

FOR EVERY APPLICATION

In order to be able to satisfy every application, RÖHM has hydraulically as well as pneumatically actuated cylinders with through-hole in their product range.



hydraulic operated



pneumatically operated

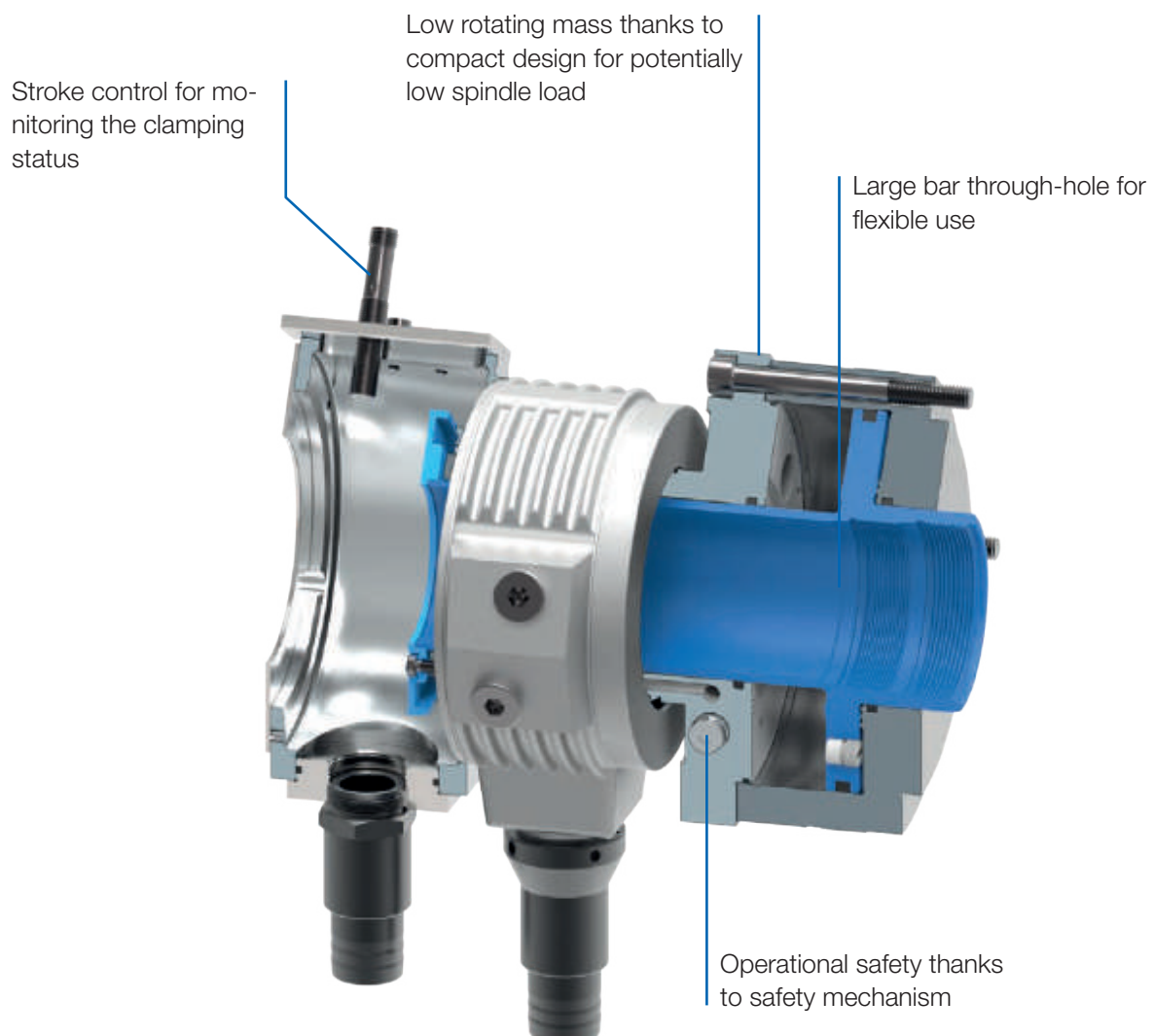


CYLINDERS WITH THROUGH-HOLE

RÖHM clamping cylinders with through-hole are optimally suited for machining different bar material thanks to their large through-hole. The short design and low weight of the clamping cylinders protect the machine spindle and the safety device ensures operational safety, even if the power fails during spindle rotation.

ADVANTAGES AT A GLANCE

- ⊕ Safe actuation of power chucks and collet chucks for hollow clamping
- ⊕ Versatile applications thanks to oil and air actuator media
- ⊕ Flexible use thanks to large strokes and forces



Cylinders with through-hole



Oil operated cylinders with through-hole

SZS



APPLICATION

Hydraulic actuation of power chucks/collet chucks with through-hole.

TYPE

Hollow clamping cylinders for actuation pressures of 8-45 bar.

CUSTOMER BENEFITS

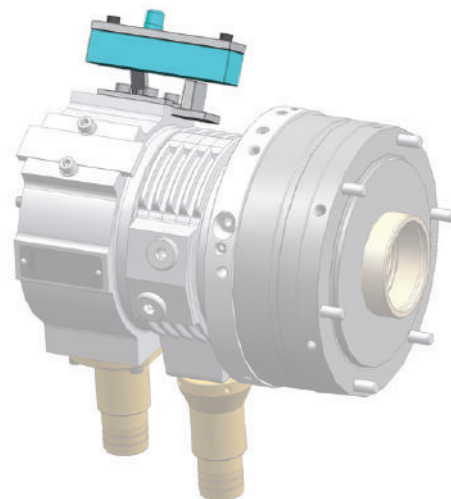
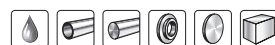
- ⌚ Short design and low weight ensure small machine spindle load and also allow high speeds
- ⌚ Thanks to the large through-hole, optimally suited for machining bar material
- ⌚ Operational safety thanks to safety mechanism, guaranteed even if there is a pressure drop during spindle rotation

TECHNICAL FEATURES

- Stroke control by means of inductive proximity system or linear path measuring system F90 (stroke control system not included in the scope of delivery)
- Overpressure safeguard
- Coolant collector
- Fastening from the rear with through bolts
- For its actuation, we recommend hydraulic oil H-LP 32, DIN 51525 (32 centistokes at 40° Celsius)
- Insert a filter unit (10 µm) between the pump and control valve
- Can also be actuated during rotation
- Hollow clamping cylinders can usually only be used for horizontal machining axes

Note:
ROHM clamping cylinders meet the testing requirements of the Employer's Liability Insurance Association thanks to their safety system and stroke check.

SZS = clamping, cylinder, with safety mechanism



Oil-operated actuating cylinders with through-hole

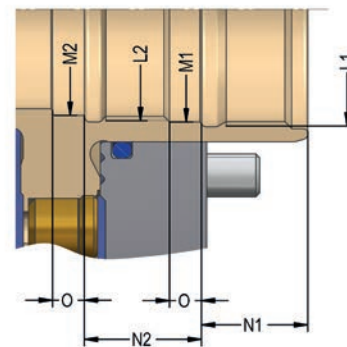
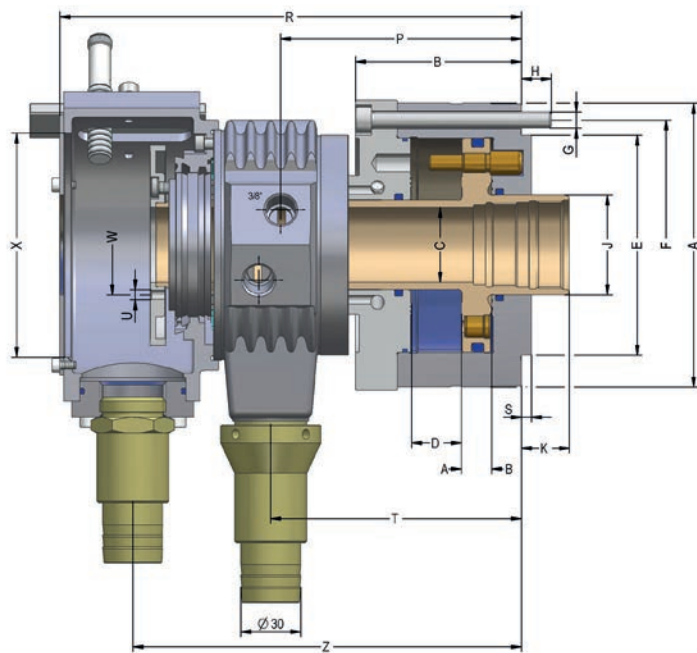
Standard:
Prepared for inductive proximity system

Optional stroke monitoring with F 90:
High resolution, minimal temperature drift, contactless, teachable, inductive effect principle



Oil operated cylinders with through-hole

SZS up to 45 bar, short design



C 15
Oil operated cylinders **SZS**, basic model up to 45 bar, short design for high speeds

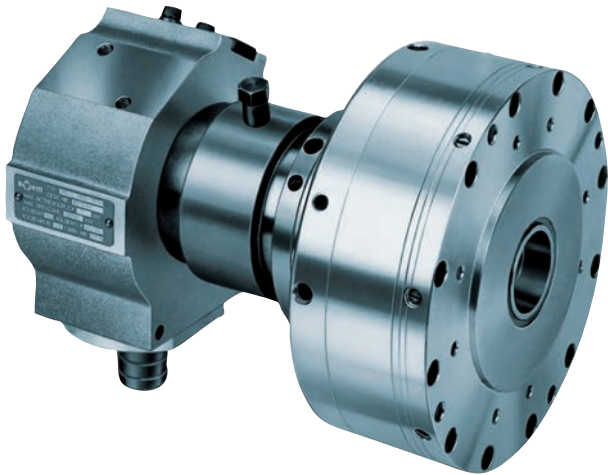
Item No.	432765	432766	432767	432768	432769 ▲	432770 ▲	435766 ▲	433217 ▲
Size	46/103	52/130	67/150	77/170	86/200	95/225	110/250	127/325
A mm	162	182	197	212	228	245	264	295
B mm	83	83	94	94	104	104	104	127
C mm	46,5	52,5	67,5	77	86,5	95,5	110,5	127,5
Stroke D mm	25	25	30	30	35	35	35	40
Eh6 mm	130	140	160	160	180	210	210	250
F mm	147	165	180	195	210	227	240	270
G	6xM8	6xM8	6xM10	6xM10	6xM10	6xM10	6xM10	6xM12
H mm	15	15	15	15	15	15	16	20
J mm	61	70	85	95	105	115	130	145
K max.	22	22	25	25	31	31	31	44
K min.	-3	-3	-5	-5	-4	-4	-4	4
L1	M55x2	M60x1,5	M75x2	M85x2	M95x2	M105x2	M120x2	M135x2
L2	M50x1,5	M55x2	M72x1,5	M80x2	M90x2	M100x2	M115x2	-
M1 mm	52,5	57,5	72,5	82	92	102,5	117,5	132
M2 mm	47	52,5	69	77	87	97	112	-
N1 mm	25	25	25	25	32	32	32	30
N2 mm	25	28	28	28	30	30	30	-
O mm	6	6	6	6	6	6	6	6
P mm	120,5	120,5	138,5	138,5	155	159	166,3	196
R mm	231	231	269	269	292	302	321	355
S mm	5	5	8	8	8	8	8	5
T mm	125,75	125,75	142,75	142,75	159,25	163,25	171,5	201,5
U	2xM6	2xM6	2xM6	2xM6	2xM6	2xM6	4xM6	2xM6
W mm	68	76	91	91	116	120	135	150
X mm	122	122	135	145	167	177	116	131
Z mm	195,5	195,5	225	226	249	259	275	307
Piston area A cm ²	109,8	142,4	164,5	184	212,6	243,5	267	337
Piston area B cm ²	103,5	131	152	170	197	226,2	247,4	325,7
Eff. draw bar pull (F=45 bar) kN	46	58	68	76	88	100	110	145
Max. admissible speed min ⁻¹	7000	6300	5500	5000	4500	4000	3500	3200
Oil leakage rate (30 bar 50° C - n max.) l/min	3	3,5	4	4,5	5	5	5	6
Moment of inertia J kgm ²	0,03	0,045	0,07	0,13	0,17	0,3	0,35	0,58
Weight approx. kg	16	18	22	30	35	38	48	66

Oil-operated cylinders with through-hole



Air-operated cylinders with through-hole

LHS-L



APPLICATION

Pneumatic actuation of power chucks/collet chucks with through-hole.

TYPE

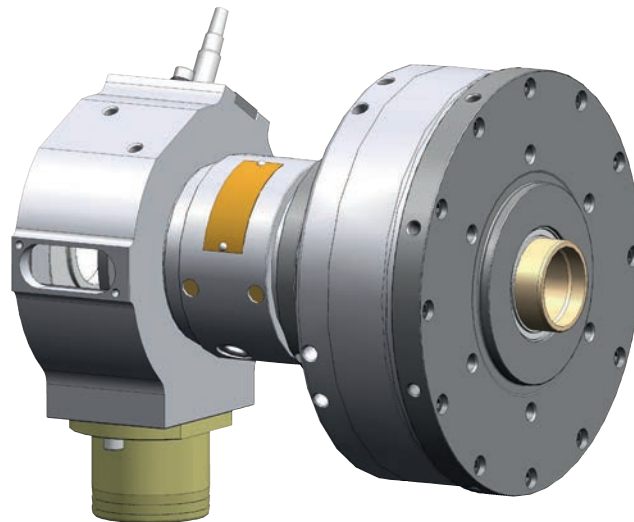
Hollow clamping cylinders for actuation pressures from 1.5-8 bar.

CUSTOMER BENEFITS

- ⊕ Short design and low weight ensure small machine spindle load and also allow high speeds
- ⊕ Thanks to the large through-hole, optimally suited for machining bar material
- ⊕ Operational safety thanks to safety mechanism, guaranteed even if there is a pressure drop during spindle rotation

TECHNICAL FEATURES

- Stroke control via inductive proximity switches (not included in the scope of delivery)
- Coolant collector
- Can also be actuated during rotation



Air-operated cylinders with through-hole

Accessories:

Connection for supply and drain hoses

Special accessories:

2 inductive proximity switches piece/item no. 381551 (opener)

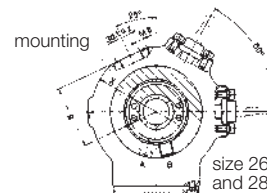
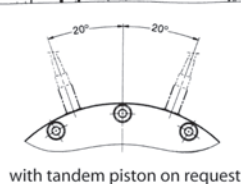
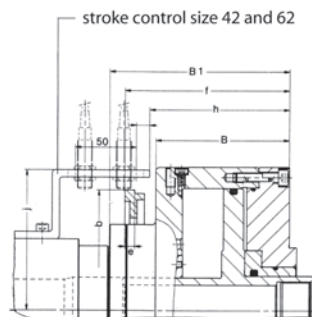
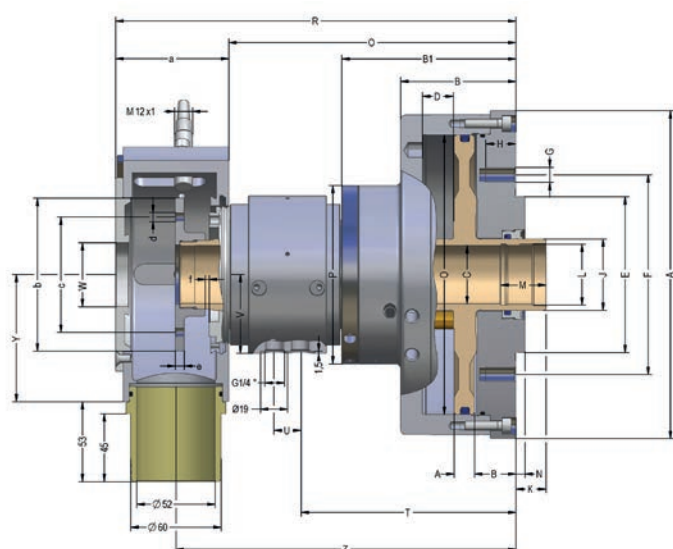
or 2 inductive proximity switches piece/item no. 202759 (closer)

With tandem piston on request.



Air-operated cylinders with through-hole

LHS-L



C 15
Air actuating cylinders with through-hole **LHS-L with safety valve**
The coolant collection shell (sizes 26 and 38) must be held centrally by a bracket on the machine

Item No.	417310 ▲	417311 ▲	417312 ▲
Size	26/190	38/251	42/289
A mm	187	215	235
B mm	76	78	109,7
B1 mm	110	110	147,5
C mm	26,2	38,2	42
Stroke D mm	20	20	32
E-0,01 mm	70	103	103
F mm	105	132	145
G	6 x M 8	6 x M 10	8 x M 8
H mm	15	20	20
J mm	38	50	57
K max.	20	20	20
K min.	0	0	-12
L	M 32 x 1,25	M 44 x 1,5	M 52 x 1,5
M mm	25	30	30
N mm	5	6	6
O mm	160	185	200
P mm	106	118	140
Q mm	197	198	263,7
R mm	275	273	337,7
S mm	210	211	283,5
T mm	141	140	188
U mm	23	23	28,5
V mm	46	52	60
W mm	42	42	51
X mm	130	151	151
Y mm	73,5	84	84
Z mm	233,5	233	297,7
a mm	78	75	74
b mm	77	101	197
c mm	61	76	-
d	4 x M 6	4 x M 6	-
e mm	7,5	7,5	8
f max.	22,5	22,5	135
f min.	2,5	2,5	167
g mm	62	72	-
h mm	-	-	114,7
j mm	-	-	115
Piston area A cm ²	189,7	249,1	288,6
Piston area B cm ²	190,9	251,4	291,3
Eff. draw bar pull (F=6 bar) kN	10,47	13,75	15,90
Max. admissible speed min ⁻¹	6500	6500	4000
Volume for full double stroke l	0,762	1	1,9
Moment of inertia J kgm ²	0,03	0,06	0,102
Weight approx. kg	11,8	16	25,5

When working with high and low pressure, the release of the safety valve is guaranteed for clamping pressure: unclamping pressure ≤ 2:1

▲ on request

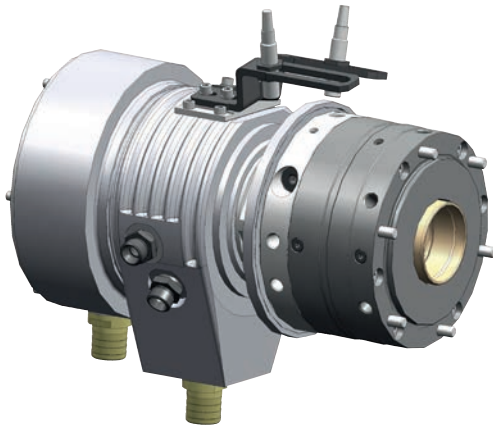
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Air operated cylinders with through-hole



Special solutions - on request



SZS (80 bar) Hollow clamping cylinder

APPLICATION

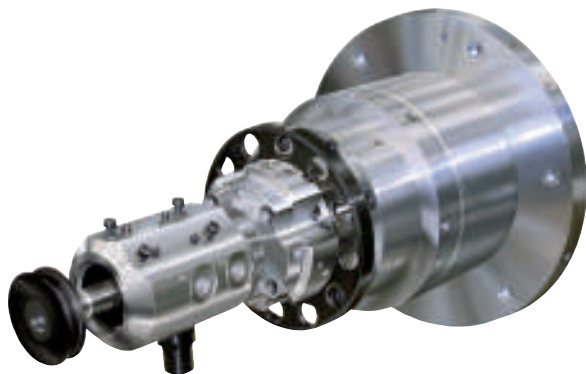
For the hydraulic actuation of power chucks/collet chucks with through-hole.

TYPE

Hollow clamping cylinders for actuation pressures up to 80 bar.

CUSTOMER BENEFITS

- ⌚ Stroke control outside of the coolant collection bowl
- ⌚ Operational safety thanks to safety valve, guaranteed even if there is a pressure drop during spindle rotation
- ⌚ Low mass moment of inertia and required installation space thanks to reduced external diameter
- ⌚ Flexible application: Low draw forces thanks to reduced piston surface, and nevertheless maximum draw forces thanks to high maximum actuation pressure



OVUSHH Double piston cylinder

APPLICATION

For hydraulic actuating of power chucks with additional functions (ejector, retractable center points, etc.).

TYPE

With 4-way oil supply.

CUSTOMER BENEFITS

- ⌚ Different strokes, piston surfaces and arbitrary safety requirements can be realized thanks to modular system
- ⌚ Feed-through of another medium (coolant, oil, air, etc.) through the cylinder axis by installing an additional rotary feed-through



Notes

Notes