



Imperial Setting Instructions for W-20 and WS-20 *gravostar*

Setting instructions the first time you use *gravostar*.

1. Mount *gravostar* in a 20mm Weldon side-lock holder, Collet chuck or Hydraulic chuck.
2. Undo M6 Cap head screw in side of *gravostar* main body
3. Screw in supplied pressure gauge (hand tight).
4. Place *gravostar* in machine tool.
5. Turn red drag indicator on pressure gauge to '0'.
6. Activate machine internal coolant system (through spindle coolant).
7. Turn off internal coolant system and take note of the reading on the pressure gauge from the red indicator. This will confirm the actual machine tool coolant system operating pressure.
8. Remove *gravostar* from machine tool.
9. Remove pressure gauge and replace M6 cap head screw.
10. Select needle adaptor according to corresponding coolant pressure.
Machine coolant pressure up to 15 bar; use 10 bar adaptor NA-W/10.
Machine coolant pressure between 15 and 30 bar; use 20-30 bar adaptor NA-W/20-30.
Machine coolant pressure above 30 bar plus use 40 bar adaptor NA-W/40.
(To change Needle adaptor undo the two M4 cap head screws securing the needle adaptor to the main body of the *gravostar* tool).
11. Place *gravostar* back in machine tool ready for use.

Setting *gravostar* on a new work piece

1. Set needle 'Z' height offset on the top of work piece.
2. Program engraving to be done by *gravostar* (the cutting plane is Z=0 and the rapids between the text at Z=0.197")
3. In the program, turn internal coolant system on at beginning of cycle and turn off at the end.
4. Adjust the Z offset to 0.157" above the workpiece.
5. Run the cycle. (The *gravostar* should not engrave the workpiece at this point).
6. Move Z offset down 0.020".
7. Run the cycle.
8. Repeat steps 6 and 7 until the text starts to appear.
9. Once the text starts to appear move Z offset down another 0.020"
10. Run cycle again. The text should now appear as programmed.

Once you have the depth of text you require, every time you use the *gravostar* unit on that particular machine tool, the Z height offset will be permanently predetermined.

