



FOR EVERY APPLICATION

In order to be able to satisfy every application, RÖHM has hydraulically as well as pneumatically actuated cylinders without through-hole in their product range.



hydraulic operated



pneumatically operated



CYLINDER WITHOUT THROUGH-HOLE

RÖHM clamping cylinders without through-hole are optimally suited for actuating power chucks or special clamping devices for full or partial hollow clamping. Thanks to the possibility of a horizontal or vertical installation position, the clamping cylinders can be used flexibly and the safety mechanism guarantees operational safety, even if the power fails during spindle rotation.

ADVANTAGES AT A GLANCE

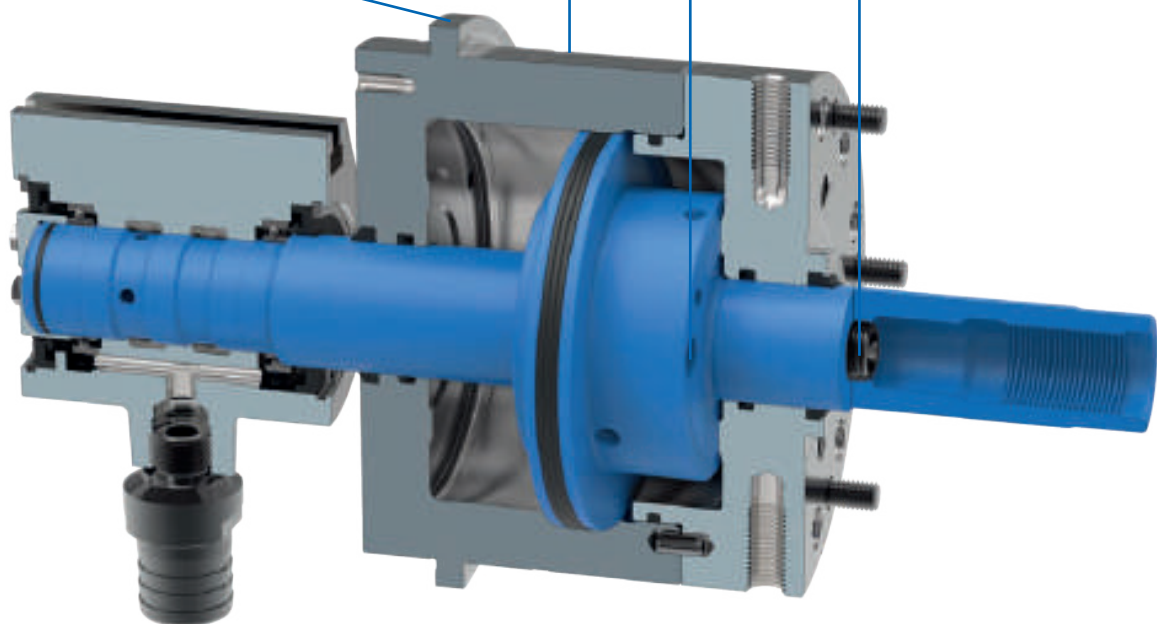
- ⊕ Safe actuation of power chucks or special clamping devices for full or partial hollow clamping
- ⊕ Versatile applications thanks to oil and air actuator media
- ⊕ Flexible use thanks to large strokes and forces

Stroke control for monitoring the clamping status

Low rotating mass thanks to compact design for potentially low spindle load

Safety mechanism to guarantee operational safety

Prepared for media feed-through via optional rotary feed-through (except for LVS)



Cylinder without through-hole



Oil-operated cylinders without through-hole

OVS

**APPLICATION**

Hydraulic actuation of power chucks (full or partial hollow clamping).

TYPE

Clamping cylinders without through-hole for actuation pressures from 8-80 bar.

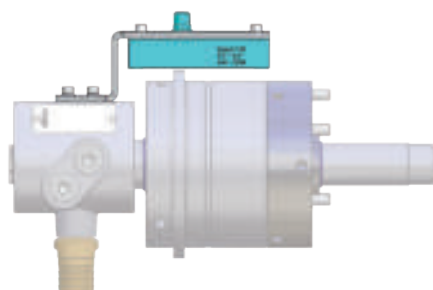
CUSTOMER BENEFITS

- ④ Compact design and low mass moment of inertia for low machine spindle load
- ④ Operational safety thanks to safety mechanism, guaranteed even if there is a pressure drop during spindle rotation
- ④ Flexible use thanks to possible horizontal or vertical installation position

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)
- Through-hole for media feed-through
- 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

OVS = oil-operated, without through-hole, with safety mechanism

**Stroke control with monitoring system F 90:**

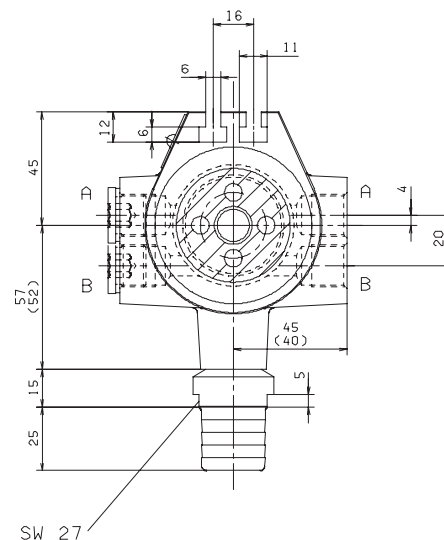
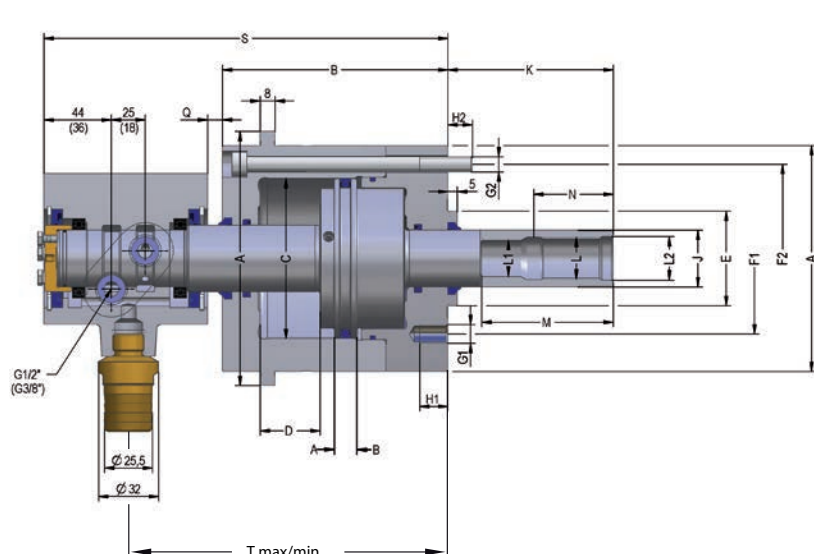
- High resolution and accuracy
- Minimal temperature drift
- Contactless
- Teaching mode
- Inductive principle of operation

With high and low pressure chucking the change-over of the safety valve is guaranteed when:
 chucking pressure : releasing pressure =< 5,5 : 1 (Size 85 - 130)
 chucking pressure : releasing pressure =< 3,8 : 1 (Size 150 - 200)



Oil-operated cylinders without through-hole

OVS



C 15
Oil-operated actuating cylinders without through-hole **OVS, basic model**, with **safety device**, up to **80 bar** - **Steel design** for high speed, fastening from the rear, central through-hole

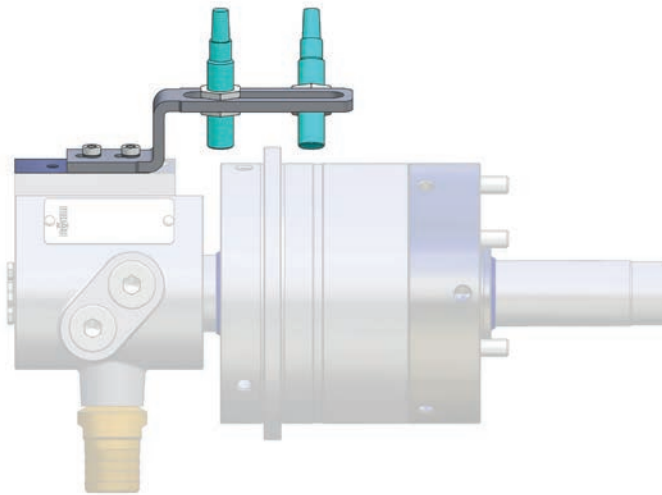
Item No.	438261	438262	438263	438264	438265
Size	85	105	130	150	200
Design	steel	steel	steel	steel	steel
A mm	120	140	165	193	245
A1 mm	135	155	180	208	260
B mm	120	120	120	147	164
C mm	85	105	130	150	200
Stroke D mm	32	32	32	45	50
Eh6 mm	50	50	80	95	125
F1 mm	80	80	105	145	170
F2 mm	100	120	145	170	220
G1	M10 (3x120°)	M10 (4x90°)	M12 (4x90°)	M16 (4x90°)	M16 (6x60°)
G2	M8 (6x60°)	M8 (6x60°)	M8 (8x45°)	M10 (8x45°)	M12 (8x45°)
H1 mm	15	15	18	24	29
H2 mm	13	13	13	14	19
J mm	30	32	42	50	70
K max.	88	88	82	98	108
K min.	56	56	50	53	58
L mm	M 22 x 1,5	M 22 x 1,5	M 30 x 2	M 36 x 2	M 48 x 2
L1 mm	19	19	26	30	42
L2 mm	23	23	32	38	50
M mm	70	70	88	105	125
Min. reach of draw bar N mm	43	43	65	78	90
Q max.	40	40	40	53	58
Q min.	8	8	8	8	8
S max.	252	247	247	307	329
S min.	220	215	215	262	279
T max.	202	202	202	250	272
T min.	170	170	170	205	222
Piston area A cm ²	47,1	77	116,8	160,8	298,2
Piston area B cm ²	49,7	78,6	118,9	157,1	275,7
Eff. draw bar pull (F=60 bar) kN	29,50	47	71,3	94	165,4
Max. admissible speed min ⁻¹	8000	8000	5000	5500	4500
Volume for full double stroke l	0,31	0,5	0,775	1,43	2,87
Moment of inertia J kgm ²	0,018	0,03	0,066	0,142	0,36
Weight approx. kg	10	12,7	17,7	31,4	49
Suitable connecting flange for Duoflow Rotating Unions	1022186	1022186	1022187	1022187	1022187

Oil-operated cylinders without through-hole



Oil-operated cylinders without through-hole

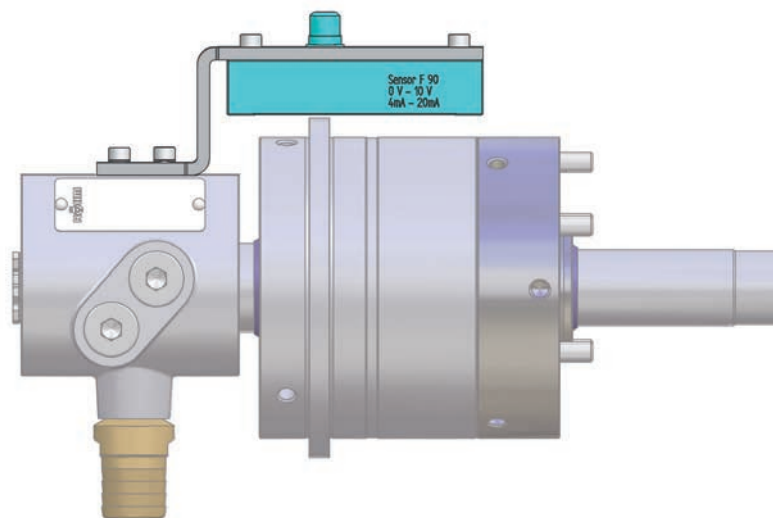
Stroke Monitors OVS



C 15
OVS-stroke monitoring by inductive proximity switches (Limit switch not included in the scope of delivery)

Item no.	Size
1159712	OVS 85
1159713	OVS 105
1159714	OVS 130
1159715	OVS 150
1159716	OVS 200

Order cylinder separately
External rotary feed-throughs fitting Deublin/Rotoflux



C 15
OVS-stroke monitoring linear, inductive F90 (F90 system included)

Item no.	Size
1159707	OVS 85
1159708	OVS 105
1159709	OVS 130
1159710	OVS 150
1159711	OVS 200

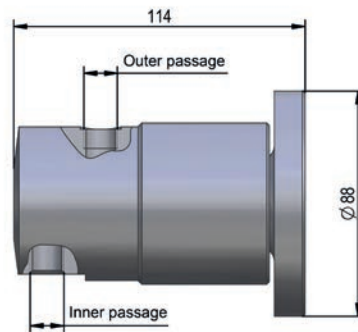
Order cylinder separately
External rotary feed-throughs fitting Deublin/Rotoflux
Linear stroke monitoring sensors with IO-Link on request

Oil-operated cylinders
without through-hole



Oil-operated cylinders without through-hole

Accessories



C 15

2-Through-hole rotating unions

Item no.	Inner passage			Outer passage		
	Connection	Media	Max. Pressure	Connection	Media	Max. Pressure
1118078	1/4	Oil	100	1/4	Oil	30
1118079	1/4	Oil	70	1/4	Air	10
1118080	1/4	Coolant	70	1/4	Air	10
1118081	3/8	Air	10	1/8	Air	10
1118082	1/4	Air	10	1/4	Oil	40
1118083	1/4	Air	10	1/4	Coolant	40

Optional: 1-Through-hole Rotating Union for OVS Size 85-105 Item No.: 10003958

Optional: 1-Through-hole Rotating Union for OVS Size 130-150 Item No.: 10003959

Optional: 1-Through-hole Rotating Union for OVS Size 200 Item No.: 611172

Connecting flange complete for 2-passage rotating union size 85-105 Item no.: 1022186

Connecting flange complete for 2-passage rotating union size 130-200 Item No.: 1022187



Air operated cylinders without through-hole

LVS



APPLICATION

Pneumatic actuation of power chucks or special clamping devices (full or partial hollow clamping).

TYPE

Clamping cylinders without through-hole for actuation pressure 2-10 bar.

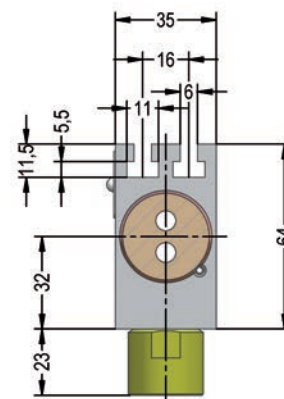
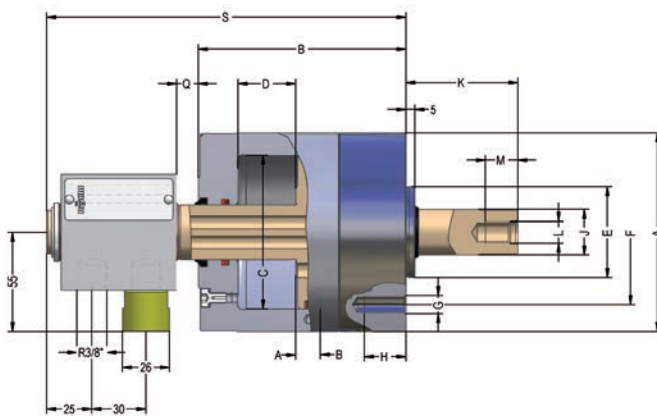
CUSTOMER BENEFITS

- ⊕ Operational safety thanks to standard safety mechanism, guaranteed even if there is a pressure drop during spindle rotation
- ⊕ Flexible use thanks to possible horizontal or vertical installation position

TECHNICAL FEATURES

- Stroke control by means of inductive proximity system or linear path measuring system F90, fastened on the machine side (stroke control system not included in the scope of delivery)
- The maximum permissible speed can be run in continuous operation (100% ED)
- Can also be actuated during rotation
- On request with central media feed-through

LVS = air-operated, without through-hole, with safety mechanism



C 15
LVS Air actuating cylinders without through-hole with safety mechanism and stroke control

Item No.	096553	096554	096555	096556	096557	096558	096560 ▲
Size	85	105	130	150	200	250	350
A mm	110	130	155	180	240	287	387
B mm	115	115	117	128	125	125	148
C mm	85	105	130	150	200	250	350
Stroke D mm	32	32	32	32	32	32	45
Eh6 mm	50	50	80	95	95	125	125
F mm	80	80	105	145	145	170	170
G	3 x M 10	3 x M 10	3x M 12	4 x M 16	4 x M 16	6 x M 16	6 x M 16
H mm	23	23	27	35	35	35	35
J mm	25	25	25	25	35	35	35
K max.	62	88	79	74	87	87	82
K min.	30	56	47	42	55	55	37
L	M 12	M 12	M 16	M 16	M 24	M 24	M 24
M mm	18	18	24	24	36	36	36
Q max.	44	44	44	44	44	44	57
Q min.	12	12	12	12	12	12	12
S max.	231	231	233	244	241	241	277
S min.	199	199	201	212	209	209	232
Piston area A cm ²	49,7	79,5	125,7	169,6	307,1	483,8	955
Piston area B cm ²	51,8	81,7	127,8	171,8	304,5	481,5	952,5
Eff. draw bar pull (F=6 bar) kN	3	4,80	7,50	10	18	28,50	56,50
Max. admissible speed min ⁻¹	5000	5000	5000	5000	4500	4000	3200
Air consumption for full double stroke at 6 bar NL	2,8	4,6	6,5	7,5	12,5	18	50
Moment of inertia J kgm ²	0,007	0,009	0,03	0,06	0,09	0,10	0,45
Weight approx. kg	5,3	6,5	9	12,5	19,5	23	32,5

Air operated cylinders without through-hole



Notes

Notes