

Technical information

Fig. 1:

Clamp top dead centre.

Self-locking of the hinge prevents independent opening during the machining process.

Fig. 2:

Clamp in intermediate position.

The holding arm approaches dead centre of the toggle hinge very rapidly when closing the clamp (swivel angle of handle \ll swivel angle of holding arm).

Fig. 3:

Clamp open.

The wide opening angle of the clamping arm allows easy loading and unloading.



Toggle clamps generate the maximum clamping force when the three pivots are in a straight line (dead centre position). A clamp is locked by moving one pivot beyond the dead centre position. The end position over dead centre is carefully chosen to retain the maximum clamping force while preventing inadvertent opening of the clamp due to vibration or varying loading.

The force-multiplying characteristics of the toggle hinge mechanism put in practice in straight line action clamps can be used to carry out work such as light punching, drilling, forming, bonding, jointing, riveting, welding and locking.

Holding force

The holding force is the force applied to the workpiece which the closed clamp can readily withstand without permanent distortion or loss of function.

Clamping force

The clamping force is the force applied to the workpiece by the clamping arm when it is closed. The hand forces indicated in the catalogue can achieve the corresponding clamping forces.

