



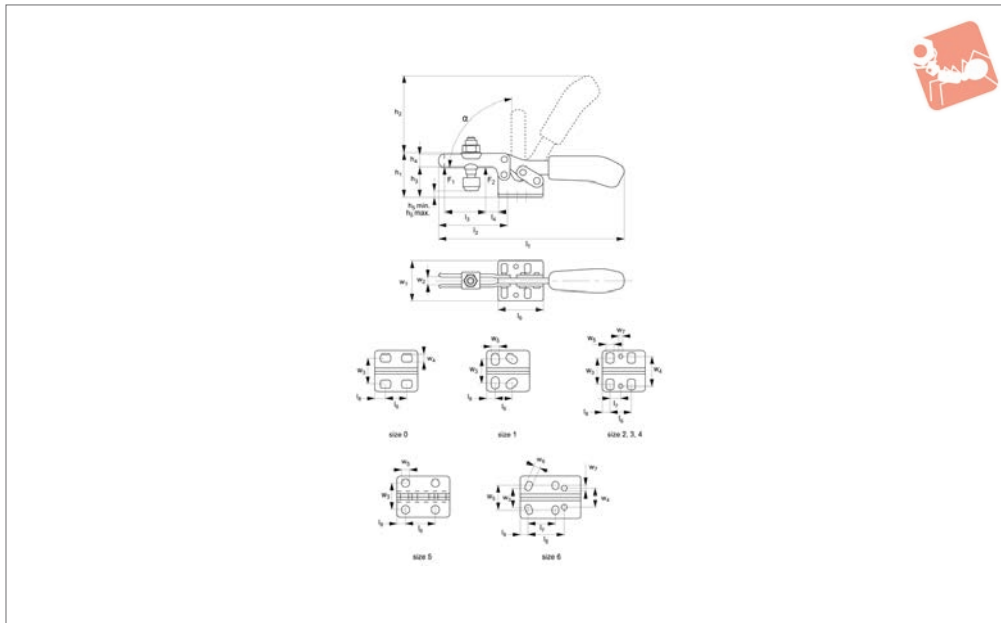
Horizontal Acting Toggle Clamps

open arm - horizontal base



41000.1

STEEL TOGGLE CLAMPS



Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes (sizes 2-6).
 Pre-lubricated bearings (grease suitable for food industry use).

Ergonomic, soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes

Temperature range -10°C to +80°C.

Tips

For stainless steel version see part no. 41020.

| Order No. | Size | F ₁ kN | F ₂ kN | Clamping screw | h ₁ | h ₂ | h ₃ | h ₄ min. | h ₅ min. | h ₅ max. | l ₁ | l ₂ | Weight g |
|-------------|------|----------------------|----------------------|----------------|----------------|----------------|----------------|------------------------|------------------------|------------------------|----------------|----------------|-------------|
| 41000.W0000 | 0 | 0.3 | 0.4 | M 4x25 | 23.0 | 34 | 14.5 | 7.5 | -5.5 | 0.0 | 79 | 28 | 35 |
| 41000.W0001 | 1 | 0.8 | 1.1 | M 5x30 | 30.0 | 49 | 19.0 | 10.0 | -3.0 | 2.5 | 120 | 42 | 105 |
| 41000.W0002 | 2 | 1.0 | 1.2 | M 6x35 | 45.0 | 68 | 24.0 | 13.2 | -1.5 | 5.0 | 162 | 64 | 185 |
| 41000.W0003 | 3 | 1.8 | 2.5 | M 8x45 | 48.5 | 86 | 32.0 | 15.0 | -2.0 | 9.0 | 206 | 73 | 320 |
| 41000.W0004 | 4 | 2.0 | 3.0 | M 8x65 | 75.0 | 126 | 45.0 | 20.0 | -4.0 | 24.0 | 287 | 113 | 700 |
| 41000.W0005 | 5 | 3.0 | 5.0 | M 8x65 | 73.0 | 128 | 46.0 | 25.0 | 1.7 | 25.0 | 321 | 123 | 1080 |
| 41000.W0006 | 6 | 4.0 | 7.0 | M10x116 | 114.5 | 181 | 71.5 | 30.0 | -6.0 | 44.0 | 354 | 110 | 1925 |

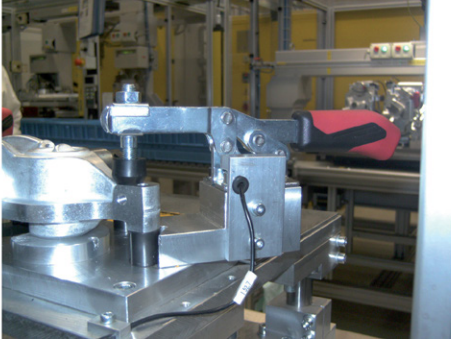
| Order No. | l ₃ | l ₄ | l ₅ | l ₆ | l ₇ | l ₈ | w ₁ | w ₂ | w ₃ | w ₄ | w ₅ | w ₆ | w ₇ | α |
|-------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|
| 41000.W0000 | 9.0 | 5.5 | 25.5 | 11,5-15,5 | - | 6.3 | 25.0 | 4 | 16.0 | - | 4.6 | - | - | 90° |
| 41000.W0001 | 18.7 | 8.0 | 34.0 | 13,0-14,5 | - | 5.5 | 34.0 | 5 | 18,0-21,5 | - | 5.2 | - | - | 90° |
| 41000.W0002 | 32.0 | 16.0 | 38.0 | 26.0 | 12.7 | 6.0 | 42.0 | 6 | 19,5-29,5 | 28.5 | 5.6 | - | 5.6 | 90° |
| 41000.W0003 | 38.0 | 14.0 | 50.0 | 25.7 | 13.0 | 7.0 | 45.5 | 8 | 22,0-31,8 | 31.6 | 6.5 | - | 5.1 | 90° |
| 41000.W0004 | 63.0 | 27.0 | 57.0 | 41.0 | 20.5 | 8.0 | 58.0 | 10 | 29,0-43,0 | 43.0 | 8.5 | - | 8.5 | 90° |
| 41000.W0005 | 78.0 | 16.0 | 77.0 | 41.5 | - | 12.5 | 58.0 | 10 | 41.5 | - | 8.5 | - | - | 90° |
| 41000.W0006 | 59.3 | 20.6 | 95.0 | 57.7 | 43.6 | 11.5 | 66.5 | 10 | 32,1-43,8 | 31.6 | 9.8 | 36,0-44,2 | 8.7 | 83° |

Steel Toggle Clamps

Horizontal Acting Toggle Clamps open arm - horizontal base



STEEL TOGGLE CLAMPS



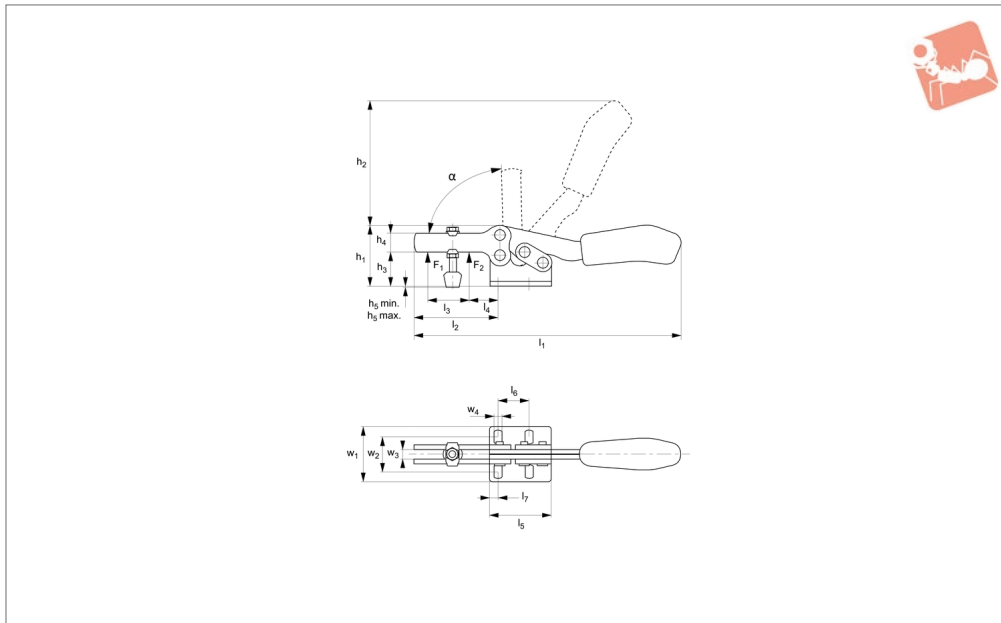


Horizontal Toggle Clamp Plus

open arm - horizontal base - increased clamping



Steel Toggle Clamps



41001.1

STEEL TOGGLE CLAMPS

Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes.
 Pre-lubricated bearings (grease suitable for food industry use).

Ergonomic, soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes

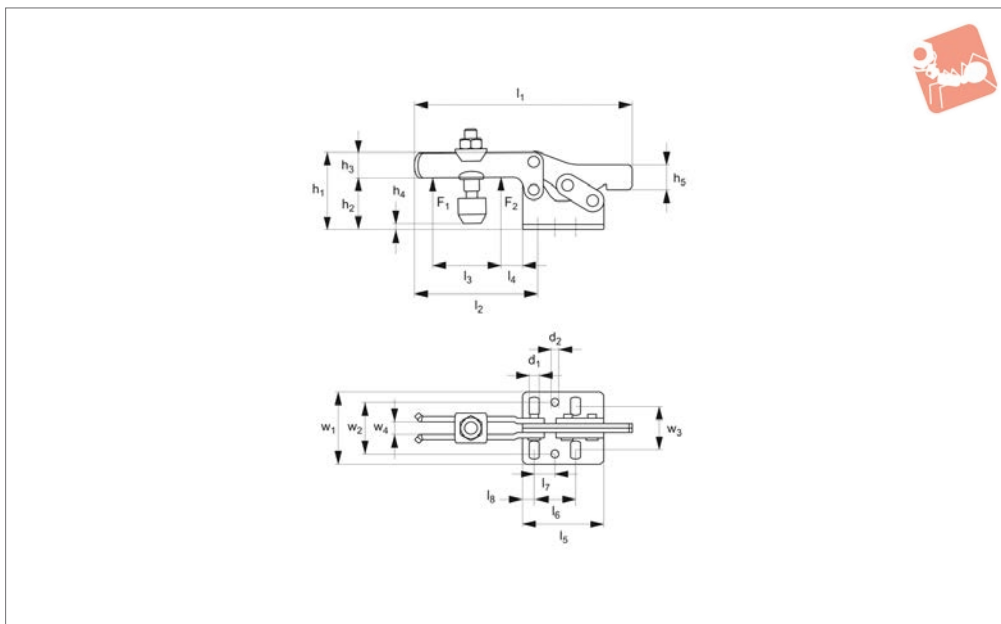
Temperature range -10°C to +80°C. **With increased clamping force.**
 Also available in stainless steel part no. 41001.W0301 - .W0304.

| Order No. | Size | F ₁ kN | F ₂ kN | Clamping screw | h ₁ | h ₂ | h ₃ | h ₄ | h ₅ min. | h ₅ max. | l ₁ | Weight g |
|-------------|------|----------------------|----------------------|----------------|----------------|----------------|----------------|----------------|------------------------|------------------------|----------------|-------------|
| 41001.W0001 | 1 | 1.1 | 1.7 | M 5x35 | 35 | 46 | 19.0 | 12 | 0 | 10.0 | 126 | 114 |
| 41001.W0002 | 2 | 1.6 | 3.0 | M 6x50 | 51 | 108 | 28.0 | 16 | -1 | 12.0 | 224 | 450 |
| 41001.W0003 | 3 | 2.5 | 4.0 | M 8x58 | 58 | 112 | 33.5 | 18 | -1 | 13.0 | 242 | 560 |
| 41001.W0004 | 4 | 3.5 | 8.0 | M10x76 | 77 | 135 | 41.0 | 24 | -2 | 16.5 | 329 | 1250 |

| Order No. | l ₂ | l ₃ | l ₄ | l ₅ | l ₆ | l ₇ | w ₁ | w ₂ | w ₃ | w ₄ | α |
|-------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|
| 41001.W0001 | 46 | 20 | 16.5 | 34.0 | 13.5 | 6.0 | 27.5 | 15,0 - 19,5 | 5 | 4.3 | 90° |
| 41001.W0002 | 71 | 39 | 14.0 | 52.0 | 26.0 | 7.0 | 46.0 | 23,5 - 34,0 | 8 | 6.5 | 90° |
| 41001.W0003 | 78 | 43 | 22.0 | 52.5 | 26.0 | 6.5 | 47.0 | 25,5 - 36,0 | 8 | 6.5 | 90° |
| 41001.W0004 | 120 | 69 | 23.0 | 76.0 | 41.5 | 10.5 | 60.0 | 34,5 - 45,0 | 10 | 8.6 | 90° |



41005.1



Material

Body: steel, zinc plated.

Rivets: stainless steel running in hardened bushes.

Pre-lubricated bearings (grease suitable for food industry use).

Supplied complete with clamping screw

(with rubber pad).

Technical Notes

Temperature range -10°C to +80°C.

Tips

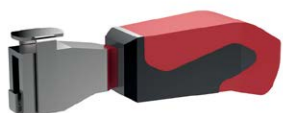
Order removable handle separately 41005.

W0102- .W0104.

To prevent interference during use the handle can be removed after opening or closing the clamp.

| Order No. | Size | F ₁ kN | F ₂ kN | Clamping screw | h ₁ | h ₂ | h ₃ | h ₄ min. | h ₄ max. | h ₅ | Weight g |
|-------------|------|----------------------|----------------------|----------------|----------------|----------------|----------------|------------------------|------------------------|----------------|-------------|
| 41005.W0002 | 2 | 1.0 | 1.2 | M 6x35 | 45.0 | 24 | 13.2 | -1.5 | 5 | 12 | 160 |
| 41005.W0003 | 3 | 1.8 | 2.5 | M 8x45 | 48.5 | 32 | 15.0 | -2.0 | 9 | 15 | 269 |
| 41005.W0004 | 4 | 2.0 | 3.0 | M 8x65 | 75.0 | 45 | 20.0 | -4.0 | 24 | 15 | 608 |

| Order No. | l ₁ | l ₂ | l ₃ | l ₄ | l ₅ | l ₆ | l ₇ | l ₈ | w ₁ | w ₂ | w ₃ | w ₄ | d ₁ | d ₂ | α |
|-------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|
| 41005.W0002 | 113 | 64 | 32 | 16 | 38 | 26.0 | 12.7 | 6 | 42.0 | 19,5-29,5 | 6 | 28.5 | 5.6 | 5.6 | 90° |
| 41005.W0003 | 134 | 73 | 38 | 14 | 50 | 25.7 | 13.0 | 7 | 45.5 | 22,0-31,8 | 8 | 31.6 | 6.5 | 5.1 | 90° |
| 41005.W0004 | 191 | 113 | 63 | 27 | 57 | 41.5 | 20.5 | 8 | 58.0 | 29,0-43,0 | 10 | 43.0 | 8.5 | 8.5 | 90° |



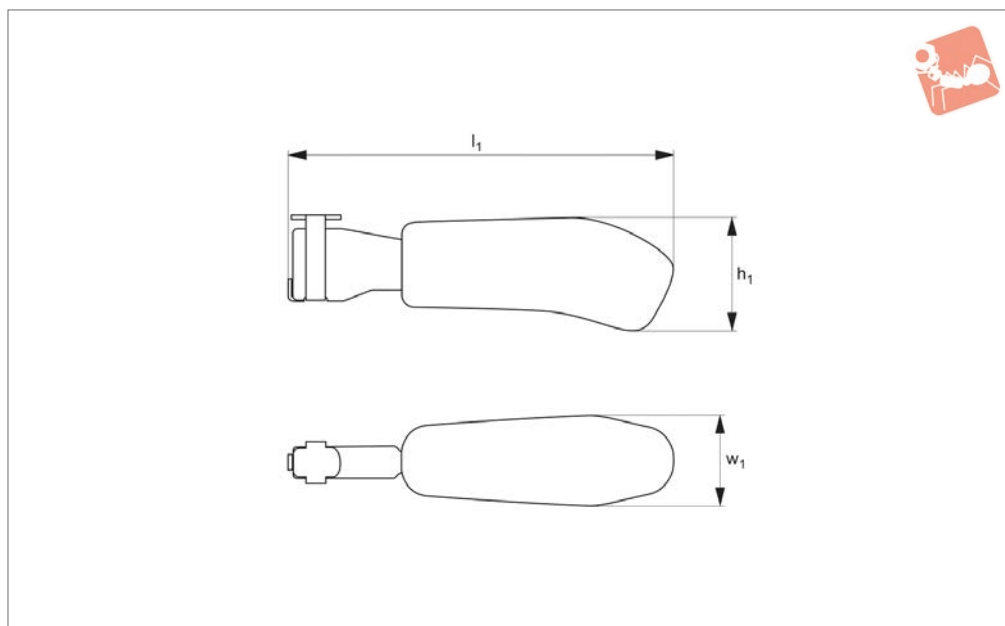
part no. 41005.W0102- .W0104
to reduce length during use the handle can be removed after opening or closing the clamp



Red Handle - Removable for horizontal acting toggle clamp



Steel Toggle Clamps



41005.2

STEEL TOGGLE CLAMPS

Material

Ergonomic, oil-resistant handle with large grip surface and soft components.

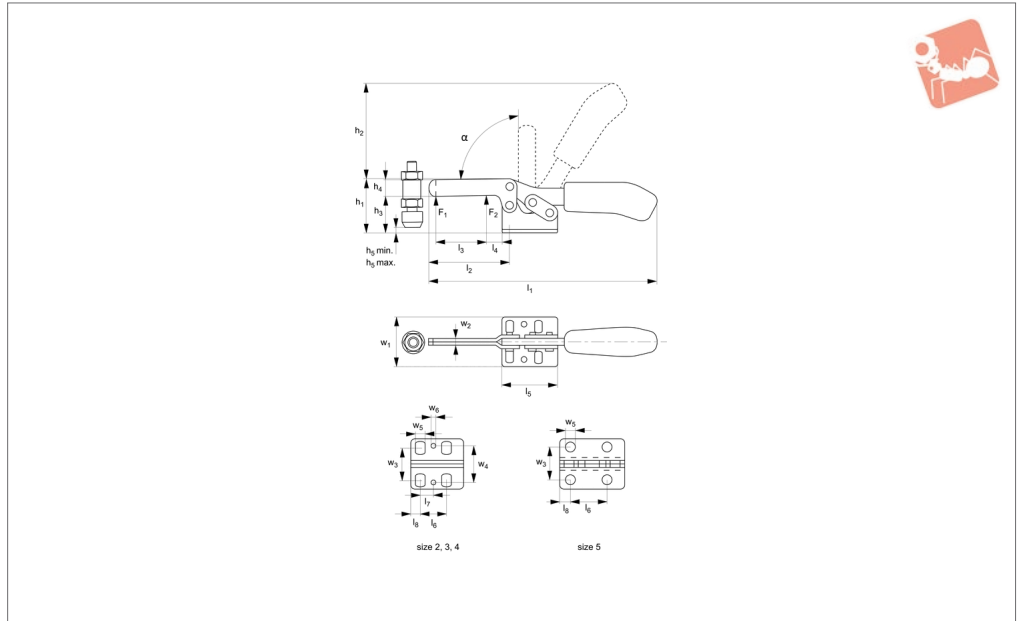
Technical Notes

For use with clamp no. 41005.W0002 - . W0004.

| Order No. | Size | h_1 | l_1 | w_1 | Weight g |
|-------------|------|-------|-------|-------|-------------|
| 41005.W0102 | 2 | 26 | 93.0 | 21.0 | 70 |
| 41005.W0103 | 3 | 35 | 118.5 | 27.0 | 122 |
| 41005.W0104 | 4 | 42 | 134.5 | 34.5 | 195 |



41030



Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes.
 Pre-lubricated bearings (grease suitable for food industry use).

Ergonomic, soft feel, oil-resistant handle with large grip area.
 Supplied complete with weldable clamping screw (with rubber pad).

Technical Notes

The arm can be shortened to suit the work-piece, the sleeve is then welded to the arm.
 Temperature range -10°C to $+80^{\circ}\text{C}$.

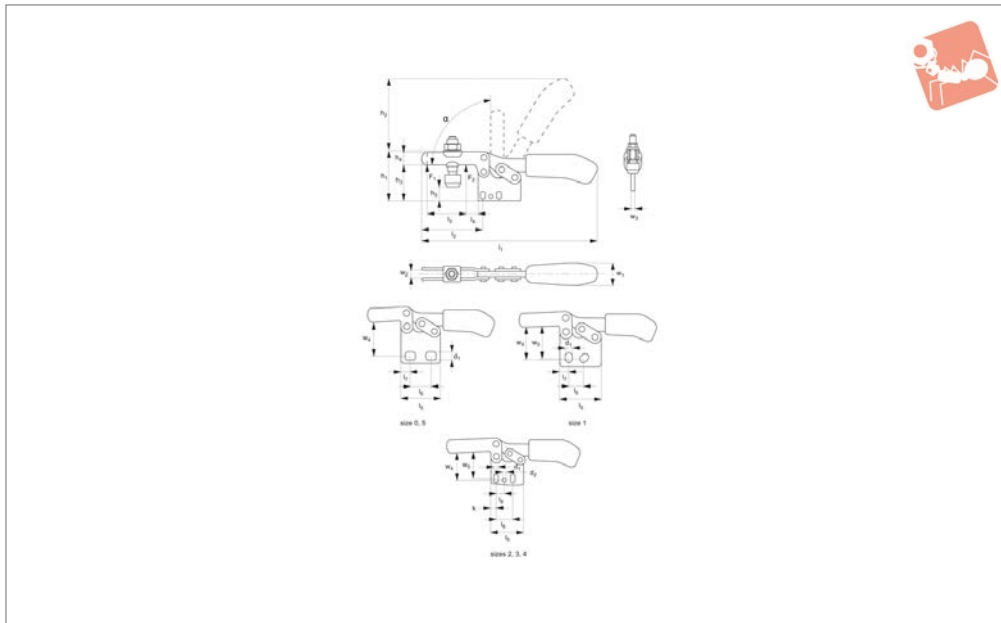
| Order No. | Size | F_1 kN | F_2 kN | Clamping screw | h_1 | h_2 | h_3 | h_4 | h_5 min. | h_5 max. | l_1 | l_2 | Weight g |
|-------------|------|-------------|-------------|----------------|-------|-------|-------|-------|---------------|---------------|-------|-------|-------------|
| 41030.W0002 | 2 | 1.0 | 1.2 | M 6x35 | 45.0 | 66 | 24 | 13 | -2.0 | 7.5 | 161 | 63 | 185 |
| 41030.W0003 | 3 | 1.8 | 2.5 | M 8x45 | 48.5 | 86 | 32 | 15 | -3.5 | 11.0 | 205 | 72 | 320 |
| 41030.W0004 | 4 | 2.0 | 3.0 | M 8x65 | 75.0 | 114 | 45 | 20 | -6.0 | 22.0 | 280 | 111 | 700 |
| 41030.W0005 | 5 | 3.0 | 5.0 | M12x80 | 73.0 | 128 | 46 | 25 | -13.0 | 12.5 | 320 | 121 | 1080 |

| Order No. | l_3 | l_4 | l_5 | l_6 | l_7 | l_8 | w_1 | w_2 | w_3 | w_4 | w_5 | w_6 | α |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|-------|-------|-------|--------------|
| 41030.W0002 | 35 | 16.0 | 38 | 26.0 | 12.7 | 6.0 | 42.0 | 5 | 19,5-29,5 | 28.5 | 5.6 | 5.6 | 90° |
| 41030.W0003 | 44 | 15.0 | 50 | 26.0 | 13.0 | 7.0 | 45.5 | 6 | 22,0-31,8 | 32.0 | 6.5 | 5.1 | 90° |
| 41030.W0004 | 66 | 26.0 | 57 | 41.0 | 20.5 | 8.0 | 58.0 | 8 | 29,0-43,0 | 43.0 | 8.5 | 8.5 | 90° |
| 41030.W0005 | 78 | 17.5 | 77 | 41.5 | - | 12.5 | 58.0 | 10 | 41.5 | - | 8.5 | - | 90° |



Horizontal Acting Toggle Clamps

open arm - vertical base



41050.1

STEEL TOGGLE CLAMPS

Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes (sizes 2-5).
 Pre-lubricated bearings (grease suitable

for food industry use).
 Ergonomic, soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes

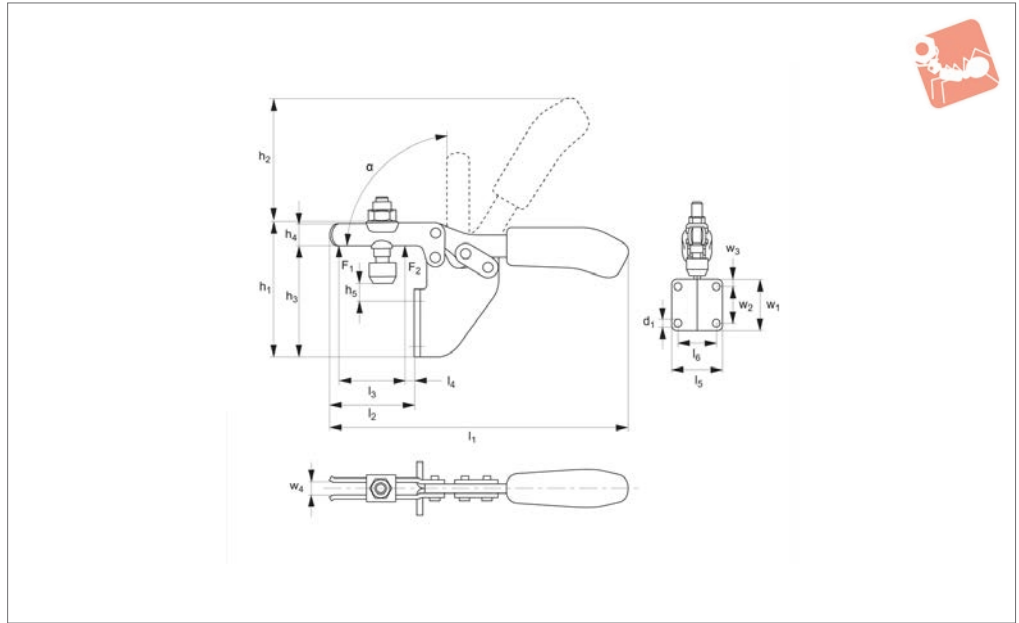
Temperature range -10°C to +80°C.

| Order No. | Size | F ₁ kN | F ₂ kN | Clamping screw | h ₁ | h ₂ | h ₃ | h ₄ | h ₅ min. | h ₅ max. | l ₁ | l ₂ | Weight g |
|-------------|------|----------------------|----------------------|----------------|----------------|----------------|----------------|----------------|------------------------|------------------------|----------------|----------------|-------------|
| 41050.W0000 | 0 | 0.3 | 0.4 | M 4x25 | 33.0 | 34 | 24.5 | 7.5 | 4.7 | 10.7 | 79 | 28 | 35 |
| 41050.W0001 | 1 | 0.8 | 1.1 | M 5x30 | 43.0 | 49 | 31.5 | 10.0 | 8.0 | 15.0 | 120 | 42 | 105 |
| 41050.W0002 | 2 | 1.0 | 1.2 | M 6x35 | 61.0 | 68 | 40.0 | 13.2 | 15.0 | 22.0 | 164 | 64 | 185 |
| 41050.W0003 | 3 | 1.8 | 2.5 | M 8x45 | 65.0 | 86 | 49.0 | 15.0 | 14.5 | 26.0 | 206 | 73 | 320 |
| 41050.W0004 | 4 | 2.0 | 3.0 | M 8x65 | 97.0 | 115 | 66.5 | 20.0 | 17.5 | 46.0 | 287 | 113 | 700 |
| 41050.W0005 | 5 | 3.0 | 5.0 | M 8x65 | 92.5 | 128 | 65.0 | 25.0 | 21.5 | 45.0 | 321 | 123 | 1080 |

| Order No. | l ₃ | l ₄ | l ₅ | l ₆ | l ₇ | l ₈ | w ₁ | w ₂ | w ₃ | w ₄ | w ₅ | d ₁ | d ₂ | α |
|-------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|
| 41050.W0000 | 9.0 | 5 | 25.5 | 11,5-15,5 | 6.3 | - | 12 | 4 | 20.0 | - | 3 | 4.6 | - | 90° |
| 41050.W0001 | 18.5 | 8 | 34.0 | 13,0-14,5 | 5.5 | - | 18 | 5 | 23,5-25,5 | 24.5 | 5 | 5.2 | - | 90° |
| 41050.W0002 | 32.0 | 16 | 38.0 | 26.0 | 6.0 | 12.7 | 21 | 6 | 29,5-34,0 | 34.0 | 5 | 5.6 | 5.6 | 90° |
| 41050.W0003 | 38.5 | 14 | 50.0 | 25.7 | 7.0 | 13.0 | 27 | 8 | 37,5-42,5 | 42.0 | 6 | 6.5 | 5.1 | 90° |
| 41050.W0004 | 63.0 | 27 | 57.0 | 41.0 | 8.0 | 20.5 | 34 | 10 | 52,0-59,0 | 59.0 | 8 | 8.5 | 8.5 | 90° |
| 41050.W0005 | 78.0 | 16 | 77.0 | 41.5 | 12.5 | - | 36 | 10 | 57.0 | - | 10 | 8.5 | - | 90° |



41100



Material

Body: steel, zinc plated.
 Rivets: stainless steel running in hardened bushes (sizes 2-3).
 Pre-lubricated bearings (grease suitable

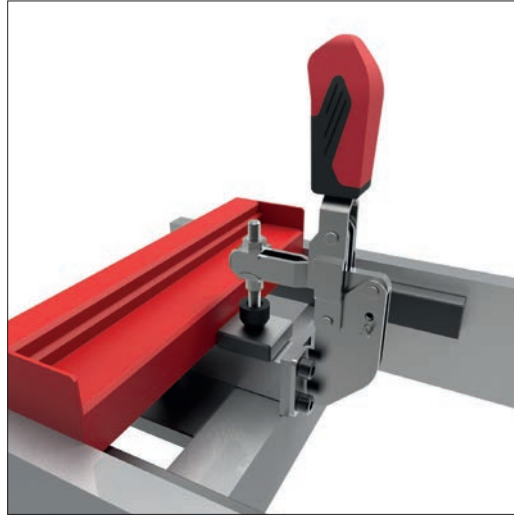
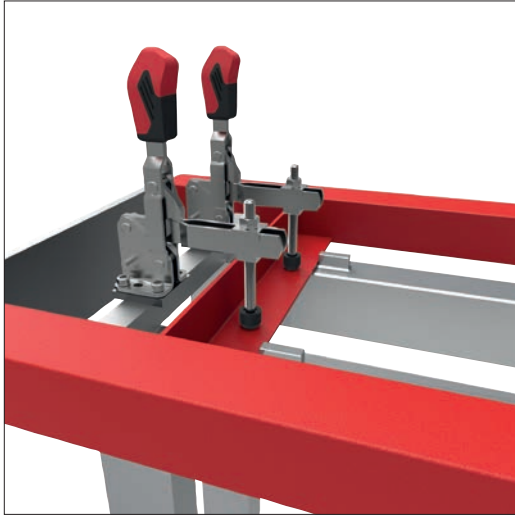
for food industry use).
 Ergonomic, soft feel, oil-resistant handle with large grip area.
 Supplied complete with clamping screw (with rubber pad).

Technical Notes

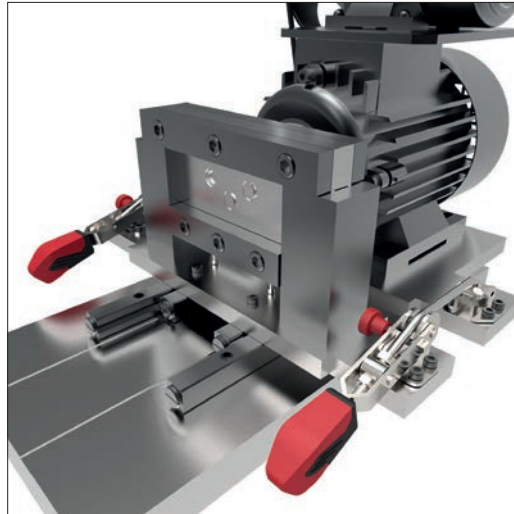
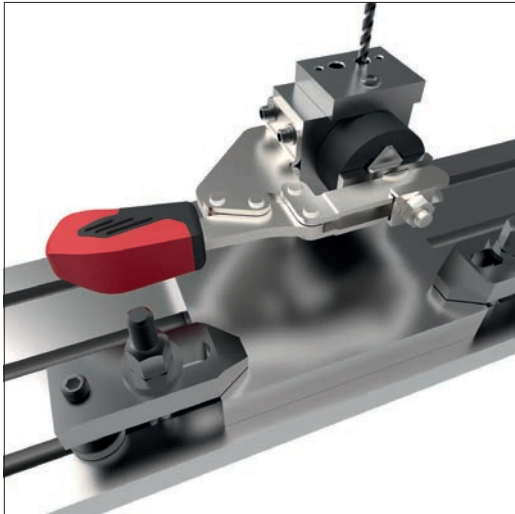
Temperature range -10°C to +80°C.

| Order No. | Size | F ₁ kN | F ₂ kN | Clamping screw | h ₁ | h ₂ | h ₃ | h ₄ | h ₅ min. | h ₅ max. | Weight g |
|-------------|------|----------------------|----------------------|----------------|----------------|----------------|----------------|----------------|------------------------|------------------------|-------------|
| 41100.W0001 | 1 | 0.8 | 1.1 | M 5x30 | 68.0 | 49 | 57 | 10.0 | 14 | 20.0 | 170 |
| 41100.W0002 | 2 | 1.0 | 1.2 | M 6x35 | 94.0 | 68 | 73 | 13.2 | 22 | 29.5 | 245 |
| 41100.W0003 | 3 | 1.8 | 2.5 | M 8x45 | 86.5 | 86 | 70 | 15.0 | 5 | 16.0 | 390 |
| 41100.W0004 | 4 | 2.0 | 3.0 | M 8x65 | 133.0 | 120 | 102 | 20.0 | 11 | 40.0 | 730 |

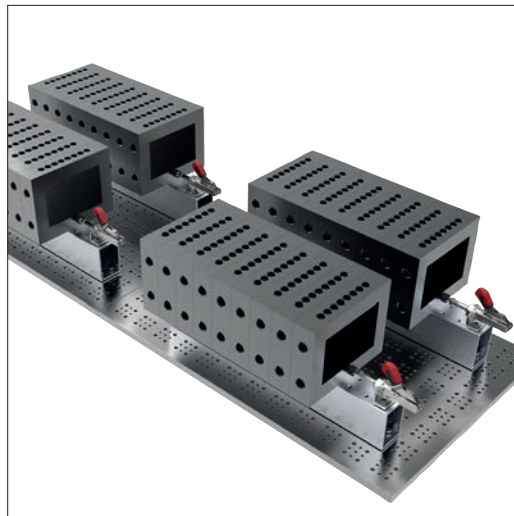
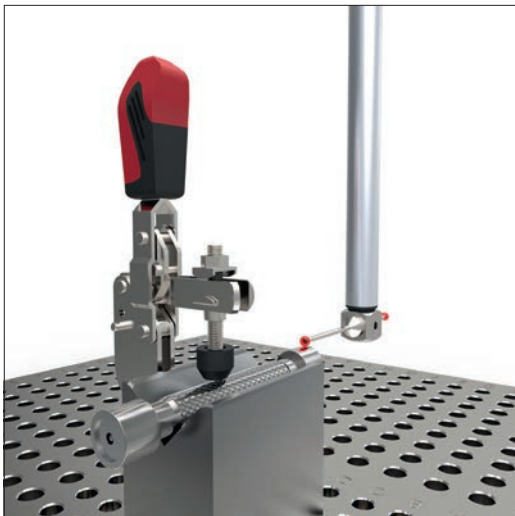
| Order No. | l ₁ | l ₂ | l ₃ | l ₄ | l ₅ | l ₆ | w ₁ | w ₂ | w ₃ | w ₄ | d ₁ | α |
|-------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|
| 41100.W0001 | 120 | 32 | 18.5 | 4.0 | 31.0 | 19.0 | 28 | 13.5 | 8 | 5.0 | 5.2 | 90° |
| 41100.W0002 | 162 | 52 | 32.0 | 10.5 | 37.0 | 25.5 | 32 | 20.0 | 6 | 6.2 | 5.6 | 90° |
| 41100.W0003 | 206 | 59 | 37.0 | 6.5 | 42.5 | 28.5 | 38 | 24.0 | 7 | 8.0 | 6.8 | 90° |
| 41100.W0004 | 282 | 93 | 63.0 | 15.0 | 52.0 | 32.0 | 82 | 32.0 | 40 | 10.0 | 8.5 | 90° |



Welding Fixtures



Machining and Jig Assemblies



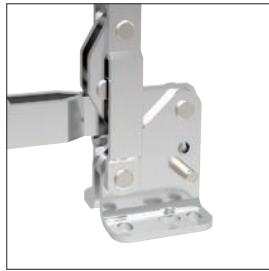
Cmm's

STEEL TOGGLE CLAMPS

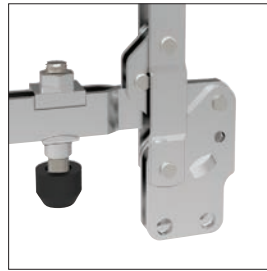
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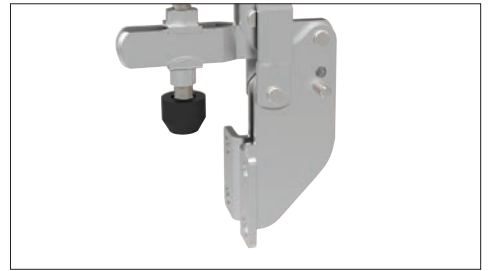
Mounting Base Variations



Horizontal base



Vertical base



Angled base

Clamping Variations



Vertical acting



Horizontal acting



Push-pull



Hook type

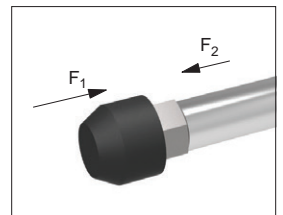
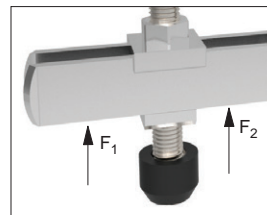


Latch type

Explanation of forces

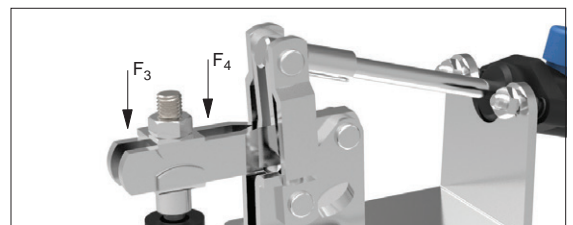
Holding Forces F_1 or F_2

The force transmitted to the workpiece by the toggle clamp's closed arm, without itself being deformed when machine forces are applied. The holding force value is dependent upon the proximity of the measuring load point to the toggle clamp's pivot point (therefore two values, F_1 and F_2 are provided).



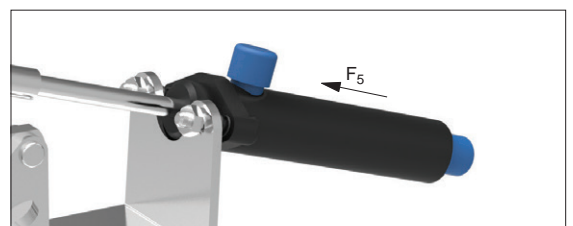
Clamping Forces F_3 or F_4

The force applied to the workpiece when the toggle clamp's arm is closed. These clamping forces can only be stated for pneumatic toggle clamps, clamping forces of manual clamps cannot be easily measured as they are dependent upon the operator.



Piston Forces F_5

For pneumatically controlled toggle clamps only, F_5 is the piston force required (at 6 bar) to achieve the stated clamping force.

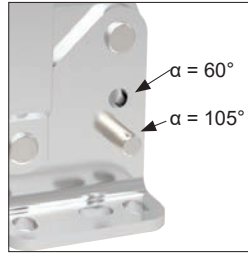




Ergonomic soft grip
2-component handle



Stainless rivets and
hardened bushings

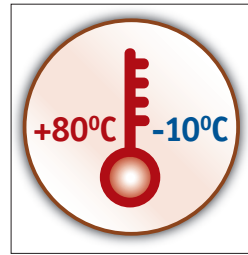


Moveable stop for
variable opening angle



Operator
finger protection

Quality Features



Temperature resistant

STEEL TOGGLE CLAMPS



Safety catches



Heavy duty versions



Pneumatic versions



Matt black surface for
optical measurement

Unique Features



Steel, zinc plated
and passivated



Stainless steel (304)



Steel, matt black
vario-spektron coated



Protective cap and
handle made of an
electrostatic conductive
(dissipative) material.

Materials

ov-W40000.1-A-T-W42070-A-T-c-rmh- Updated -27-10-2022