

# advantages of high pressure vises

## The advantages of high pressure clamping are considerable.

Here is **why** we manufacture high pressure vises:

### SAFE CLAMPING

High pressure produces intense force therefore the workpiece is securely clamped.

This allows for faster cutting and reduces the risk of part movement.

### ZERO WEAR

High pressure clamps do not cause any wear on the vise parts because the movement is linear.

On a traditional vise more force is obtained by rotating the spindle screw, and as such the spindle thread creates the pressure on the workpiece causing wear on the thread. With high pressure vises a pushrod creates the force using an linear movement, and thus does not place much force on the thread.

### EFFORTLESS

The power booster creates high pressure with little operator effort.

### DURABILITY

High pressures vise spindles have less wear, and as such have a much longer lifespan.

### REPEATABILITY

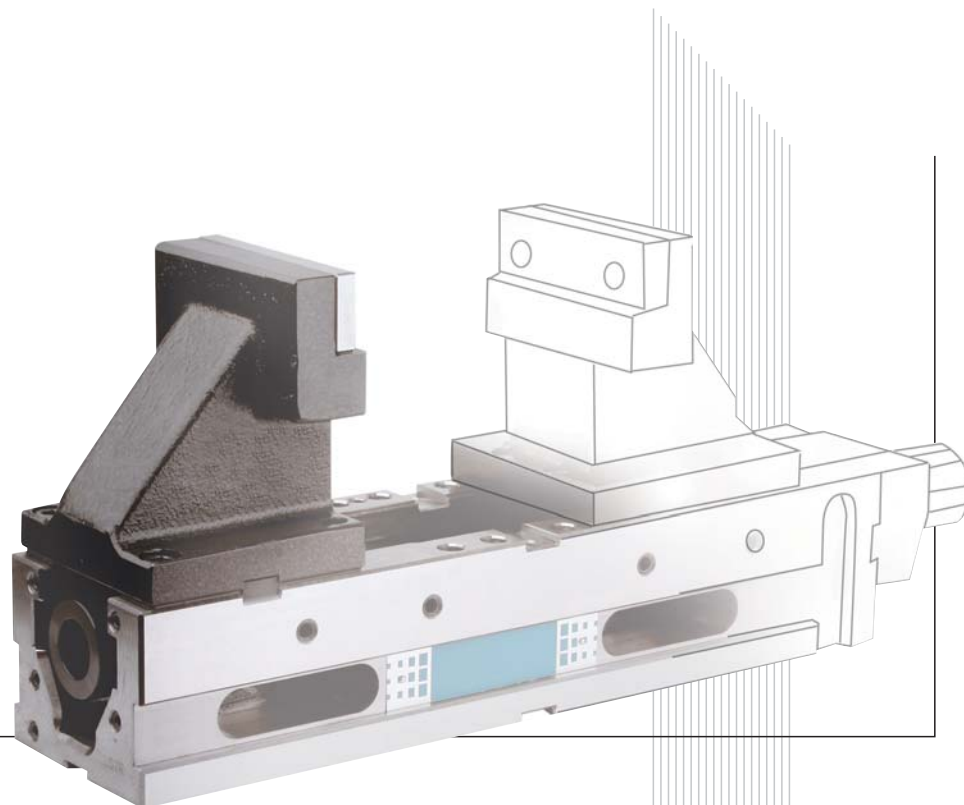
The same clamping force is always obtained, regardless of the operator. This constant repeatability enables greater clamping precision and positioning of the work-piece.

### MANUFACTURE

The manufacturing of your ARNOLD high pressure vise is a high precision process. Height, distances between points, finishes, milling, grinding, tempering, hardness are all carefully controlled and tested to offer maximum performance on the machines where they will be used.

**ARNOLD**  
workholding, inc.

- FASTER CUTTING
- FASTER PRODUCTION
- SAFER CLAMPING
- LONGER LASTING
- NO OPERATOR FATIGUE
- LOWER CUTTING TOOL COST
- BETTER REPEATABILITY
- BETTER QUALITY
- ZERO WEAR
- BETTER PROFITABILITY



# spindles

- All ARNOLD high pressure spindles use the same operating principles.

### Manually operated spindles

- Hydraulic booster spindle
- Mechanical booster spindle
- PROX Spindle (pulls instead of pushing)

- ARNOLD vises always make a two-step movement with one single lever. First the approach step to the work-piece, and then the high pressure step.

- To switch from one step to the next all ARNOLD high pressure vises have a built-in clutch system which has been tried and tested for years with excellent results.

- Once the movable jaw makes contact with the workpiece the clutch engages the power booster; continuing to turn the handle will build up pressure with very little effort.

- A dead-stop at the end of the power cycle ensures that the same pressure is created for each clamping.

### Automatic spindles

- Hydraulic spindles
- Hydro-pneumatic spindles
- AUTOMAT spindle

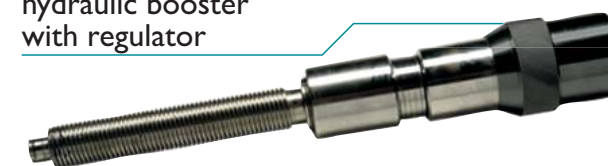
- These spindles do not need a clutch; the approach movement is controlled by a handle (hydraulic or automat) or by manual cylinder rotation (hydro-pneumatic).

- High pressure is created by either high or low pressure hydraulic fluids, or by compressed air.

hydraulic booster



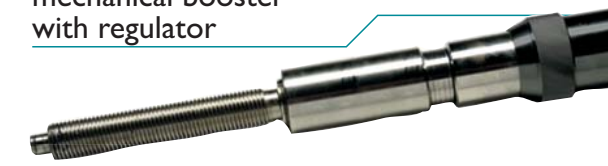
hydraulic booster with regulator



mechanical booster



mechanical booster with regulator



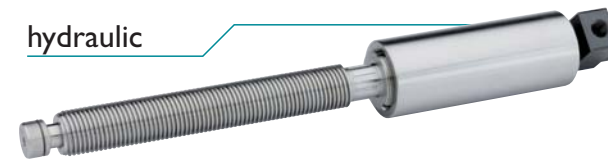
prox



hydro-pneumatic



hydraulic



automat

