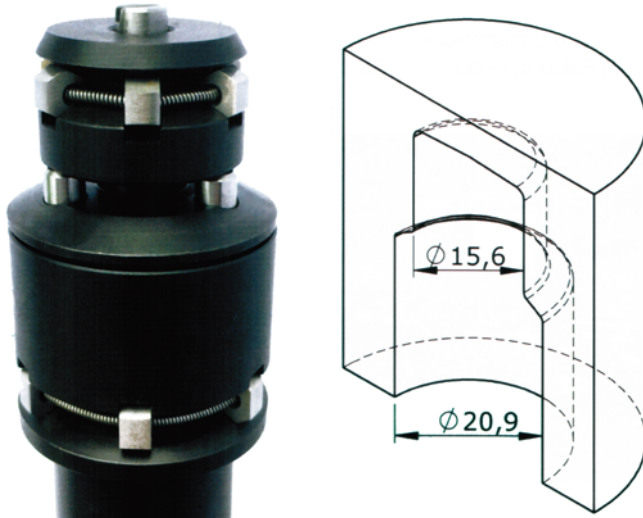


Two-level centering clamp



Task:

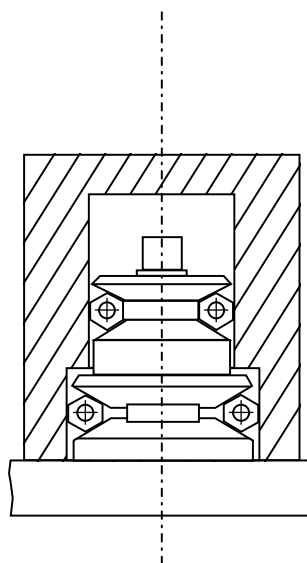
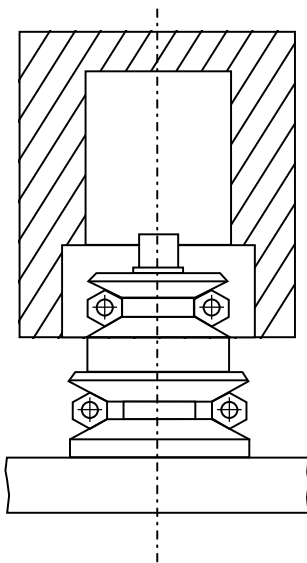
The exterior of a hot-punch component needs to be automatically machined on a turning lathe in large quantities.

Problem:

The hot-punch component has a taper of 2° in the offset interior hole.

Solution:

With the two-level centering clamp, the workpiece is clamped together at the maximum possible distance for each diameter. The clamped segments, 6 per level, have a relatively small clamping surface. Thus the tapering can be ignored. The two different diameters are securely clamped with the same clamping tension on each level. The workpiece stop built into the two-level centering clamp guarantees precise positioning of the workpiece.



Procedure:

Assembly takes place automatically. A robot pushes the workpiece to the stop on the two-level centering clamp. A hydraulically operated pull rod presses the clamped segments outward, thereby securely clamping the workpiece on two levels for the subsequent turning process.

Summary:

The customer had spent a long time looking for secure workpiece clamping that balanced out the tapering factor. The two-level clamping process made the turning process significantly more efficient.