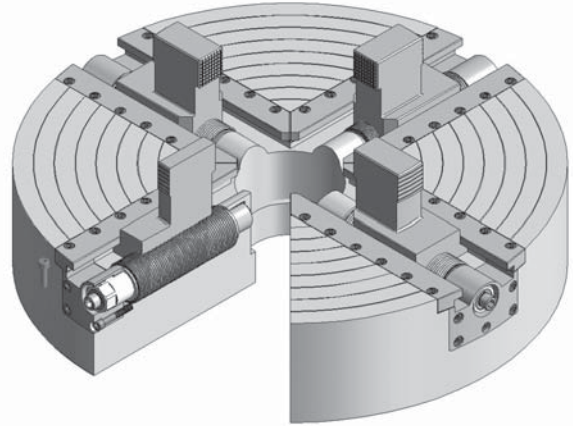


Power clamping screws I series MSP / MSPD - HSP

For face plates and surface plates on
jarboxes as well as grinding and turning
machines and special machines

The JAKOB power clamping screws have been developed for the most exacting demands and maximum work-piece weights with an optimum operational safety. They are primarily suited for integration in jaw boxes or for direct installation in faceplates of lathes, grinding and special machines. Diverse clamping screw series with different constructions assemblies and profile requirements are available. The user can choose between a hydraulic or mechanical, and single or double action designs.

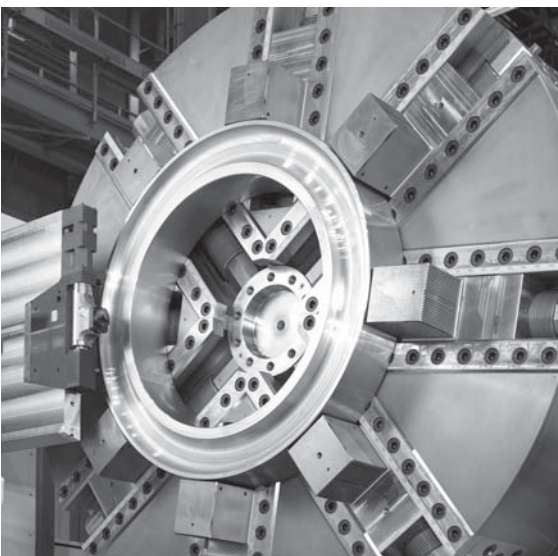
All parts are made of heat-treated steel and produced in high precision, this guarantees the operator a clamping element with highest robustness and sturdiness



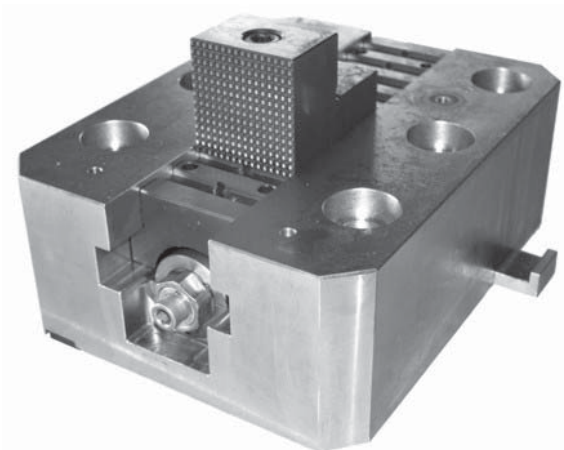
Essential features of performance:

- ✓ enormous clamping force, low actuation torque
- ✓ maximum reliability, high rigidity
- ✓ large clamping stroke, high alignment accuracy
- ✓ simple manual operation
- ✓ minimized maintenance

Application examples:



Face plate for turning center with 8 Power clamping screws Type MSP 200 for clamping of turbine rotor up to 350 tons total weight



Double action Power clamping screw Series MSPD 80 for clamping direction internal and external integrated in jaw box

Power clamping screws I Series MSP/MSPD-HSP

Mechanical power clamping screw Series MSP / MSPD

The force transmission in the mechanical power clamping screws is produced by a special mechanical key clamping system. The sophisticated geometry of the key-mechanics, have very large transmission surfaces and a self-locking action to ensure low wear and the highest reliability. Especially worth mentioning is the double-acting version, Series MSPD, with a simple automatic reverser to change clamping direction from external to internal clamping. Furthermore, its simple, manual operation and low installation outlay are worth emphasizing. When taking the main technical and economic assessment criteria into consideration, the MSP/MSPD Series can be recommended as the ideal version for most applications.

Hydromechanical power clamping screw Series HSP

The hydromechanical power clamping screw's operating principle is based on power multiplication, resulting from the area ratio of a primary and secondary piston. In the distinctly smaller primary piston, an internal oil pressure of up to 600 bar is generated and at the same time a long stroke distance is travelled. The secondary piston, with its larger effective area during a smaller clamping stroke produces an extremely large axial force, which is transmitted through the external thread to the piston housing on the clamping shoe. HSP power clamping screws are only provided for the external clamping direction. They excel with their long clamping strokes and low tightening torques. However, due to the necessary, mechanical safeguard (counter ring), significantly higher expenses are necessary.

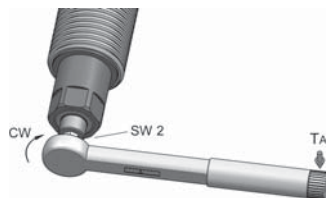
Note:

- At the calculation of installation length L1 must also take into account any bearing rings or axial washers.
- Basically, excepting the fitting position L1, the thread of the screw housing or the dimensions of the bearing pin can be customised to fit each customer's circumstances. That might be necessary, especially when replacing defective older model clamping screws and when retrofitting machine tools. Please get in touch with us if you have non-compliances with the standard dimensions.
- On request, a compression ring with electronic data transmission to a separate display module or to the machine controller can be supplied as add-on equipment. That ensures permanent clamping force monitoring during the entire processing cycle. The compression ring is made as an axial bearing disc with low width, so it can be easily integrated into the overall design. Please get in touch with us if you are interested.

clamping force diagram

Each clamping spindle is supplied with a clamping force diagram and a test report.

On request, the appropriate clamping force diagram can be supplied on an aluminium plate for fitting to the machine, as ready information to the operating personnel. Due to friction loss in the clamping jaws or linear guides, the table or diagram values for the actuation torque must be corrected. The appropriate factor must be determined, if necessary, by the face plate or jaw box manufacturers either empirically or based on trials & tests.



Clamping force diagram "MSPD 120"

