



Application

SKVZ locking heads are designed for limiting the springing out resilience of the tools to the elastic yield of the connection elements when the axially acting cutting force components are larger than the clamping force on spring actuated tool clamping and chucking systems.

Design Features

The SKVZ locking head comprises a self-limiting locking mechanism with a downstream hydraulic cylinder, as well as a hydraulic rotary transmission lead-in. The locking head housing is permanently connected to the spindle to ensure that no axial forces act upon the spindle bearings during tool ejection. In clamping position the self-limiting properties of the clamping sleeve ensure that piston and tool, connected to the locking head by way of the tensioning rod, are securely locked. Springs fitted in the locking head pretension the clamping sleeve with the force F_v .

The locking head has a longer operating life in comparison to systems with power enhancing mechanisms, as the locking head is only loaded when the axially acting cutting force components are larger than the clamping force. A plate spring breakage does not have a negative effect as the locking mechanism does not lie within the force flux of the spring elements and the traction forces are directly transmitted from the draw bar to the housing and thus to the spindle via the locking head, closing the force flux.

The piston stroke h permits a large clamping reserve. Installation and length tolerances of the retention knobs cannot endanger the safe function of the locking head.

Ensure that the connection elements are designed such that the clamping point SS lies within the locking stroke h_{Sp}

The clamping and release position can be controlled by way of proximity switches which are to be energized by way of contact surfaces on the draw bar side. Respective connection elements are available on submission of spindle and machine drawings.