

Rotary lever clamps enclosed with control

hydraulically, double-acting, pneumatic position control, positive air pressure, pmax 350 bar

250-30

Issue: 05/2025

Description:

The enclosed rotary lever clamp with pneumatic position control is particularly suitable for clamping fixtures where there is limited space for the installation of workholding elements and where a very large amount of chips is produced. The clamping lever is designed so that the chips are scraped off at the front and top by a metal wiper. There is also an internal soft wiper and a positive air pressure connection. The construction and compact design of the rotary lever clamps provide flexible solutions for a wide range of installation conditions.

The double-acting rotary lever clamps are used in clamping fixtures whose oil supply is made through drilled channels.

To swing down the clamping lever, the linear motion is used pro rata which clamps the workpiece. To unclamp, the clamping lever swings back to where the workpiece can be safely taken out.

Clamping levers are not included in scope of supply! You can order standard clamping levers from different materials and various lengths as accessories. The rotary lever clamp can also be assembled with special and self made clamping levers (see page 3). The clamping force depends on the length of the clamping lever.

The enclosed rotary lever clamps have the same mounting dimensions as the double-acting rotary lever clamps on data sheet 250-10/250-20 and are therefore interchangeable.

Operating conditions:

The clamping lever is coupled with the piston rod. On the double-acting rotary lever clamps, the clamping lever is unclamped by the pressure medium.

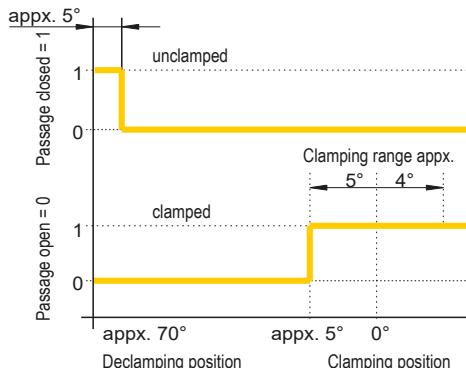
When installing the rotary lever clamps, the flange surface should be adjusted to the height of the workpiece. The clamping point should be in a horizontal position. Workpiece tolerances can be compensated in spite of the short clamping stroke.

Pneumatic position control:

The clamping levers are equipped with elastic sealing plugs on both sides.

There are two drilled channels in the rotary lever clamp, into which compressed air can be introduced into the clamping lever guide of the housing. The bore holes are arranged in a way that they are sealed in the clamping position or in the declamping position by the sealing plug of the clamping lever. This generates a pressure increase in the pneumatic line, which can be monitored by using standard pneumatic pressure switches in the respective position.

The pressure switch registers the pneumatic pressure rise and generates an electrical signal which is forwarded to the connected control unit.

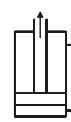


Installation note:

The rotary lever clamp is suitable for any mounting position.



Webcode: 025030



Connections:

Drilled channels

Advantages:

- Clamping without shear forces
- Pipelineless oil supply
- Partial retractable housing
- Individual clamping levers mountable
- Control position unclamped/clamped
- Optimum chips protection
- Operating temperature -10°C to +80°C

Safety instructions:

Rotary lever clamps can generate high forces. Workpieces and fixtures must be designed for such loads. During operation, danger of crushing is given.

The **accident prevention regulations** must be observed. The rotary lever clamps must regularly be checked for contamination and cleaned when necessary.

We also design and manufacture customized variants!

HYDROKOMP®
Hydraulische Komponenten GmbH

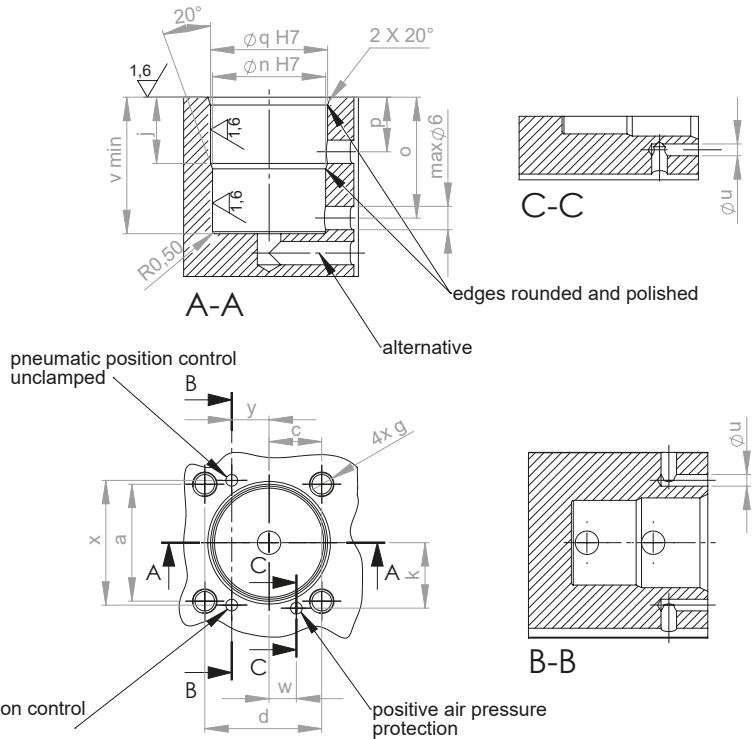
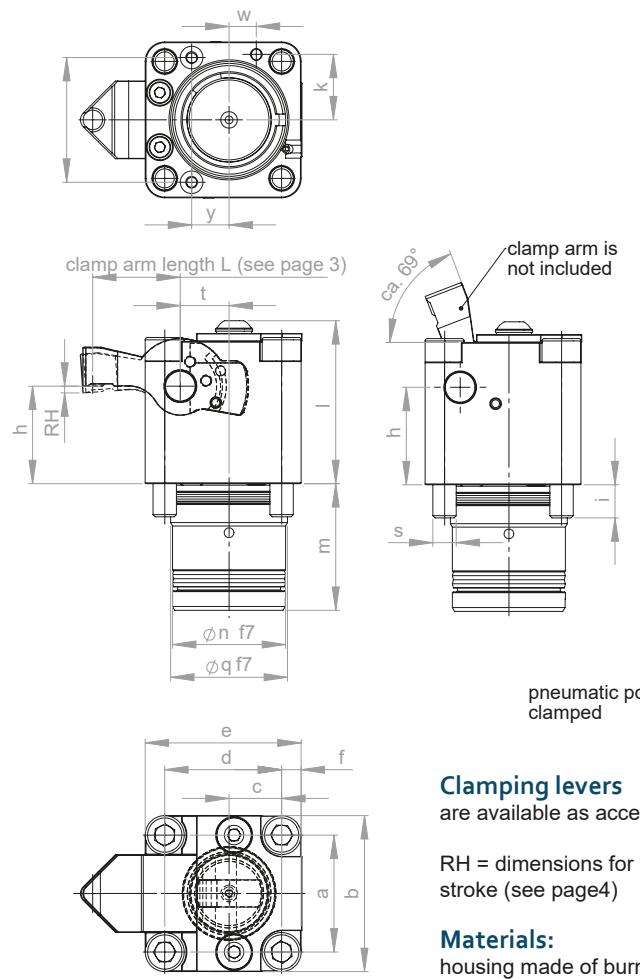
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Technology that connects

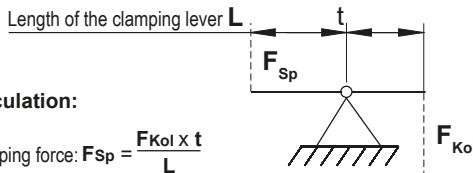


Clamping levers
are available as accessories.

RH = dimensions for residual stroke (see page 4)

Materials:
housing made of burnished steel
piston made of tempered steel

**Effective clamping force F_{Sp} in relation to
piston force F_{Kol} and length of the clamping lever L**



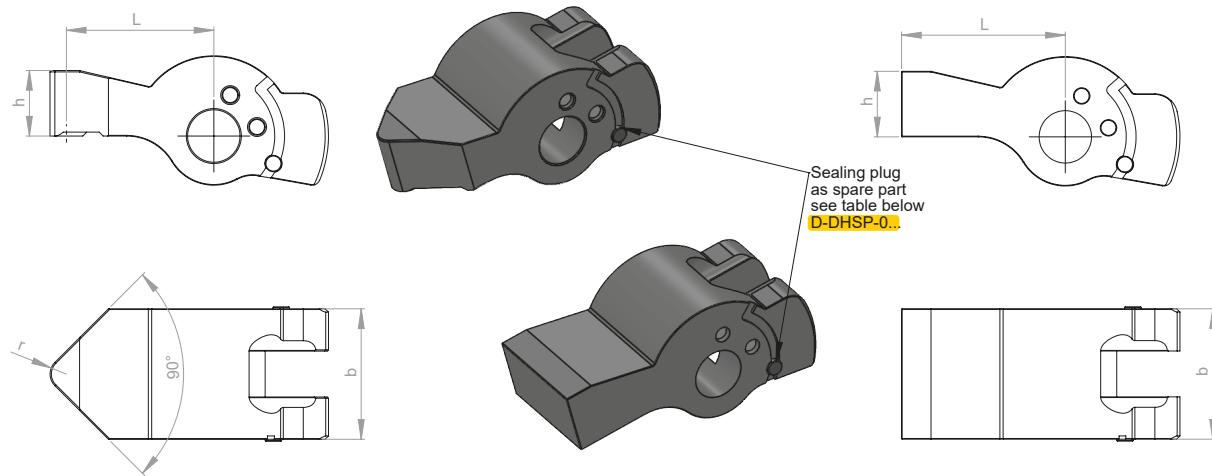
Calculation:

$$\text{Clamping force: } F_{Sp} = \frac{F_{Kol} \times t}{L}$$

$$\text{Example: } F_{Sp} = \frac{2,5 \text{ kN} \times 10 \text{ mm}}{18 \text{ mm}} = 1,39 \text{ kN}$$

Size	12	16	20	25	32	40	50	
Piston force at 100 bar	[kN]	1,7	2,8	4,5	6,15	10,1	15,9	
Piston force at pmax. 350 bar	[kN]	6,1	9,8	15,7	21,5	35,5	55,6	
Volume	[cm³]	1,06	2,03	4,52	8,82	16,27	31,8	
Effective piston surface	[cm²]	1,77	2,83	4,52	6,15	10,17	15,9	
a	[mm]	19,5	25	30	38,5	49	59	
b	[mm]	27	34	40	52	66	78	
c	[mm]	8,75	9,5	13,5	14,75	18,5	21,5	
d	[mm]	18,5	23	30	35,5	45	68	
e	[mm]	26	32	40	49	62	74	
f	[mm]	3,75	4,5	5	6,75	8,5	9,5	
g	[mm]	M4x8	M5x11	M6x10	M8x12	M10x15	M12x18	
h	[mm]	15	20	25	31,25	40	50	
i	[mm]	6	9	9	11	13	17	
j	[mm]	14	17	17	20	23	25	
k	[mm]	11,3	14,2	16,8	21	27	32	
l	[mm]	27	35	42	51	66	80	
m	[mm]	21	26	32,5	37	42	47	
n Ø	[mm]	19,4	23	29	35	43	53	
o	[mm]	23	26	31	33	38	40	
p	[mm]	11	13	14	15	17	19	
q Ø	[mm]	20	24	30	36	45	55	
s (acc. to DIN 6912)	[mm]	M4x10/4x25	M5x16/5x35	M6x16/6x40	M8x20/8x50	M10x25/10x65	M12x30/12x80	
t	[mm]	7,5	10	12,5	15,63	20	25	
u Ø	[mm]	1,5	3	3	5	5	5	
v	[mm]	21,5	26,5	33	38	43	48	
w	[mm]	4,7	4,3	7	7	8	10	
x	[mm]	22,6	27	32	42	53	64	
y	[mm]	5,4	7,2	9,6	11	13	14	
Weight	[kg]	0,17	0,34	0,70	1,13	2,31	3,5	
Order no.:	DHSP-DHG... →	-012-001-P	-016-001-P	-020-001-P	-025-001-P	-032-001-P	-040-001-P	-050-001-P
Mounting tool rod seal:		9000-270	9000-271	9000-272	9000-273	9000-274	9000-275	9000-276
Rod seal sparepart:		6012-037	6016-037	6020-065	6025-055	6032-062	6040-056	6050-043

The order number begins with DHSP-DHG to be completed. Example: DHSP-DHG-012-001-P



⁽¹⁾ For easier handling, the blanks are made of unhardened steel. To prevent deformation during the operation, the clamp arms

must be case-hardened by the customer after completion. (hardening depth: 0,3 +0,2, hardening: HRC 50 +/-2)

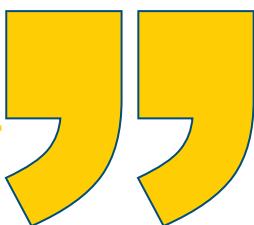
for Size	Type	Clamping force at 100 bar hydraulically	Clamping force at 350 bar hydraulically	Residual stroke RH	b	h	l	r	Sealing plugs as spare part	Order No.
12	Standard	1,416 kN	5,1 kN	0,8 mm	12	6,0	10,5	1,5	D-DHSP-012	5012-026
	Standard	0,944 kN	3,4 kN	1,0 mm	12	6,0	13,5	1,5	"	5012-027
	Standard	0,708 kN	2,5 kN	1,4 mm	12	6,0	18,0	1,5	"	5012-028
	Standard	0,566 kN	2,0 kN	1,7 mm	12	6,0	22,5	1,5	"	5012-029
	Blank	-	-	-	12	6,0	15,0	-	"	5012-030
	Blank	-	-	-	12	6,0	24,0	-	"	5012-031
16	Standard	2,333 kN	8,2 kN	1,0 mm	16	8,0	12,5	2,0	D-DHSP-016	5016-041
	Standard	1,555 kN	5,5 kN	1,4 mm	16	8,0	18,0	2,0	"	5016-042
	Standard	1,166 kN	4,1 kN	1,8 mm	16	8,0	24,0	2,0	"	5016-043
	Standard	0,933 kN	3,3 kN	2,2 mm	16	8,0	30,0	2,0	"	5016-044
	Blank	-	-	-	16	8,0	20,0	-	"	5016-045
	Blank	-	-	-	16	8,0	32,0	-	"	5016-046
20	Standard	3,750 kN	13,1 kN	1,3 mm	20	10,0	16,0	2,5	D-DHSP-020	5020-053
	Standard	2,500 kN	8,7 kN	1,7 mm	20	10,0	22,5	2,5	"	5020-054
	Standard	1,875 kN	6,5 kN	2,2 mm	20	10,0	30,0	2,5	"	5020-055
	Standard	1,500 kN	5,2 kN	3,4 mm	20	10,0	37,5	2,5	"	5020-056
	Blank	-	-	-	20	10,0	25,0	-	"	5020-057
	Blank	-	-	-	20	10,0	40,0	-	"	5020-058
25	Standard	5,058 kN	17,7 kN	1,8 mm	25	12,5	20,0	3,0	D-DHSP-025	5025-030
	Standard	3,432 kN	12,0 kN	2,4 mm	25	12,5	28,0	3,0	"	5025-031
	Standard	2,529 kN	8,8 kN	3,2 mm	25	12,5	38,0	3,0	"	5025-032
	Standard	2,045 kN	7,1 kN	3,9 mm	25	12,5	47,0	3,0	"	5025-033
	Blank	-	-	-	25	12,5	31,0	-	"	5025-034
	Blank	-	-	-	25	12,5	50,0	-	"	5025-035
32	Standard	8,416 kN	29,6 kN	2,2 mm	32	16,0	28,0	4,0	D-DHSP-032	5032-031
	Standard	5,611 kN	19,7 kN	2,7 mm	32	16,0	36,0	4,0	"	5032-032
	Standard	4,208 kN	14,8 kN	3,5 mm	32	16,0	48,0	4,0	"	5032-033
	Standard	3,366 kN	11,8 kN	4,3 mm	32	16,0	60,0	4,0	"	5032-034
	Blank	-	-	-	32	16,0	40,0	-	"	5032-035
	Blank	-	-	-	32	16,0	64,0	-	"	5032-036
40	Standard	13,250 kN	46,3 kN	1,9 mm	40	20,0	32,0	5,0	D-DHSP-040	5040-071
	Standard	8,833 kN	30,9 kN	2,6 mm	40	20,0	45,0	5,0	"	5040-072
	Standard	6,625 kN	23,1 kN	3,4 mm	40	20,0	60,0	5,0	"	5040-073
	Standard	5,300 kN	18,5 kN	4,0 mm	40	20,0	75,0	5,0	"	5040-074
	Blank	-	-	-	40	20,0	50,0	-	"	5040-075
	Blank	-	-	-	40	20,0	80,0	-	"	5040-076
50	Standard	19,490 kN	68,3 kN	2,6 mm	50	25,0	44,0	6,0	D-DHSP-050	5050-051
	Standard	13,225 kN	46,3 kN	3,2 mm	50	25,0	56,0	6,0	"	5050-052
	Standard	9,874 kN	34,6 kN	4,2 mm	50	25,0	75,0	6,0	"	5050-053
	Standard	6,612 kN	23,1 kN	6,1 mm	50	25,0	112,0	6,0	"	5050-054
	Blank	-	-	-	50	25,0	62,0	-	"	5050-055
	Blank	-	-	-	50	25,0	118,0	-	"	5050-056

Special sizes and designs are available on request.



Rotary lever clamps enclosed with pneumatic position control, hydraulically,
double-acting

Technology that connects



Rotary lever clamp for optimum chip protection!