

Two-level centering clamp

Task:

Machining a cast aluminum piece with a pre-drilled inner bore hole, using a barrier-free all-around machining process.

Solution:

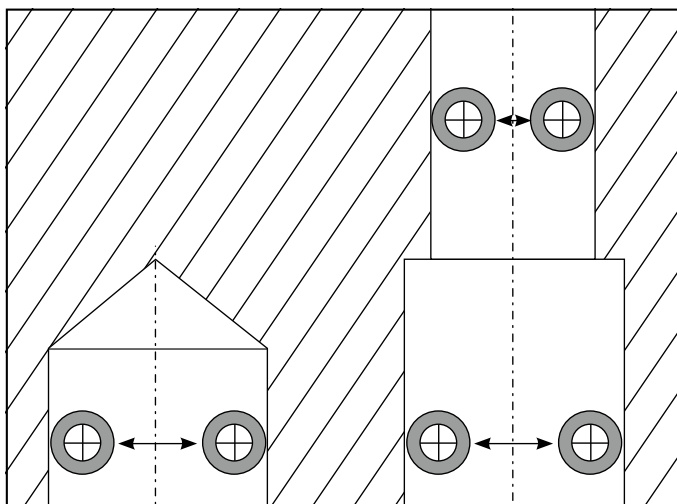
A two-level centering clamp features two clamping levels that are far enough apart to guarantee a secure clamp on the cast aluminum part during all-around machining. The two clamping levels hold the cast aluminum part with the same clamp pressure on each level.

Procedure:

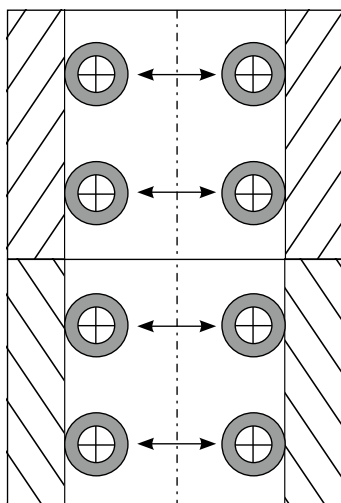
The cast aluminum piece is placed over the two-level centering clamp and secured to the workpiece support using a stop on the side. An Allen wrench is used to slide the clamped segments outward using floating tapered rings, so the cast aluminum piece can be clamped from the inside without causing any damage.

Summary:

Barrier-free all-around machining, which is also automated, saves the manufacturer a second clamping step; it also improves machining precision and lowers costs.



Distortion-free positioning and clamping



Combining different materials through welding, bonding or similar