

Manual clamping unit HKC 50

Operation instructions



1. Description

The manual clamping unit is a heavy-duty tool designed for clamping work in the metal plate processing industry. It consists of a manual feed unit, a metal housing with connection possibilities on the front and a clamping arm with a holder for the jig.

During the clamping action the manual lever increases the force on the integrated toggle joint mechanism that initiates the swivel action of the clamping arm.

2. Safety

The manual clamping unit was not designed as an independent tool and has therefore not been fitted with its own safety facilities. In order to comply with the safety requirements, the unit must be integrated into a production system and it must be connected to a suitable safety control system.

In the event of any failures resulting in a risk to people's safety, the use of the manual clamping unit must be discontinued immediately. Maintenance work must only be carried out by properly trained staff when the machine is not running.

After carrying out such maintenance work, any protective devices must be fitted again properly.

3. Mounting the manual clamping unit

- Connect the clamping unit using fillister head screws to the mounting surfaces on the front of the unit.

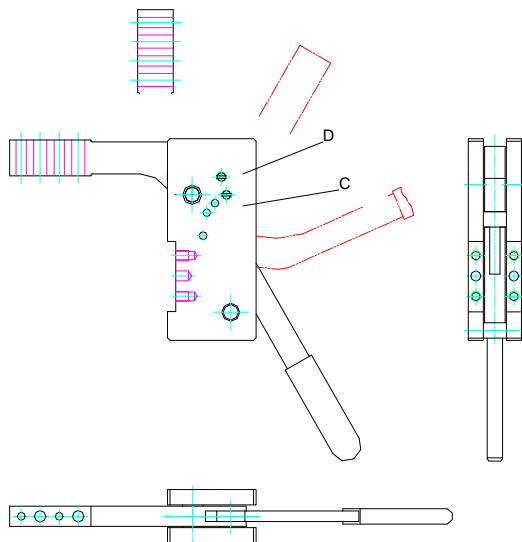


Figure 1: Clamping unit

4. Adjusting the manual clamping unit

Warning: Risk of getting trapped!

When adjusting the clamping arm, your fingers may get trapped between moving parts. Do not reach into the operating area of the clamping arm while the clamping unit is being operated.

- Screw the jig onto the clamping arm.
- Close the clamping unit. The toggle joint must audibly click into the position above the dead point.
- Determine the difference in size between the clamping arm/jig and the product being worked on.
- Open the clamping unit.
 - Adjustment without pre-tensioning (soft touch)
Take out the difference in size to 0 mm (!) by mounting the relevant adaptor plates.
 - Adjustment with pre-tensioning
Take out the difference in size to 0.5 mm by mounting the relevant adaptor plates.
- Close the clamping unit. The toggle joint will take up its position above the dead point and the required pre-tension will be achieved.

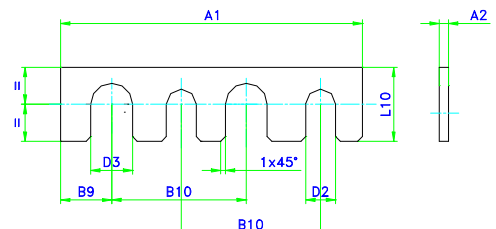


Figure 2: Adaptor plates

Adaptor plate No.	A1	A2	D2	D3	B9	B10	L10
AP 5005-16	65	0.5	6.5	9	10	30	15.8
AP 5010-16		1.0					
AP 5020-16		2.0					

5. Adjusting the opening angle

The opening angle can be set to the 120°, 96°, 75°, 45° positions using the stop pin "C" and both ball ratchets "D" integrated into the housing. The factory-set position (120°) can be changed by disassembling the pin and the ball ratchets and fitting them in the required holes.

6. Maintenance

The manual clamping unit was primarily designed for series manufacturing applications and has been fitted with low-maintenance bearings and guides. For clamping units with an open housing we recommend regular cleaning of the moving parts of the toggle joint mechanism.

Note: The clamping unit should only be cleaned in a closed state, as otherwise dust particles might penetrate into the housing. Cleaning the unit with a steam jet cleaner or dry ice will damage the manual clamping unit.