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Components



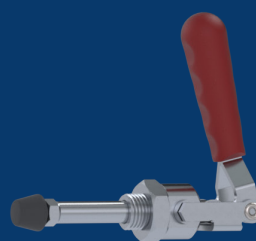
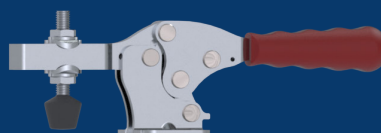
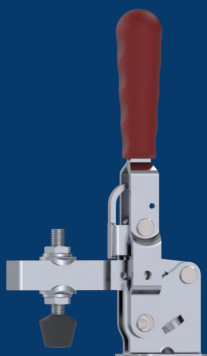
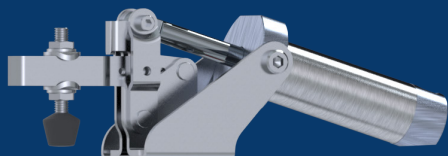
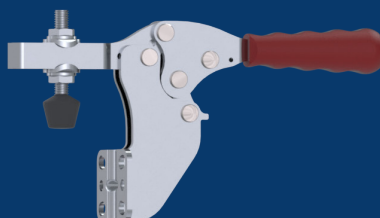
NEW

# TOGGLE CLAMPS

Manual Toggle Clamps 1

Pneumatic Toggle Clamps 2

Accessories 3











**NEW**

# TOGGLE CLAMPS

**VERSION 1.2**

2nd edition, April 2019  
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## PROPERTIES OF TOGGLE CLAMPS

Toggle clamps are versatile fixation elements that can be used in many industries. Great pushing, pulling or squeezing force can be achieved with minimal effort thanks to the mechanical transmission which is the basic operational principle of all the toggle clamps.

Mounting variations:

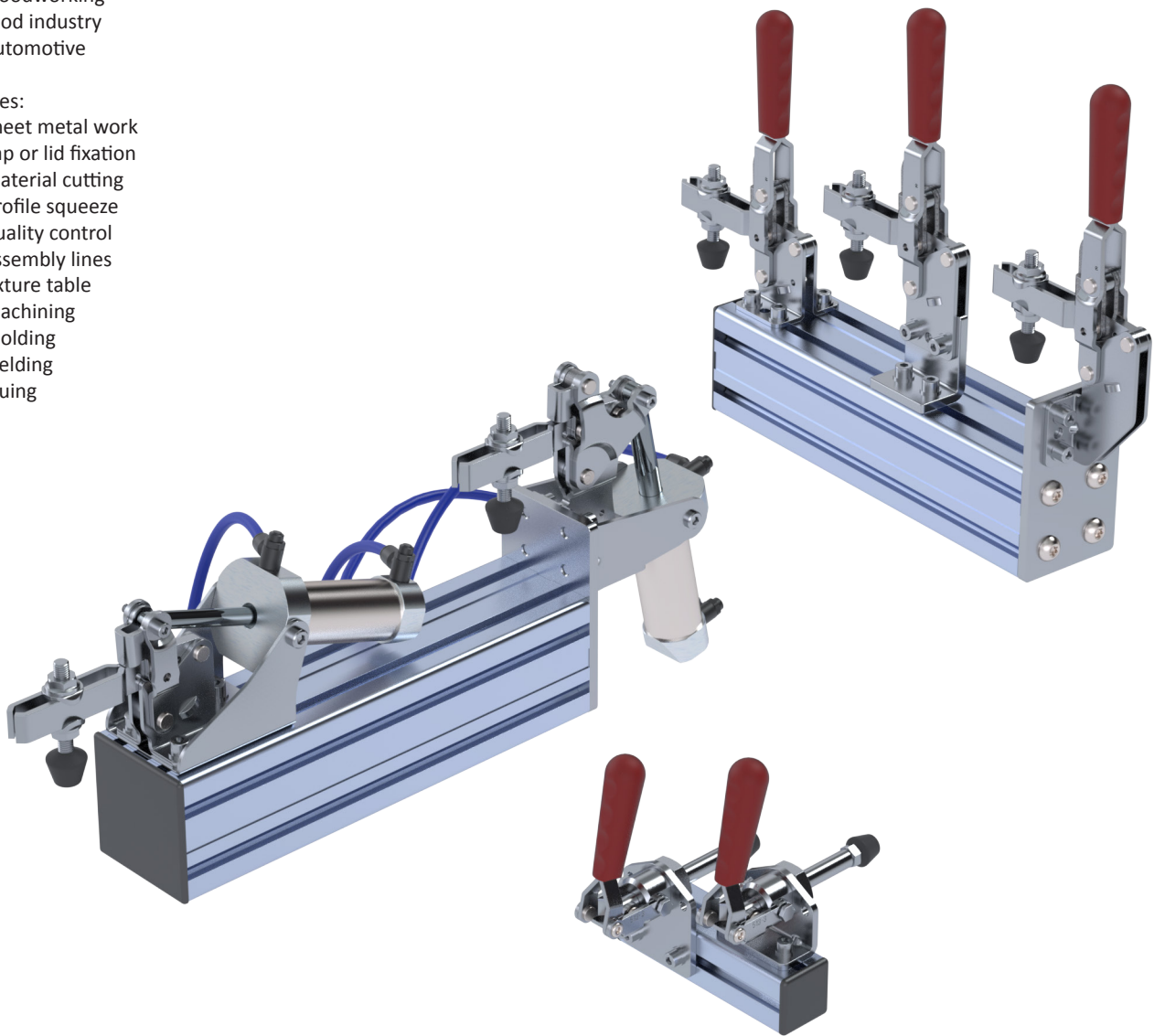
- horizontal base
- vertical base
- side base
- bore

Applicable industries:

- plastics manufacturing
- machine building
- woodworking
- food industry
- automotive

Uses:

- sheet metal work
- cap or lid fixation
- material cutting
- profile squeeze
- quality control
- assembly lines
- fixture table
- machining
- molding
- welding
- gluing





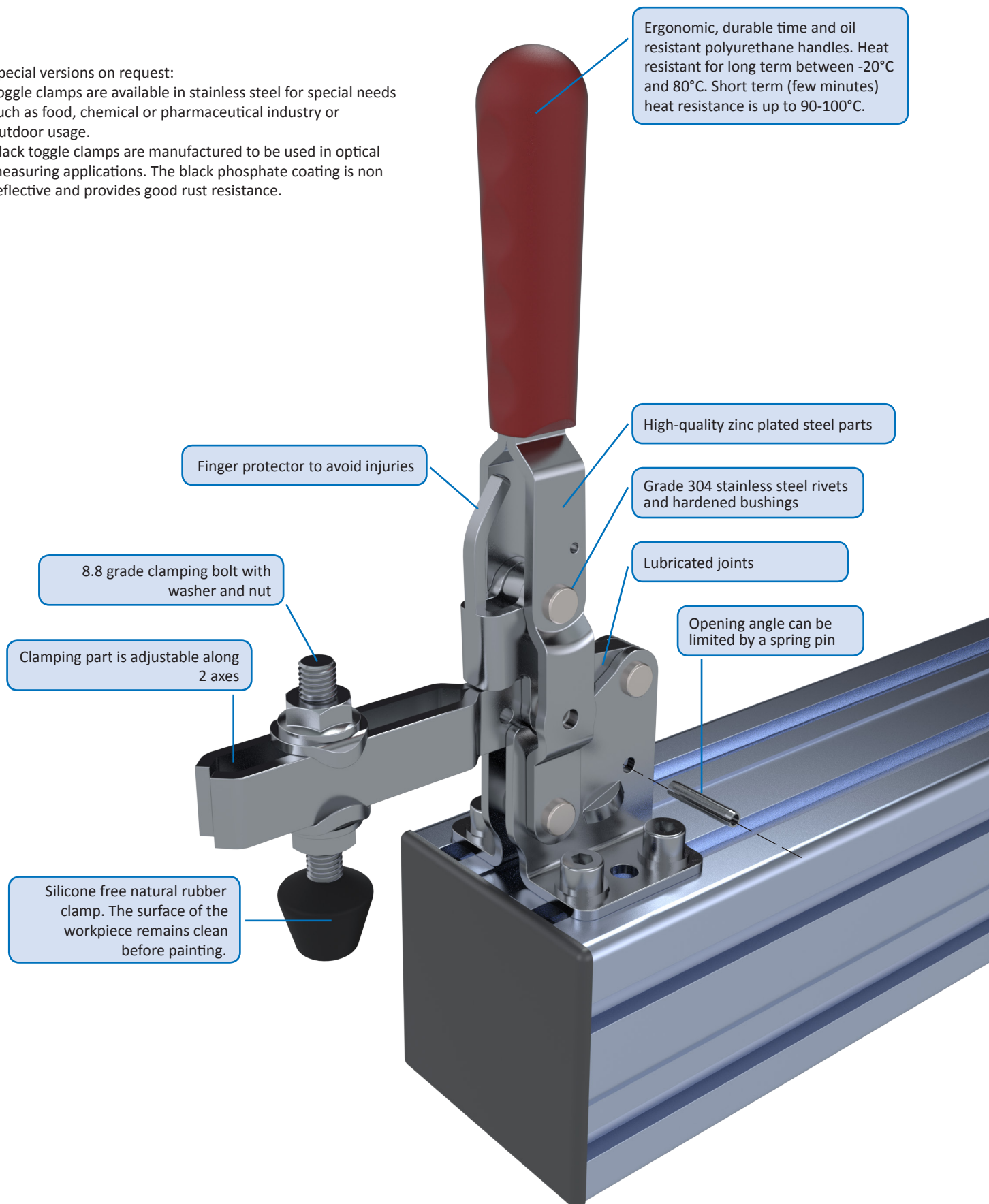


## PROPERTIES OF TOGGLE CLAMPS

Special versions on request:

Toggle clamps are available in stainless steel for special needs such as food, chemical or pharmaceutical industry or outdoor usage.

Black toggle clamps are manufactured to be used in optical measuring applications. The black phosphate coating is non reflective and provides good rust resistance.



CONTENT OVERVIEW

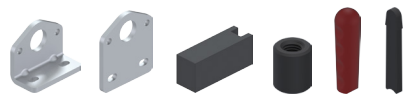




Manual Toggle Clamps 1



Pneumatic Toggle Clamps 2



Accessories 3

## TOGGLE CLAMPS – MODULAR SYSTEM

### MOUNTING INSTRUCTIONS

Weld the parts together after the clamp and its accessories are positioned according to the needs.

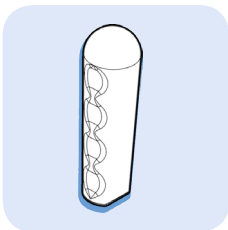
Step 1: weld the clamping bar to the clamp

Step 2: weld the handle arm to the clamp

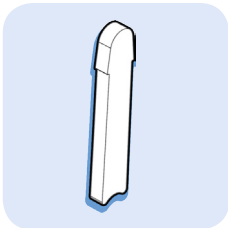
Important notice!

Welding process must be made on both sides and not only in one spot! Applying too much heat can cause deformation.

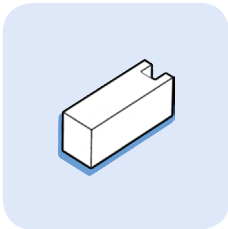
Modular toggle clamps are on page 20, 21



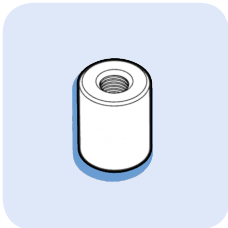
Compatible handle  
on page 36



Compatible handle bar  
on page 34

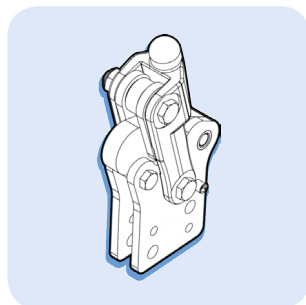


Compatible clamping  
arm on page 35



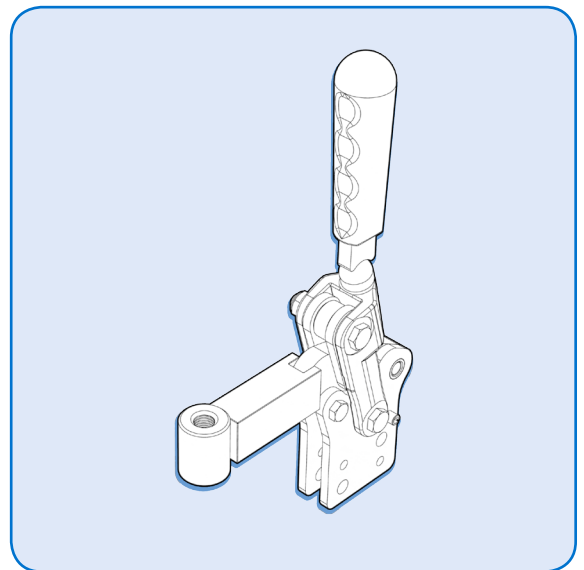
Compatible threaded  
sleeve on page 37

+



Compatible clamps  
on page 20, 21

=





## CONTENT OVERVIEW



Manual Toggle Clamps 1

Pneumatic Toggle Clamps 2

Accessories 3

## TOGGLE CLAMP WITH HORIZONTAL BASE

**Description** For easy and secure fixation of workpieces with rotating movement  
Handle and base position: horizontal

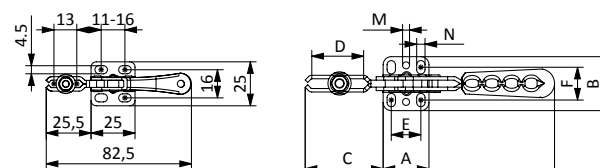
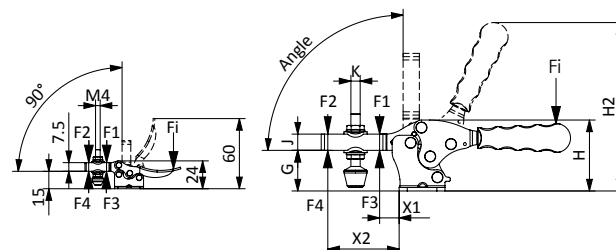
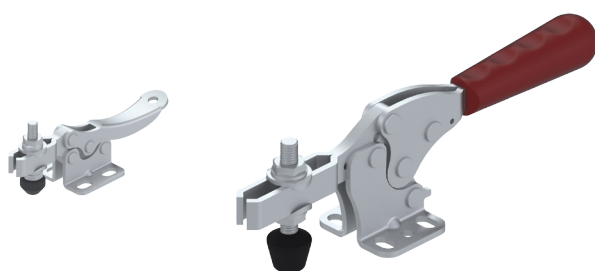
**Material** Clamp: Steel / stainless steel  
Rivets: Stainless steel SS304  
Handle grip: PUR  
Clamping rubber: Silicone free NR

**Surface** Clamp: Zinc plated / plain / black passivated

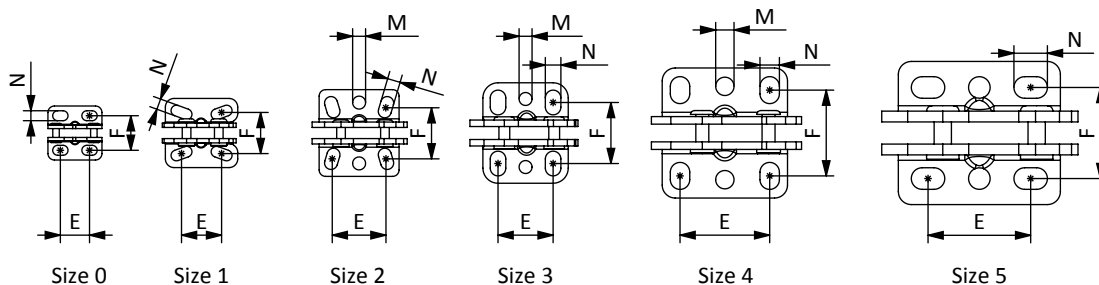
**Color** Handle: Red  
Clamping rubber: Black

**Pack Quantity** 1 piece

**Specials** Clamp with lock on request



Size 0, with metal handle

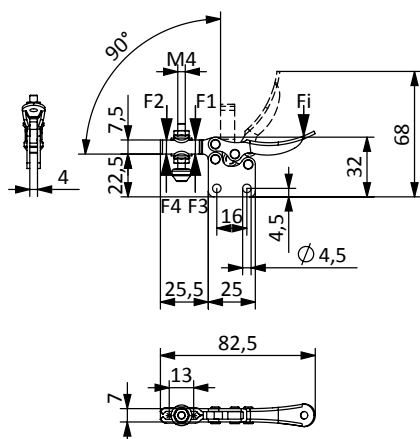
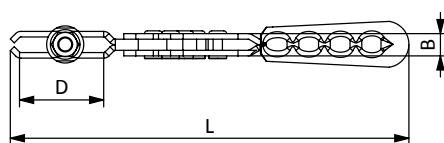
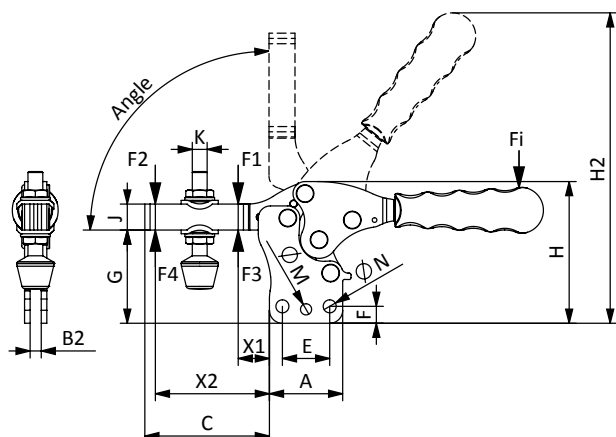


| Size | A [mm] | B [mm] | C [mm] | D [mm] | E [mm]    | F [mm]      | G [mm] | H [mm] | H2 [mm] | J [mm] | K [mm] | L [mm] | M [mm] | N [mm]    | X1 [mm] | X2 [mm] |
|------|--------|--------|--------|--------|-----------|-------------|--------|--------|---------|--------|--------|--------|--------|-----------|---------|---------|
| 0    | 25     | 25     | 25,5   | 13     | 11 – 16   | 16          | 15     | 24     | 60      | 7,5    | M4     | 82,5   |        | 4,5 x 7   | 11      | 18      |
| 1    | 33,5   | 32     | 43     | 28     | 14 – 23   | 17,5 – 20,5 | 21     | 40     | 95      | 10     | M5     | 148    |        | 5 x 10    | 15      | 33      |
| 2    | 37     | 40     | 66     | 47     | 23,7 – 26 | 20 – 27,5   | 28     | 51     | 110     | 14     | M6     | 184    | Ø 6    | 6 x 10    | 19      | 54      |
| 3    | 39,5   | 46,5   | 68     | 42     | 25,5      | 24 – 32,5   | 34     | 61     | 136     | 14     | M 8    | 215    | Ø 6    | 7 x 11,5  | 25      | 53      |
| 4    | 58     | 60     | 100    | 73     | 41,5      | 36 – 43     | 45     | 82     | 175     | 19     | M10    | 296    | Ø 8,5  | 9 x 12,5  | 27      | 83      |
| 5    | 75     | 66     | 129    | 92     | 42 – 53   | 42          | 55     | 104    | 218     | 25,5   | M12    | 345    | Ø 10   | 10 x 15,5 | 37      | 107     |

| Size | F1 [N] | F2 [N] | F3 [N] | F4 [N] | X1 [F1 : F2] | X2 [F2 : F1] | Screw    | Angle (± 5°) [°] | Weight [g] | Part #<br>Zinc plated steel | on request                |                 |
|------|--------|--------|--------|--------|--------------|--------------|----------|------------------|------------|-----------------------------|---------------------------|-----------------|
|      |        |        |        |        |              |              |          |                  |            |                             | Part #<br>Stainless steel | Part #<br>Black |
| 0    | 450    | 300    | 520    | 350    | 5:1          | 2:1          | M4 x 25  | 90               | 42         | 041TCM00H0V                 | 041TCM00H0E               | 041TCM00H0S     |
| 1    | 850    | 650    | 1000   | 800    | 7:1          | 3:1          | M5 x 35  | 90               | 125        | 041TCM00H1V                 | 041TCM00H1E               | 041TCM00H1S     |
| 2    | 1000   | 750    | 1200   | 1000   | 7:1          | 3:1          | M6 x 40  | 90               | 225        | 041TCM00H2V                 | 041TCM00H2E               | 041TCM00H2S     |
| 3    | 2300   | 1250   | 2500   | 1350   | 8:1          | 4:1          | M8 x 50  | 90               | 340        | 041TCM00H3V                 | 041TCM00H3E               | 041TCM00H3S     |
| 4    | 3500   | 1800   | 3650   | 2000   | 9:1          | 4:1          | M10 x 70 | 90               | 810        | 041TCM00H4V                 | 041TCM00H4E               | 041TCM00H4S     |
| 5    | 4500   | 2000   | 5000   | 2125   | 10:1         | 5:1          | M12 x 80 | 90               | 1520       | 041TCM00H5V                 | 041TCM00H5E               | 041TCM00H5S     |

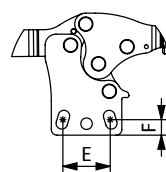
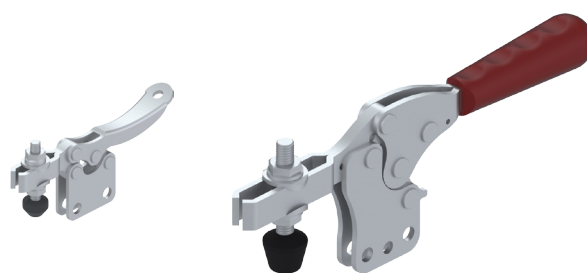
F1 - F2 : Exerting force, F3 - F4 : Holding capacity, Fi : Applied force

## TOGGLE CLAMP WITH VERTICAL BASE



Size 0 with metal handle

|                      |                                                                                                                           |
|----------------------|---------------------------------------------------------------------------------------------------------------------------|
| <b>Description</b>   | For easy and secure fixation of workpieces with rotating movement<br>Handle position: horizontal; base position: vertical |
| <b>Material</b>      | Clamp: Steel / stainless steel<br>Rivets: Stainless steel SS304<br>Handle grip: PUR<br>Clamping rubber: Silicone free NR  |
| <b>Surface</b>       | Clamp: Zinc plated / plain / black passivated                                                                             |
| <b>Color</b>         | Handle: Red<br>Clamping rubber: Black                                                                                     |
| <b>Pack Quantity</b> | 1 piece                                                                                                                   |
| <b>Specials</b>      | Clamp with lock on request                                                                                                |



Size 2

| Size | A [mm] | B [mm] | B2 [mm] | C [mm] | D [mm] | E [mm]  | F [mm] | G [mm] | H [mm] | H2 [mm] | J [mm] | K [mm] | L [mm] | M [mm] | N [mm] | X1 [mm] | X2 [mm] |
|------|--------|--------|---------|--------|--------|---------|--------|--------|--------|---------|--------|--------|--------|--------|--------|---------|---------|
| 0    | 25     | 7      | 4       | 25,5   | 13     | 16      | 4,5    | 22,5   | 32     | 68      | 7,5    | M4     | 82,5   |        | Ø4,5   | 11      | 18      |
| 1    | 33,5   | 9      | 5       | 43     | 28     | 23      | 5,5    | 31     | 50     | 105     | 10     | M5     | 148    |        | Ø5     | 15      | 33      |
| 2    | 37     | 10     | 5       | 66     | 47     | 23,7-26 | 6,5-10 | 41     | 64     | 123     | 14     | M6     | 184    | Ø6     | 6 x 10 | 19      | 54      |
| 3    | 39,5   | 12     | 6       | 68     | 42     | 25,5    | 9      | 49     | 76     | 151     | 14     | M8     | 215    | Ø6     | Ø7     | 25      | 53      |
| 4    | 58     | 16     | 8       | 100    | 73     | 41,5    | 8,5    | 65     | 102    | 195     | 19     | M10    | 296    | Ø8,5   | Ø9     | 27      | 83      |
| 5    | 75     | 20     | 10      | 129    | 92     | 47,5    | 12     | 75     | 124    | 238     | 25,5   | M12    | 345    | Ø10    | Ø10    | 37      | 107     |

| Size | F1<br>[N] | F2<br>[N] | F3<br>[N] | F4<br>[N] | X1 | Fi<br>[F1 : Fi] | Fi<br>[F2 : Fi] | Screw    | Angle (± 5°)<br>[°] | Weight<br>[g] | Part #<br><br>Zinc plated steel | on request                |                 |
|------|-----------|-----------|-----------|-----------|----|-----------------|-----------------|----------|---------------------|---------------|---------------------------------|---------------------------|-----------------|
|      |           |           |           |           |    |                 |                 |          |                     |               |                                 | Part #<br>Stainless steel | Part #<br>Black |
| 0    | 450       | 300       | 520       | 350       |    | 5:1             | 2:1             | M4 x 25  | 90                  | 42            | 041TCM00V0V                     | 041TCM00V0E               | 041TCM00V0S     |
| 1    | 850       | 650       | 1000      | 800       |    | 7:1             | 3:1             | M5 x 35  | 90                  | 125           | 041TCM00V1V                     | 041TCM00V1E               | 041TCM00V1S     |
| 2    | 1000      | 750       | 1200      | 1000      |    | 7:1             | 3:1             | M6 x 40  | 90                  | 225           | 041TCM00V2V                     | 041TCM00V2E               | 041TCM00V2S     |
| 3    | 2300      | 1250      | 2500      | 1350      |    | 8:1             | 4:1             | M8 x 50  | 90                  | 340           | 041TCM00V3V                     | 041TCM00V3E               | 041TCM00V3S     |
| 4    | 3500      | 1800      | 3650      | 2000      |    | 9:1             | 4:1             | M10 x 70 | 90                  | 810           | 041TCM00V4V                     | 041TCM00V4E               | 041TCM00V4S     |
| 5    | 4500      | 2000      | 5000      | 2125      |    | 10:1            | 5:1             | M12 x 80 | 90                  | 1520          | 041TCM00V5V                     | 041TCM00V5E               | 041TCM00V5S     |

F1 - F2 : Exerting force, F3 - F4 : Holding capacity, Fi : Applied force



## TOGGLE CLAMP WITH SIDE BASE

**Description** For easy and secure fixation of workpieces with rotating movement  
Handle position: horizontal; base position: side

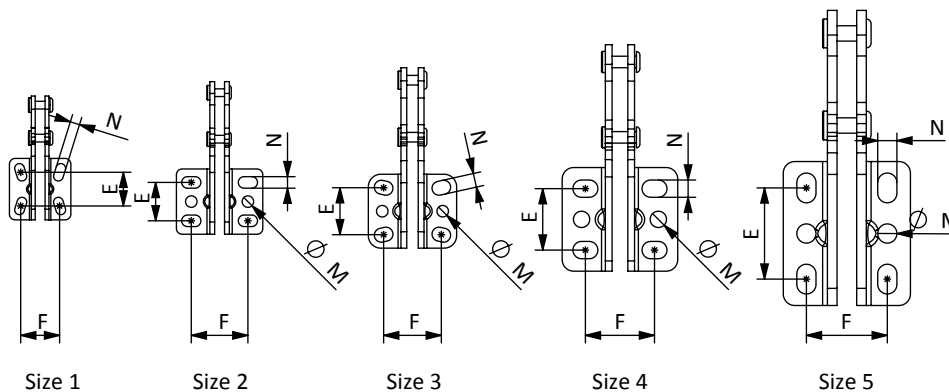
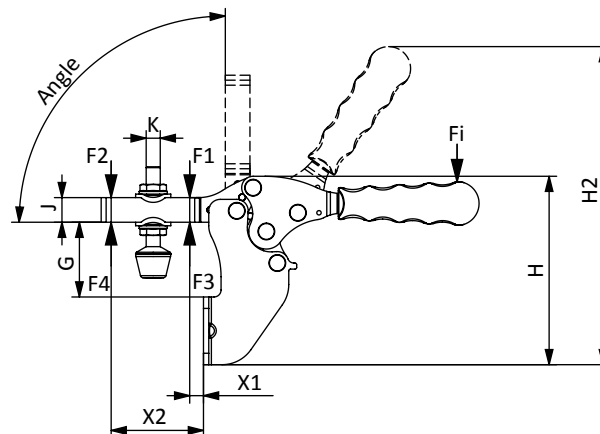
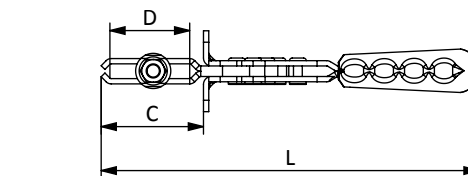
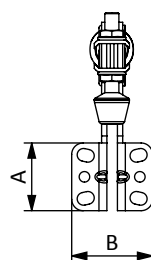
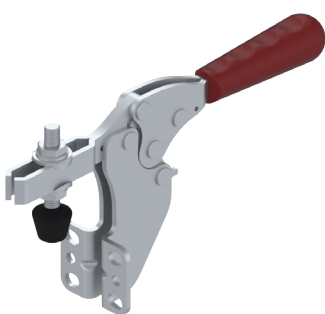
**Material** Clamp: Steel / stainless steel  
Rivets: Stainless steel SS304  
Handle grip: PUR  
Clamping rubber: Silicone free NR

**Surface** Clamp: Zinc plated / plain / black passivated

**Color** Handle: Red  
Clamping rubber: Black

**Pack Quantity** 1 piece

**Specials** Clamp with lock on request



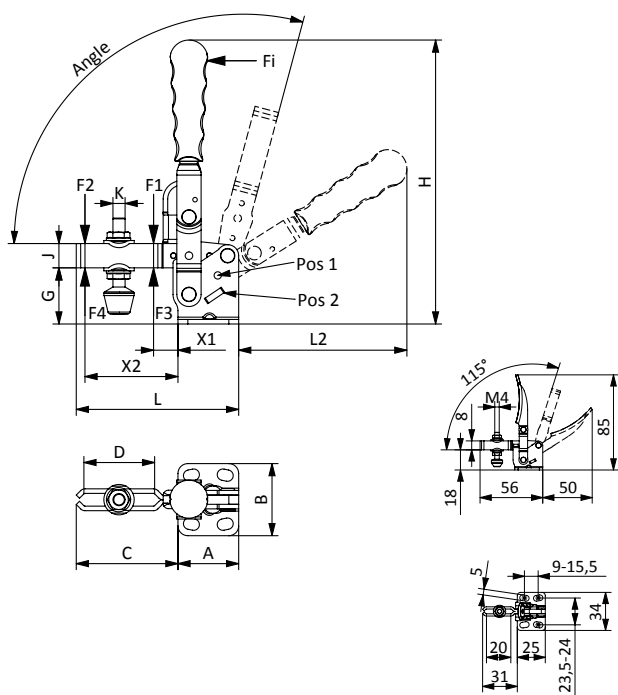
| Size | A [mm] | B [mm] | C [mm] | D [mm] | E [mm]    | F [mm]    | G [mm] | H [mm] | H2 [mm] | J [mm] | K   | L [mm] | M [mm] | N [mm]    | X1 [mm] | X2 [mm] |
|------|--------|--------|--------|--------|-----------|-----------|--------|--------|---------|--------|-----|--------|--------|-----------|---------|---------|
| 1    | 32     | 32     | 40     | 28     | 13,5-21,5 | 19-21,5   | 22,5   | 73     | 128     | 10     | M5  | 148    |        | 5 x 9     | 12      | 30      |
| 2    | 34     | 45     | 60     | 47     | 20        | 25,5-33,5 | 34     | 90     | 149     | 14     | M6  | 184    | Ø6     | 6 x 10    | 13      | 48      |
| 3    | 38,5   | 46     | 58     | 42     | 24-25     | 27,5-32,5 | 41     | 107    | 183     | 14     | M8  | 215    | Ø6     | 7 x 9,5   | 16      | 44      |
| 4    | 54     | 60     | 91     | 73     | 32        | 32-40     | 46,5   | 135    | 230     | 19     | M10 | 296    | Ø8,5   | 9 x 13    | 18      | 74      |
| 5    | 75     | 66     | 117    | 92     | 42-53     | 42        | 54     | 177    | 291     | 25,5   | M12 | 345    | Ø10    | 10 x 15,5 | 25      | 95      |

| Size | F1 [N] | F2 [N] | F3 [N] | F4 [N] | X1 [F1 : Fi] | X2 [F2 : Fi] | Screw    | Angle (± 5°) [°] | Weight [g] | Part #<br>Zinc plated steel | on request                |                 |
|------|--------|--------|--------|--------|--------------|--------------|----------|------------------|------------|-----------------------------|---------------------------|-----------------|
|      |        |        |        |        |              |              |          |                  |            |                             | Part #<br>Stainless steel | Part #<br>Black |
| 1    | 850    | 650    | 1000   | 800    | 7:1          | 3:1          | M5 x 35  | 90               | 155        | 041TCM00S1V                 | 041TCM00S1E               | 041TCM00S1S     |
| 2    | 1000   | 750    | 1200   | 1000   | 7:1          | 3:1          | M6 x 40  | 90               | 270        | 041TCM00S2V                 | 041TCM00S2E               | 041TCM00S2S     |
| 3    | 2300   | 1250   | 2500   | 1350   | 8:1          | 4:1          | M8 x 50  | 90               | 420        | 041TCM00S3V                 | 041TCM00S3E               | 041TCM00S3S     |
| 4    | 3500   | 1800   | 3650   | 2000   | 9:1          | 4:1          | M10 x 70 | 90               | 940        | 041TCM00S4V                 | 041TCM00S4E               | 041TCM00S4S     |
| 5    | 4500   | 2000   | 5000   | 2125   | 10:1         | 5:1          | M12 x 80 | 90               | 1840       | 041TCM00S5V                 | 041TCM00S5E               | 041TCM00S5S     |

F1 - F2 : Exerting force, F3 - F4 : Holding capacity, Fi : Applied force

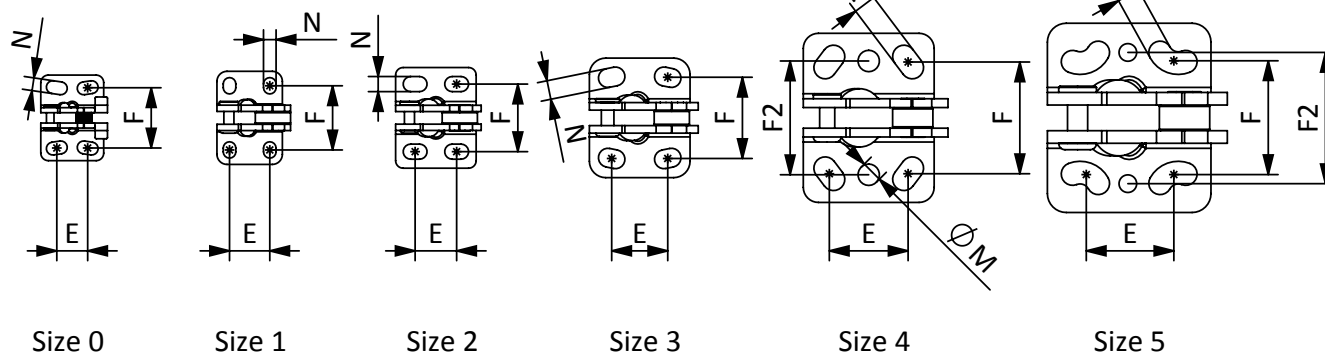
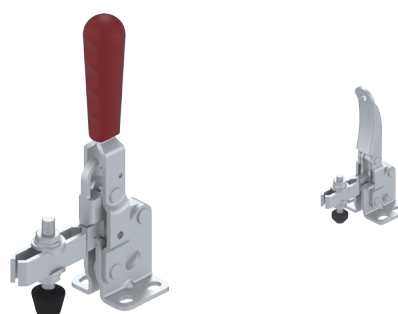


## TOGGLE CLAMP WITH HORIZONTAL BASE



Size 0 with metal handle

|                      |                                                                                                                           |
|----------------------|---------------------------------------------------------------------------------------------------------------------------|
| <b>Description</b>   | For easy and secure fixation of workpieces with rotating movement<br>Handle position: vertical; base position: horizontal |
| <b>Material</b>      | Clamp: Steel / stainless steel<br>Rivets: Stainless steel SS304<br>Handle grip: PUR<br>Clamping rubber: Silicone free NR  |
| <b>Surface</b>       | Clamp: Zinc plated / plain / black passivated                                                                             |
| <b>Color</b>         | Handle: Red<br>Clamping rubber: Black                                                                                     |
| <b>Pack Quantity</b> | 1 piece                                                                                                                   |
| <b>Specials</b>      | Clamp with lock on request                                                                                                |



| Size | A [mm] | B [mm] | C [mm] | D [mm] | E [mm]  | F [mm]    | F2 [mm] | G [mm] | H [mm] | J [mm] | K   | L [mm] | L2 [mm] | M [mm] | N [mm]     | X1 [mm] | X2 [mm] |
|------|--------|--------|--------|--------|---------|-----------|---------|--------|--------|--------|-----|--------|---------|--------|------------|---------|---------|
| 0    | 25     | 34     | 31     | 20     | 9-15,5  | 23,5-24   |         | 18     | 85     | 8      | M4  | 56     | 50      |        | 5 x 8      | 11      | 22      |
| 1    | 26     | 37     | 44     | 26     | 16      | 24-27     | 25,5    | 23     | 125    | 10     | M5  | 70     | 75      | Ø5     | 5 x 6,5    | 18      | 34      |
| 2    | 32     | 40     | 62     | 42     | 13-20   | 27        | 27      | 26     | 141    | 13     | M6  | 94     | 85      | Ø4     | 6 x 9,5    | 20      | 50      |
| 3    | 40     | 47,5   | 67     | 42     | 19-25   | 31,5-32,5 | 32,3    | 37     | 187    | 16     | M8  | 107    | 110     | Ø5     | 7,5 x 10,5 | 25      | 52      |
| 4    | 52     | 67     | 100    | 67     | 28-34,5 | 40-48,5   | 45,2    | 47     | 240    | 20     | M10 | 152    | 160     | Ø5     | 9 x 14,5   | 34      | 82      |
| 5    | 65     | 75     | 130    | 88     | 24,5-45 | 44,5-52   | 52      | 58     | 263    | 25     | M12 | 195    | 165     | Ø6     | 9 x 19,5   | 42      | 107     |

| Size | F1 [N] | F2 [N] | F3 [N] | F4 [N] | Fi [N] | Fi [N] | Screw    | Angle (± 5°)<br>Pos 1 [°] | Pos 2 [°] | Weight [g] | Part #<br>Zinc plated steel | on request                |                 |
|------|--------|--------|--------|--------|--------|--------|----------|---------------------------|-----------|------------|-----------------------------|---------------------------|-----------------|
|      |        |        |        |        |        |        |          |                           |           |            |                             | Part #<br>Stainless steel | Part #<br>Black |
| 0    | 550    | 350    | 700    | 455    | 10:1   | 5:1    | M4 x 25  | 115                       |           | 80         | 041TCM90H0V                 | 041TCM90H0E               | 041TCM90H0S     |
| 1    | 750    | 500    | 1000   | 680    | 12:1   | 8:1    | M5 x 35  | 105                       |           | 155        | 041TCM90H1V                 | 041TCM90H1E               | 041TCM90H1S     |
| 2    | 1200   | 700    | 1400   | 925    | 12:1   | 7,5:1  | M6 x 40  | 105                       |           | 230        | 041TCM90H2V                 | 041TCM90H2E               | 041TCM90H2S     |
| 3    | 2000   | 1400   | 2500   | 1560   | 11:1   | 8:1    | M8 x 50  | 105                       |           | 415        | 041TCM90H3V                 | 041TCM90H3E               | 041TCM90H3S     |
| 4    | 3000   | 2000   | 3300   | 2200   | 11,5:1 | 8:1    | M10 x 70 | 135                       | 105       | 900        | 041TCM90H4V                 | 041TCM90H4E               | 041TCM90H4S     |
| 5    | 4500   | 2500   | 5000   | 3000   | 12:1   | 7:1    | M12 x 80 | 135                       | 105       | 1540       | 041TCM90H5V                 | 041TCM90H5E               | 041TCM90H5S     |

F1 - F2 : Exerting force, F3 - F4 : Holding capacity, Fi : Applied force

## TOGGLE CLAMP WITH VERTICAL BASE

**Description** For easy and secure fixation of workpieces with rotating movement  
Handle and base position: vertical

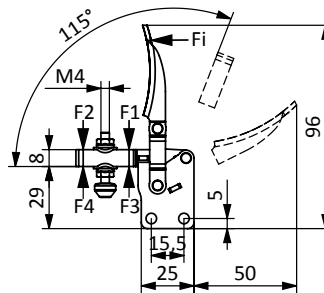
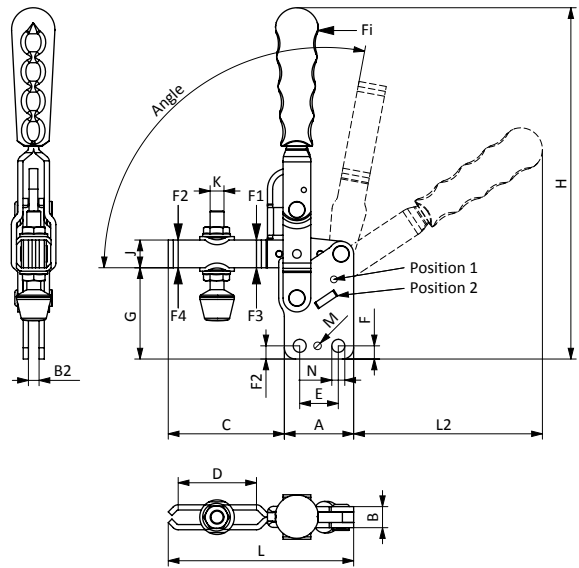
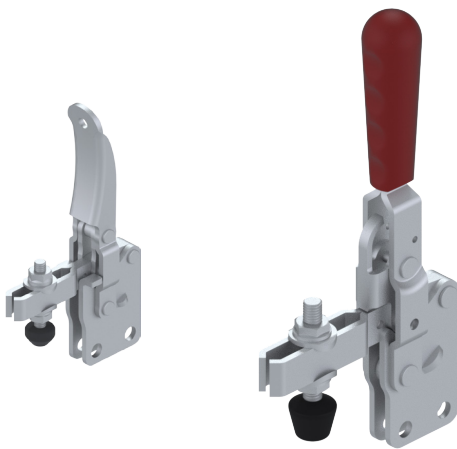
**Material** Clamp: Steel / stainless steel  
Rivets: Stainless steel SS304  
Handle grip: PUR  
Clamping rubber: Silicone free NR

**Surface** Clamp: Zinc plated / plain / black passivated

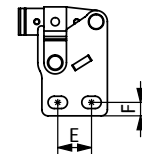
**Color** Handle: Red  
Clamping rubber: Black

**Pack Quantity** 1 piece

**Specials** Clamp with lock on request



Size 0 with metal handle



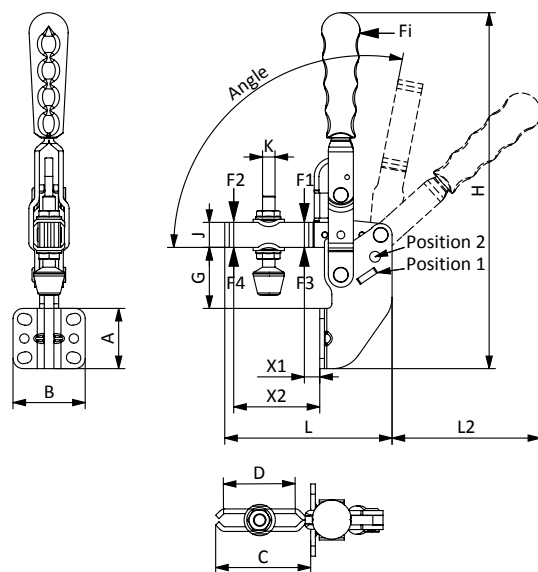
Size 2

| Size | A [mm] | B [mm] | B2 [mm] | C [mm] | D [mm] | E [mm] | F [mm] | F2 [mm] | G [mm] | H [mm] | J [mm] | K [mm] | L [mm] | L2 [mm] | M [mm] | N [mm]  | X1 [mm] | X2 [mm] |
|------|--------|--------|---------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|---------|--------|---------|---------|---------|
| 0    | 25     | 8      | 4       | 31     | 20     | 15,5   | 5      |         | 29     | 96     | 8      | M4     | 56     | 50      |        | ø 5     | 11      | 22      |
| 1    | 26     | 10     | 5       | 44     | 26     | 16     | 5      | 5,8     | 35     | 137    | 10     | M5     | 70     | 75      | ø 5    | ø 5     | 18      | 34      |
| 2    | 32     | 10     | 5       | 62     | 42     | 13-20  | 6,5    | 6,5     | 39     | 154    | 13     | M6     | 94     | 85      | ø 4    | 6 x 9,5 | 20      | 50      |
| 3    | 40     | 12     | 6       | 67     | 42     | 22,5   | 7,5    | 7,6     | 52     | 202    | 16     | M8     | 107    | 110     | ø 5    | ø 7,5   | 25      | 52      |
| 4    | 52     | 16     | 8       | 100    | 67     | 32     | 12     | 11      | 70     | 263    | 20     | M10    | 152    | 160     | ø 5    | ø 9     | 34      | 82      |
| 5    | 65     | 20     | 10      | 130    | 88     | 42     | 15,5   | 11,6    | 82     | 287    | 25     | M12    | 195    | 165     | ø 6    | ø 9     | 42      | 107     |

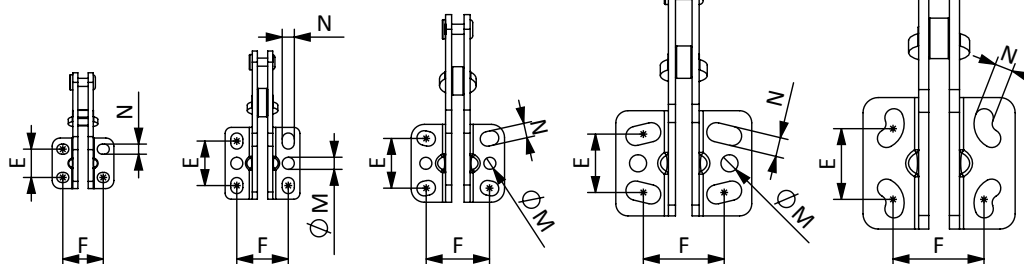
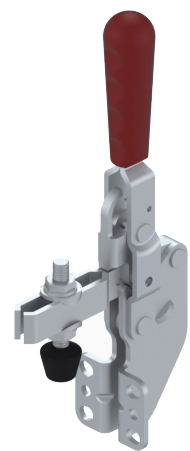
| Size | F1 [N] | F2 [N] | F3 [N] | F4 [N] | Fi           |              | Screw    | Angle (± 5°) |           | Weight [g] | Part #<br>Zinc plated steel | on request                |                 |
|------|--------|--------|--------|--------|--------------|--------------|----------|--------------|-----------|------------|-----------------------------|---------------------------|-----------------|
|      |        |        |        |        | X1 [F1 : Fi] | X2 [F2 : Fi] |          | Pos 1 [°]    | Pos 2 [°] |            |                             | Part #<br>Stainless steel | Part #<br>Black |
| 0    | 550    | 350    | 700    | 455    | 10:1         | 5:1          | M4 x 25  | 115          |           | 80         | 041TCM90V0V                 | 041TCM90V0E               | 041TCM90V0S     |
| 1    | 750    | 500    | 1000   | 680    | 12:1         | 8:1          | M5 x 35  | 105          |           | 155        | 041TCM90V1V                 | 041TCM90V1E               | 041TCM90V1S     |
| 2    | 1200   | 700    | 1400   | 925    | 12:1         | 7,5:1        | M6 x 40  | 105          |           | 230        | 041TCM90V2V                 | 041TCM90V2E               | 041TCM90V2S     |
| 3    | 2000   | 1400   | 2500   | 1560   | 11:1         | 8:1          | M8 x 50  | 105          |           | 415        | 041TCM90V3V                 | 041TCM90V3E               | 041TCM90V3S     |
| 4    | 3000   | 2000   | 3300   | 2200   | 11,5:1       | 8:1          | M10 x 70 | 135          | 105       | 900        | 041TCM90V4V                 | 041TCM90V4E               | 041TCM90V4S     |
| 5    | 4500   | 2500   | 5000   | 3000   | 12:1         | 7:1          | M12 x 80 | 135          | 105       | 1540       | 041TCM90V5V                 | 041TCM90V5E               | 041TCM90V5S     |

F1 - F2 : Exerting force, F3 - F4 : Holding capacity, Fi : Applied force

**TOGGLE CLAMP WITH SIDE BASE**



|                      |                                                                                                                          |
|----------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Description</b>   | For easy and secure fixation of workpieces with rotating movement<br>Handle position: vertical; base position: side      |
| <b>Material</b>      | Clamp: Steel / stainless steel<br>Rivets: Stainless steel SS304<br>Handle grip: PUR<br>Clamping rubber: Silicone free NR |
| <b>Surface</b>       | Clamp: Zinc plated / plain / black passivated                                                                            |
| <b>Color</b>         | Handle: Red<br>Clamping rubber: Black                                                                                    |
| <b>Pack Quantity</b> | 1 piece                                                                                                                  |
| <b>Specials</b>      | Clamp with lock on request                                                                                               |



| Size | A [mm] | B [mm] | C [mm] | D [mm] | E [mm]  | F [mm]  | G [mm] | H [mm] | J [mm] | K [mm] | L [mm] | L2 [mm] | M [mm] | N [mm]     | X1 [mm] | X2 [mm] |
|------|--------|--------|--------|--------|---------|---------|--------|--------|--------|--------|--------|---------|--------|------------|---------|---------|
| 1    | 25     | 30,5   | 38     | 26     | 14      | 19-21   | 22,5   | 150    | 10     | M5     | 70     | 75      |        | 5 x 6      | 12      | 28      |
| 2    | 35,5   | 37     | 58     | 42     | 20-24   | 25,5    | 25,5   | 175    | 13     | M6     | 94     | 85      | Ø 6    | 6 x 8      | 15      | 45      |
| 3    | 38,5   | 46     | 61     | 42     | 24-25   | 29-33   | 39     | 228    | 16     | M8     | 107    | 110     | Ø 6    | 7 x 9      | 19      | 46      |
| 4    | 52     | 67     | 91     | 67     | 27-30,5 | 32-47,5 | 48     | 292    | 20     | M10    | 152    | 160     | Ø 8,5  | 9,5 x 17,5 | 24      | 72      |
| 5    | 65     | 75,5   | 118,5  | 88     | 24,5-45 | 44,5-52 | 59     | 328    | 25     | M12    | 195    | 165     |        | 9 x 19,5   | 30      | 95      |

| Size | F1<br>[N] | F2<br>[N] | F3<br>[N] | F4<br>[N] | X1<br>[F1 : Fi] | Fi<br>[F2 : Fi] | Screw    | Angle (± 5°)<br>Pos 1 [°] | Pos 2 [°] | Weight<br>[g] | Part #<br>Zinc plated steel | on request                |                 |
|------|-----------|-----------|-----------|-----------|-----------------|-----------------|----------|---------------------------|-----------|---------------|-----------------------------|---------------------------|-----------------|
|      |           |           |           |           |                 |                 |          |                           |           |               |                             | Part #<br>Stainless steel | Part #<br>Black |
| 1    | 750       | 500       | 1000      | 680       | 12:1            | 8:1             | M5 x 35  | 135                       | 105       | 170           | 041TCM90S1V                 | 041TCM90S1E               | 041TCM90S1S     |
| 2    | 1200      | 700       | 1400      | 925       | 12:1            | 7,5:1           | M6 x 40  | 135                       | 105       | 265           | 041TCM90S2V                 | 041TCM90S2E               | 041TCM90S2S     |
| 3    | 2000      | 1400      | 2500      | 1560      | 11:1            | 8:1             | M8 x 50  | 105                       |           | 470           | 041TCM90S3V                 | 041TCM90S3E               | 041TCM90S3S     |
| 4    | 3000      | 2000      | 3300      | 2200      | 11,5:1          | 8:1             | M10 x 70 | 135                       | 105       | 1050          | 041TCM90S4V                 | 041TCM90S4E               | 041TCM90S4S     |
| 5    | 4500      | 2500      | 5000      | 3000      | 12:1            | 7:1             | M12 x 80 | 135                       | 105       | 1760          | 041TCM90S5V                 | 041TCM90S5E               | 041TCM90S5S     |

F1 - F2 : Exerting force, F3 - F4 : Holding capacity, Fi : Applied force



## TOGGLE CLAMP WITH HORIZONTAL BASE

**Description** For easy and secure fixation of workpieces with rotating movement  
Handle and clamping arm can be welded in different position  
Handle position: vertical; base position: horizontal

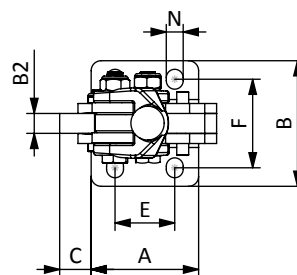
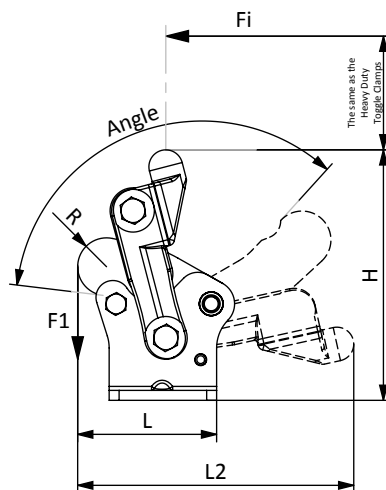
**Material** Steel / Cast steel (EN-GJS-600-3)

**Surface** Black passivated

**Color** Black

**Pack Quantity** 1 piece

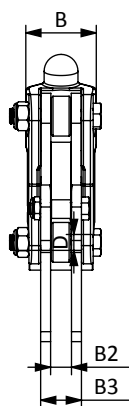
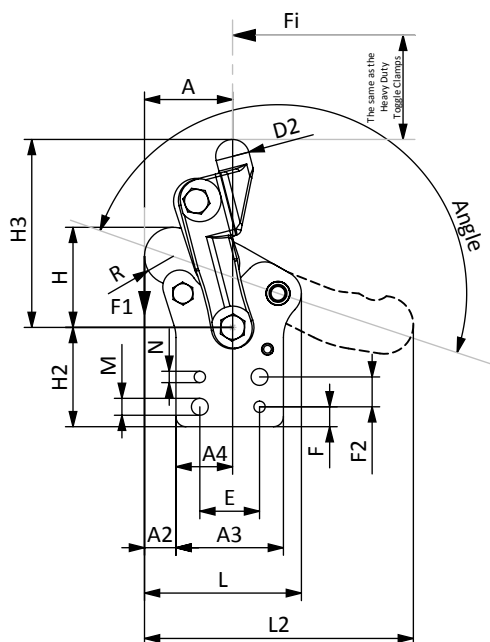
**Specials** Compatible handle see page 36  
Compatible handle bar see page 34  
Compatible clamping bar see page 35  
Compatible threaded sleeve see page 37



| Size | A [mm] | B [mm] | B2 [mm] | C [mm] | E [mm] | F [mm]  | H [mm] | L [mm] | L2 [mm] | N [mm]      | R [mm] |
|------|--------|--------|---------|--------|--------|---------|--------|--------|---------|-------------|--------|
| 2    | 36     | 48,5   | 6       | 17,5   | 20     | 30 - 34 | 72     | 56     | 90      | 6,5 x 8,5   | 9,5    |
| 4    | 54     | 63     | 10      | 16     | 30     | 43 - 46 | 126    | 79     | 138     | 8,5 x 10    | 15     |
| 6    | 70     | 74     | 12      | 32     | 45     | 51 - 53 | 159    | 112    | 188     | 10,5 x 11,5 | 18     |

| Size | F1 [N] | F1 : Fi | Angle (± 5°) [°] | Weight [g] | Part #       |
|------|--------|---------|------------------|------------|--------------|
| 2    | 2500   | 5:1     | 120              | 240        | 041TCMM90H2S |
| 4    | 7000   | 5:1     | 120              | 940        | 041TCMM90H4S |
| 6    | 11000  | 5:1     | 120              | 1820       | 041TCMM90H6S |

## TOGGLE CLAMP WITH VERTICAL BASE



- Description** For easy and secure fixation of workpieces with rotating movement  
Handle and clamping arm can be welded in different position  
Handle and base position: vertical
- Material** Steel / Cast steel (EN-GJS-600-3)
- Surface** Black passivated
- Color** Black
- Pack Quantity** 1 piece
- Specials** Compatible handle see page 36  
Compatible handle bar see page 34  
Compatible clamping bar see page 35  
Compatible threaded sleeve see page 37



| Size | A<br>[mm] | A2<br>[mm] | A3<br>[mm] | A4<br>[mm] | B<br>[mm] | B2<br>[mm] | B3<br>[mm] | D   | D2<br>[mm] | E<br>[mm] | F<br>[mm] | F2<br>[mm] | H<br>[mm] | H2<br>[mm] | H3<br>[mm] | L<br>[mm] | L2<br>[mm] | M<br>[mm] | N<br>[mm] | R<br>[mm] |
|------|-----------|------------|------------|------------|-----------|------------|------------|-----|------------|-----------|-----------|------------|-----------|------------|------------|-----------|------------|-----------|-----------|-----------|
| 2    | 36        | 17,5       | 36         | 18,5       | 23        | 6          | 12         | M6  | ø10        | 20        | 8         |            | 31        | 34         | 55         | 56        | 98         | ø6,5      |           | 9,5       |
| 4    | 44        | 16         | 54         | 28,5       | 36        | 10         | 20         | M8  | ø17        | 30        | 10        | 15         | 50        | 50         | 94,5       | 79        | 135        | ø8,5      | ø5,7      | 15        |
| 6    | 69        | 32         | 70         | 37         | 46        | 12         | 22         | M10 | ø22        | 45        | 15        | 20         | 73        | 62         | 120        | 112       | 197        | ø10,5     | ø7,7      | 18,5      |

| Size | F1<br>[N] | F1 : Fi | Angle (± 5°)<br>[°] | Weight<br>[g] | Part #       |
|------|-----------|---------|---------------------|---------------|--------------|
| 2    | 2500      | 5:1     | 180                 | 240           | 041TCMM90V2S |
| 4    | 7000      | 5:1     | 180                 | 940           | 041TCMM90V4S |
| 6    | 11000     | 5:1     | 180                 | 1820          | 041TCMM90V6S |



## TOGGLE CLAMP WITH HORIZONTAL BASE

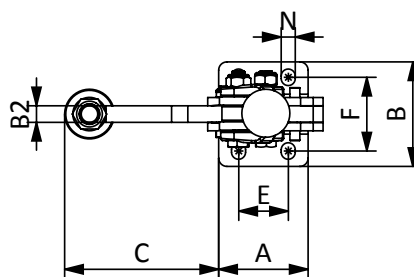
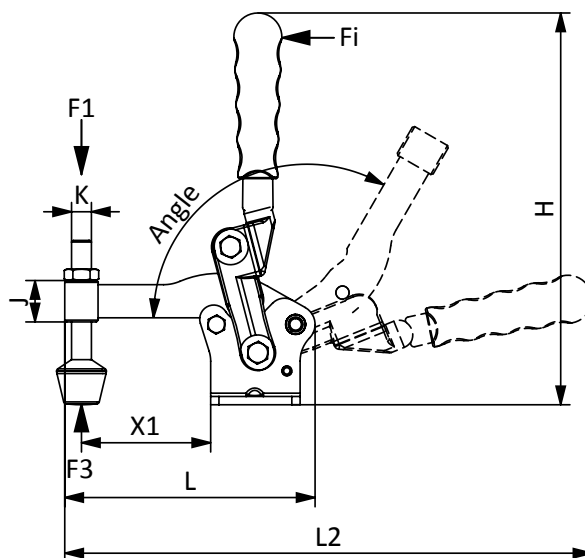
**Description** For easy and secure fixation of workpieces with rotating movement  
Handle position: vertical; base position: horizontal

**Material** Steel / Cast steel (EN-GJS-600-3)  
Handle grip: PUR  
Clamping rubber: Silicone free NR

**Surface** Clamp body: Black passivated  
Squeeze part: Zinc plated

**Color** Clamp body: Black  
Handle: Red  
Clamping rubber: Black

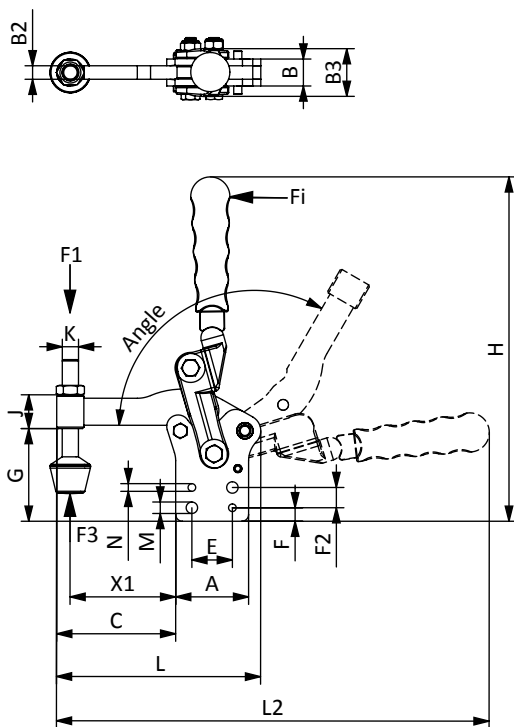
**Pack Quantity** 1 piece



| Size | A<br>[mm] | B<br>[mm] | B2<br>[mm] | C<br>[mm] | E<br>[mm] | F<br>[mm] | G<br>[mm] | H<br>[mm] | J<br>[mm] | K<br>[mm] | L<br>[mm] | L2<br>[mm] | N<br>[mm]   | X1<br>[mm] |
|------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-------------|------------|
| 2    | 36        | 48,5      | 6          | 52,5      | 20        | 30 - 34   | 28,5      | 143       | 15        | M6        | 89        | 192        | 6,5 x 8,5   | 44,5       |
| 4    | 54        | 63        | 10         | 88        | 30        | 43 - 46   | 49        | 238       | 27        | M12       | 151       | 323        | 8,5 x 10    | 78         |
| 6    | 70        | 74        | 12         | 111       | 45        | 51 - 53   | 68        | 280       | 32        | M12       | 191       | 390        | 10,5 x 11,5 | 98,5       |

| Size | F1<br>[N] | F3<br>[N] | F1:Fi | Angle (± 5°)<br>[°] | Weight<br>[g] | Part #       |
|------|-----------|-----------|-------|---------------------|---------------|--------------|
| 2    | 750       | 2500      | 5:1   | 120                 | 325           | 041TCMH90H2S |
| 4    | 1500      | 5000      | 5:1   | 120                 | 1340          | 041TCMH90H4S |
| 6    | 2000      | 6000      | 5:1   | 120                 | 2340          | 041TCMH90H6S |

## TOGGLE CLAMP WITH VERTICAL BASE



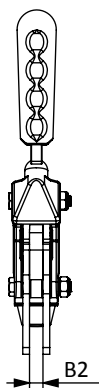
**Description** For easy and secure fixation of workpieces with rotating movement  
Handle and base position: vertical

**Material** Steel / Cast steel (EN-GJS-600-3)  
Handle grip: PUR  
Clamping rubber: Silicone free NR

**Surface** Clamp body: Black passivated  
Squeeze part: Zinc plated

**Color** Clamp body: Black  
Handle: Red  
Clamping rubber: Black

**Pack Quantity** 1 piece



| Size | A<br>[mm] | B<br>[mm] | B2<br>[mm] | B3<br>[mm] | C<br>[mm] | E<br>[mm] | F<br>[mm] | F2<br>[mm] | G<br>[mm] | H<br>[mm] | J<br>[mm] | K<br>[mm] | L<br>[mm] | L2<br>[mm] | M<br>[mm] | N<br>[mm] | X1<br>[mm] |
|------|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|------------|
| 2    | 36        | 12        | 6          | 23         | 50,5      | 20        | 8         |            | 44,5      | 159       | 15        | M6        | 89        | 192        | ø6,5      |           | 44,5       |
| 4    | 54        | 20        | 10         | 36         | 88        | 30        | 10        | 15         | 67,5      | 257       | 27        | M12       | 151       | 323        | ø8,5      | ø5,7      | 78         |
| 6    | 70        | 22        | 12         | 46         | 111       | 45        | 15        | 20         | 91        | 303       | 32        | M12       | 191       | 390        | ø10,5     | ø7,7      | 98,5       |

| Size | F1<br>[N] | F3<br>[N] | F1:Fi | Angle (± 5°)<br>[°] | Weight<br>[g] | Part #       |
|------|-----------|-----------|-------|---------------------|---------------|--------------|
| 2    | 750       | 2500      | 5:1   | 120                 | 325           | 041TCMH90V2S |
| 4    | 1500      | 10 000    | 5:1   | 120                 | 1340          | 041TCMH90V4S |
| 6    | 2000      | 12 000    | 5:1   | 120                 | 2340          | 041TCMH90V6S |



## LIGHT DUTY LATCH TOGGLE CLAMP

**Description** For easy and secure fixation of workpieces or doors with pulling force  
Handle and base position: horizontal

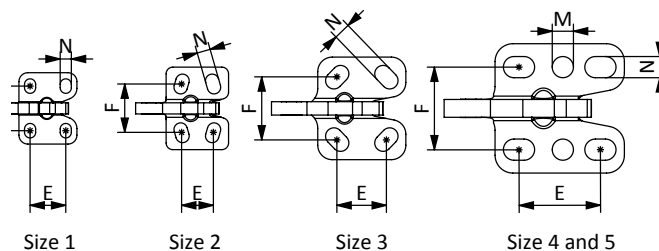
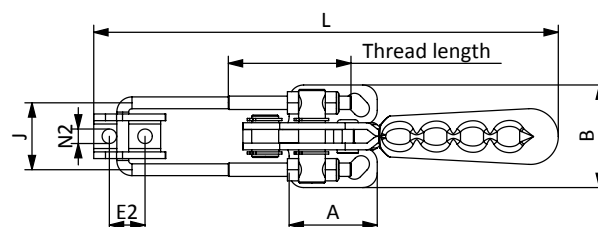
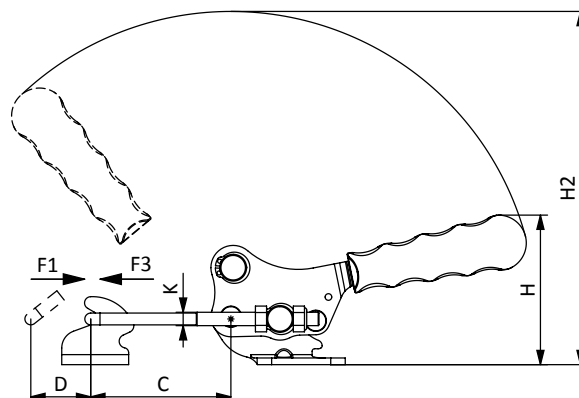
**Material** Clamp: Steel / stainless steel  
Joint pin: Steel / stainless steel  
U hook: Steel / stainless steel  
Handle grip: PUR

**Surface** Clamp: Zinc plated / plain / black passivated

**Color** Handle: Red

**Pack Quantity** 1 piece

**Specials** Clamp with lock on request



| Size | A [mm] | B [mm] | C min. [mm] | C max. [mm] | D [mm] | E [mm]  | E2 [mm] | F [mm]      | G [mm] | H [mm] | H2 [mm] | J [mm] | K [mm] | L min. [mm] | L max. [mm] | M [mm] | N [mm]     | N2 [mm]   |
|------|--------|--------|-------------|-------------|--------|---------|---------|-------------|--------|--------|---------|--------|--------|-------------|-------------|--------|------------|-----------|
| 1    | 26     | 32     | 35          | 65          | 20     | 16      | 10      | 18,5 - 21,5 | 13     | 55     | 110     | 23     | M4     | 135         | 165         |        | 5 x 6,5    | Ø5        |
| 2    | 28     | 37     | 32          | 62          | 25     | 13 - 15 | 10 - 14 | 19 - 24,5   | 17     | 58     | 120     | 23     | M4     | 142         | 172         |        | 6 x 9      | 5,5 x 7,5 |
| 3    | 39,5   | 46     | 32          | 67          | 35     | 19 - 25 | 16      | 25 - 31     | 21,5   | 67     | 160     | 30     | M6     | 177         | 212         |        | 7,5 x 11,5 | Ø6,5      |
| 4    | 58     | 58     | 45          | 95          | 44     | 32 - 41 | 18 - 21 | 37          | 27,5   | 91     | 200     | 43     | M8     | 233         | 282         | Ø9,5   | 9,5 x 14   | 8,5 x 10  |
| 5    | 58     | 58     | 45          | 127         | 44     | 32 - 41 | 18 - 21 | 37          | 27,5   | 93,5   | 204,5   | 45     | M10    | 233         | 315         | Ø9,5   | 9,5 x 14   | 8,5 x 10  |

| Size | F1 [N] | F3 [N] | Thread length [mm] | Weight [g] | Part #<br>Zinc plated steel | on request                |                 |  |
|------|--------|--------|--------------------|------------|-----------------------------|---------------------------|-----------------|--|
|      |        |        |                    |            |                             | Part #<br>Stainless steel | Part #<br>Black |  |
| 1    | 1000   | 1500   | 45                 | 135        | 041LUM00H1V                 | 041LUM00H1E               | 041LUM00H1S     |  |
| 2    | 1500   | 2000   | 45                 | 175        | 041LUM00H2V                 | 041LUM00H2E               | 041LUM00H2S     |  |
| 3    | 2200   | 3200   | 75                 | 335        | 041LUM00H3V                 | 041LUM00H3E               | 041LUM00H3S     |  |
| 4    | 7000   | 8000   | 95                 | 815        | 041LUM00H4V                 | 041LUM00H4E               | 041LUM00H4S     |  |
| 5    | 10000  | 11000  | 110                | 1185       | 041LUM00H5V                 | 041LUM00H5E               | 041LUM00H5S     |  |

F1: Exerting force, F3: Holding capacity, (Stainless steel latch clamps have 30% less tensile strength)





## HEAVY DUTY LATCH TOGGLE CLAMP

**Description** For easy and secure fixation of workpieces or doors with pulling force  
Handle and base position: horizontal

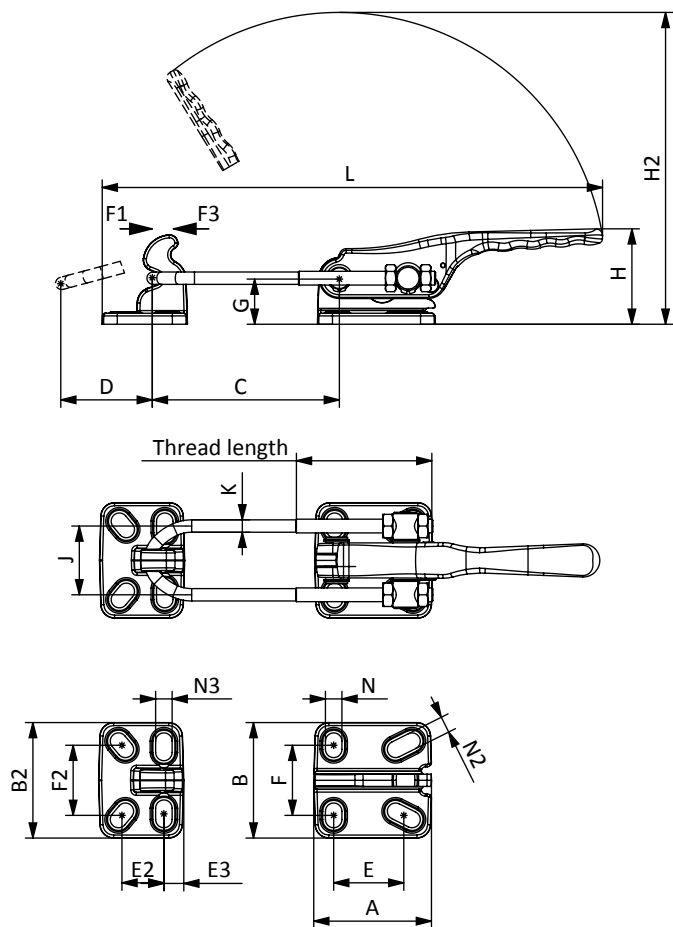
**Material** Clamp and counter piece: Cast steel (EN-GJS-600-3)  
Joint pin: Zinc plated steel  
U hook: Zinc plated steel

**Surface** Clamp and counter piece: Powder coated

**Color** Black

**Pack Quantity** 1 piece

**Specials** Clamp with lock on request



| Size | A [mm] | A2 [mm] | B [mm] | B2 [mm] | C min. [mm] | C max. [mm] | D [mm] | E [mm] | E2 [mm] | E3 [mm] | F [mm] | F2 [mm] | G [mm] | H [mm] | H2 [mm] | J [mm] | K   | L min. [mm] | L max. [mm] | N [mm]  | N2 [mm] | N3 [mm] |
|------|--------|---------|--------|---------|-------------|-------------|--------|--------|---------|---------|--------|---------|--------|--------|---------|--------|-----|-------------|-------------|---------|---------|---------|
| 4    | 86     | 62      | 84     | 84      | 50          | 135         | 80     | 45-57  | 28-33   | 15      | 45-57  | 45-57   | 33,5   | 69     | 230     | 50     | M10 | 280         | 365         | 11 x 17 | 11 x 24 | 11 x 19 |
| 5    | 86     | 66      | 84     | 84      | 50          | 70          | 80     | 45-57  | 28-35   | 20      | 45-57  | 45-57   | 33,5   | 89     | 230     | 56     | M12 | 280         | 298         | 11 x 17 | 11 x 24 | 11 x 19 |

| Size | F1 [N] | F3 [N] | Thread length [mm] | Weight [g] | Part #       |
|------|--------|--------|--------------------|------------|--------------|
| 4    | 15000  | 17000  | 130                | 1850       | 041LUMH00H4S |
| 5    | 20000  | 25000  | 65                 | 2235       | 041LUMH00H5S |



## PUSH-PULL CLAMP WITHOUT BASE

**Description** For easy and secure fixation of workpieces with pushing force  
Handle position: vertical; without base

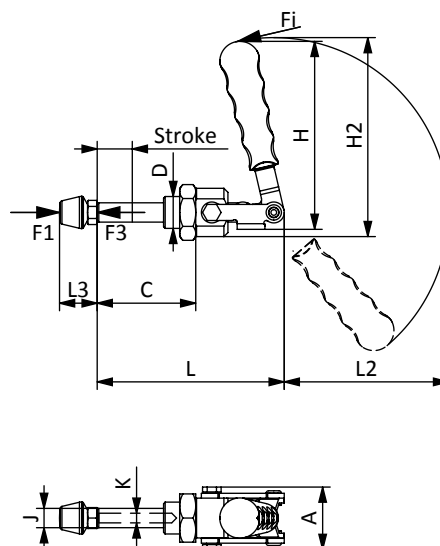
**Material** Clamp: Steel / stainless steel  
Rivets: Stainless steel SS304  
Handle grip: PUR  
Clamping rubber: Silicone free NR

**Surface** Clamp: Zinc plated / plain / black passivated

**Color** Handle: Red  
Clamping rubber: Black

**Pack Quantity** 1 piece

**Tip** Compatible bases see page 38 et sq.

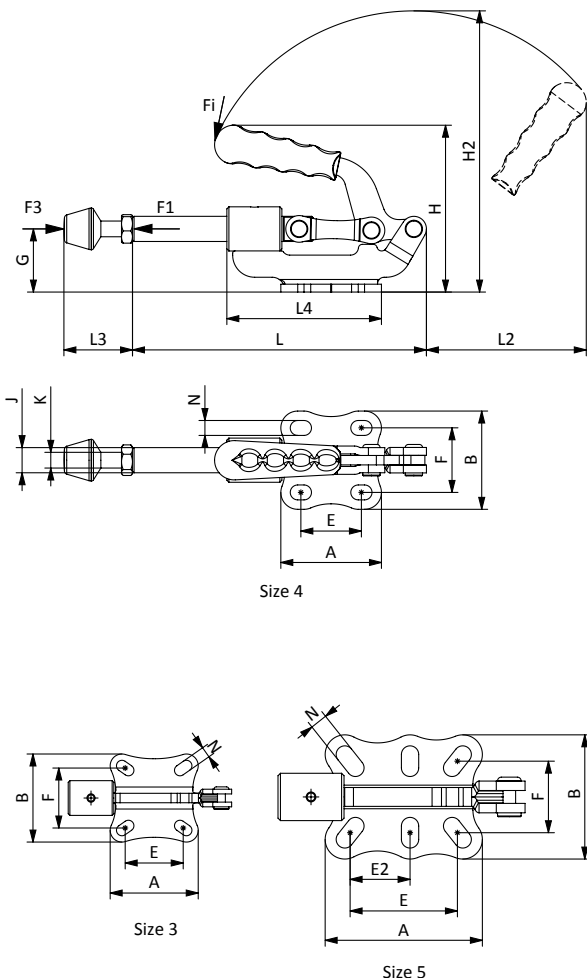


| Size | A [mm] | C [mm] | D [mm]    | H [mm] | H2 [mm] | J [mm] | K [mm] | L [mm] | L2 [mm] | L3 min. [mm] | L3 max. [mm] |
|------|--------|--------|-----------|--------|---------|--------|--------|--------|---------|--------------|--------------|
| 1    | 28     | 37     | M12 x 1,5 | 69     | 82      | 8      | M5     | 73     | 68,5    | 15           | 38           |
| 2    | 32     | 46     | M16 x 1,5 | 81,5   | 97      | 10     | M6     | 89     | 80      | 19           | 46           |
| 3    | 39     | 61     | M20 x 1,5 | 100    | 103     | 12     | M8     | 116    | 80      | 24           | 58           |
| 5    | 47     | 81     | M24 x 1,5 | 131    | 159     | 14     | M10    | 155    | 135     | 32           | 74           |
| 6    | 51     | 81     | M24 x 1,5 | 131    | 159     | 16     | M10    | 155    | 135     | 32           | 74           |

| Size | F1 [N] | F3 [N] | Fi [F1 : Fi] | Screw    | Stroke [mm] | Weight [g] | Part #<br>Zinc plated steel | on request                |                 |                 |
|------|--------|--------|--------------|----------|-------------|------------|-----------------------------|---------------------------|-----------------|-----------------|
|      |        |        |              |          |             |            |                             | Part #<br>Stainless steel | Part #<br>Black | Part #<br>Black |
| 1    | 800    | 970    | 24:1         | M5 x 35  | 22          | 95         | 041PCM90B1V                 | 041PCM90B1E               | 041PCM90B1S     |                 |
| 2    | 1500   | 1700   | 26:1         | M6 x 40  | 27          | 200        | 041PCM90B2V                 | 041PCM90B2E               | 041PCM90B2S     |                 |
| 3    | 2500   | 2640   | 27:1         | M8 x 50  | 38          | 360        | 041PCM90B3V                 | 041PCM90B3E               | 041PCM90B3S     |                 |
| 5    | 3500   | 3700   | 38:1         | M10 x 70 | 53          | 710        | 041PCM90B5V                 | 041PCM90B5E               | 041PCM90B5S     |                 |
| 6    | 4500   | 4650   | 38:1         | M10 x 70 | 53          | 780        | 041PCM90B6V                 | 041PCM90B6E               | 041PCM90B6S     |                 |

F1: Exerting force, F3: Holding capacity, Fi : Applied force

## PUSH-PULL CLAMP WITH HORIZONTAL BASE



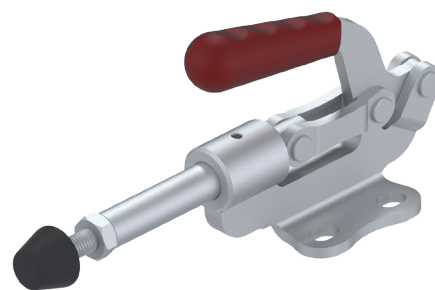
**Description** For easy and secure fixation of workpieces with pushing force  
Handle and base position: horizontal

**Material** Clamp: Steel  
Rivets: Stainless steel SS304  
Handle grip: PUR  
Clamping rubber: Silicone free NR

**Surface** Clamp: Zinc plated

**Color** Handle: Red  
Clamping rubber: Black

**Pack Quantity** 1 piece



| Size   | A [mm] | B [mm] | E [mm]      | E2 [mm]     | F [mm]  | G [mm] | H [mm] | H2 [mm] | J [mm] | K [mm] | L [mm] | L2 [mm] | L3 min. | L3 max. | L4  | N          |
|--------|--------|--------|-------------|-------------|---------|--------|--------|---------|--------|--------|--------|---------|---------|---------|-----|------------|
| 3 Ø 12 | 56     | 56     | 32,5 - 41   |             | 35 - 41 | 32     | 88     | 142     | 12     | M8     | 154    | 85      | 24      | 58      | 83  | 7 x 12     |
| 3 Ø 14 | 56     | 56     | 32,5 - 41   |             | 35 - 41 | 32     | 88     | 142     | 14     | M8     | 154    | 85      | 24      | 58      | 83  | 7 x 12     |
| 4 Ø 16 | 64     | 62     | 34,5 - 42,5 |             | 41      | 40     | 107    | 179     | 16     | M10    | 186    | 105     | 32      | 81      | 98  | 9,5 x 13,5 |
| 4 Ø 18 | 64     | 62     | 34,5 - 42,5 |             | 41      | 40     | 107    | 179     | 18     | M10    | 186    | 105     | 32      | 81      | 98  | 9,5 x 13,5 |
| 5 Ø 20 | 100    | 79     | 61,5 - 75   | 34,5 - 41,5 | 37 - 54 | 47     | 125    | 216     | 20     | M12    | 234    | 125     | 39      | 94      | 130 | 11 x 22    |

| Size  | F1 [N] | F3 [N] | Fi [F1 : Fi] | Screw    | Stroke [mm] | Weight [g] | Part #        |
|-------|--------|--------|--------------|----------|-------------|------------|---------------|
| 3 Ø12 | 2500   | 2960   | 16:1         | M8 x 50  | 38          | 390        | 041PCM00H312V |
| 3 Ø14 | 2500   | 3200   | 16:1         | M8 x 50  | 38          | 405        | 041PCM00H314V |
| 4 Ø16 | 4500   | 6650   | 23:1         | M10 x 70 | 47          | 810        | 041PCM00H416V |
| 4 Ø18 | 4500   | 7200   | 23:1         | M10 x 70 | 47          | 825        | 041PCM00H418V |
| 5 Ø20 | 7500   | 15000  | 30:1         | M12 x 80 | 55          | 1425       | 041PCM00H520V |

F1 - F2 : Exerting force, F3 - F4 : Holding capacity, Fi : Applied force



## PUSH-PULL CLAMP WITH HORIZONTAL BASE

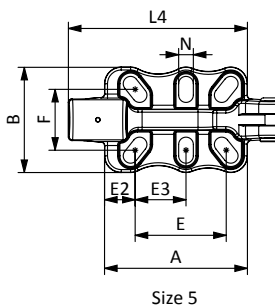
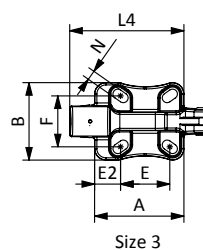
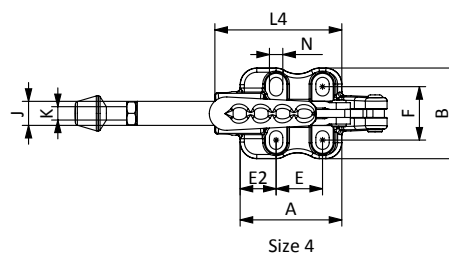
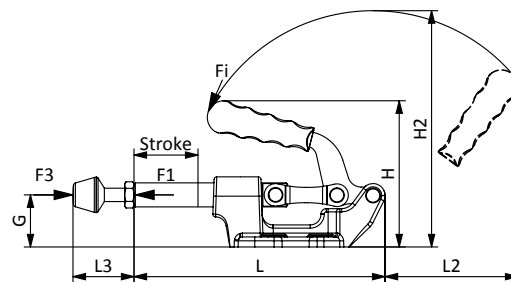
**Description** For easy and secure fixation of workpieces with pushing force  
Handle and base position: horizontal

**Material** Clamp: Cast steel (EN-GJS-600-3) / Steel  
Rivets: Stainless steel SS304  
Handle grip: PUR  
Clamping rubber: Silicone free NR

**Surface** Clamp: Black powder coated / Zinc plated

**Color** Clamp body: Black  
Handle: Red  
Clamping rubber: Black

**Pack Quantity** 1 piece



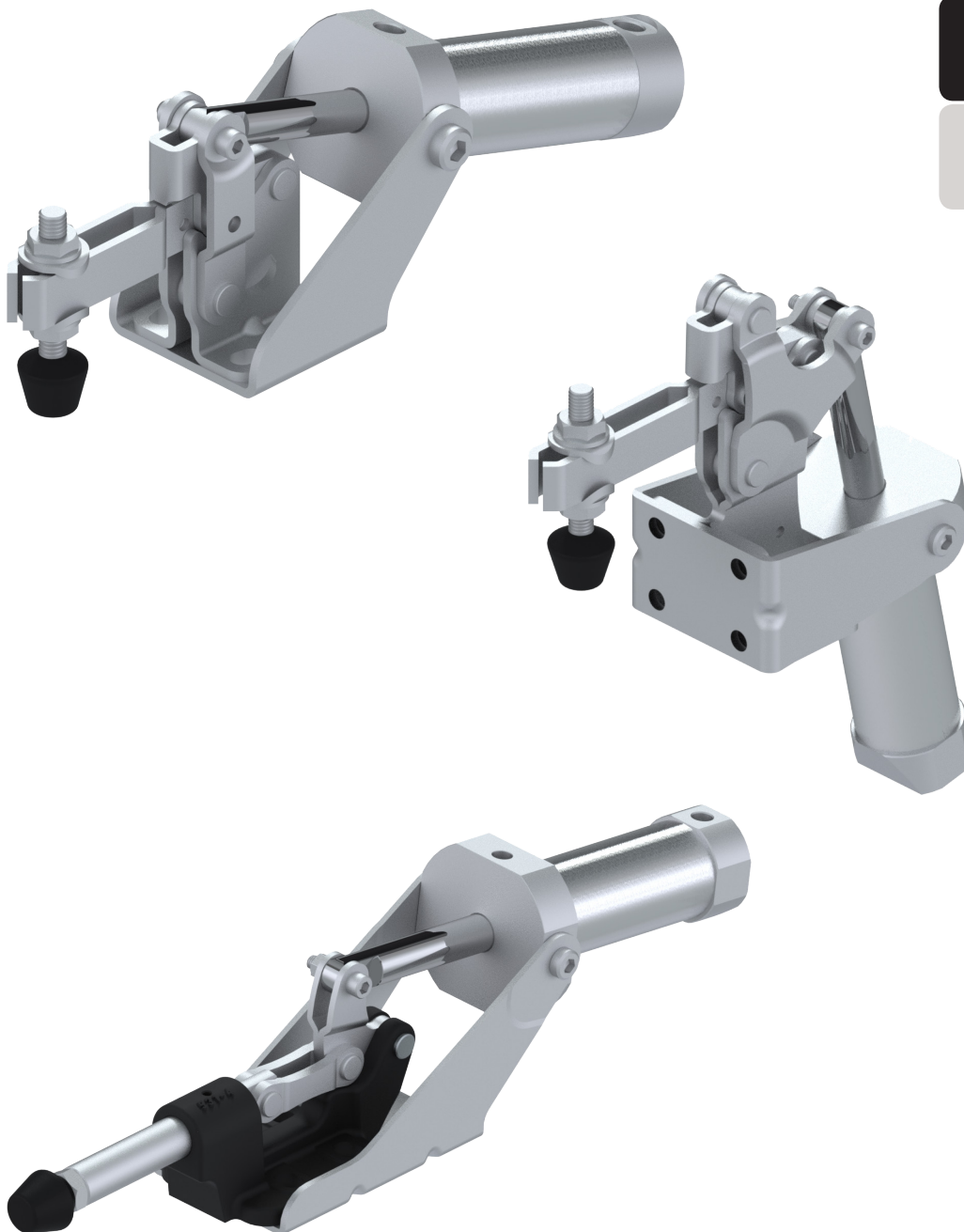
| Size   | A [mm] | B [mm] | E [mm]    | E2 [mm]     | E3 [mm]     | F [mm]  | G [mm] | H [mm] | H2 [mm] | J [mm] | K [mm] | L [mm] | L2 [mm] | L3 min. [mm] | L3 max. [mm] | L4 [mm] | N [mm]  |
|--------|--------|--------|-----------|-------------|-------------|---------|--------|--------|---------|--------|--------|--------|---------|--------------|--------------|---------|---------|
| 3 Ø 12 | 67     | 58     | 32,5 - 41 | 17,5 - 21,5 |             | 35 - 41 | 32     | 88     | 142     | 12     | M8     | 155    | 85      | 24           | 58           | 85,5    | 7 x 12  |
| 4 Ø 18 | 76     | 68     | 34,5      | 27          |             | 36 - 44 | 39     | 107    | 179     | 18     | M10    | 187    | 105     | 32           | 81           | 95      | 10 x 14 |
| 5 Ø 20 | 107    | 79     | 61,5 - 75 | 19,5 - 26   | 34,5 - 41,5 | 37 - 54 | 47     | 125    | 216     | 20     | M12    | 235    | 125     | 39           | 94           | 134     | 11 x 22 |

| Size   | F1 [N] | F3 [N] | Fi [F1 : Fi] | Screw    | Stroke [mm] | Weight [g] | Part #                         |
|--------|--------|--------|--------------|----------|-------------|------------|--------------------------------|
| 3 Ø 14 | 2500   | 4000   | 16:1         | M8 x 50  | 38          | 635        | <a href="#">041PCMH00H314S</a> |
| 4 Ø 18 | 4500   | 8800   | 23:1         | M10 x 70 | 47          | 1150       | <a href="#">041PCMH00H418S</a> |
| 5 Ø 20 | 7500   | 18450  | 30:1         | M12 x 80 | 55          | 1835       | <a href="#">041PCMH00H520S</a> |

F1: Exerting force, F3: Holding capacity, Fi : Applied force



## CONTENT OVERVIEW



Manual Toggle Clamps 1

**Pneumatic Toggle Clamps 2**

Accessories 3



## TOGGLE CLAMP WITH HORIZONTAL BASE

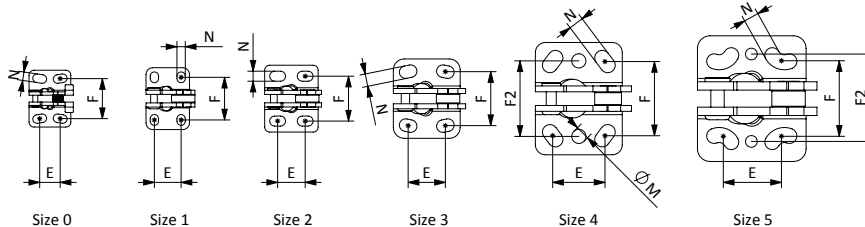
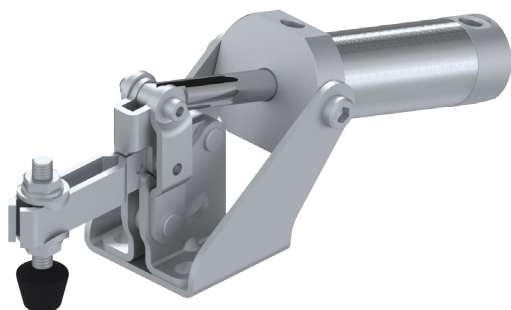
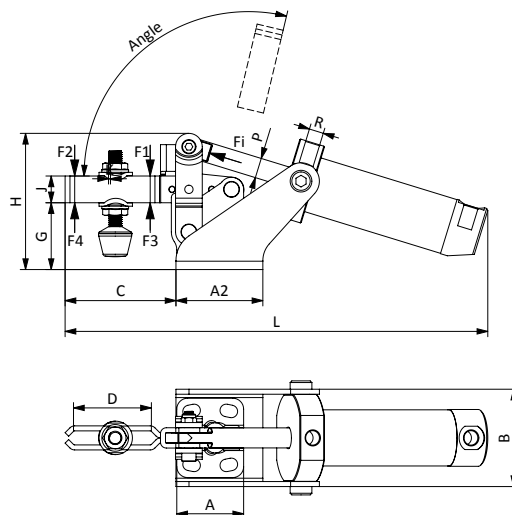
**Description** For easy and secure fixation of workpieces; operated by compressed air; double acting magnetic cylinders with air cushion  
Base position: horizontal

**Material** Clamp mechanism: Steel  
Cylinder: Aluminum / Stainless steel  
Rivets: Stainless steel SS304  
Clamping rubber: Silicone free NR

**Surface** Clamp mechanism: Zinc plated  
Cylinder: Anodized / Brushed

**Color** Clamping rubber: Black

**Pack Quantity** 1 piece



|           | A    | A2   | B    | C    | D    | E         | F         | F2   | G    | H    | J    | K    | L     | M    | N          | X1   | X2   | P    | R    | Cylinder |
|-----------|------|------|------|------|------|-----------|-----------|------|------|------|------|------|-------|------|------------|------|------|------|------|----------|
| Size [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm]      | [mm]      | [mm] | [mm] | [mm] | [mm] | [mm] | [mm]  | [mm] | [mm]       | [mm] | [mm] | [mm] | [mm] |          |
| 1 Ø16     | 26   | 34   | 44   | 42   | 26   | 16        | 24 - 27   | 25,5 | 25   | 52   | 10   | M5   | 185   | Ø5   | 5 x 6,5    | 16   | 32   | Ø6   | M5   | Ø16      |
| 1 Ø20     | 26   | 34   | 44   | 44   | 26   | 16        | 24 - 27   | 25,5 | 25   | 52   | 10   | M5   | 192   | Ø5   | 5 x 6,5    | 16   | 32   | Ø8   | G1/8 | Ø20      |
| 2         | 32   | 42   | 51   | 60   | 42   | 13 - 20   | 27        | 27   | 29   | 61   | 13   | M6   | 225   | Ø4   | 6 x 9,5    | 18   | 48   | Ø10  | G1/8 | Ø25      |
| 3         | 40   | 52   | 58   | 66,5 | 42   | 19 - 25   | 31,5-32,5 | 32,3 | 40   | 81,5 | 16   | M8   | 253,5 | Ø5   | 7,5 x 10,5 | 25   | 52   | Ø12  | G1/8 | Ø32      |
| 4         | 52   | 95   | 77   | 98,5 | 67   | 28 - 34,5 | 40-48,5   | 45,2 | 50   | 104  | 20   | M10  | 323   | Ø5   | 9 x 14,5   | 32   | 80   | Ø16  | G1/8 | Ø40      |
| 5         | 65   | 134  | 92   | 124  | 88   | 24,5 - 45 | 44,5 - 52 | 52   | 62   | 128  | 25   | M12  | 399   | Ø6   | 9 x 19,5   | 36   | 101  | Ø20  | G1/8 | Ø50      |

| Size  | F1 [N] | F2 [N] | F3 [N] | F4 [N] | Fi [N] | Vn (dm³) | Angle (± 5°) [°] | Weight 6 bar [g] | Pressure [bar] | Part #      |
|-------|--------|--------|--------|--------|--------|----------|------------------|------------------|----------------|-------------|
| 1 Ø16 | 600    | 400    | 1000   | 680    | 120    | 0,09     | 95               | 275              | 6              | 041TCPH116V |
| 1 Ø20 | 750    | 500    | 1000   | 680    | 190    | 0,14     | 95               | 360              | 6              | 041TCPH120V |
| 2     | 1200   | 700    | 1400   | 925    | 300    | 0,25     | 95               | 535              | 6              | 041TCPH2V   |
| 3     | 2000   | 1400   | 2500   | 1560   | 500    | 0,51     | 95               | 860              | 6              | 041TCPH3V   |
| 4     | 3000   | 2000   | 3300   | 2200   | 750    | 1,04     | 95               | 1690             | 6              | 041TCPH4V   |
| 5     | 4500   | 2500   | 5000   | 3000   | 1100   | 2        | 95               | 3090             | 6              | 041TCPH5V   |

F1 - F2 : Exerting force, F3 - F4 : Holding capacity, Fi : Applied force

Vn: air consumption per double stroke in dm³ at 6 bar.



## TOGGLE CLAMP WITH SIDE BASE

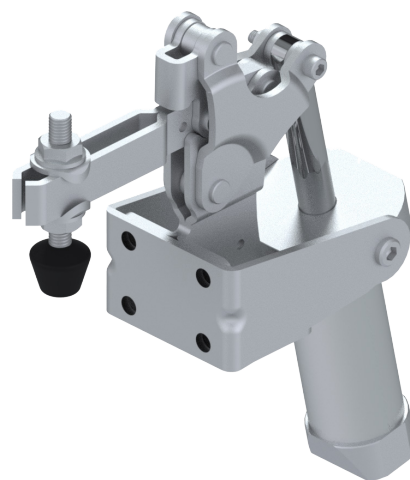
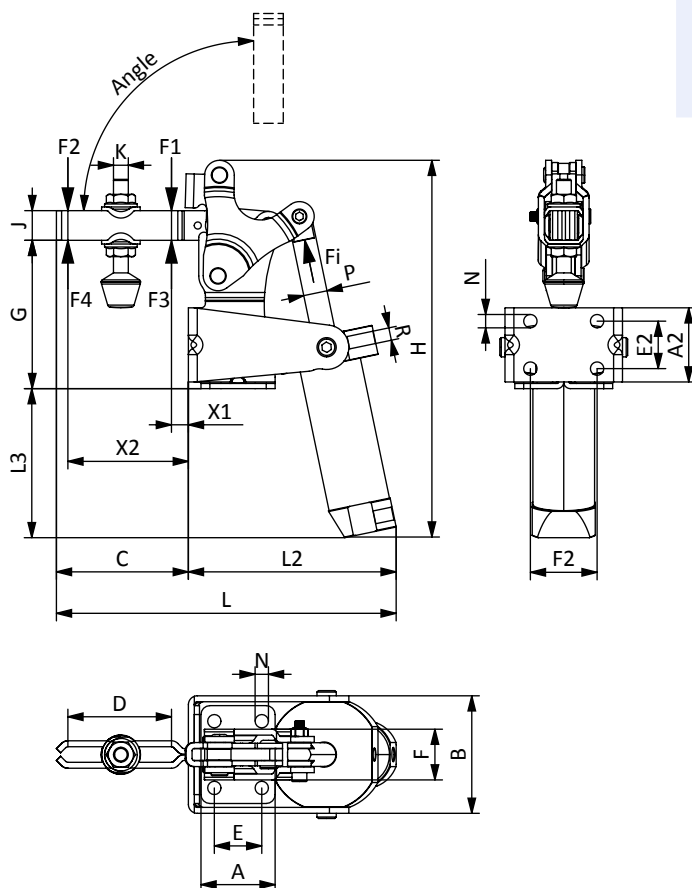
**Description** For easy and secure fixation of workpieces; operated by compressed air; double acting magnetic cylinders with air cushion  
Base position: side

**Material** Clamp mechanism: Steel  
Cylinder: Aluminum / Stainless steel  
Rivets: Stainless steel SS304  
Clamping rubber: Silicone free NR

**Surface** Clamp mechanism: Zinc plated  
Cylinder: Anodized / Brushed

**Color** Clamping rubber: Black

**Pack Quantity** 1 piece



| Size | A [mm] | A2 [mm] | B [mm] | C [mm] | D [mm] | E [mm] | E2 [mm] | F [mm]      | F2 [mm]     | G [mm] | H [mm] | J [mm] | K [mm] | L [mm] | L2 [mm] | L3 [mm] | N [mm] | X1 [mm] | X2 [mm] | P [mm] | R [mm] | Cylinder |
|------|--------|---------|--------|--------|--------|--------|---------|-------------|-------------|--------|--------|--------|--------|--------|---------|---------|--------|---------|---------|--------|--------|----------|
| 2    | 26     | 26      | 51     | 54     | 42     | 12,5   | 12,5    | 25 - 29     | 25 - 29     | 65     | 180    | 13     | M6     | 146    | 92      | 82      | 6 x 8  | 12      | 42      | Ø10    | G1/8   | Ø25      |
| 3    | 32     | 32      | 60     | 57     | 42     | 16     | 16      | 23,5 - 27,5 | 23,5 - 27,5 | 70,5   | 210    | 16     | M8     | 164    | 106     | 98      | 7 x 9  | 15      | 42      | Ø12    | G1/8   | Ø32      |
| 4    | 50     | 50      | 79     | 89     | 67     | 32     | 32      | 45          | 45          | 100    | 255    | 20     | M10    | 230    | 141     | 101     | 9      | 22      | 70      | Ø16    | G1/8   | Ø40      |
| 5    | 65     | 65      | 91     | 113    | 94     | 41,5   | 41,5    | 57          | 57          | 130    | 311    | 25     | M12    | 286    | 172     | 114     | 11     | 25      | 91      | Ø20    | G1/8   | Ø50      |

| Size | F1 [N] | F2 [N] | F3 [N] | F4 [N] | Fi [N] | Vn (dm³) | Angle (± 5°) [°] | Weight 6 bar [g] | Pressure [bar] | Part #    |
|------|--------|--------|--------|--------|--------|----------|------------------|------------------|----------------|-----------|
| 2    | 1200   | 700    | 1400   | 925    | 300    | 0,25     | 90               | 570              | 6              | 041TCPS2V |
| 3    | 2000   | 1400   | 2500   | 1560   | 500    | 0,51     | 90               | 910              | 6              | 041TCPS3V |
| 4    | 3000   | 2000   | 3300   | 2200   | 750    | 1,04     | 90               | 1945             | 6              | 041TCPS4V |
| 5    | 4500   | 2500   | 5000   | 3000   | 1100   | 2        | 90               | 3678             | 6              | 041TCPS5V |

F1 - F2 : Exerting force, F3 - F4 : Holding capacity, Fi : Applied force

Vn: air consumption per double stroke in dm³ at 6 bar



## PUSH-PULL TOGGLE CLAMP

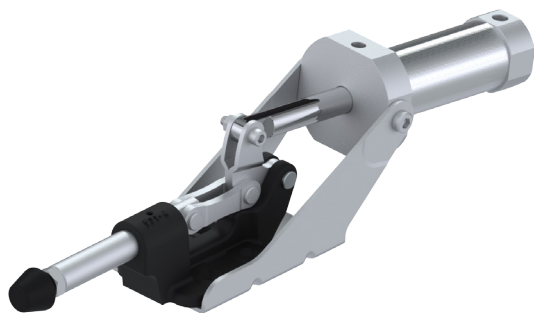
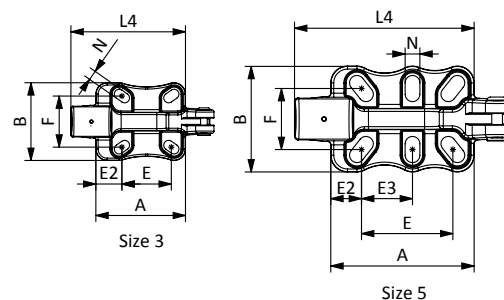
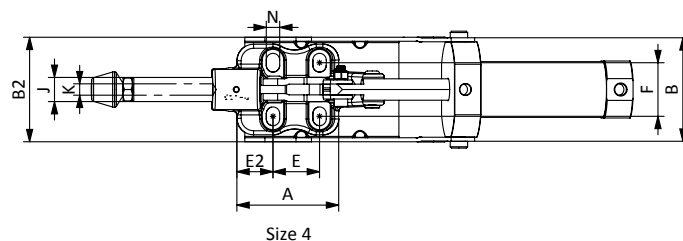
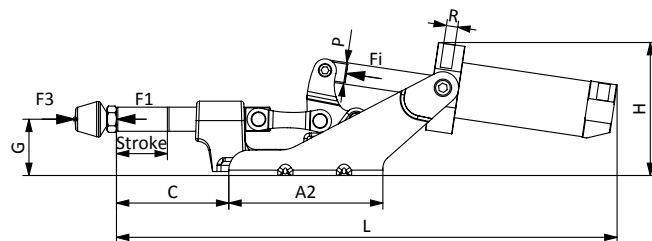
**Description** For easy and secure fixation of workpieces with pushing force; operated by compressed air; double acting magnetic cylinders with air cushion  
Base position: horizontal

**Material** Clamp mechanism: Cast steel (EN-GJS-600-3) / Steel  
Cylinder: Aluminum / Stainless steel  
Rivets: Stainless steel SS304  
Clamping rubber: Silicone free NR

**Surface** Clamp mechanism: Powder coated / Zinc plated  
Cylinder: Anodized / Brushed

**Color** Clamp body: Black  
Clamping rubber: Black

**Pack Quantity** 1 piece



| Size  | A<br>[mm] | A2<br>[mm] | B<br>[mm] | B2<br>[mm] | C<br>[mm] | E<br>[mm] | E2<br>[mm]  | F<br>[mm] | G<br>[mm] | H<br>[mm] | J<br>[mm] | K<br>[mm] | L<br>[mm] | N<br>[mm] | P<br>[mm] | R<br>[mm] | Cylinder |
|-------|-----------|------------|-----------|------------|-----------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
| 3 Ø14 | 67        | 100        | 58        | 68         | 70        | 32,5 - 41 | 17,5 - 21,5 | 35 - 41   | 35        | 79        | 14        | M8        | 312       | 7 x 12    | Ø12       | G1/8      | Ø32      |
| 4 Ø18 | 76        | 115        | 77        | 78         | 84        | 34,5      | 27          | 36 - 44   | 42        | 100       | 18        | M10       | 372       | 10 x 14   | Ø16       | G1/8      | Ø40      |

| Size  | F1<br>[N] | F3<br>[N] | Fi<br>[N] | Vn<br>[dm³] | Stroke<br>[mm] | Weight<br>[g] | Pressure<br>[bar] | Part #       |
|-------|-----------|-----------|-----------|-------------|----------------|---------------|-------------------|--------------|
| 3 Ø14 | 2500      | 4000      | 500       | 0,51        | 23             | 1250          | 6                 | 041PCPHH314S |
| 4 Ø18 | 4500      | 8800      | 750       | 1,04        | 33             | 2140          | 6                 | 041PCPHH418S |

F1: Exerting force, F3 : Holding capacity, Fi: Applied force

Vn: air consumption per double stroke in dm³ at 6 bar.





## CONTENT OVERVIEW



Manual Toggle Clamps 1

Pneumatic Toggle Clamps 2

Accessories 3



HANDLE BAR

- Description

Handle bar for Modular toggle clamps
- Material

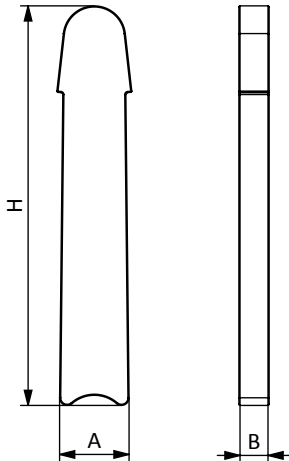
Steel
- Surface

Black passivated
- Color

Black
- Pack Quantity

1 piece
- Tip

Compatible handles see page 38  
Compatible toggle clamps see page 20 et sq.

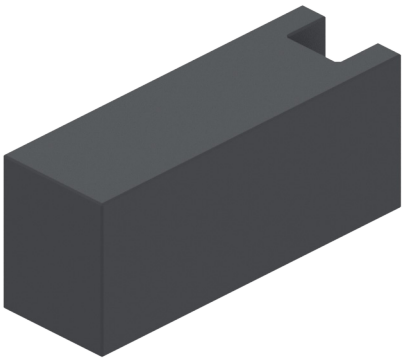
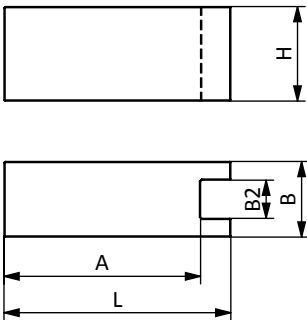


|  | Size | A<br>[mm] | B<br>[mm] | H<br>[mm] | Part #     |
|--|------|-----------|-----------|-----------|------------|
|  | 2    | 11        | 5         | 66        | 041TCAM2AS |
|  | 4    | 18        | 8         | 105       | 041TCAM4AS |
|  | 6    | 18        | 10        | 114       | 041TCAM6AS |



CLAMPING ARM

|               |                                                                                        |
|---------------|----------------------------------------------------------------------------------------|
| Description   | Clamping arm for Modular toggle clamps                                                 |
| Material      | Steel                                                                                  |
| Surface       | Black passivated                                                                       |
| Color         | Black                                                                                  |
| Pack Quantity | 1 piece                                                                                |
| Tip           | Compatible toggle clamps see page 20 et sq.<br>Compatible threaded sleeves see page 37 |



3

| Size | A<br>[mm] | B<br>[mm] | B2<br>[mm] | L<br>[mm] | H<br>[mm] | Part #     |
|------|-----------|-----------|------------|-----------|-----------|------------|
| 2    | 32        | 12        | 6,5        | 40        | 15        | 041TCAM2CS |
| 4    | 52        | 20        | 10,1       | 60        | 25        | 041TCAM4CS |
| 6    | 68        | 25        | 12,1       | 80        | 30        | 041TCAM6CS |



# HANDLE

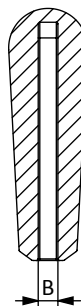
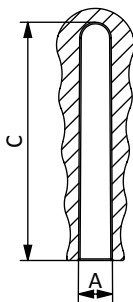
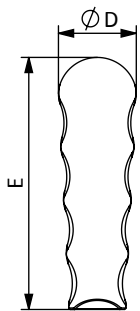
**Description** Handle for Modular toggle clamps

**Material** PUR

**Color** Red

**Pack Quantity** 1 piece

**Tip** Compatible handle bars see page 34

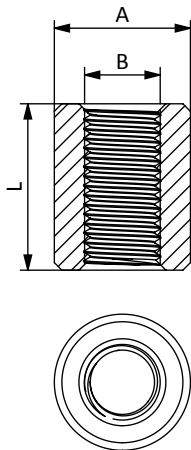


|  | Size | A<br>[mm] | B<br>[mm] | C<br>[mm] | D<br>[mm] | E<br>[mm] | Part #                       |
|--|------|-----------|-----------|-----------|-----------|-----------|------------------------------|
|  | 1    | 11        | 4         | 54        | 17,5      | 58        | <a href="#">041TCAM104HU</a> |
|  | 2    | 11        | 5         | 54        | 23        | 60        | <a href="#">041TCAM205HU</a> |
|  | 3    | 11        | 6         | 74        | 25        | 80        | <a href="#">041TCAM306HU</a> |
|  | 4    | 18        | 6         | 94        | 29        | 100       | <a href="#">041TCAM406HU</a> |
|  | 5    | 18        | 8         | 94        | 29        | 100       | <a href="#">041TCAM408HU</a> |
|  | 6    | 18        | 10        | 94        | 29        | 100       | <a href="#">041TCAM410HU</a> |



THREADED SLEEVE

**Description** Threaded sleeve for Modular toggle clamps  
**Material** Steel  
**Surface** Black passivated  
**Color** Black  
**Pack Quantity** 1 piece  
**Tip** Compatible clamping arms see page 35



3

|  | Size | A<br>[mm] | B<br>[mm] | L<br>[mm] | Part #     |
|--|------|-----------|-----------|-----------|------------|
|  | 1    | Ø10       | M5        | 12        | 041TCAM1TS |
|  | 2    | Ø12       | M6        | 15        | 041TCAM2TS |
|  | 3    | Ø16       | M8        | 18        | 041TCAM3TS |
|  | 4    | Ø18       | M10       | 22        | 041TCAM4TS |
|  | 5    | Ø20       | M12       | 27        | 041TCAM5TS |
|  | 6    | Ø25       | M12       | 32        | 041TCAM6TS |



## HORIZONTAL BASE

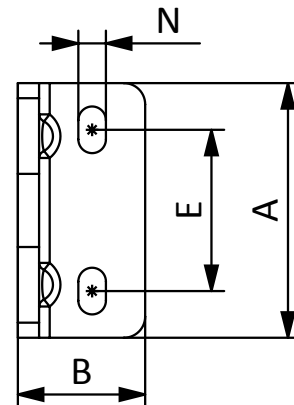
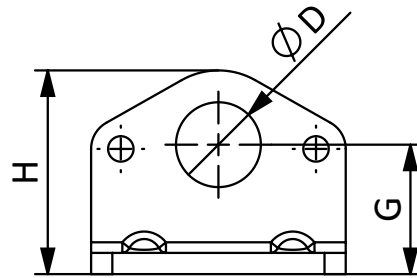
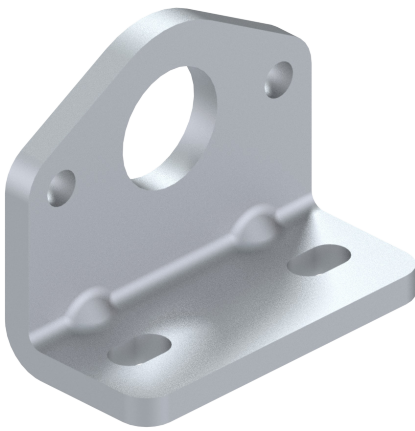
**Description** Base plate for Push-pull toggle clamps  
Base position: horizontal

**Material** Steel

**Surface** Zinc plated

**Pack Quantity** 1 piece

**Tip** Compatible Toggle clamps see page 26



| Size | A<br>[mm] | B<br>[mm] | ØD<br>[mm] | E<br>[mm]   | G<br>[mm] | H<br>[mm] | N<br>[mm]  | Part #    |
|------|-----------|-----------|------------|-------------|-----------|-----------|------------|-----------|
| 1    | 44        | 20        | 12,5       | 21,5 - 31,5 | 19,5      | 30,5      | 5,5 x 10,5 | 041PCAH1V |
| 2    | 53        | 24,5      | 16,5       | 30 - 40     | 24,5      | 39        | 6 x 11     | 041PCAH2V |
| 3    | 60        | 30        | 20,5       | 33,5 - 42,5 | 30,5      | 48        | 6,5 x 11   | 041PCAH3V |
| 5    | 78        | 36        | 24,5       | 42 - 57     | 38        | 61        | 8,5 x 16   | 041PCAH5V |

## SIDE BASE

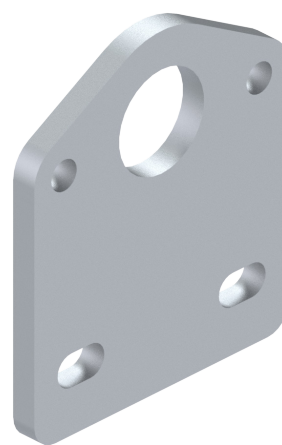
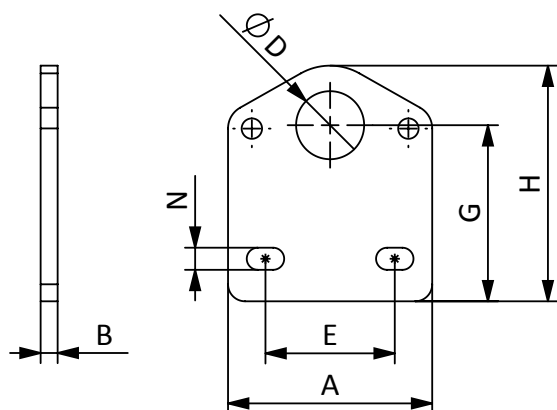
**Description** Base plate for Push-pull toggle clamps  
Base position: side

**Material** Steel

**Surface** Zinc plated

**Pack Quantity** 1 piece

**Tip** Compatible Toggle clamps see page 26



3

| Size | A<br>[mm] | B<br>[mm] | ØD<br>[mm] | E<br>[mm]   | F<br>[mm] | G<br>[mm] | H<br>[mm] | N<br>[mm]  | Part #    |
|------|-----------|-----------|------------|-------------|-----------|-----------|-----------|------------|-----------|
| 1    | 44        | 3         | 12,5       | 21,5 - 31,5 | 8,5       | 35        | 46        | 5,5 x 10,5 | 041PCAS1V |
| 2    | 53        | 4         | 16,5       | 30 - 40     | 9         | 42,5      | 57        | 6 x 11     | 041PCAS2V |
| 3    | 60        | 5         | 20,5       | 33,5 - 42,5 | 12,5      | 52        | 69        | 6,5 x 11   | 041PCAS3V |
| 5    | 78        | 6         | 24,5       | 42 - 57     | 15        | 64,5      | 87,5      | 8,5 x 16   | 041PCAS5V |







PART NUMBER INDEX

Manual Toggle Clamps 1

Pneumatic Toggle Clamps 2

Accessories 3



## PART NUMBER INDEX

|                |    |              |    |             |    |              |    |
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| 041LUM00H1S    | 24 | 041TCAM306HU | 36 | 041TCM00V3E | 16 | 041TCM90V4E  | 18 |
| 041LUM00H1V    | 24 | 041TCAM3TS   | 37 | 041TCM00V3S | 16 | 041TCM90V4S  | 18 |
| 041LUM00H2E    | 24 | 041TCAM406HU | 36 | 041TCM00V3V | 16 | 041TCM90V4V  | 18 |
| 041LUM00H2S    | 24 | 041TCAM408HU | 36 | 041TCM00V4E | 16 | 041TCM90V5E  | 18 |
| 041LUM00H2V    | 24 | 041TCAM410HU | 36 | 041TCM00V4S | 16 | 041TCM90V5S  | 18 |
| 041LUM00H3E    | 24 | 041TCAM4AS   | 34 | 041TCM00V4V | 16 | 041TCM90V5V  | 18 |
| 041LUM00H3S    | 24 | 041TCAM4CS   | 35 | 041TCM00V5E | 16 | 041TCMH90H2S | 22 |
| 041LUM00H3V    | 24 | 041TCAM4TS   | 37 | 041TCM00V5S | 16 | 041TCMH90H4S | 22 |
| 041LUM00H4E    | 24 | 041TCAM5TS   | 37 | 041TCM00V5V | 16 | 041TCMH90H6S | 22 |
| 041LUM00H4S    | 24 | 041TCAM6AS   | 34 | 041TCM90H0E | 17 | 041TCMH90V2S | 23 |
| 041LUM00H4V    | 24 | 041TCAM6CS   | 35 | 041TCM90H0S | 17 | 041TCMH90V4S | 23 |
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| 041PCAH5V      | 38 | 041TCM00H2S  | 14 | 041TCM90H3S | 17 | 041TCPH120V  | 30 |
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| 041PCAS2V      | 39 | 041TCM00H3E  | 14 | 041TCM90H4E | 17 | 041TCPH3V    | 30 |
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| 041PCM90B2V    | 26 | 041TCM00S2E  | 15 | 041TCM90S3E | 19 |              |    |
| 041PCM90B3E    | 26 | 041TCM00S2S  | 15 | 041TCM90S3S | 19 |              |    |
| 041PCM90B3S    | 26 | 041TCM00S2V  | 15 | 041TCM90S3V | 19 |              |    |
| 041PCM90B3V    | 26 | 041TCM00S3E  | 15 | 041TCM90S4E | 19 |              |    |
| 041PCM90B5E    | 26 | 041TCM00S3S  | 15 | 041TCM90S4S | 19 |              |    |
| 041PCM90B5S    | 26 | 041TCM00S3V  | 15 | 041TCM90S4V | 19 |              |    |
| 041PCM90B5V    | 26 | 041TCM00S4E  | 15 | 041TCM90S5E | 19 |              |    |
| 041PCM90B6E    | 26 | 041TCM00S4S  | 15 | 041TCM90S5S | 19 |              |    |
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| 041PCM90B6V    | 26 | 041TCM00S5E  | 15 | 041TCM90V0E | 18 |              |    |
| 041PCMH00H314S | 28 | 041TCM00S5S  | 15 | 041TCM90V0S | 18 |              |    |
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| 041PCMH00H520S | 28 | 041TCM00V0E  | 15 | 041TCM90V1E | 18 |              |    |
| 041PCPHH314S   | 32 | 041TCM00V0S  | 15 | 041TCM90V1S | 18 |              |    |
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| 041TCAM205HU   | 36 | 041TCM00V1V  | 16 | 041TCM90V2V | 18 |              |    |
| 041TCAM2AS     | 34 | 041TCM00V2E  | 16 | 041TCM90V3E | 18 |              |    |
| 041TCAM2CS     | 35 | 041TCM00V2S  | 16 | 041TCM90V3S | 18 |              |    |



# simply practical

# FATH®

## Components



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**2** Pneumatic Toggle Clamps

**3** Accessories

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