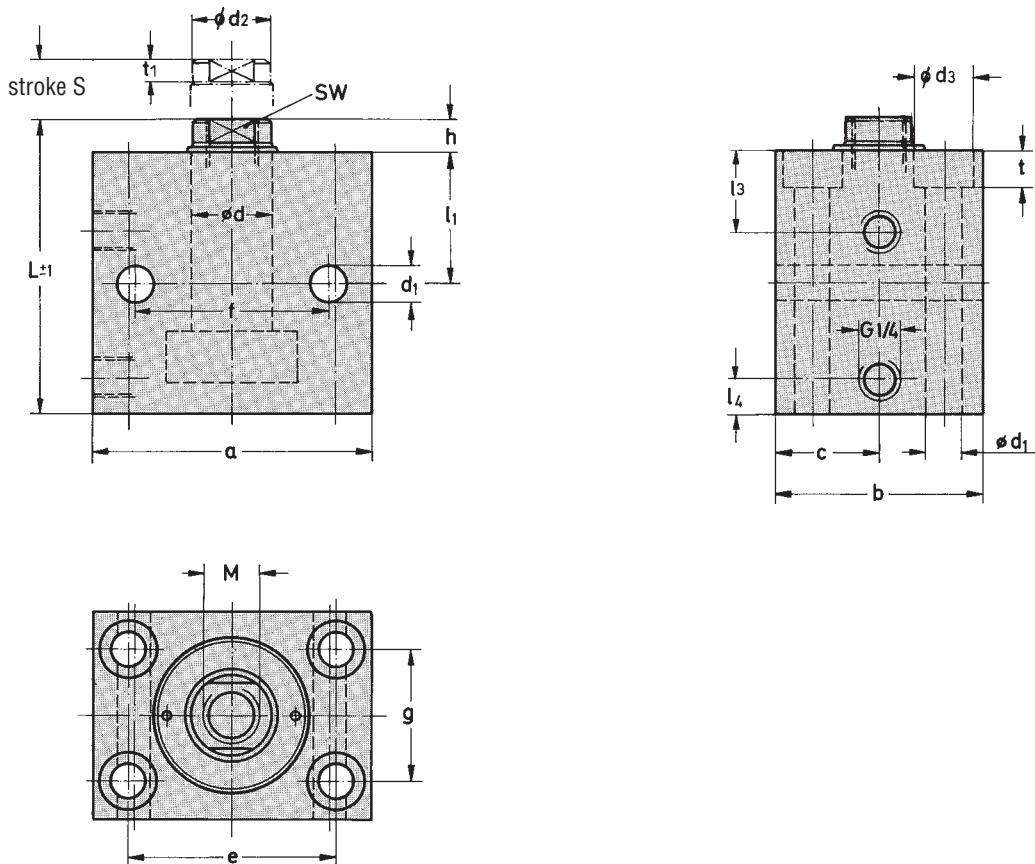
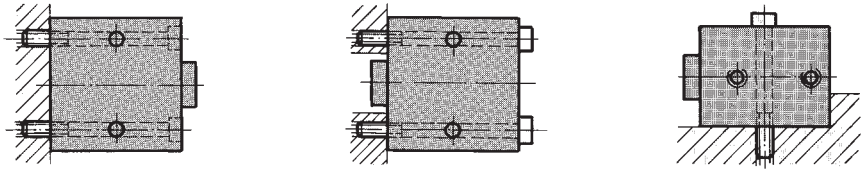
2 straight screw connectors D8S-R1/4

Model no.	Clamping force at 100 bar		Seal kit	Piston Ø [mm]	Stroke* S max. [mm]	Piston surface		Oil consumption/ stroke		Connection G 2x	Weight ~ [kg]
	forward stroke [daN]	back stroke [daN]				forward stroke [cm²]	back stroke [cm²]	forward stroke [cm³]	back stroke [cm³]		
722D16162-1	197	120	720V16-0002	16	16	2,01	1,23	3,20	1,95	G1/4	0,9
722D16502-1	197	120	720V16-0002	16	50	2,01	1,23	10,05	6,15	G1/4	1,3
722D25202-1	480	284	720V25-0002	25	20	4,91	2,90	9,82	5,80	G1/4	1,4
722D32252-1	788	480	720V32-0002	32	25	8,04	4,90	20,10	12,25	G1/4	2,0
722D32502-1	788	480	720V32-0002	32	50	8,04	4,90	40,20	24,50	G1/4	3,2
722D40252-1	1232	751	720V40-0002	40	25	12,56	7,66	31,40	19,15	G1/4	2,8
722D40992-1	1232	751	720V40-0002	40	100	12,56	7,66	125,70	76,60	G1/4	5,5
722D50252-1	1925	1136	720V50-0001	50	25	19,64	11,59	49,10	29,00	G1/4	5,7
722D50502-1	1925	1136	720V50-0001	50	50	19,64	11,59	98,20	58,00	G1/4	7,0
722D50992-1	1925	1136	720V50-0001	50	100	19,64	11,59	196,40	116,00	G1/4	13,0
722D63252-1	3000	1800	720V63-0002	63	25	31,2	18,6	77,9	46,5	G1/4	8,0
722D63502-1	3000	1800	720V63-0002	63	50	31,2	18,6	155,9	93,0	G1/4	9,4
722D63802-1	3000	1800	720V63-0002	63	80	31,2	18,6	249,4	148,9	G1/4	14,0

* Other strokes on request

Mounting options

application example
see p. 23.10



Model no.	a	b	c	Ød	Ød1	Ød2	Ød3	e	f	g	h	L	l1	l3	l4	M x depth	SW	t	t1
722D16162-1	60	35	17,5	10	6,5	9	11	40	40	22	6	76	44	30,5	11	M6x15	8	6,8	4,5
722D16502-1	60	35	17,5	10	6,5	9	11	40	40	22	6	111	44	30,5	11	M6x15	8	6,8	4,5
722D25202-1	65	45	22,5	16	8,5	15	13,5	50	50	30	7	84	46	32	11	M10x15	13	9	5,5
722D32252-1	75	55	27,5	20	10,5	19	18	55	55	35	10	97	50	34	11	M12x18	17	11	7
722D32502-1	75	55	27,5	20	10,5	19	18	55	55	35	10	122	50	34	11	M12x18	17	11	7
722D40252-1	85	63	31,5	25	10,5	24	18	63	63	40	10	98	49	33	11	M16x25	21	11	7
722D40992-1	85	63	31,5	25	10,5	24	18	63	63	40	10	187	49	33	11	M16x25	21	20	7
722D50252-1	100	75	37,5	32	13	31	20	76	76	45	10	110	54	38	13	M20x30	27	13	8
722D50502-1	100	75	37,5	32	13	31	20	76	76	45	10	135	54	38	13	M20x30	27	13	8
722D50992-1	100	75	37,5	32	13	31	20	76	76	45	10	199	56	38	13	M20x30	27	30	8

Hydraulic hollow piston cylinder, single action

Operating pressure max. 350 bar

These hydraulic cylinder are single acting with spring retraction. A typical application for hydraulic hollow piston cylinders is when pulling and/or pushing forces are needed for clamping (see application examples p. 23.14 and p. 23.16).

The piston inserts which can be mounted in the thread on the top end of the piston are used to secure threaded bolts or screws. The piston inserts are available with the internal thread (type A) or with the through-hole (type B).

Technical characteristics

- Piston with through-hole (different piston inserts available)
- Piston nitrogen hardened
- Spring retraction
- 2 cylinder types available with or without external thread
- Fastening threads at the base
- Lateral hydraulic connection

CUSTOMER DESIGNED MODELS

If you need a special cylinder for your application – customer designed models are available.

PLEASE LET US KNOW!

Important note

The operating pressure should not exceed 100 bar if the piston is actuated without a counter force.

Recommended accessories (separate order)

- 1 straight screw connectors D8S-R1/8
- 1 straight screw connectors D8S-R1/4
- Piston inserts (see table S. 23.14)

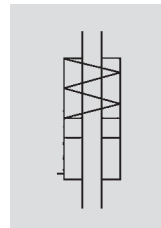


Model **70550-D2** with piston insert type B



Model **70550-DG** with piston insert type B

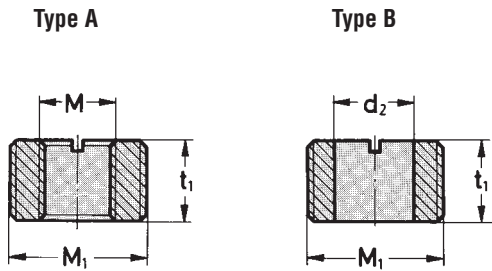
Symbol



Model no.	Clamping force at 100 bar [daN]	Seal kit	Stroke S* max. [mm]	Piston surface [cm ²]	Oil consumption/ stroke [cm ³ /Hub]	Spring retracting force min [daN]	Connection G 2X	Weight ~ [kg]
70537-DX11	800	70537-D1-00	9	8,8	7,9	34	G1/8	1,25
70537-D1	840	70537-D1-00	9	8,8	7,9	12,5	G1/8	1,25
70537-DG	840	70537-D1-00	9	8,8	7,9	12,5	G1/8	1,25
70550-D2	1570	70550-D2-00	12,5	16,4	20,5	18,5	G1/4	2
70550-DG	1570	70550-D2-00	12,5	16,4	20,5	18,5	G1/4	2
70562-D2	2385	70562-D1-00	15,5	24,8	38,4	32	G1/4	2,8
70562-DG	2385	70562-D1-00	15,5	24,8	38,4	32	G1/4	2,8

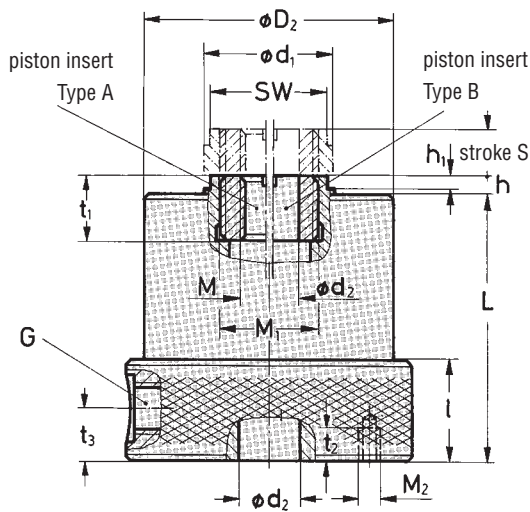
* Other strokes on request

Special accessories (separate order)

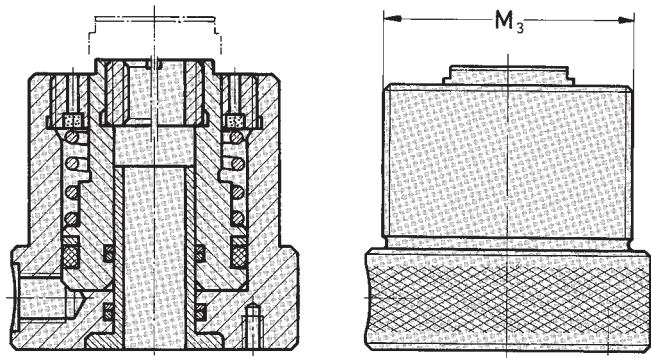


Piston inserts

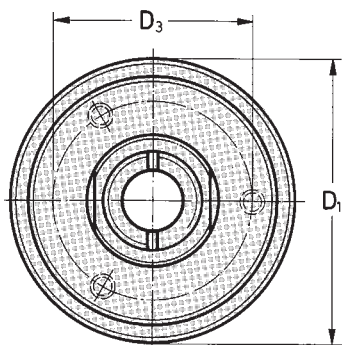
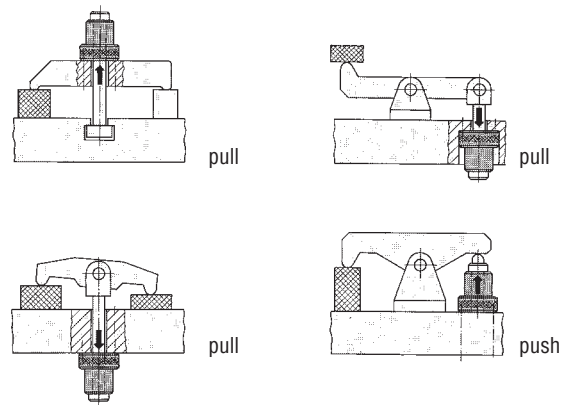
Type A order no.	Type B order no.	Ød2	M	M1	t1	To fit with hollow piston cylinder
705383-D	705384-D	12,3	M12	M20x1,5	11,5	70537-DX11 70537-D1 70537-DG
705511-D	705513-D	17	M16	M27x1,5	17,5	70550-D2 70550-DG
705633-D	705634-D	21	M20	M36x1,5	21	70562-D2



models **70537-DG** and
70550-DG with external thread



application examples



Model no.	Ød1	Ød2	ØD1	ØD2/M3	ØD3	h	h1	l	L	M	M1	M2	Con- nection G	SW	t1	t2	t3
70537-DX11	26	12,3	65	55	46	5	4,5	22	64,5	M12	M20x1,5	M5	G1/8	22	11,5	8	11
70537-D1	28	12,3	65	55	46	5	4,5	25	60	M12	M20x1,5	M5	G1/8	24	11,5	8	12
70537-DG	28	12,3	65	M55x1,5	46	5	4,5	25	60	M12	M20x1,5	M5	G1/8	24	11,5	8	12
70550-D2	36	17	79	68	54	5	4,5	28	75	M16	M27x1,5	M6	G1/4	32	17,5	9	14
70550-DG	36	17	79	M68x1,5	54	5	4,5	28	75	M16	M27x1,5	M6	G1/4	32	17,5	9	14
70562-D2	48	21	93	80	60	5	4,5	32	92	M20	M36x1,5	M6	G1/4	41	21	10	16

Hydraulic hollow piston cylinder, double action

Operating pressure max. 350 bar

Hydraulic hollow piston cylinders can solve many clamping problems because they can also be used as pulling cylinders due to the hollow piston combined with a tie rod (see application examples p. 23.14 and p. 23.16).

The double action principle allows short stroke times and high retraction forces, i.e. clamping forces in the reverse stroke direction.

Technical characteristics

- Piston with through-hole and with internal thread
- Piston hardened by inductive process
- 2 fastening threads at the base
- Lateral hydraulic connections

CUSTOMER DESIGNED MODELS

If you need a special cylinder for your application – customer designed models are available.

PLEASE LET US KNOW!

Important note

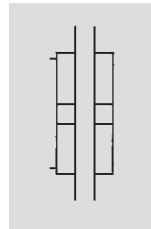
The operating pressure should not exceed 250 bar if the piston is actuated without a counter force.

Recommended accessories (separate order)

- 2 straight screw connectors D8S-R1/4



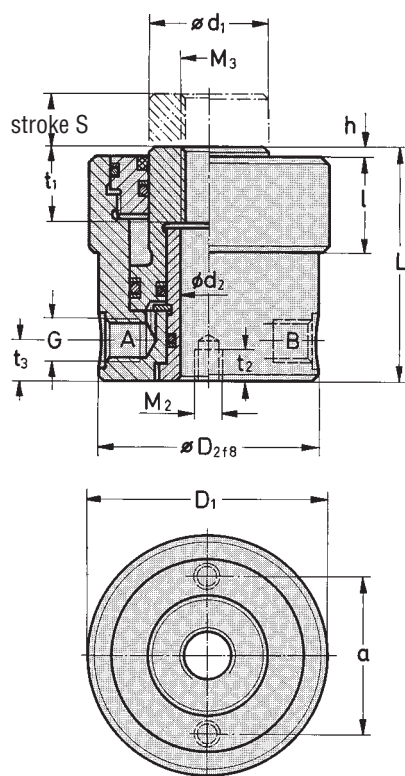
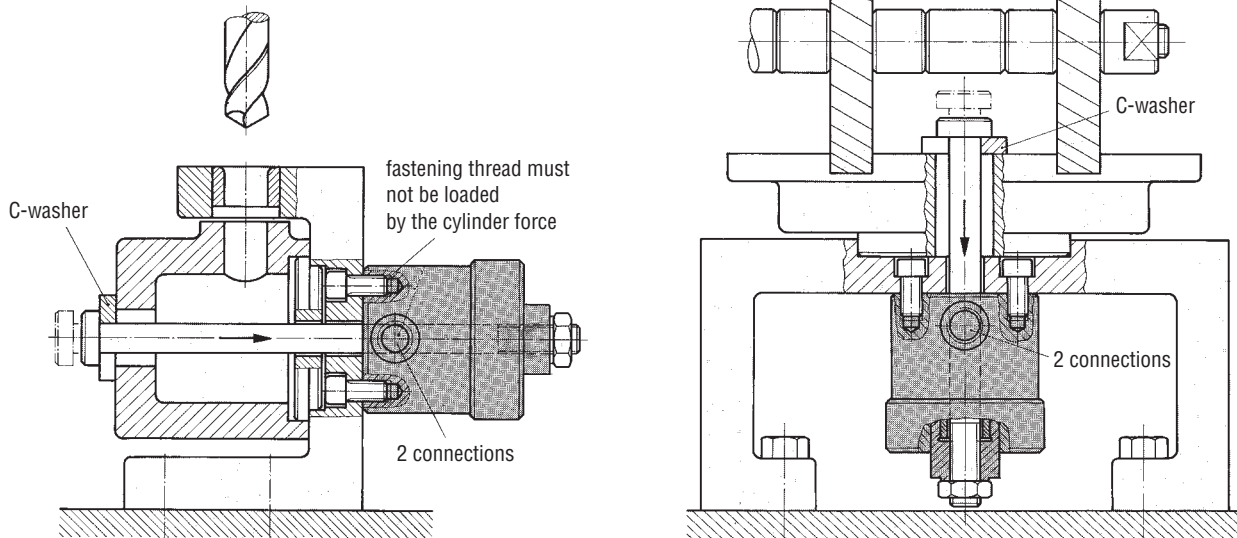
Symbol



Model no.	Clamping force at 100 bar		Seal kit	Stroke* S max. [mm]	Piston surface		Oil consumption/stroke		Connection G 2x	Weight ~ [kg]
	forward stroke [daN]	back stroke [daN]			forward stroke [cm ²]	back stroke [cm ²]	forward stroke [cm ³]	back stroke [cm ³]		
7411-1	860	590	7411-1-00	10	8,8	6,0	8,8	6,0	G1/4	0,9
7412-1	1290	830	7412-1-00	15	13,2	8,4	21,1	13,4	G1/4	1,5
7413-1	1808	1270	7413-1-00	24	18,4	15,0	44,1	36,0	G1/4	2,0
7414-1	2616	2000	7414-1-00	24	26,7	20,4	64,1	49,0	G1/4	2,6

* Other strokes on request

Application examples



A = forward stroke
B = backstroke

Model no.	a	Ød1	Ød2	D1	ØD2	h	l	L	M2	M3	t1	t2	t3
7411-1	40	26	12,3	60	56	1	25	66	M8	M12X1,5	18	12	12
7412-1	48	35	17	72	66	1	33	72	M8	M16x1,5	18	13	12
7413-1	56	40	21	80	76	1	29	80	M10	M20X1,5	18	13	12
7414-1	60	45	25	90	84	1	29	80	M10	M24x1,5	18	13	12

Hydraulic hollow piston block style cylinder, single or double action

Operating pressure max. 350 bar

Hydraulic hollow piston cylinders can be used in many ways to solve clamping problems because their drilled-through piston supports both pushing and pulling actions. Due to their block-type cylinder body they can be easily installed horizontally or vertically.

Technical characteristics

- Piston inserts can be screwed into the thread in the upper end of the hollow piston to attach threaded bolts or screws to single-action cylinders
- Pistons of double-action cylinders have a hole down their length and an inside thread
- Standard spring-actuated retraction mechanism of single-action cylinder model 723E38092-1 has a reinforced retaining spring
- Lateral hydraulic connectors

CUSTOMER DESIGNED MODELS

If you need a special cylinder for your application – customer designed models are available.

PLEASE LET US KNOW!

Important note

The operating pressure should not exceed 100 bar (for the single-acting cylinders) or 250 bar (for the double acting cylinders) if the piston is actuated without a counter force.

Recommended accessories (separate order)

- 1 or. 2 x straight screw connectors D8S-R1/8
- 1 or. 2 x straight screw connectors D8S-R1/4
- Piston inserts (see table S. 23.18)

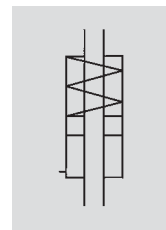


Fig. showing the single-action hollow piston cylinder

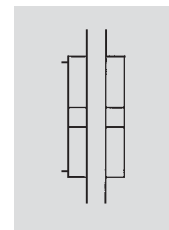


Fig. showing the double-action hollow piston cylinder

Symbol



single-action



double-action

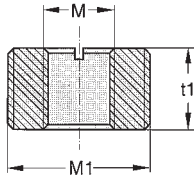
Modell no.	Clamping force at 100 bar		Sealkit	Stroke* S max. [mm]	Piston surface		Oil consumption/ stroke		Spring retraction force min. [daN]	Connection G	Weight ~ [kg]
	forward stroke [daN]	back stroke [daN]			forward stroke [cm²]	back stroke [cm²]	forward stroke [cm³]	back stroke [cm³]			
723E38092-1	800	–	70537-D1-00	9	8,8	–	7,9	–	34	G1/8	1,5
723E51122-1	1570	–	70550-D2-00	12,5	16,4	–	20,5	–	18,5	G1/4	2,5
723E63152-1	2385	–	70562-D1-00	15,5	24,8	–	28,4	–	32	G1/4	3,3
double action										2x	
723D38102-1	860	590	7411-1-00	10	8,8	6,0	8,8	6,0	–	G1/4	1,3
723D48152-1	1290	830	7412-1-00	15	13,2	8,4	21,1	13,4	–	G1/4	1,8
723D57242-1	1808	1270	7413-1-00	24	18,4	15,0	44,1	36,0	–	G1/4	2,5
723D68242-1	2616	2000	7414-1-00	24	26,7	20,4	64,1	49,0	–	G1/4	3,1

* Other strokes on request

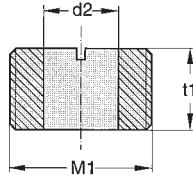
Hydraulic hollow piston block style cylinder, single or double action

Special accessories (order separately)

Type A



Type B

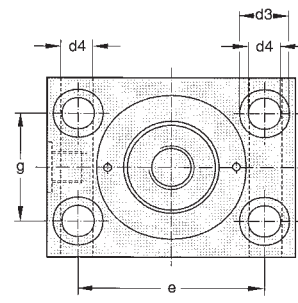
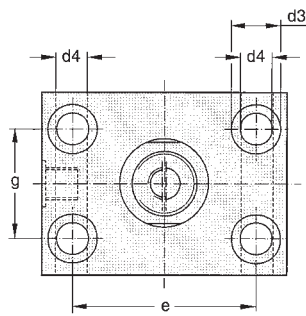
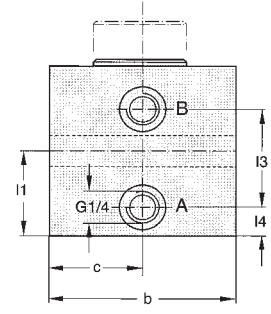
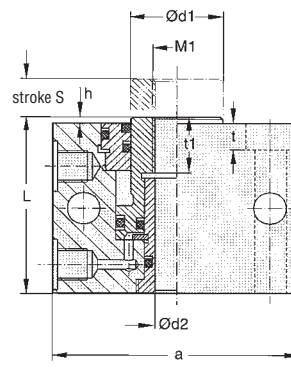
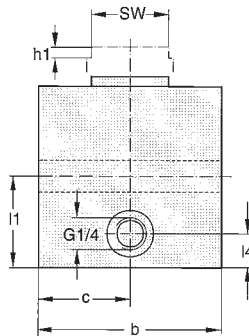
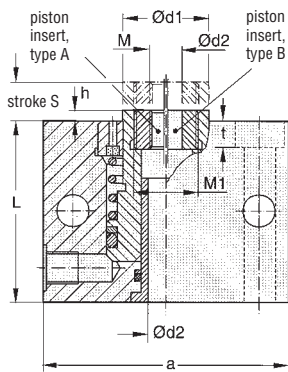


Piston inserts

Type A order no.	Type B order no.	Ød2	M	M1	t1	For hollow piston cylinder
705383-D	705384-D	12,3	M12	M20x1,5	11,5	723E38092-1
705511-D	705513-D	17	M16	M27x1,5	17,5	723E51122-1
705633-D	705634-D	21	M20	M36x1,5	21	723E63152-1

Single-action hydraulic hollow piston cylinder 723E...

Double-action hydraulic hollow piston cylinder 723D...



Model no.	a	b	c	Ød1	Ød2	Ød3	Ød4	e	g	h	h1	L	l1	l3	l4	M	M1	SW	t	t1
single-action																				
723E38092-1	75	55	27,5	28	12,3	18	10,5	55	35	5	4,5	69,5	32,3	-	11	M12	M20x1,5	24	11	11,5
723E51122-1	100	75	37,5	36	17	20	13	76	45	5	4,5	80	37,5	-	14	M16	M27x1,5	32	13	17,5
723E63152-1	110	85	42,5	48	21	20	13	186	55	5	4,5	97	46	-	16	M20	M36x1,5	41	13	21
double-action																				
723D38102-1	90	65	32,5	26	12,3	20	13	65	40	1	-	66	32,5	37	12	-	M12x1,5	-	13	18
723D48152-1	100	75	37,5	35	17	20	13	76	45	1	-	72	35,5	41	12	-	M16x1,5	-	13	18
723D57242-1	110	85	42,5	40	21	20	13	86	55	1	-	80	39,5	50	12	-	M20x1,5	-	13	18
723D68242-1	110	85	42,5	45	25	20	13	86	55	1	-	80	39,5	50	12	-	M24x1,5	-	13	18