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| Work preparation form | | | |
| Part name: Housing for piston | | Date: 11-10-2024 | Sheet number: |
| Belonging to drawing: 12112024-04-03-01 | | Made by: Ilya van den Brandt | |
| Part no: 12112024-04-03-01 | Amount:2 | Material: Bright drawn round steel Round fit h9 | |
| Starting dimensions material:28mmxØ12mm | | | |
| Machining sequence: | | | |
| **Operation** | **Tool**  fixtures, tools and other aids | **Settings**  speed (V), number of revolutions (N), feed (f), depth of cut (t0) etc. | **Remarks** |
| Clamp the stock in the chuck |  |  |  |
| Drilling a centerhole | centerdril | N=1500rpm |  |
| Drilling a hole Ø4mm x 14mm | Drill Ø4mm and cutting fluid | N=800rpm |  |
| Countersink the hole | Countersink drill | N = 200rpm |  |
| Chamfering the edges | Toolholder for 45 degrees insert | N=1000rpm  F=manual |  |
| Take the stock out and go to the milling bench |  |  |  |
| Clamp the stock (non touched side up) |  |  |  |
| Find middle of the part to place orgin | Probe | Feature circle center |  |
| Mill away middle part 12.5mm deep, from side to side | Flat end mill with insert Ø4mm and cutting fluid | N=800rpm  f=100mm/min  t0=1mm |  |
| Flip the stock 90 degrees clockwise, so that the previous milled face is facing to the right |  |  | This is going to be hard to measure |
| Find the middle of the part | probe | Feature? |  |
| Make centerhole x2 | centerdril | N=1500rpm |  |
| Pre drill hole Ø3mm for hole M4 | Drill Ø3mm and cutting fluid | N=800rpm |  |
| Countersink hole Ø3mm for M4 hole | Countersink drill | N=200rpm |  |
| Tap hole M4 | Tapping chuck with M4 tap and cutting fluid | N=50rpm | Still only with supervisor? |
| Debur all hole edges | Countersink drill | N=200rpm |  |
| Flip the material 90 degrees, long side still diagonal |  |  | This one has to be super exact |
| Find the middle | probe | Feature? |  |
| Make centerhole | Centerhole | N=1500rpm |  |
| Predrill hole Ø3mm for hole Ø4H7 | Drill Ø3mm and cutting fluid | N=800rpm |  |
| Ream the hole Ø4H7 | Ø4H7 reamer and cutting fluid | N=200rpm |  |
| Debur all hole edges | Countersink drill | N=200rpm |  |