Swing Clamps with Reinforced Swing Mechanism
bottom flange, position monitoring optional, double acting, max. operating pressure 500 bar

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, axes, etc.
- Automatic manufacturing systems
- Assembly lines

Description
This line is a further development of the proved ROEMHELD swing clamps with the aim to improve process safety in linked clamping systems. The most important data 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. FKM wiper
   This wiper has a high chemical resistance when using aggressive cutting fluids
4. Further types of bodies
   Flange at the top: data sheet B 1.8801
   Threaded-body type: data sheet B 1.8921

Options
Switch rod for position monitoring
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 monitoring 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".

Part numbers
- Without switch rod, without metallic wiper: 189XXXVDHXX
- Without switch rod, with metallic wiper: 189XXXVDMXX
- With switch rod, without metallic wiper: 189XXXVMHXX
- With switch rod, with metallic wiper: 189XXXVMMXX

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 has to be backed up. It is recommended to effect tightening and untightening in the swivel area. Frequent collisions with the clamping arm in radial direction have to be avoided.

Metallic wiper
This wiper protects the FKM wiper 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.

Connecting possibilities
Pipe thread
MH, MM: with switch rod
MH: with position monitoring (electrical or pneumatic)
DH, DM: without switch rod
Accessory Clamping arm
Option Metallic wiper

Drilled channels

Versions
DH, DM: without switch rod
Accessory Clamping arm
Option Metallic wiper

MH, MM: with switch rod
Accessory Clamping arm
Option Metallic wiper

Metallic wiper optional

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Actual issue see www.roemheld-group.com
Subject to modifications
**Dimensions**

**Technical data • Accessories**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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<tbody>
<tr>
<td>Clamping stroke [mm]</td>
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</tr>
<tr>
<td>Swing stroke [mm]</td>
<td>13</td>
</tr>
<tr>
<td>Total stroke [mm]</td>
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<tr>
<td>Operating pressure, min. [bar]</td>
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<tr>
<td>Max. oil flow rate [cm³/s]</td>
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<tr>
<td>Oil volume / stroke [cm³]</td>
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<tr>
<td>Oil volume / return stroke [cm³]</td>
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<tr>
<td>Swing direction (cw)</td>
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<tr>
<td>Swing direction (ccw)</td>
<td>60°</td>
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<tr>
<td>Swing direction (0°)</td>
<td>189°</td>
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<tr>
<td>Part no.</td>
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<tr>
<td>Accessories</td>
<td>Pneumatic position monitoring, complete</td>
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<tr>
<td></td>
<td>Electrical position monitoring</td>
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<tr>
<td></td>
<td>– without switch</td>
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<tr>
<td></td>
<td>– with standard switch and angle plug</td>
</tr>
<tr>
<td></td>
<td>Metallic wiper, complete (spare part)</td>
</tr>
</tbody>
</table>

**Clamping force diagrams and other accessories:** see data sheet B 1.881. Further proximity switches: see data sheet B 1.552.