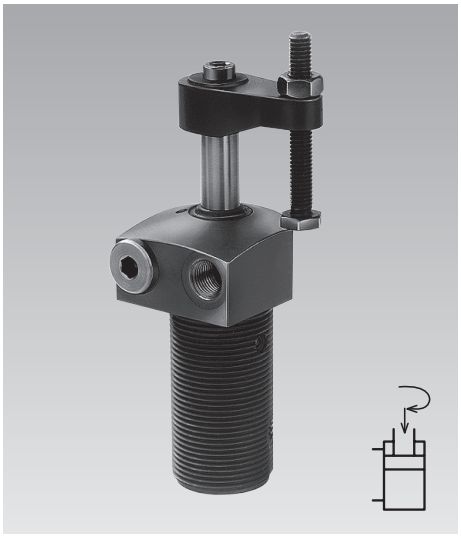
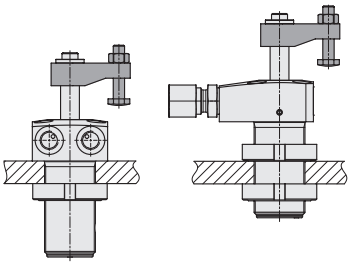
Compact Swing Clamps with robust sturdy swing mechanism

Top flange, metal-protected wiper, double-acting, max. operating pressure 350 bar

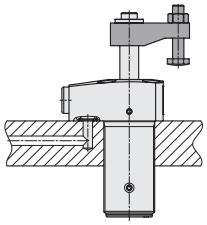


This product has been removed from the standard product line and is available for replacement purposes only.
For new applications, please use our configurable articles as found in B 1.8491.
Direct interchangeability is not possible. The flange geometry has changed. We recommend comparing the 3D data available on our website.
The version with a flange at the top and O-ring sealing has an interference contour (see adjacent figure).

Top flange

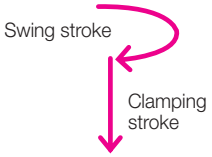


Top flange with O-ring sealing



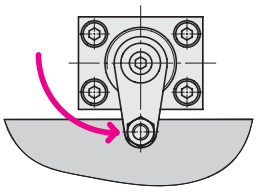
Function

This hydraulic clamping element is a pull-type cylinder where a part of the total stroke is used to swing the piston.

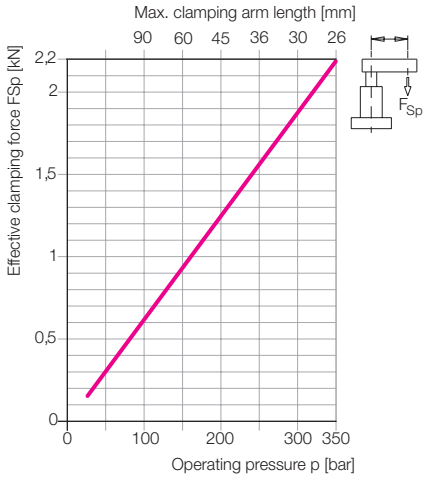


Application

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.



Clamping force diagram



Materials

- Housing and piston are made of high alloy steel. By nitrating, wear is reduced and protection against corrosion increased.
- FKM seals

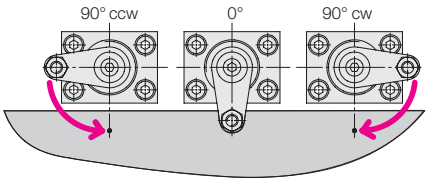
Technical characteristics

Piston Ø	[mm]	14
Rod Ø	[mm]	10
Effective piston area		
Clamping	[cm²]	0.754
Unclamping	[cm²]	1.54
Required oil per stroke		
Clamping	[cm³]	1.2
Unclamping	[cm³]	2.5
Max. flow rate		
Clamping	[cm³/s]	5
Unclamping	[cm³/s]	10
Min. operating pressure	[bar]	30
Max. operating pressure	[bar]	350
Max. pull force	[kN]	2.63
Eff. clamping force	[kN]	see diagram
Swing angle	[°]	(0, 45, 60, 90) ±2
Swing stroke*	[mm]	8
Clamping stroke*	[mm]	8
Total stroke	[mm]	16

* At swing angle 0°:
Swing stroke = 0 mm Clamping stroke = 16 mm

Swing direction

The swing clamps are available with clockwise or counterclockwise swing motion or without swing motion (0°).



Standard swing angles are 45°, 60° and 90° ±2°.
Special angles on request.
Other variants, as e.g. versions with metallic wiper on request.

0° version

Use as pure pull-type cylinder with a piston which is secured against torsion and which allows eccentric load as per clamping force diagram.

Option: metallic wiper

In addition to the FKM wiper, the following double-acting swing clamps can be equipped with a metallic wiper:

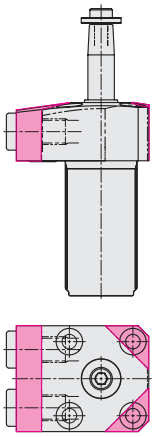
- Flange at the top with O-ring sealing
- Threaded-body type

Part no.: Add only letter "M" to the part number of the swing clamp without metallic wiper.

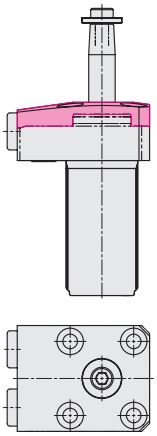
Order example:
Swing clamp **1850124**
With metallic wiper **1850124M**

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

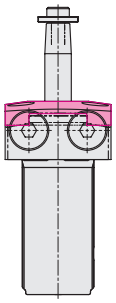
Top flange



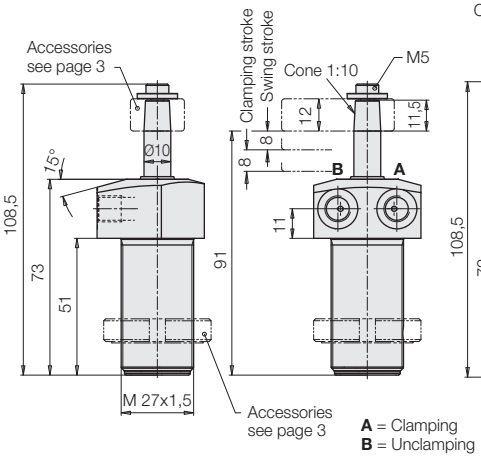
Flange at the top with O-ring sealing

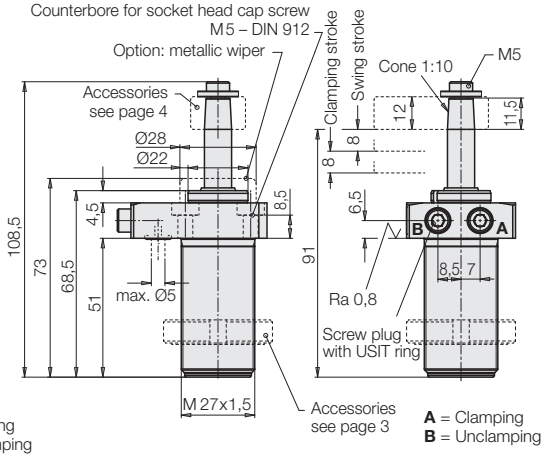


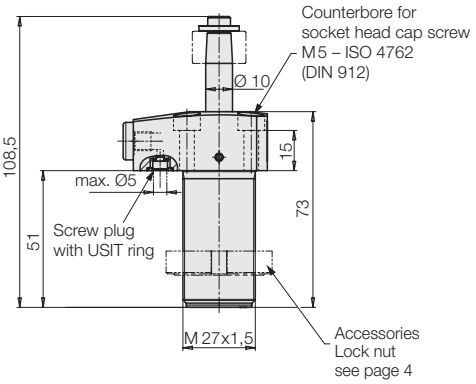
Top flange Version as per B 1.8491

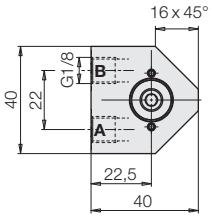


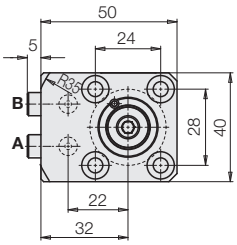
The adjacent sketches show possible interference contours when using standard compact swivel clamps with robust swing mechanism according to data sheet B 1.8491.

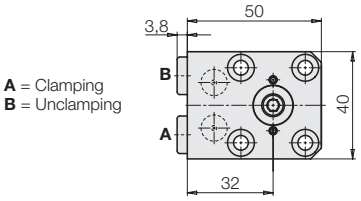












Weight: 0.35 kg		
Swing angle	Swing direction	**Part no.** Double acting
0°	–	**1850103**
90°	right	**1850113**
90°	left	**1850123**
60°	right	**1850133**
60°	left	**1850143**
45°	right	**1850153**
45°	left	**1850163**

Weight: 0.42 kg		
Swing angle	Swing direction	**Part no.** Double acting
0°	–	**1850104**
90°	right	**1850114**
90°	left	**1850124**
60°	right	**1850134**
60°	left	**1850144**
45°	right	**1850154**
45°	left	**1850164**
Spare O-ring (FKM) 7 x 1.5		**3001077**
Metallic wiper (spare part)		**0341111**

For both flange versions check interchangeability with:

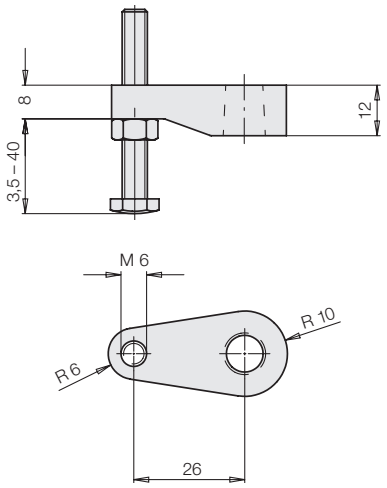
→	V1 SAF A B K6 0000 H016 F E
→	V1 SAF A B K6 R090 H008 F E
→	V1 SAF A B K6 L090 H008 F E
→	V1 SAF A B K6 R060 H008 F E
→	V1 SAF A B K6 L060 H008 F E
→	V1 SAF A B K6 R045 H008 F E
→	V1 SAF A B K6 L045 H008 F E

Product available on request
On request, we will check whether the article is still available.

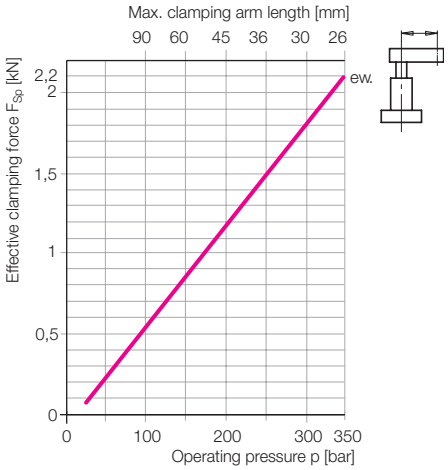
Operating conditions, tolerances and other data, see data sheet A 0.100

Clamping arm, complete max. 350 bar

Part no. 0354057

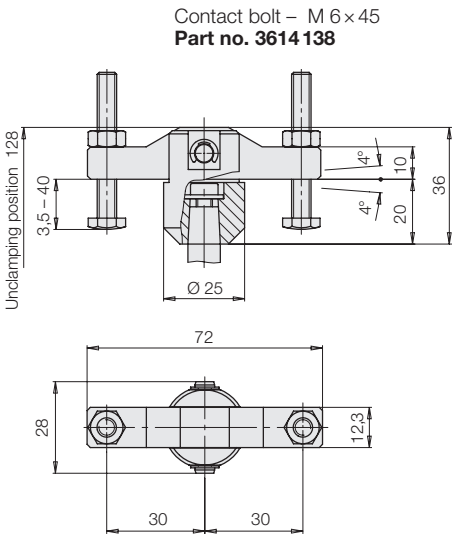


Clamping force diagram

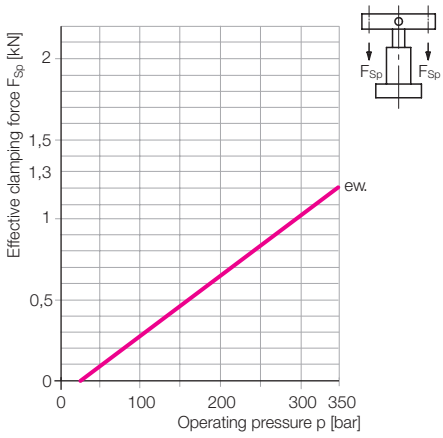


Double clamping arm, complete

Part no. 0354082

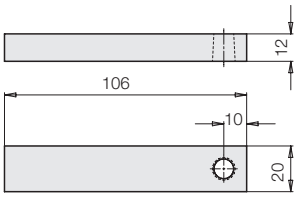


Clamping force diagram

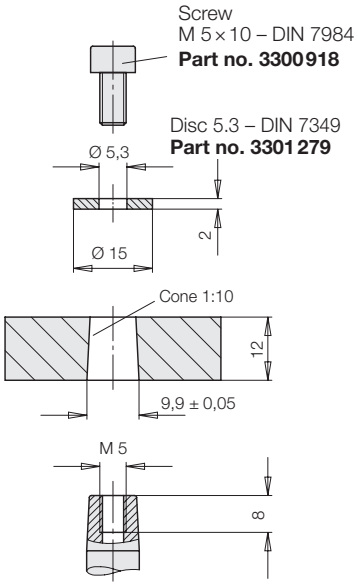


Clamping arm blank

Part no. 3548900

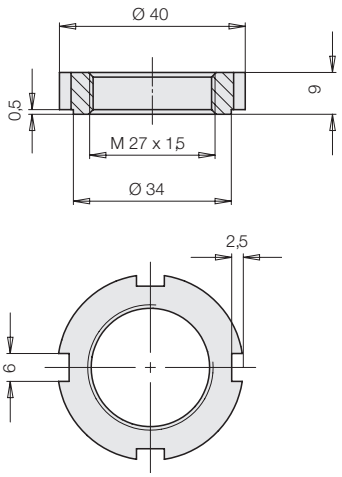


Dimensions for special clamping arms



Lock nut as per DIN 1804

Part no. 3527076



Special clamping arm

When using special clamping arms with other lengths, the corresponding operating pressures as shown in the clamping force diagram must not be exceeded.
If longer clamping arms will be used, not only the operating pressure but also the flow rate have to be reduced.

Tube male stud coupling for G1/8

ND [bar]	Designation	Part no.
250	D 8L G 1/8	**9208034**
500	D 8S G 1/8	**9208116**

Thread reducing adaptor

ND [bar]	Designation	Part no.
500	GWR 1/8–1/4	**3613003**

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