

Technical information



Figure 1:

Clamp in end position over dead centre

Self-locking in the clamping joints avoids automatic opening during the machining process.

Figure 2:

Clamp in intermediate position

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

Figure 3:

Clamp is open

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



Fig. 1

Fig. 2

Fig. 3

Toggle clamps generate the maximum clamping or exerting 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 joint mechanism put in practice in straight line action clamps can be used to carry out work such as light piercing, drilling, forming, bonding, jointing, riveting, welding and locking.

Holding force

The holding force is the machining force on 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.

