

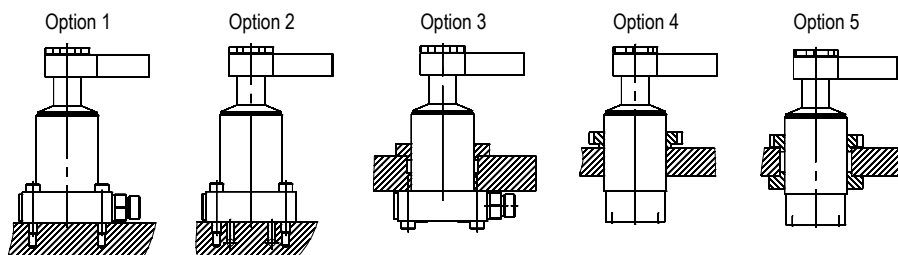
Swing clamp cylinders

with thread/flange, overload protection, single-/double-acting, pmax. 500 bar

240-30

Issue: 10/2022

Mounting options:



Option:	Housing design:	Mounting via:	Oil connection via:
1	B	flange	G1/4 threaded port lateral
2	B	flange	manifold with O-ring lower
3	B	flange/built-in	G1/4 threaded port lateral
4	C	built-in	G1/4 threaded port lower
5	C	built-in	G1/4 threaded port lower

Description:

Swing clamp cylinders release the clamping point on the workpiece. With this, it is easy to change the workpiece.

This hydraulic swing clamp cylinder operates as single-acting or double-acting pull cylinder, whereas part of the stroke is used to rotate the piston. The model with 0° swing angle operates only vertical as pull cylinder.

To guarantee a long lifetime the cylinders have an integrated metal wiper as standard.

For oil supply, the cylinders are equipped with threaded port and manifold connection with O-ring for drilled channels.

You can select between right or left turning models with various standardized swing angles.

The integrated overload protection protects the swing mechanism from damage due to blockage of the rotation or improper assembly of the clamp arm.

Operating conditions:

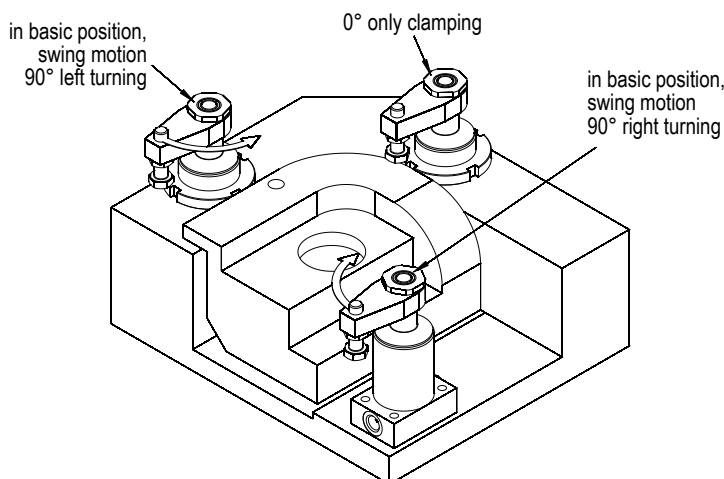
For any risk of exceeding the permitted volume flow a throttle check valve must be interposed into the oil supply line (see data sheet 700-15). Counter-hold the clamp arm when tightening or loosening the counter nut in order to prevent torque transfer to the piston rod and to avoid damage to the ball guide.

Variations with 0°, 30°, 45°, 60° and 90° swing angles are available. The permitted operating pressure is depending from the clamp arm length.

Except from standard clamp arms also special clamp arms can be assembled. The maximum operating pressure of 500 bar does not apply for each clamp arm length. For details about the permitted operating pressure, refer to page 4.

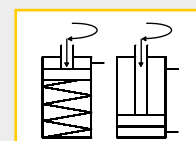
The safety instructions for swing clamp cylinders in our catalogue or on our website and the current accident prevention regulations must be considered.

Application example:



B/C

Webcode: 024030



Housing designs:

- ✘ Type B or C (lower flange or threaded body)

Connection types:

- ✘ G1/4 threaded port
- ✘ Manifold with O-ring

Advantages:

- ✘ Protecting metal wiper
- ✘ Integrated overload protection
- ✘ Easy to assemble with self designed clamp arms
- ✘ Standard and special clamp arms available (see page 3)

We also design and manufacture customized variants!



HYDROKOMP®

Hydraulische Komponenten GmbH

+49 6401 225999-0

sales@hydrokomp.de

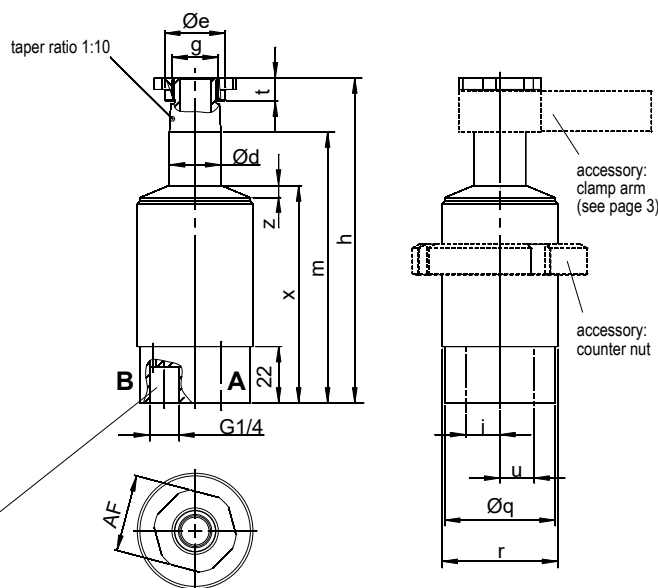
Siemenstr. 16
35325 Mücke (Germany)

www.hydrokomp.de

Technology that connects



Housing design C



Installation instructions:

The swing clamp cylinders will be delivered ready for connection. If a modification of the threaded ports on manifold ports become necessary, proceed as follows:

single-/double-acting:

- insert G1/4 locking screws into the threaded ports **A**
- remove the cap screws with seals out of the manifold connection ports **A**
- insert the O-rings 7x1,5 into the countersink of the manifold connection ports **A**

For the application of single-acting cylinders it is important to note, if the ventilation of the spring chamber should be realized by the manifold connection port you must replace the filter at port **B** with a G1/4 locking screw.

Accessories for ports:

Accessories for ports:	Order no.
G1/4 locking screw	7900-001
O-Ring, 7x1,5	6010-002

Counter nut:
DIN 1804
(accessory)

Piston Ø	Øa	Øb	c	d	e	Order no.
25 mm	68	60	12	0,5	M45x1,5	7045-008
40 mm	90	80	13	0,5	M60x1,5	7060-007
50 mm	115	105	16	1	M80x2	7080-005
63 mm	130	120	16	1	M90x2	7090-003

Technical data:

[illegible]



Clamp arms:

For these swing clamps, standard clamp arms are available as accessories. See **data sheet 240-0 «Clamp arms»** (Webcode 024000).

Special clamp arms are available on request.

Dimensions for in-house production of clamp arms:

Piston Ø [mm]	25	40	50	63
Ø ds [mm]	20	32	40	50
x [mm]	16	23	28	34
y [mm]	4	5	5	6
Ø z1 [mm]	24	34	46	56

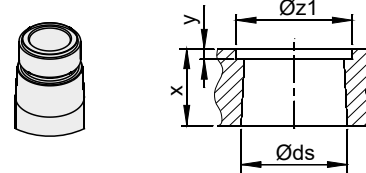
Attention: consider the interference contour for the housing.

Compatible clamp arms

c d e f

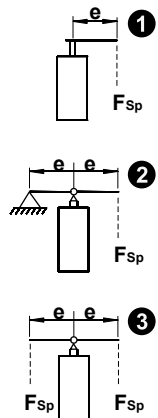
Taper holder (SPK)

Taper holder 1:10

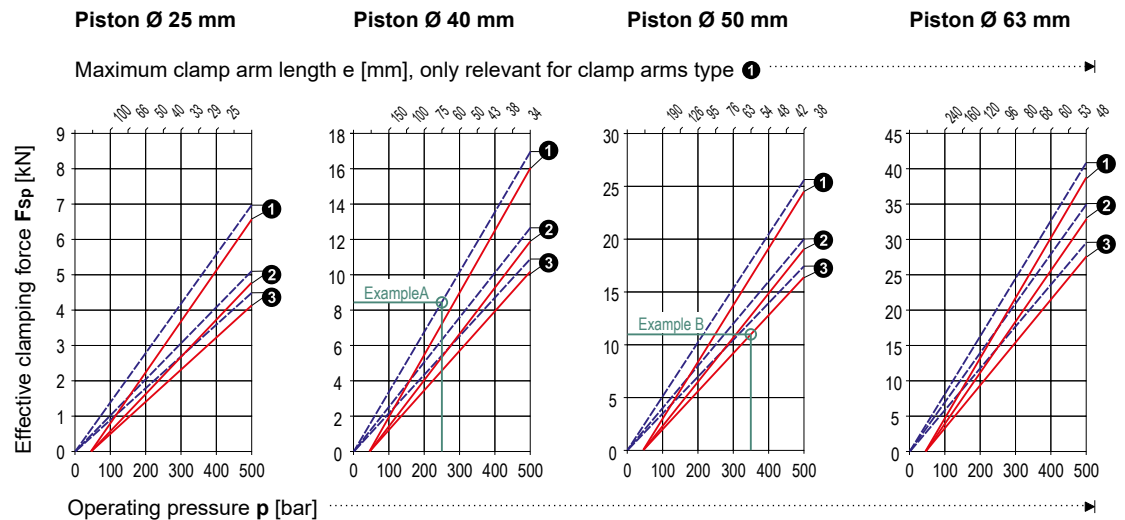


To fix the clamp arms, the swing clamp cylinders are equipped with a hexagon nut. From a piston Ø of 50 mm, scope of supply includes a slotted nut instead. See information sheet **«Assembly / disassembly of the clamp arms»**.

Effective clamping force F_{Sp} depending from operating pressure p :



--- double-acting
— single-acting



Example A:

- double-acting cylinder, piston Ø 40 mm
- present operating pressure $p = 250$ bar
- clamp arm type 1, length $e = 60$ mm
- resulting clamping force $F_{Sp} \sim 8,5$ kN

Example B:

- single-acting cylinder, piston Ø 50 mm
- present operating pressure $p = 350$ bar
- clamp arm type 3, length $e = 54$ mm
- resulting clamping force $F_{Sp} \sim 11$ kN

The retraction force of the spring in single-acting swing clamp cylinders reduces the clamping force slightly. To achieve the same clamping force as with double-acting cylinders, the operating pressure must be increased slightly.

Order number key:

Example **SSZY - RE90 - B5015 - K10 - 002**

- Swing motion:** Right turning = **R**, Left = **L**, Neutral 0° = **N**
Operating method: single-acting = **E**, double-acting = **D**
Swing angle [degree]: Standard = **0**, **30**, **45**, **60**, **90**
- Housing design:** Lower flange = **B**, Built-in housing = **C** (see page 1)
Piston Ø [mm]: see dimension table on page 2
Clamping stroke [mm]: see dimension table on page 2
- Clamp arm holder:** Taper = **K**
Overload protection: with = **1**
Position control: without = **0**
- Connection type:** Threaded port = **001**, Manifold with O-ring = **002**

For additional help in model selection, see **data sheet «Swing Clamp Cylinders - Selection Guide»**.