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Setting the Y-axis zero position in a machine with the HMC 500/600 control

Attention: This procedure is for trained service personnel only!

A mistake could cause severe mechanical damage to the machine!

To proceed, the following tools are necessary:

- Keyboard must be attached to the MMI control
- Machine calibration arbor and calibration disk must be available
- Review the technical documentation "Setting the motor encoder zero position on HMC 500 & 600 Indramat Diax 04 drives" and "Turn off the laser compensation"

Procedure :

1. Follow the procedure to "Turn off the Laser Compensation"
2. Power up the machine with the key switch in manual position. **"Do not** reference the machine!" All movements have to be done in manual mode.
3. Install the test bar in the workhead and check the runout. (Runout should be less than 0.01 mm at the end of the bar.) If the runout is greater than 0.01 mm rotate the bar in the chuck by 90° and check again. If the runout is still greater than than 0.01 mm, check your chuck and collet. If the runout is still greater than 0.01 mm your A-axis needs to be repaired!
4. Install the calibration disk on spindle 1
5. With the C-axis at the home position (parallel with the X-axis) move the Z- and the X-axes into position to allow the Y-axis to move down so the measuring disk can touch off the top center of the test bar. Touch off carefully!!
6. Set a relative position for the Y-axis only

7. Check or measure the diameter of the test bar and divide the value by 2
8. Check or measure the diameter of the calibration disk and divide the value by 2
9. Add the numbers from step 7 & 8 together.
10. Move the Z-axis negative to allow the Y-axis to move further down without hitting the test bar
11. Move the Y-axis down the value calculated in step 9 (½ the bar & ½ the disk)
12. Now follow the procedure “Setting the motor encoder zero position on HMC 500 & 600 Indramat Diax 04 drives “
13. Reference the machine with a 20% feed rate and “Ref All Move“
14. Set absolute zero with “ABS All Set“
15. Re-qualify at least the Y-axis, preferably the whole machine