

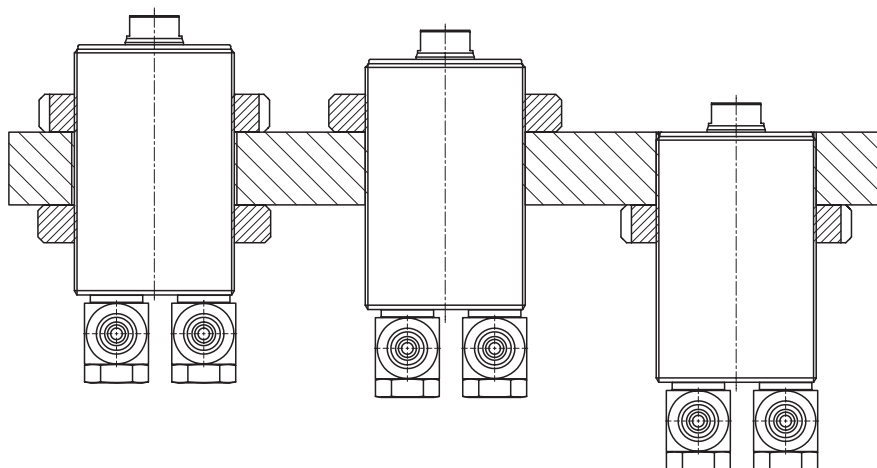


Threaded-Body Universal Cylinder

single and double acting, max. operating pressure 500 bar



Installation possibilities



Description

The threaded-body universal cylinders are delivered with the same piston diameters and strokes as the well-proven block cylinders. Hydraulic connection is exclusively effected at the cylinder bottom by hydraulic tubes or hoses.

Sealing of the case-hardened piston rod is made by a tandem sealing with minimum leakage and a wiper.

Application

The threaded-body universal cylinders can be used as clamping cylinders for workpiece clamping as well as for general motion tasks.

For temperatures exceeding 100 °C a version with VITON® seals is available. Fixing is made in cross holes with 2 lock nuts or in threaded holes with 1 lock nut. The lock nuts allow exact positioning of the cylinder in axial direction.

Important notes

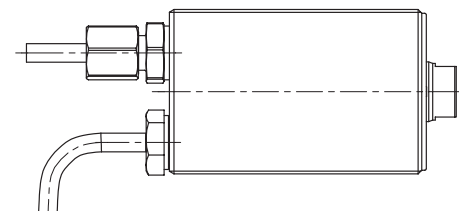
Operating conditions, tolerances and other data see data sheet A 0.100.

Advantages

- 6 piston diameters from 16 up to 63 mm
- 3 different strokes per size
- Sealing with very little leakage
- Alternatively single acting with spring return or double acting
- Connecting thread at the cylinder bottom
- Axial regulation due to external thread
- Lock nuts as per DIN 1804 can be used
- Space-saving fixing in fixture walls
- Swarf-protected tubing is possible
- Piston rod with internal thread for fixing of different contact bolts

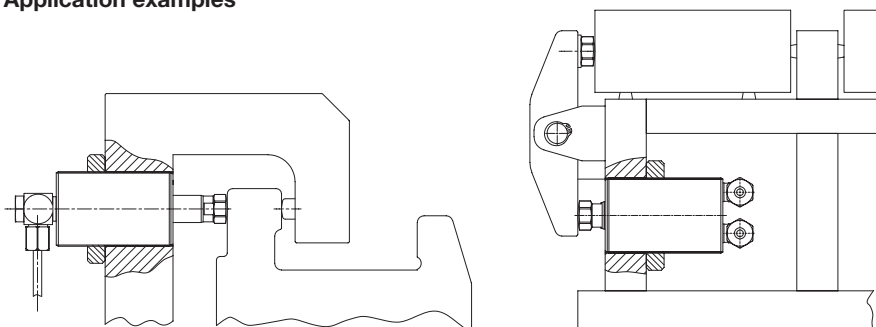
Bleeding of the spring area for single-acting versions

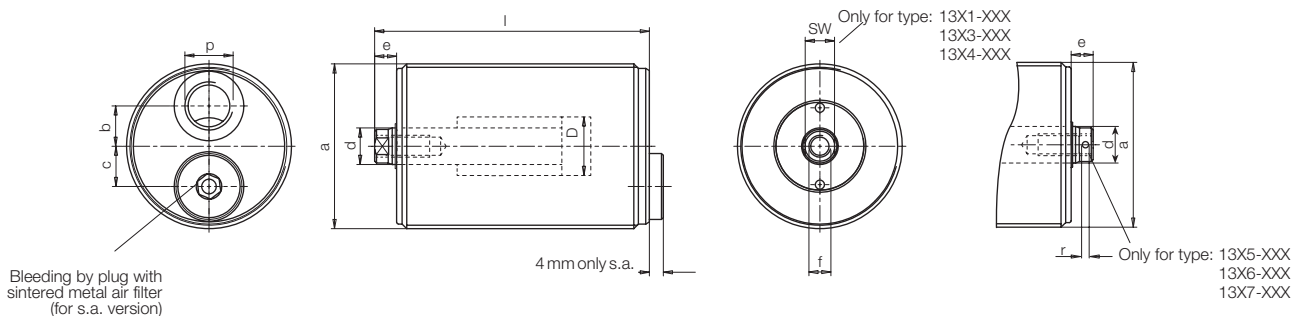
If there is a possibility that aggressive cutting lubricants and coolants penetrate through the sintered metal air filter into the cylinder's interior, a vent hose has to be connected and be placed in a protected position, see data sheet A 0.110.



For this purpose the sintered metal air filter has to be exchanged by an insertion nipple fitting, see data sheet J 7.400, or a corresponding male connector, see data sheet F 9.300.

Application examples





Piston Ø D	[mm]	16	16	25	32	40	50	63
Rod Ø d	[mm]	10	10	16	20	25	32	40
Force to push at 100 bar	[kN]	2	2	4.9	8	12.6	19.5	31.2
Force to push at 500 bar	[kN]	10	10	24.5	40.2	62.8	98.5	156
Force to pull at 100 bar	[kN]	1.2	1.2	2.9	4.9	7.7	11.6	18.6
Force to pull at 500 bar	[kN]	6.1	6.1	14.5	24.5	38.3	57.9	93
Spring return force, min.	[N]	50	50	140	195	270	410	430
Oil volume/ Stroke to extend	[cm ³]	2.01	2.01	4.91	8.05	12.56	19.63	31.17
10 mm stroke Stroke to retract	[cm ³]	1.2	1.2	2.9	4.9	7.7	11.6	18.6
a	[mm]	M40x1.5	M45x1.5	M48x1.5	M55x1.5	M65x1.5	M75x1.5	M90x2
b	[mm]	11	11	13.5	13	16.5	21	28
c	[mm]	11	11	13.5	17	21.5	27	33.5
f	[mm]	M6x12	M6x12	M10x15	M12x15	M16x25	M20x30	M27x40
e	[mm]	6(7)*	6(7)*	7	10	10	10	14
p		G1/8	G1/4	G1/4	G1/4	G1/4	G1/4	G1/4
r	[mm]					4	4	4
SW	[mm]	8	8	13	17			

Single acting with spring return

Stroke ±1	[mm]	8	8	8	10	10	12	12
Total length l ±1	[mm]	72	75	84	96	99	109	122
Weight	[kg]	0.78	0.67	0.88	1.38	1.93	2.87	4.51
Part-no.		1311-205	1311-005	1313-005	1314-105	1315-005	1316-005	1317-005
Stroke ±1	[mm]	20	20	20	20	20	20	25
Total length l ±1	[mm]	107	110	114	121	124	134	155
Weight	[kg]	1.07	1.13	1.28	1.75	2.52	3.67	5.98
Part-no.		1311-225	1311-025	1313-025	1314-125	1315-025	1316-025	1317-035

Double acting

Stroke ±1	[mm]	16	16	20	25	25	25	30
Total length l ±1	[mm]	72	75	84	96	99	109	122
Weight	[kg]	0.77	0.66	0.85	1.32	1.84	2.75	4.25
Part-no.		1341-305	1341-105	1343-105	1344-105	1345-105	1346-105	1347-105
Stroke ±1	[mm]	50	50	50	50	50	50	63
Total length l ±1	[mm]	107	110	114	121	124	134	155
Weight	[kg]	1.04	1.10	1.21	1.63	2.34	3.39	5.42
Part-no.		1341-365	1341-165	1343-165	1344-165	1345-165	1346-165	1347-175
Stroke ±1	[mm]	100	100	100	100	100	100	100
Total length l ±1	[mm]	160	163	164	171	174	184	192
Weight	[kg]	1.59	1.68	1.81	2.38	3.35	4.67	6.73
Part-no.		1341-395	1341-195	1343-195	1344-195	1345-195	1346-195	1347-195

Accessories

Part-no. lock nut DIN 1804	3300-699	3300-326	3300-324	3300-992	3301-661	3300-673	3300-412
-----------------------------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------	-----------------

* only for 1311-025, -225 and 1341-165, -195, -365, -395

Part-nos. for versions with VITON® seals for temperatures exceeding 100 °C up to 150 °C 13XX-XX6

Contact bolts see data sheet G 3.800.

