

# ROTARY LEVER CLAMPS

hydraulic single- and double-acting, pneumatic double-acting



Installation example: multiple workholding fixture with double-acting rotary lever clamps (piston  $\varnothing$  12 mm). For more information and pictures, see page 6.

## Description:

This type of cylinder is especially suited for clamping fixtures with only little space for the installation of clamping elements. Its construction and compact design allows flexible solutions at various installation conditions.

HYDROKOMP offers hydraulic clamps which are single-acting as well double-acting. They are used in clamping fixtures whose oil supply is made through drilled channels.

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

You can order standard clamp arms from different materials and various lengths as accessories. The cylinder can also be assembled with special and self made clamp arms (see page 7). The clamping force depends on the length of the clamp arm.

## Clamp arms:

Clamp arms are not included!  
They can be ordered as an accessory.

On page 5 you will find a wide range of standard clamp arms and blanks made of aluminum or steel (untempered / tempered).

## Operating conditions:

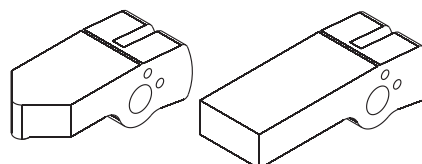
The clamp arm is coupled with the piston rod. In single-acting cylinders the clamp arm is opened through the reset spring. In double-acting cylinders this is done through the pressure medium.

When installing a rotary lever clamp, the flange face should be adapted to the height of the workpiece. With that, the clamping point should be horizontally. Despite the short clamping stroke, workpiece tolerances can be optimally compensated.

The rotary lever clamp is suited for any installation positions. For the hydraulic version we recommend hydraulic oils according to DIN 51524 (HL, HLP) as pressure medium.

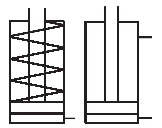
## Safety instructions:

Rotary lever clamps can generate great forces. Workpieces and fixtures must be suitable for this. During operation, danger of crushing is given. **Accident prevention regulations** must be observed. The rotary lever clamps must regularly be checked for contamination and cleaned when necessary.



Webcode: 025010

We also design and manufacture special designs



## Connections:

- ☒ Drilled channels

## Designs:

- ☒ **DHSP hydraulic**  
(Operating pressure max. 400 bar)
  - single-acting
  - double-acting
- ☒ **DHSP pneumatic**  
(Operating pressure max. 12 bar)
  - double-acting

## Advantages:

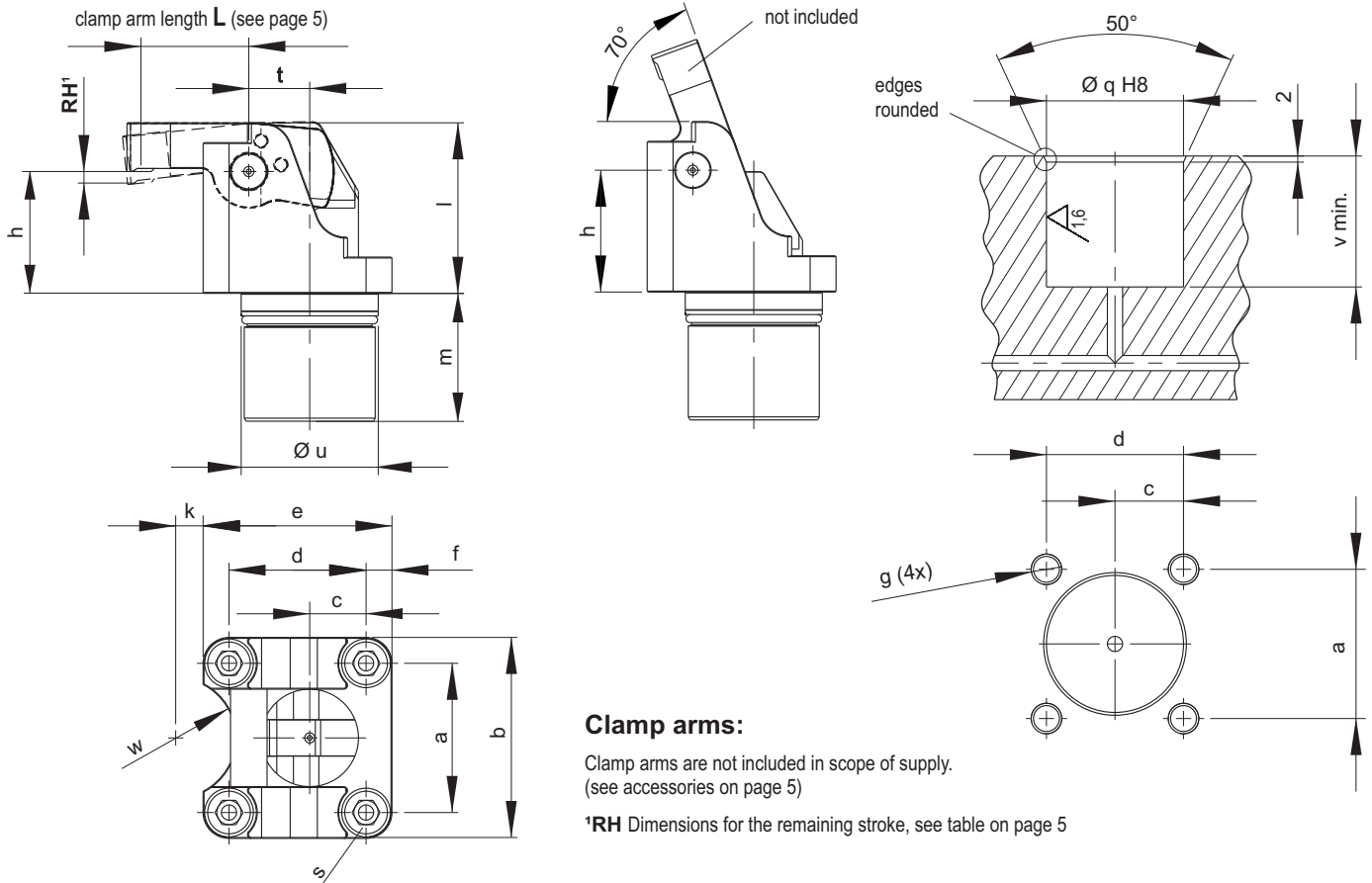
- ☒ Clamping without shear forces
- ☒ Oil supply through drilled channels
- ☒ Partial retractable housing
- ☒ Various clamp arms mountable
- ☒ Easy loading and unloading of the fixture
- ☒ DHSP with position control are available on request

 **HYDROKOMP®**  
Hydraulische Komponenten GmbH

Siemensstraße 16, 35325 Mücke (Germany)  
Phone: +49 6401 225999-0  
Fax: +49 6401 225999-50  
E-mail: info@hydrokomp.de  
Internet: www.hydrokomp.de



## Rotary lever clamps, hydraulic, with reset spring, single-acting



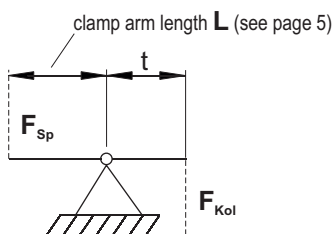
### Clamp arms:

Clamp arms are not included in scope of supply.  
(see accessories on page 5)

<sup>1</sup>RH Dimensions for the remaining stroke, see table on page 5

| Size                    |                    | 12           | 16           | 20           | 25           | 32           | 40           | 50            |
|-------------------------|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Piston force at 100 bar | [kN]               | 1,1          | 1,9          | 3            | 4,7          | 7,8          | 12,3         | 19,3          |
| Piston force at 400 bar | [kN]               | 4,4          | 8            | 12,4         | 19,4         | 32           | 50           | 78,2          |
| Volume                  | [cm <sup>3</sup> ] | 0,68         | 1,61         | 3,14         | 6,14         | 12,9         | 25,2         | 49,1          |
| Effective piston area   | [cm <sup>2</sup> ] | 1,13         | 2,01         | 3,14         | 4,91         | 8,04         | 12,57        | 19,63         |
| a                       | [mm]               | 19,5         | 25           | 30           | 38,5         | 49           | 59           | 74            |
| b                       | [mm]               | 27           | 34           | 40           | 52           | 66           | 78           | 98            |
| c                       | [mm]               | 8,75         | 9,5          | 13,5         | 14,75        | 18,5         | 21,5         | 25,75         |
| d                       | [mm]               | 18,5         | 23           | 30           | 35,5         | 45           | 55           | 68            |
| e                       | [mm]               | 26           | 32           | 40           | 49           | 62           | 74           | 92            |
| f                       | [mm]               | 3,75         | 4,5          | 5            | 6,75         | 8,5          | 9,5          | 12            |
| g                       | [mm]               | M4x8         | M5x10        | M6x10        | M8x12        | M10x15       | M12x18       | M16x22        |
| h                       | [mm]               | 15           | 20           | 25           | 31,25        | 40           | 50           | 62,5          |
| k                       | [mm]               | 7,5          | 10           | 13,5         | 11           | 9            | 12           | 14,5          |
| l                       | [mm]               | 21           | 28           | 35           | 43,75        | 56           | 70           | 87,5          |
| m                       | [mm]               | 23           | 26           | 32,5         | 37           | 47           | 55           | 62,5          |
| q Ø                     | [mm]               | 20           | 24           | 30           | 36           | 45           | 55           | 66            |
| s (acc. to DIN 6912)    | [mm]               | M4x10/4x25   | M5x16/5x35   | M6x16/6x40   | M8x20/8x50   | M10x25/10x65 | M12x30/12x80 | M16x40/16x100 |
| t                       | [mm]               | 7,5          | 10           | 12,5         | 15,63        | 20           | 25           | 31,25         |
| u Ø                     | [mm]               | 20           | 24           | 30           | 36           | 45           | 55           | 66            |
| v                       | [mm]               | 23,5         | 26,5         | 33           | 38           | 48           | 56           | 63,5          |
| w Radius                | [mm]               | 10,6         | 14,2         | 18,2         | 18,7         | 19,7         | 24,7         | 31            |
| Weight                  | [kg]               | 0,11         | 0,2          | 0,405        | 0,7          | 1,4          | 2,46         | 5,07          |
| Order numbers:          | DHSP...            | -EHS-012-001 | -EHS-016-001 | -EHS-020-001 | -EHS-025-001 | -EHS-032-001 | -EHS-040-001 | -EHS-050-001  |

Housing made of steel, burnished, tempered piston



### Effective clamping force $F_{Sp}$ depending from piston force $F_{KoI}$ and clamp arm length $L$

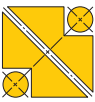
#### Example:

Rotary lever clamp size 32  
Operating pressure 400 bar  
Piston force  $F_{KoI}$  at 400 bar = 32 kN  
Measure  $t$  acc. chart = 20 mm  
Clamp arm length  $L$  (page 7) = 48 mm  
Resulting effective clamping force  $F_{Sp}$  = 13,33 kN

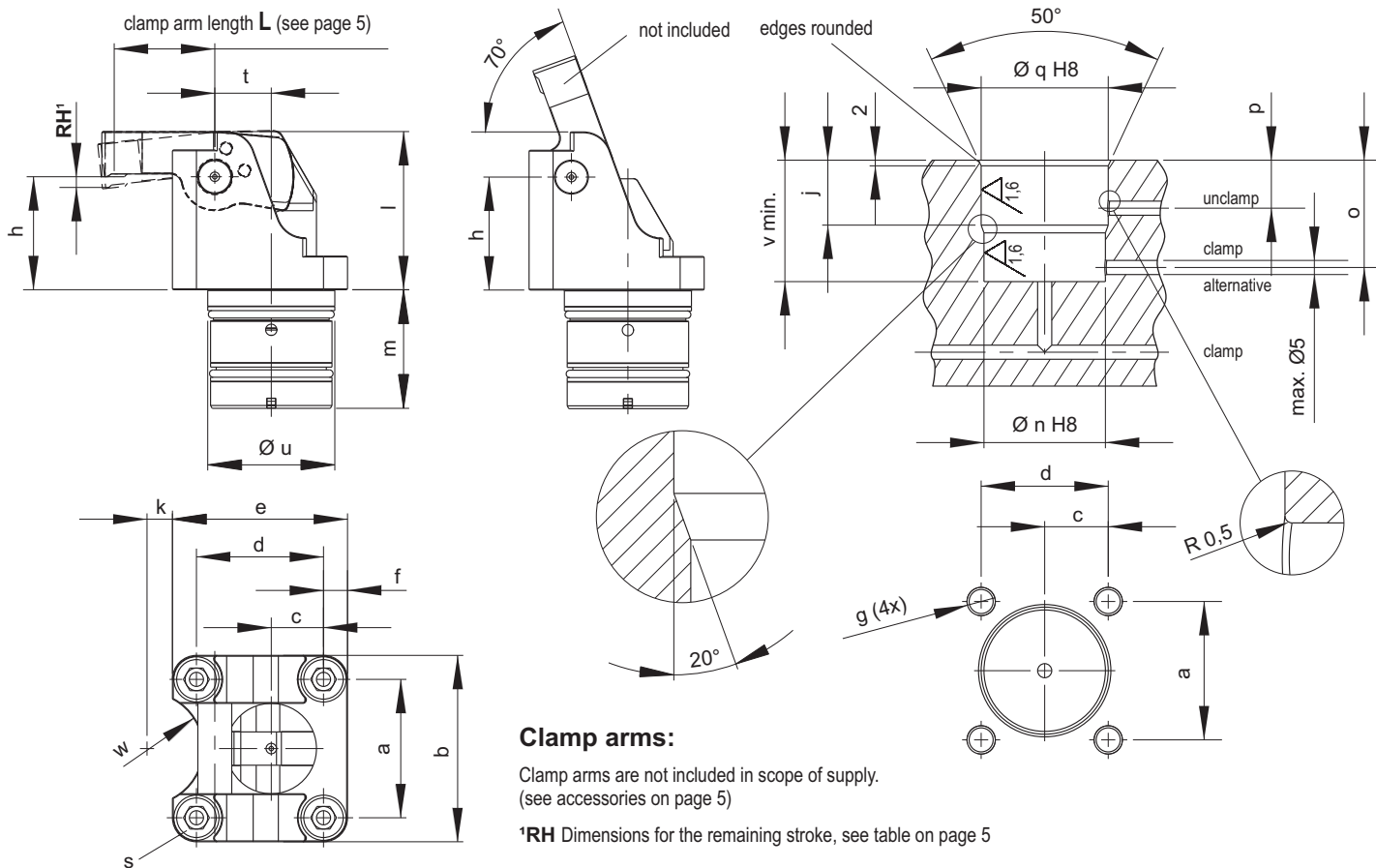
#### Calculation:

$$\text{r.e. clamp. force } F_{Sp} = \frac{F_{KoI} \times t}{L}$$

$$\text{r.e. clamp. force } F_{Sp} = \frac{32 \text{ kN} \times 20 \text{ mm}}{48 \text{ mm}} = 13,33 \text{ kN}$$

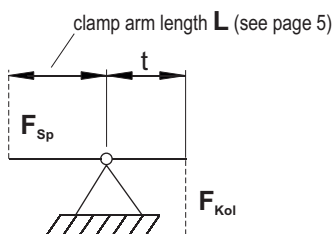


## Rotary lever clamps, hydraulic, double-acting



| Size                    |                    | 12                  | 16                  | 20                  | 25                  | 32                  | 40                  | 50                  |
|-------------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Piston force at 100 bar | [kN]               | 1,7                 | 2,5                 | 4,5                 | 7                   | 10,1                | 15,9                | 23,7                |
| Piston force at 400 bar | [kN]               | 7                   | 10,1                | 18                  | 28,2                | 40,6                | 63,6                | 95                  |
| Volume                  | [cm <sup>3</sup> ] | 1,06                | 2,03                | 4,52                | 8,82                | 16,27               | 31,8                | 58,2                |
| Effective piston area   | [cm <sup>2</sup> ] | 1,77                | 2,54                | 4,52                | 7,06                | 10,17               | 15,9                | 23,75               |
| a                       | [mm]               | 19,5                | 25                  | 30                  | 38,5                | 49                  | 59                  | 74                  |
| b                       | [mm]               | 27                  | 34                  | 40                  | 52                  | 66                  | 78                  | 98                  |
| c                       | [mm]               | 8,75                | 9,5                 | 13,5                | 14,75               | 18,5                | 21,5                | 25,75               |
| d                       | [mm]               | 18,5                | 23                  | 30                  | 35,5                | 45                  | 55                  | 68                  |
| e                       | [mm]               | 26                  | 32                  | 40                  | 49                  | 62                  | 74                  | 92                  |
| f                       | [mm]               | 3,75                | 4,5                 | 5                   | 6,75                | 8,5                 | 9,5                 | 12                  |
| g                       | [mm]               | M4x8                | M5x10               | M6x10               | M8x12               | M10x15              | M12x18              | M16x23              |
| h                       | [mm]               | 15                  | 20                  | 25                  | 31,25               | 40                  | 50                  | 62,5                |
| j                       | [mm]               | 14                  | 17                  | 17                  | 20                  | 23                  | 25                  | 30                  |
| k                       | [mm]               | 7,5                 | 10                  | 11                  | 11                  | 9                   | 12                  | 14,5                |
| l                       | [mm]               | 21                  | 28                  | 35                  | 43,75               | 56                  | 70                  | 87,5                |
| m                       | [mm]               | 21                  | 26                  | 32,5                | 37                  | 42                  | 47                  | 57,5                |
| n Ø                     | [mm]               | 19,4                | 23                  | 29                  | 35                  | 43                  | 53                  | 64                  |
| o                       | [mm]               | 23                  | 26                  | 31                  | 33                  | 38                  | 40                  | 53                  |
| p                       | [mm]               | 11                  | 13                  | 14                  | 15                  | 17                  | 19                  | 24                  |
| q Ø                     | [mm]               | 20                  | 24                  | 30                  | 36                  | 45                  | 55                  | 66                  |
| s (acc. to DIN 6912)    | [mm]               | M4x10/4x25          | M5x16/5x35          | M6x16/6x40          | M8x20/8x50          | M10x25/10x65        | M12x30/12x80        | M16x40/16x100       |
| t                       | [mm]               | 7,5                 | 10                  | 12,5                | 15,63               | 20                  | 25                  | 31,25               |
| u Ø                     | [mm]               | 20                  | 24                  | 30                  | 36                  | 45                  | 55                  | 66                  |
| v                       | [mm]               | 21,5                | 26,5                | 33                  | 38                  | 43                  | 48                  | 58,5                |
| w Radius                | [mm]               | 10,6                | 14,2                | 15,7                | 18,7                | 19,7                | 24,7                | 31                  |
| Weight                  | [kg]               | 0,115               | 0,265               | 0,55                | 0,855               | 1,755               | 2,625               | 5,325               |
| <b>Order numbers:</b>   | <b>DHSP...</b>     | <b>-DHS-012-001</b> | <b>-DHS-016-001</b> | <b>-DHS-020-001</b> | <b>-DHS-025-001</b> | <b>-DHS-032-001</b> | <b>-DHS-040-001</b> | <b>-DHS-050-001</b> |

Housing made of steel, burnished, tempered piston



### Effective clamping force $F_{Sp}$ depending from piston force $F_{Kol}$ and clamp arm length $L$

#### Example:

Rotary lever clamp size 16  
 Operating pressure 100 bar  
 Piston force  $F_{Kol}$  at 100 bar = 2,5 kN  
 Measure  $t$  acc. chart = 10 mm  
 Clamp arm length  $L$  (page 7) = 18 mm  
 Resulting effective clamping force  $F_{Sp}$  = 1,39 kN

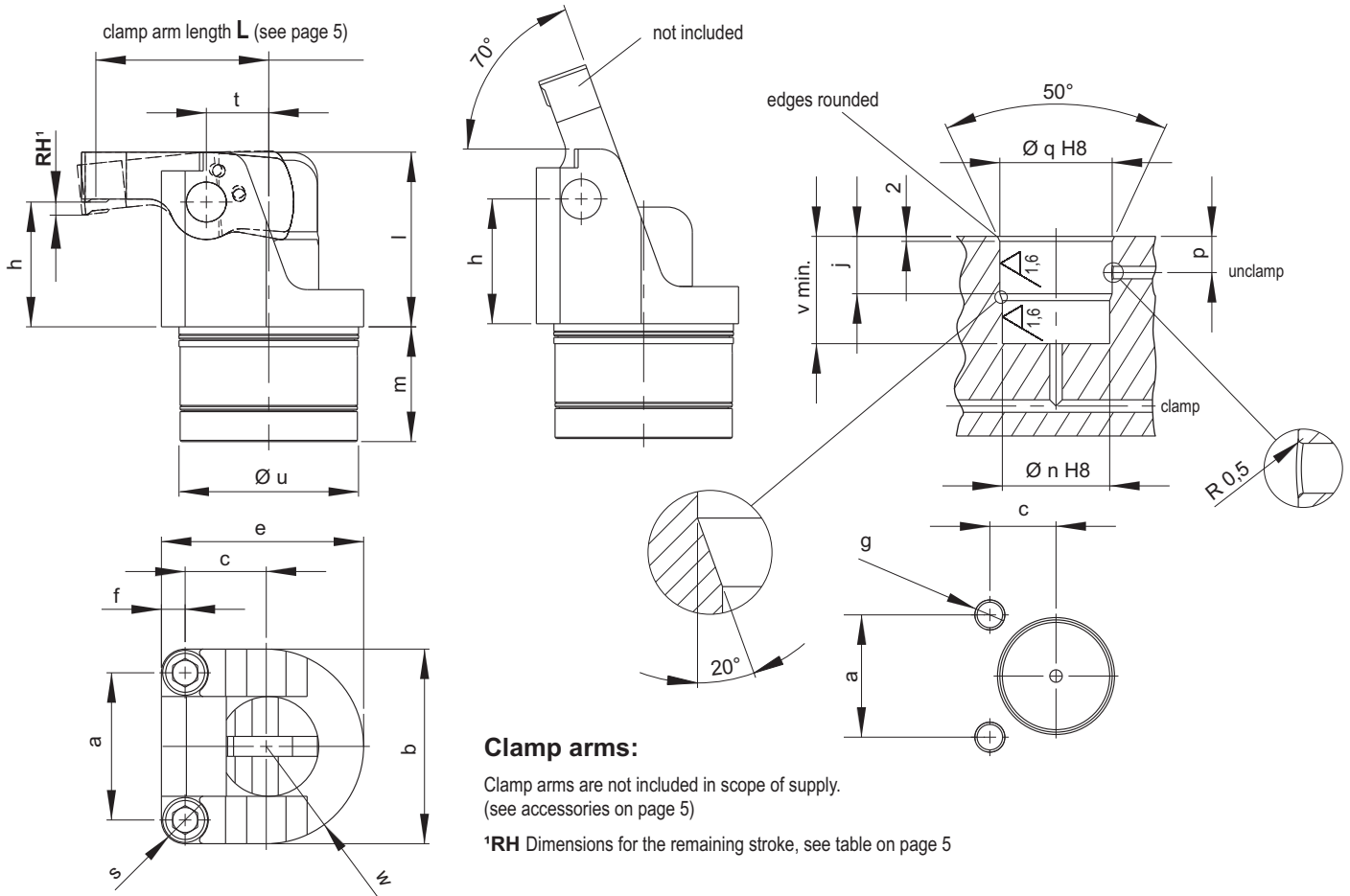
#### Calculation:

$$\text{r.e. clamp. force } F_{Sp} = \frac{F_{Kol} \times t}{L}$$

$$\text{r.e. clamp. force } F_{Sp} = \frac{2,5 \text{ kN} \times 10 \text{ mm}}{18 \text{ mm}} = 1,39 \text{ kN}$$



# Rotary lever clamps, pneumatic, double-acting



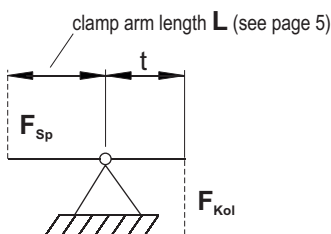
### Clamp arms:

Clamp arms are not included in scope of supply.  
(see accessories on page 5)

\*RH Dimensions for the remaining stroke, see table on page 5

| Size                               |         | 12           | 16           | 20           | 25           | 32           | 40           | 50           |
|------------------------------------|---------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Piston force at 6 bar              | [kN]    | 0,135        | 0,27         | 0,42         | 0,68         | 1,27         | 1,99         | 3,01         |
| Piston force at 6 bar, ret. stroke | [kN]    | 0,068        | 0,15         | 0,235        | 0,385        | 0,791        | 1,236        | 1,837        |
| a                                  | [mm]    | 19,5         | 25           | 30           | 38,5         | 49           | 59           | 74           |
| b                                  | [mm]    | 27           | 34           | 40           | 52           | 66           | 78           | 98           |
| c                                  | [mm]    | 9,75         | 13,5         | 16,5         | 20,75        | 26,5         | 33,5         | 42,25        |
| e                                  | [mm]    | 27           | 34           | 41           | 51,5         | 66           | 81           | 101,5        |
| f                                  | [mm]    | 3,75         | 4,5          | 5            | 6,75         | 8,5          | 9,5          | 12           |
| g                                  | [mm]    | M4x8         | M5x11        | M6x10        | M8x12        | M10x16       | M12x18       | M16x23       |
| h                                  | [mm]    | 15           | 20           | 25           | 31,25        | 40           | 50           | 62,5         |
| j                                  | [mm]    | 12           | 13           | 15           | 19           | 21           | 28           | 35           |
| l                                  | [mm]    | 21           | 28           | 35           | 43,75        | 56           | 70           | 87,5         |
| m                                  | [mm]    | 22           | 24           | 27,5         | 32           | 37           | 46           | 55           |
| n Ø                                | [mm]    | 20           | 27           | 34           | 43           | 57           | 71           | 89           |
| p                                  | [mm]    | 9,5          | 10           | 11           | 13           | 14,5         | 18,5         | 22,5         |
| q Ø                                | [mm]    | 21           | 28           | 35           | 44           | 58           | 72           | 90           |
| s (acc. to DIN 6912)               | [mm]    | M4x25        | M5x35        | M6x40        | M8x50        | M10x65       | M12x80       | M16x100      |
| t                                  | [mm]    | 7,5          | 10           | 12,5         | 15,63        | 20           | 25           | 31,25        |
| u Ø                                | [mm]    | 21           | 28           | 35           | 44           | 58           | 72           | 90           |
| v                                  | [mm]    | 22,5         | 24,5         | 28           | 33           | 38           | 47           | 56           |
| w Radius                           | [mm]    | 13,5         | 17           | 20           | 26           | 33           | 39           | 49           |
| Weight                             | [kg]    | 0,056        | 0,116        | 0,215        | 0,41         | 0,815        | 1,5          | 2,995        |
| Order numbers:                     | DHSP... | -DPA-012-001 | -DPA-016-001 | -DPA-020-001 | -DPA-025-001 | -DPA-032-001 | -DPA-040-001 | -DPA-050-001 |

Housing made of anodized aluminum, tempered piston



### Effective clamping force $F_{Sp}$ depending from piston force $F_{Kol}$ and clamp arm length $L$

#### Example:

Rotary lever clamp size 50  
 Operating pressure 6 bar  
 Piston force  $F_{Kol}$  at 6 bar = 3,010 kN  
 Measure  $t$  acc. chart = 31,25 mm  
 Clamp arm length  $L$  (page 7) = 56 mm  
 Resulting effective clamping force  $F_{Sp}$  = 1,68 kN

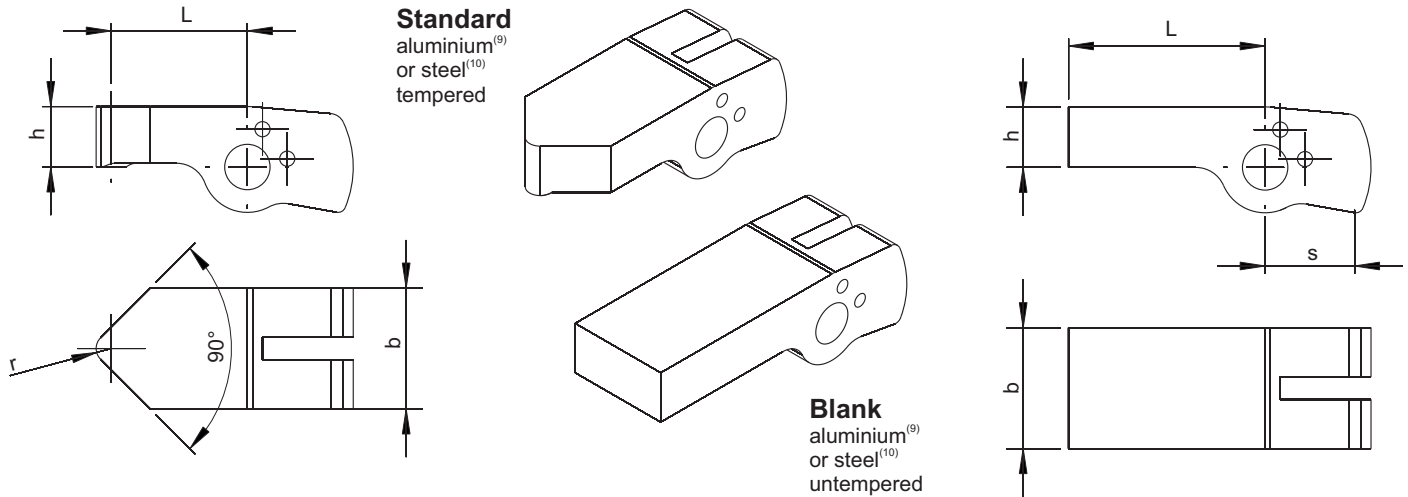
#### Calculation:

$$\text{r.e. clamp. force } F_{Sp} = \frac{F_{Kol} \times t}{L}$$

$$\text{r.e. clamp. force } F_{Sp} = \frac{3,010 \text{ kN} \times 31,25 \text{ mm}}{56 \text{ mm}} = 1,68 \text{ kN}$$



## Rotary lever clamps / Clamp arms (Accessories)



Values are valid for double-acting cylinders

| for Size | Type     | Clamp. force at 6 bar, alu. <sup>(9)</sup> | Clamp. force at 10 bar, alu. <sup>(9)</sup> | Clamp. force at 100 bar, steel <sup>(10)</sup> | Clamp. force at 400 bar, steel <sup>(10)</sup> | Residual stroke | b  | h    | L     | r   | s     | Order no. steel <sup>(10)</sup> |
|----------|----------|--------------------------------------------|---------------------------------------------|------------------------------------------------|------------------------------------------------|-----------------|----|------|-------|-----|-------|---------------------------------|
| 12       | Standard | 0,135 kN                                   | 0,225 kN                                    | 1,100 kN                                       | 4,400 kN                                       | 0,98 mm         | 12 | 6,0  | 9,0   | 1,5 | -     | 5012-003                        |
|          | Standard | 0,090 kN                                   | 0,150 kN                                    | 0,730 kN                                       | 3,100 kN                                       | 1,12 mm         | 12 | 6,0  | 13,5  | 1,5 | -     | 5012-004                        |
|          | Standard | 0,067 kN                                   | 0,110 kN                                    | 0,550 kN                                       | 2,200 kN                                       | 1,97 mm         | 12 | 6,0  | 18,0  | 1,5 | -     | 5012-005                        |
|          | Standard | 0,054 kN                                   | 0,090 kN                                    | 0,400 kN                                       | 1,750 kN                                       | 2,45 mm         | 12 | 6,0  | 22,5  | 1,5 | -     | 5012-006                        |
|          | Blank    | -                                          | -                                           | -                                              | -                                              | 1,64 mm         | 12 | 6,0  | 15,0  | -   | 9,00  | 5012-001                        |
|          | Blank    | -                                          | -                                           | -                                              | -                                              | 2,62 mm         | 12 | 6,0  | 24,0  | -   | 9,00  | 5012-002                        |
| 16       | Standard | 0,270 kN                                   | 0,450 kN                                    | 1,900 kN                                       | 8,000 kN                                       | 0,78 mm         | 16 | 8,0  | 12,0  | 2,0 | -     | 5016-006                        |
|          | Standard | 0,180 kN                                   | 0,300 kN                                    | 1,300 kN                                       | 5,300 kN                                       | 1,16 mm         | 16 | 8,0  | 18,0  | 2,0 | -     | 5016-007                        |
|          | Standard | 0,135 kN                                   | 0,225 kN                                    | 0,950 kN                                       | 4,000 kN                                       | 1,6 mm          | 16 | 8,0  | 24,0  | 2,0 | -     | 5016-008                        |
|          | Standard | 0,108 kN                                   | 0,180 kN                                    | 0,400 kN                                       | 3,200 kN                                       | 1,94 mm         | 16 | 8,0  | 30,0  | 2,0 | -     | 5016-009                        |
|          | Blank    | -                                          | -                                           | -                                              | -                                              | 1,29 mm         | 16 | 8,0  | 20,0  | -   | 10,00 | 5016-004                        |
|          | Blank    | -                                          | -                                           | -                                              | -                                              | 2,07 mm         | 16 | 8,0  | 32,0  | -   | 10,00 | 5016-005                        |
| 20       | Standard | 0,420 kN                                   | 0,700 kN                                    | 3,000 kN                                       | 12,400 kN                                      | 1,48 mm         | 20 | 10,0 | 15,0  | 2,5 | -     | 5020-006                        |
|          | Standard | 0,280 kN                                   | 0,465 kN                                    | 2,000 kN                                       | 8,200 kN                                       | 2,21 mm         | 20 | 10,0 | 22,5  | 2,5 | -     | 5020-007                        |
|          | Standard | 0,210 kN                                   | 0,350 kN                                    | 1,500 kN                                       | 6,200 kN                                       | 2,95 mm         | 20 | 10,0 | 30,0  | 2,5 | -     | 5020-008                        |
|          | Standard | 0,168 kN                                   | 0,280 kN                                    | 1,200 kN                                       | 4,900 kN                                       | 3,68 mm         | 20 | 10,0 | 37,5  | 2,5 | -     | 5020-009                        |
|          | Blank    | -                                          | -                                           | -                                              | -                                              | 2,45 mm         | 20 | 10,0 | 25,0  | -   | 12,50 | 5020-004                        |
|          | Blank    | -                                          | -                                           | -                                              | -                                              | 3,92 mm         | 20 | 10,0 | 40,0  | -   | 12,50 | 5020-005                        |
| 25       | Standard | 0,680 kN                                   | 1,130 kN                                    | 4,700 kN                                       | 19,400 kN                                      | 1,26 mm         | 25 | 12,5 | 19,0  | 3,0 | -     | 5025-006                        |
|          | Standard | 0,460 kN                                   | 0,765 kN                                    | 3,200 kN                                       | 13,400 kN                                      | 1,86 mm         | 25 | 12,5 | 28,0  | 3,0 | -     | 5025-007                        |
|          | Standard | 0,340 kN                                   | 0,565 kN                                    | 2,300 kN                                       | 9,700 kN                                       | 2,52 mm         | 25 | 12,5 | 38,0  | 3,0 | -     | 5025-008                        |
|          | Standard | 0,274 kN                                   | 0,455 kN                                    | 1,600 kN                                       | 6,700 kN                                       | 3,12 mm         | 25 | 12,5 | 47,0  | 3,0 | -     | 5025-009                        |
|          | Blank    | -                                          | -                                           | -                                              | -                                              | 2,1 mm          | 25 | 12,5 | 31,0  | -   | 15,63 | 5025-004                        |
|          | Blank    | -                                          | -                                           | -                                              | -                                              | 3,32 mm         | 25 | 12,5 | 50,0  | -   | 15,63 | 5025-005                        |
| 32       | Standard | 1,270 kN                                   | 2,110 kN                                    | 7,800 kN                                       | 32,000 kN                                      | 2,56 mm         | 32 | 16,0 | 24,0  | 4,0 | -     | 5032-006                        |
|          | Standard | 0,845 kN                                   | 1,400 kN                                    | 5,200 kN                                       | 21,300 kN                                      | 3,85 mm         | 32 | 16,0 | 36,0  | 4,0 | -     | 5032-007                        |
|          | Standard | 0,635 kN                                   | 1,050 kN                                    | 3,900 kN                                       | 16,000 kN                                      | 5,13 mm         | 32 | 16,0 | 48,0  | 4,0 | -     | 5032-008                        |
|          | Standard | 0,505 kN                                   | 0,840 kN                                    | 3,100 kN                                       | 12,800 kN                                      | 6,4 mm          | 32 | 16,0 | 60,0  | 4,0 | -     | 5032-009                        |
|          | Blank    | -                                          | -                                           | -                                              | -                                              | 4,28 mm         | 32 | 16,0 | 40,0  | -   | 20,00 | 5032-004                        |
|          | Blank    | -                                          | -                                           | -                                              | -                                              | 6,84 mm         | 32 | 16,0 | 64,0  | -   | 20,00 | 5032-005                        |
| 40       | Standard | 1,990 kN                                   | 3,310 kN                                    | 12,300 kN                                      | 50,000 kN                                      | 3,05 mm         | 40 | 20,0 | 30,0  | 5,0 | -     | 5040-011                        |
|          | Standard | 0,995 kN                                   | 2,200 kN                                    | 8,200 kN                                       | 33,300 kN                                      | 4,6 mm          | 40 | 20,0 | 45,0  | 5,0 | -     | 5040-012                        |
|          | Standard | 0,795 kN                                   | 1,650 kN                                    | 6,100 kN                                       | 25,000 kN                                      | 6,1 mm          | 40 | 20,0 | 60,0  | 5,0 | -     | 5040-013                        |
|          | Standard | 0,325 kN                                   | 1,320 kN                                    | 4,900 kN                                       | 20,000 kN                                      | 7,6 mm          | 40 | 20,0 | 75,0  | 5,0 | -     | 5040-014                        |
|          | Blank    | -                                          | -                                           | -                                              | -                                              | 5,08 mm         | 40 | 20,0 | 50,0  | -   | 25,00 | 5040-009                        |
|          | Blank    | -                                          | -                                           | -                                              | -                                              | 8,1 mm          | 40 | 20,0 | 80,0  | -   | 25,00 | 5040-010                        |
| 50       | Standard | 3,000 kN                                   | 5,000 kN                                    | 19,300 kN                                      | 78,200 kN                                      | 3,46 mm         | 50 | 25,0 | 38,0  | 6,0 | -     | 5050-010                        |
|          | Standard | 2,030 kN                                   | 3,380 kN                                    | 13,000 kN                                      | 53,000 kN                                      | 5,1 mm          | 50 | 25,0 | 56,0  | 6,0 | -     | 5050-011                        |
|          | Standard | 1,500 kN                                   | 2,500 kN                                    | 9,600 kN                                       | 39,100 kN                                      | 6,83 mm         | 50 | 25,0 | 75,0  | 6,0 | -     | 5050-012                        |
|          | Standard | 1,210 kN                                   | 2,000 kN                                    | 6,500 kN                                       | 26,500 kN                                      | 10,19 mm        | 50 | 25,0 | 112,0 | 6,0 | -     | 5050-013                        |
|          | Blank    | -                                          | -                                           | -                                              | -                                              | 5,64 mm         | 50 | 25,0 | 62,0  | -   | 31,25 | 5050-008                        |
|          | Blank    | -                                          | -                                           | -                                              | -                                              | 10,74 mm        | 50 | 25,0 | 118,0 | -   | 31,25 | 5050-009                        |

<sup>(9)</sup> Clamp arms made of aluminum are suitable only for pneumatic rotary lever clamps.

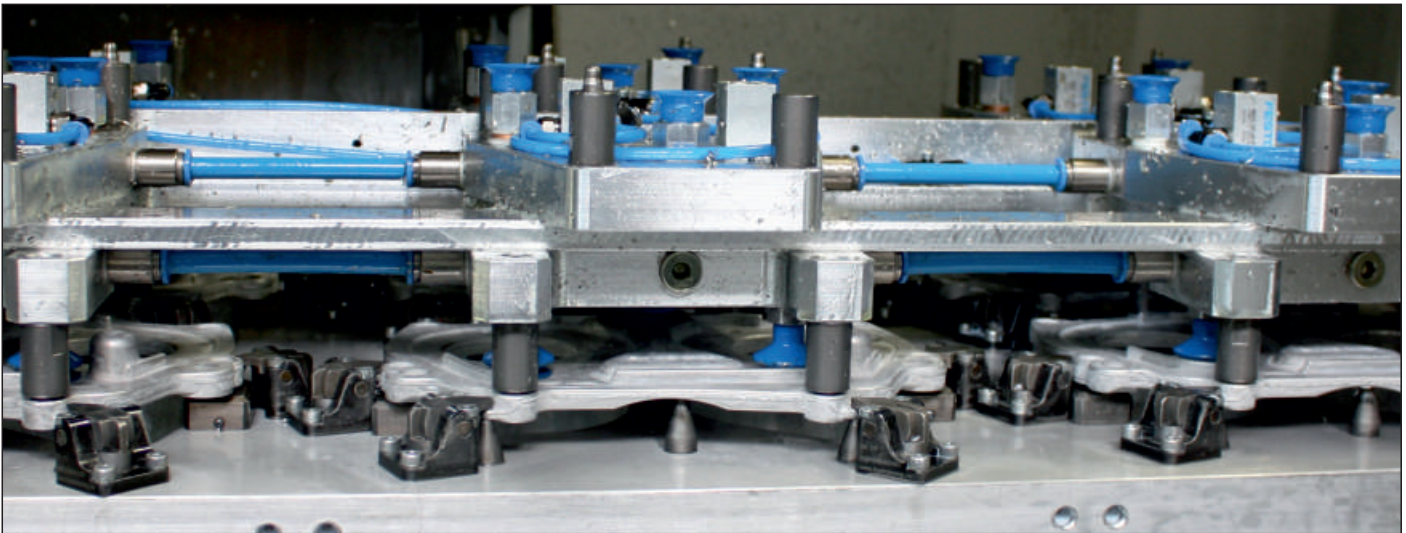
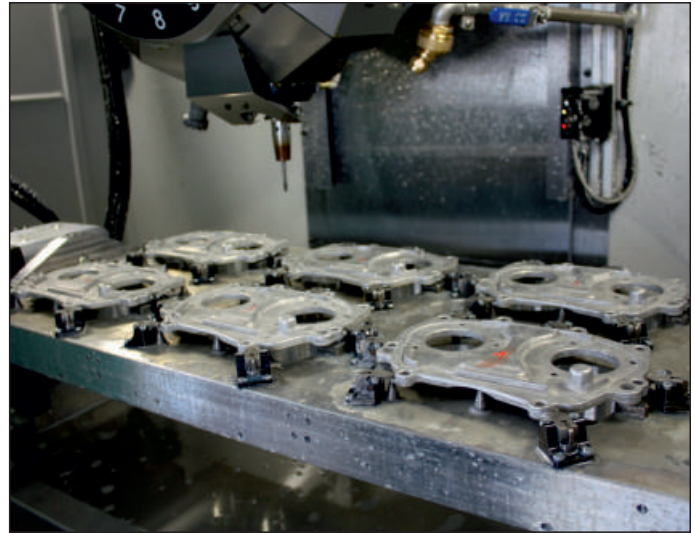
<sup>(10)</sup> Clamp arms made of steel are suitable for pneumatic and hydraulic rotary lever clamps.

Other sizes and designs available on request.

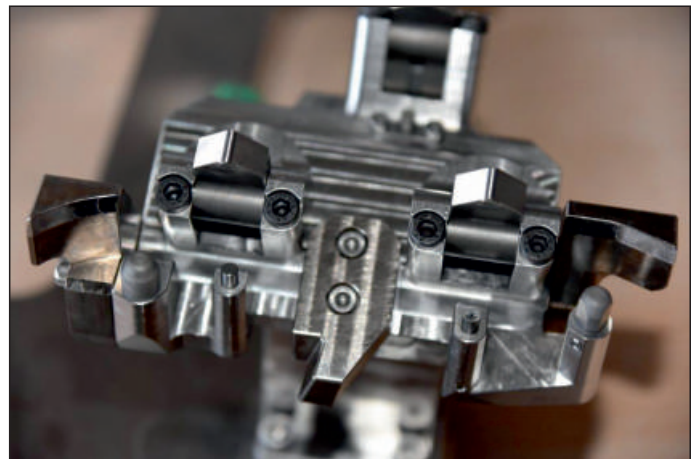
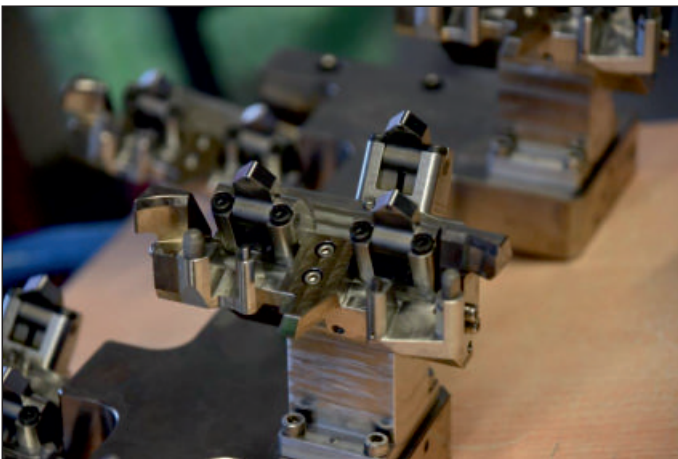




## Rotary lever clamps / Application examples



Multiple workholding fixture with double-acting rotary lever clamps (piston  $\varnothing$  12 mm) for two-sided machining, even through the fixture plate. The workholding fixture has six clamp sets, each with six rotary lever clamps. Respectively with three elements, the clamping operation takes place sequentially controlled by a sequence valve. The loading and unloading is done by a robot, which also positions the workpieces. This ensures the collision-free clamping operation.



Pneumatically operated rotary lever clamps in double-acting function with partially cranked special clamp arms