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DAMPING ELEMENT FOR DOWNHOLDER

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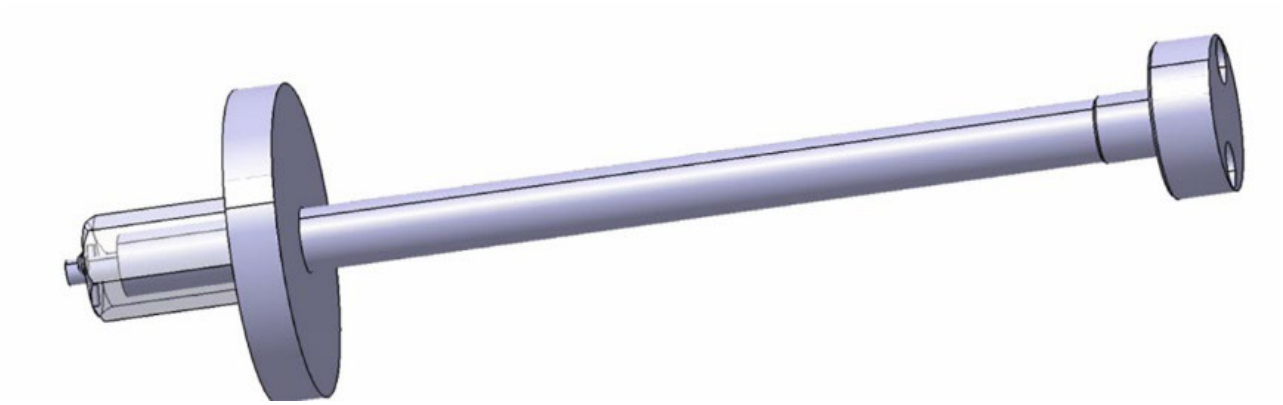
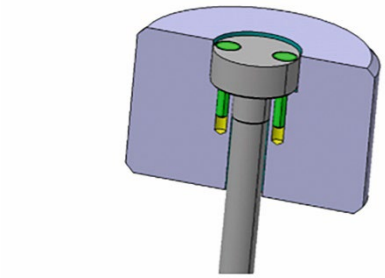
State of the art damping element for blank holder of a press tool:
Standard

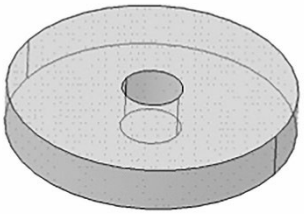


Disadvantage:
The one-piece bar requires a semi-finished product > Ø 50 mm.
The machining rate is more than 80%

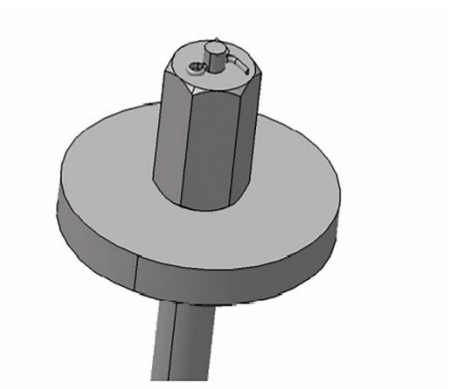
Due to the one-piece character (rod and "head"), the element must be secured against rotation with two screws.
(loosening torque of the lower nut)



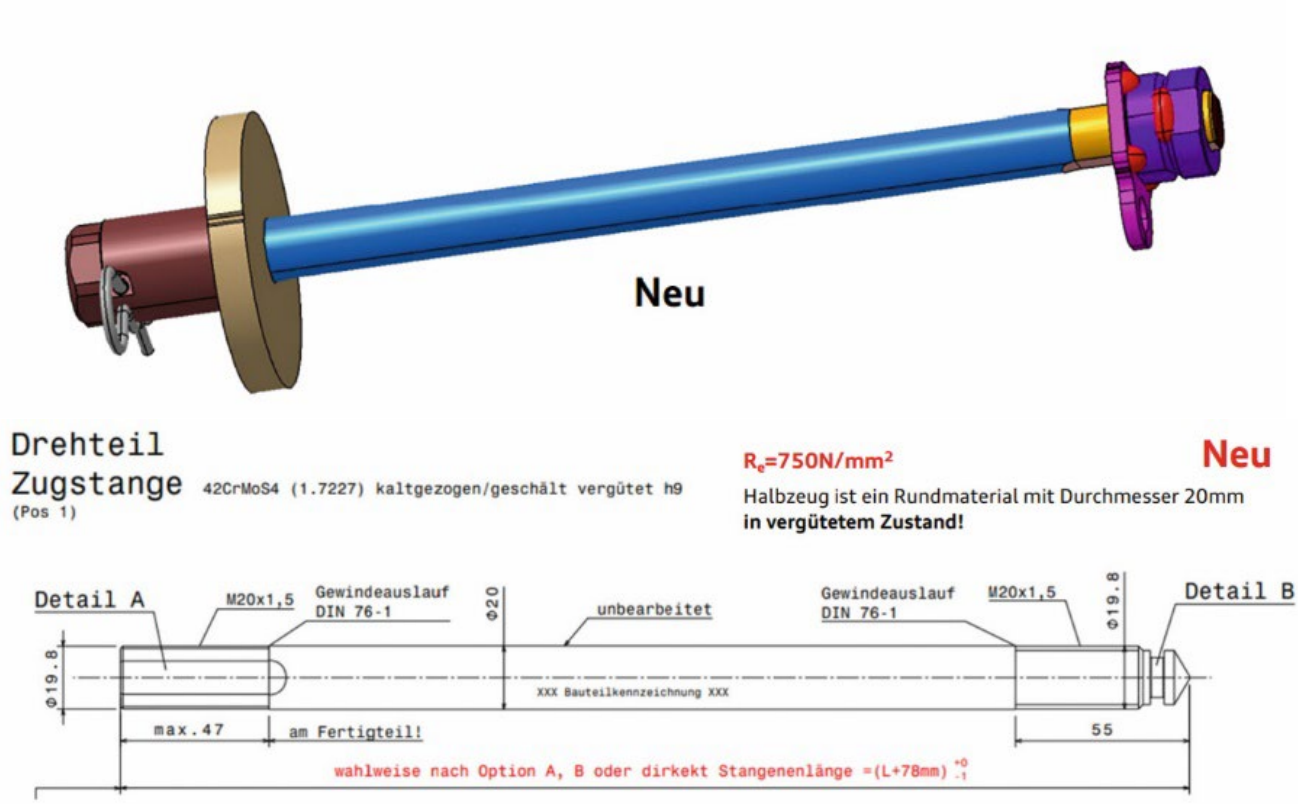
The disc is manufactured as a turned part (insert part)
Three steps are necessary for this:
1. sawing
2. machining of the first side
3. machining of the second side
Continuous automation is not possible.
The saw cut alone takes several minutes.



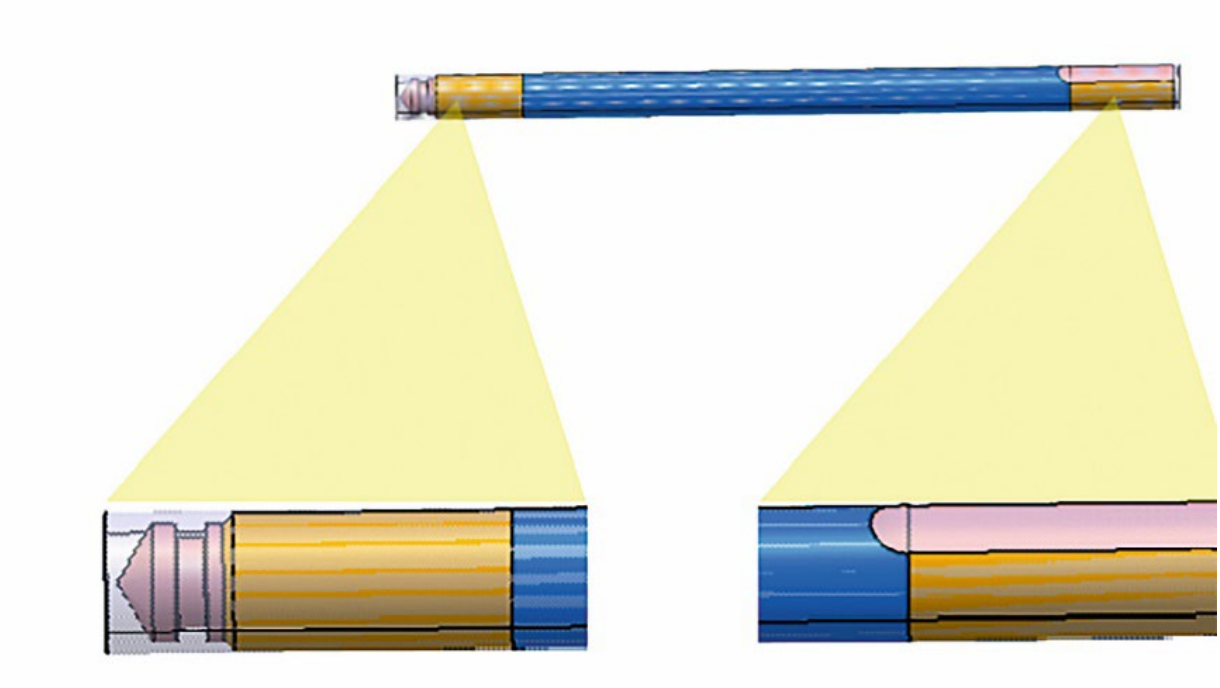
A very small cotter pin is used to prevent loss. Time-consuming assembly and risk of injury.



Solution:
New damping element for hold-downs



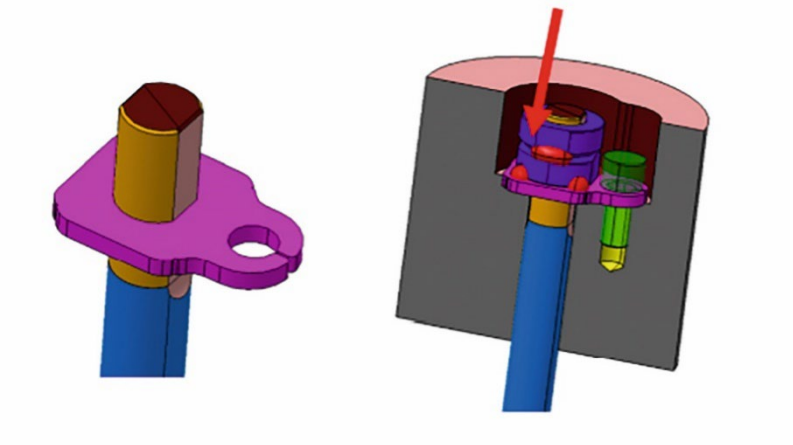
Advantages:



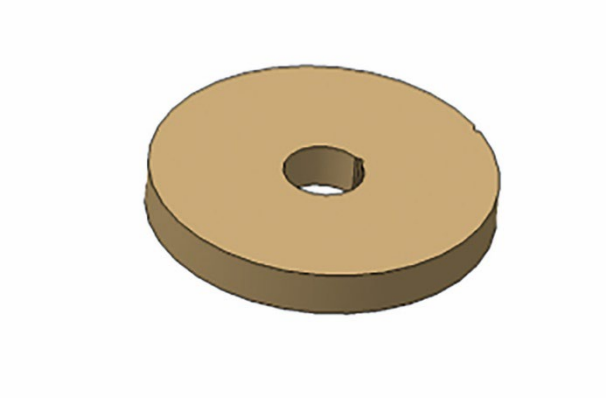
The tie rod requires a semi-finished product Ø 20 mm
The amount of machining is approx. 5%

Force closure

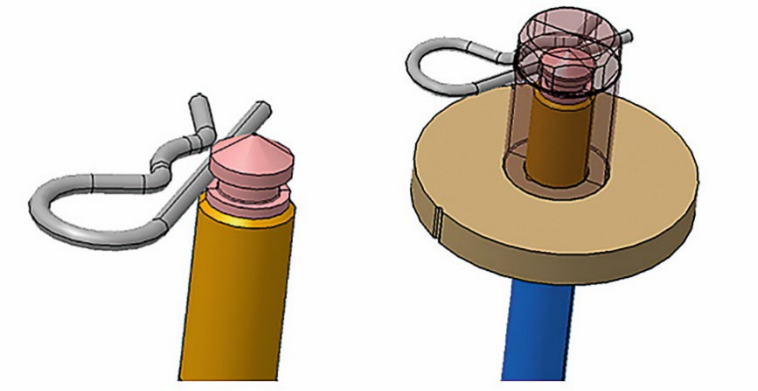
Form closure



Through the combination of a "defined pre-stressed" and secured screw connection (frictional connection) and the geometry on the anti-rotation device and tie rod (positive connection), equivalent strength properties are achieved and at the same time a screw connection can be omitted.



The disc is produced as a laser part.



Fully automated production in a matter of seconds.

Here, a cotter pin that can be quickly installed and removed is used. This is made possible by an "alternative" application of such a spring cotter. Instead of a central hole, the spring cotter is pushed through an off-centre hole in the nut and a recess in the rod. This arrangement makes it possible to push through in any end position of the nut on the rod.