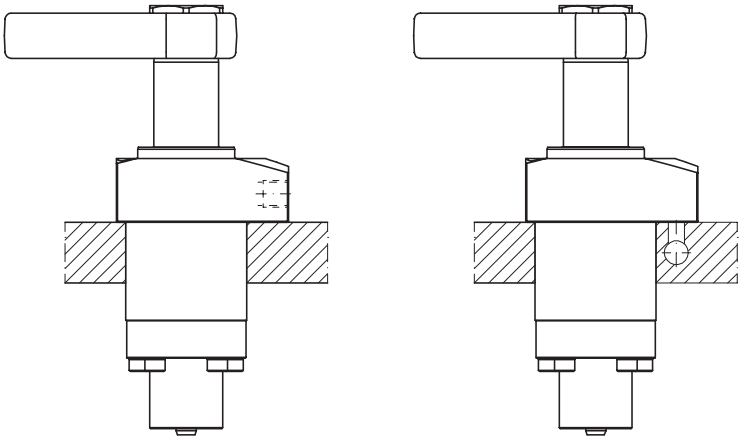
ROEMHELD

B 1.8801

Swing Clamp, double acting, top flange-type version, without overload protection device, reinforced swing mechanism, switch rod for position control, max. operating pressure 500 bar

Installation possibilities



Application

Hydraulic swing clamps are used for clamping of workpieces when it is essential to keep the clamping area free of straps and clamping components for unrestricted workpiece loading and unloading. Due to the sturdy swing mechanism and the extended switch rod they are particularly suited for

- Clamping fixtures with workpiece loading via handling systems
- Transfer lines
- Test systems for motors, gears, axis, etc.
- Automatic manufacturing systems
- Assembly lines

Description

This line is a further development of the proved RÖMHELD swing clamps with the aim to improve process safety in linked clamping systems. The most important characteristics are as follows:

1. Omission of the overload protection device
In the case of a slight collision with the clamping arm during loading and unloading of the fixture, the angular position of the clamping arm will be maintained. Less critical are the weight of the clamping arm or an increased swing speed.

2. Reinforced swing mechanism
The reinforced swing mechanism endures a collision of the clamping arm with the workpiece during clamping up to a pressure of 100 bar.

3. Switch rod for position control
The helix rod protrudes through the cover and allows thereby a pneumatic or electrical control of the piston position outside the swarf area. As an accessory a pneumatic position control is available; the brass control slide being displaced in a stainless housing. The slide opens and closes bore holes, so that a pressure switch or a differential pressure switch can signal the position „Clamped“ and „Unclamped“. It is also possible to realise this control directly in the fixture body by means of drilled channels. An electrical position monitoring with inductive proximity switches is also available (see page 2).

4. Wiper VITON®
Has a high chemical resistance when using aggressive cutting fluids

5. Option: Metallic wiper
Protects the wiper VITON® against mechanical damage, e.g. by hot swarf. The swing clamp body is prepared for mounting of the metallic wiper. The wiper consists of a radially floating wiping disk and a retaining disk which will be pressed onto the existing collar.

6. Different types of bodies
Beside the version „Top Flange“ the versions „Bottom Flange“ (B 1.8811) and „Threaded-body type“ (B 1.8921) are available with the same equipment.

Important notes

Due to the missing overload protection device, assembly and disassembly of the clamping arm has to be made carefully despite the reinforced swing mechanism. When tightening and untightening the fixing nut, the clamping arm or the hexagon socket in the piston have to be backed up. It is recommended to effect tightening and untightening in the swing area. Frequent collisions with the clamping arm in radial direction have to be avoided.

For interpretation of the pneumatic pressure we recommend to use the differential switches type PEL. Series connection for up to 8 swing clamps is possible.

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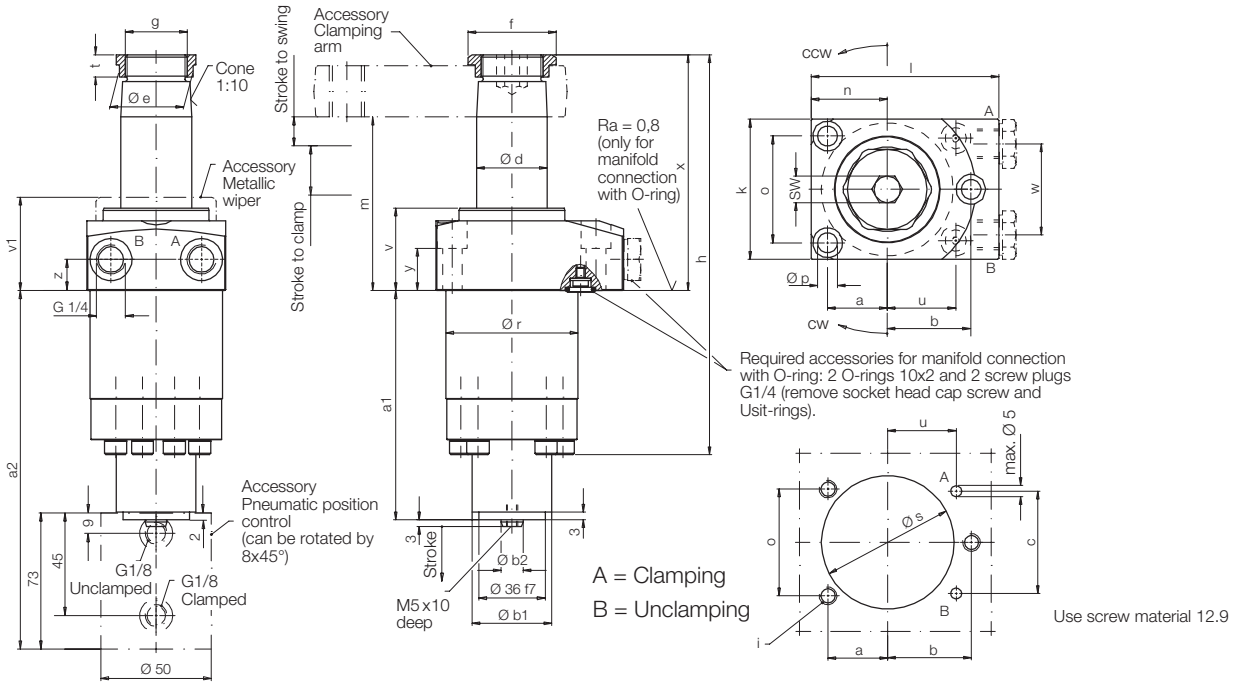
Further important notes
see page B 1.880.

VITON® wiper standard



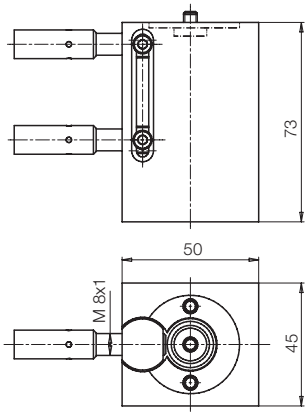
Stroke to clamp	[mm]	22	20	20
Stroke to swing	[mm]	13	16	18
Total stroke	[mm]	35	36	38
Operating pressure to swing, min.	[bar]	30	30	30
Max. oil flow rate	[cm³/s]	20	36	55
Oil to clamp	[cm³]	15.8	25.4	43.8
Oil to return	[cm³]	41.2	66.6	114.2
a	[mm]	27	37	42
a1	[mm]	102	116	128
a2	[mm]	173	187	199
b	[mm]	38	50	55
Ø b1	[mm]	36	45	45
Ø b2 f7	[mm]	10	12	12
c	[mm]	46	62	75
Ø d	[mm]	32	40	50
Ø e	[mm]	33.5	45	55.5
f	[mm]	40	55	68
g	[mm]	M 28x1.5	M 35x1.5	M 45x1.5
h	[mm]	181	204	207
i	[mm]	M 8	M 10	M 12
k	[mm]	63	85	95
l	[mm]	85	110	125
m –1	[mm]	79	80	82
n	[mm]	34.5	47	55
o	[mm]	48	65	72
Ø p	[mm]	9	11	14
Ø r –0.1	[mm]	59.8	79.8	89.8
Ø s +1	[mm]	60	80	90
t	[mm]	10	11	12
u	[mm]	31	40	45
v	[mm]	37	35	35
v1	[mm]	42	40	40
w	[mm]	41	55	70
x	[mm]	107	114	122
y	[mm]	22	15	14
z	[mm]	14	12	12
SW	[mm]	12	17	17
		Part-no.	**Part-no.**	**Part-no.**
Clockwise rotation 90°		**1895-303-VMH35**	**1896-303-VMH36**	**1897-303-VMH38**
Counterclockwise rotation 90°		**1895-403-VMH35**	**1896-403-VMH36**	**1897-403-VMH38**
0 degree		**1895-443-VMH35**	**1896-443-VMH36**	**1897-443-VMH38**

Accessories

Pneumatic position control, complete	**0353-808**	**0353-809**	**0353-810**
Electrical position monitoring			
– without switch	**0353-815**	**0353-813**	**0353-813**
– with standard switch	**0353-814**	**0353-811**	**0353-811**
Metallic wiper, complete	**0341-100**	**0341-101**	**0341-102**

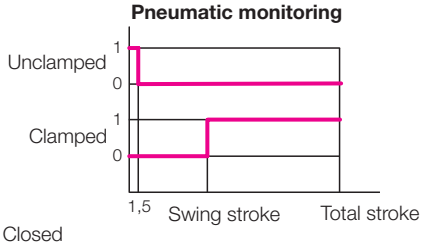
Clamping force diagram see data sheet B 1.880, pg. 2 – other accessories see data sheet B 1.880, pg. 4
Further proximity switches see data sheet B 1.552, pg. 2

Accessory:
Electrical position monitoring



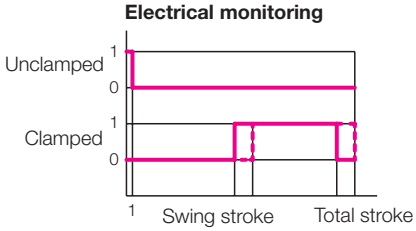
Function charts

Pneumatic monitoring



1 = Closed
0 = Passage

Electrical monitoring



Key for available angles of rotation

Angle of rotation (±1°)	Part-no.
90°	**189X-X0X-VMHXX**
60°	**189X-X2X-VMHXX**
45°	**189X-X3X-VMHXX**