
the open and the closed position. This prevents opening under vibration or inadvertent movement of the clamping arm when loading or unloading a fixture.

Temperature range $-10^{\circ} \mathrm{C}$ to $+80^{\circ} \mathrm{C}$.

41010


## 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
The safety lever holds the clamp in both

| Order No. | Size | $\begin{aligned} & \mathrm{F}_{1} \\ & \mathrm{kN} \end{aligned}$ | $\begin{aligned} & \mathrm{F}_{2} \\ & \mathrm{kN} \end{aligned}$ | Clamping screw |  | $\mathrm{h}_{1}$ | $\mathrm{h}_{2}$ | $\mathrm{h}_{3}$ | $\mathrm{h}_{4}$ | $\begin{gathered} \mathrm{h}_{5} \\ \mathrm{~min} . \end{gathered}$ | $\begin{gathered} \mathrm{h}_{5} \\ \max . \end{gathered}$ | $I_{1}$ | $\mathrm{I}_{2}$ | $\begin{gathered} \text { Weight } \\ \mathrm{g} \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 41010.W0003 | 3 | 1.8 | 2.5 | M $8 \times 45$ |  | 48.5 | 86.0 | 32 | 15 | -2 | 9 | 206 | 73 | 390 |
| 41010.W0004 | 4 | 2.0 | 3.0 | M $8 \times 65$ |  | 75.0 | 126.5 | 45 | 20 | -4 | 24 | 287 | 113 | 800 |
| Order No. | $I_{3}$ | $\mathrm{I}_{4}$ | 15 | $I_{6}$ | 17 | 18 | $\mathrm{w}_{1}$ | $\mathrm{w}_{2}$ |  |  | $\mathrm{w}_{4}$ | $\mathrm{w}_{5}$ | $\mathrm{w}_{6}$ | a |
| 41010.W0003 | 38 | 14 | 50 | 25.7 | 13.0 | 7 | 45.5 | 31.6 |  | 31,8 | 8 | 6.5 | 5.1 | $90^{\circ}$ |
| 41010.W0004 | 63 | 27 | 57 | 41.0 | 20.5 | 8 | 58.0 | 43.0 |  | 43,0 | 10 | 8.5 | 8.5 | $90^{\circ}$ |

## Toggle Clamps

Welding Fixtures


Machining and Jig Assemblies


## Cmm's



Wixroyd Toggle Clamps


Horizontal base


Vertical acting


Hook type


Vertical base


Horizontal acting


Latch type


Angled base


Push-pull

Mounting Base Variations

## Clamping Variations

## Explanation of forces

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, F1 and F2 are provided).


Holding Forces F1 or F2

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.


For pneumatically controlled toggle clamps only, $\mathrm{F}_{5}$ is the piston force required (at 6 bar to) achieve the stated clamping force.


Quality Features


Ergonomic soft grip 2-component handle


Stainless rivets and hardened bushings


Moveable stop for variable opening angle


Operator finger protection


Temperature resistant

Unique Features


Safety catches


Heavy duty versions


Pneumatic versions


Matt black surface for optical measurement

## Materials



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.

