

TROUBLESHOOTING GUIDE – STATIONARY ANTI VIBRATION TOOL

NO.	PROBLEM	PROBABLE CAUSES	CORRECTIVE ACTIONS
01	 Vibration / Chatter Still Present	- Damped unit not activated or preloaded correctly - Overhang exceeds recommended L/D ratio - Cutting parameters too aggressive - Insert geometry causing high cutting forces - Holder or turret clamping insufficient	- Verify damping module is properly seated and tightened - Reduce overhang (target < 6–8 × diameter depending on model) - Reduce speed or feed ±20% - Use sharp, positive-rake insert - Recheck turret clamping bolts and tool post rigidity
02	 Poor Surface Finish	- Damping mechanism not functioning - Worn insert - Excessive runout in setup - Very low feed causing rub marks - Incorrect center height for tool	- Inspect damping element for damage or looseness - Replace insert with fresh edge - Re-align tool center height and ensure runout < 0.01 mm - Increase feed slightly to avoid rubbing - Confirm correct approach angle
03	 Bore Taper or Inconsistent Dimensions	- Tool deflection due to improper damped unit preload - Overhang too long - Insert force too high for tool type - Machine spindle/turret misalignment	- Reset damped unit per manufacturer instructions - Reduce overhang or use larger diameter damped tool - Change insert geometry to lower cutting pressure - Verify machine alignment with test bar
04	 Excessive Tool Deflection	- Damping element worn or internally loose - Overhang beyond rated capacity - High feed or depth of cut - Insert too large for application	- Inspect damping rod/module; replace if necessary - Reduce overhang - Reduce feed / DOC - Use smaller nose radius (0.4–0.8 mm typically)
05	 Abnormal Noise from Damped Holder	- Internal damping mass hitting outer wall - Loose fasteners or rear locking nut - Incorrect preload - Damaged elastomer/polymer inside	- Check all external screws and rear plug - Tighten damping module to recommended torque - Replace damping cartridge if internal wear is detected
06	 Insert Breakage / Chipping	- Chatter due to poor damping - Incorrect insert grade for interrupted cuts - Excessive entry angle - Machine acceleration jerks during infeed	- Recheck damping activation or replace module - Use tougher grade insert - Adjust approach angle to reduce shock - Use smoother infeed / reduced rapid-to-cut transition
07	 Damped Tool Getting Hot	- Internal friction due to failing damping element - Chip packing around holder - Coolant not reaching cutting zone - Overloaded insert	- Inspect damping module condition - Clean chips from pocket and shank - Adjust coolant direction - Reduce cutting parameters / use coated inserts
08	 Excessive Spindle or Machine Load	- Damping unit not absorbing vibration correctly - Wrong insert geometry (too negative) - Feed or DOC too high - Tool dragging due to incorrect center height	- Verify damping element movement and torque settings - Use positive or medium-positive insert - Reduce feed/DOC gradually - Correct center height
09	 Tool Holder Slipping in Turret / Block	- Clamping screws loose - Surface contamination (oil/chips) on shank - Wrong torque used - Damaged clamping pocket	- Clean all mating surfaces - Tighten to proper torque - Replace damaged block or check shank surface - Use anti-slip liners if applicable
10	 Damped Tool Not Effective at Certain RPM	- Operating near natural frequency of tool - Incorrect tuning of damped unit - Feed too low causing rubbing - Large nose radius generating high forces	- Shift RPM ±15–25% - Retune or replace damping cartridge - Increase feed slightly - Use smaller nose radius



PRECISION



HIGH
STRENGTH



SECURE
LOCKING



VIBRATION
CONTROL



LONGER
TOOL LIFE

BUILT FOR
PERFORMANCE.