

Clamping Technology I General

Definition:

Clamping tasks in manufacturing technology are versatile and numerous; the elements and systems supplied will gain ever greater importance in the future due to the requirements placed on short setup and manufacturing times. When selecting suitable clamping equipment, reliability, cost effectiveness, user friendliness and technical details are the most important factors. Additional aspects are increasing quality, flexibility and ergonomics demands in the work area. Mechanical clamping elements from JAKOB with multiple patented power amplification systems and hydromechanical clamping systems meet the high requirements of the user.

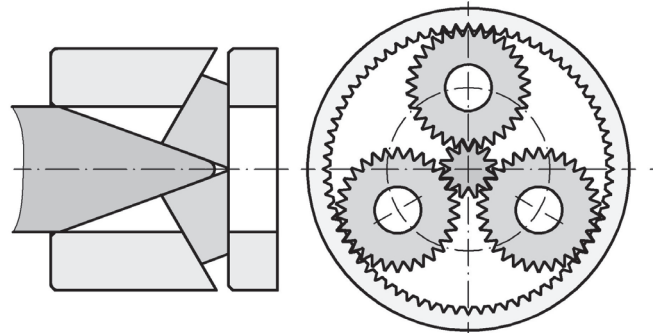
At the same time, they provide a genuine alternative to simple, mechanical clamping equipment (steel ties, brackets, etc.) along with semi- and fully-automatic clamping elements, which usually have highly elaborate energy supplies and control systems. With their low installation costs, the minimal operating and maintenance expenditures and the moderate procurement price, JAKOB clamping elements are often the most cost effective solution. Whether as original equipment or as retrofit elements, JAKOB clamping elements always hold tools and workpieces in position securely.

Characteristics:

- ✓ highest clamping forces ✓ low actuation torques ✓ large operation path
- ✓ high operational safety ✓ clamping force control
- ✓ easy installation ✓ economical clamping technology
- ✓ more humane workplace ✓ reduced risk of accidents
- ✓ simple & manual operation or automatic mode
- ✓ versatile application through compact and flexible design

Clamping elements with power amplification:

This group of clamping elements includes mechanical power clamping screws and power clamping nuts. They are designed for manual operation with simple handling but at the same time allow very high clamping forces. The manual actuation torque is also used for clamping force monitoring. Various clamping mechanisms such as key systems, planet gears or pressure distributors are used for power amplification. The sturdy design, the self-locking feature and a very high overload capacity ensure maximum reliability and long time life in these clamping



Hydromechanical spring tension system

The hydromechanical spring tension system is characterized especially by high reliability and low operating costs. The clamping force is actuated leakproof by a disk spring packet while the hydraulic pressure is only required for the release process. This results in highly compact, sturdy and reliable clamping elements, such as spring clamping cylinders, spring pressure cylinders, and spring clamping nuts.