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Ballscrews

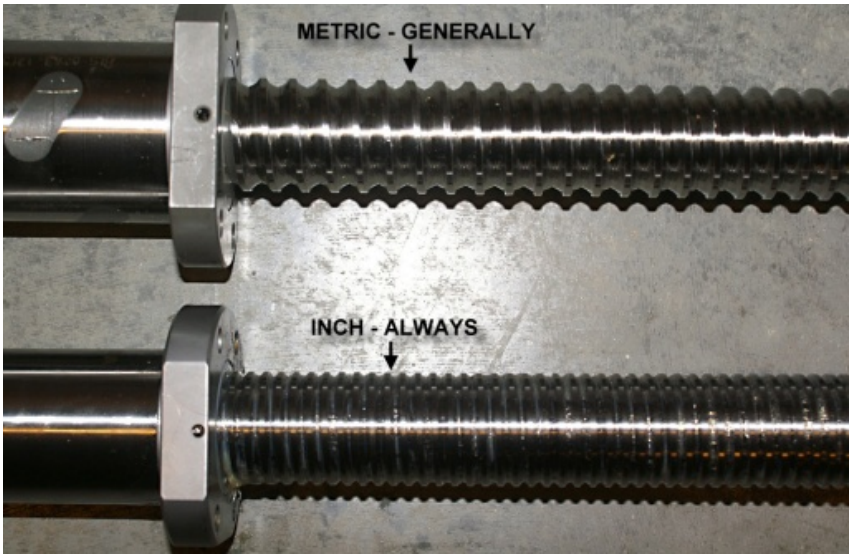
Identifying Inch from Metric Screws

When replacing ballscrews, it is imperative that you order the correct screw or your machine will not move accurately. Every ballscrew has a very specific diameter and pitch. Pitch meaning, how far the ball nut (connected to the table) moves per 1 revolution of the screw. When Fadal specified ballscrews in the early days, they were all made with an "Inch" pitch. This continued until approximately 1992 where they saw the benefits of moving to a "Metric" pitch for faster feed rates and machine longevity. The VMC 6030 and 8030 were all made with inch pitch screws and the only model that never changed throughout the years.

If you don't own a VMC 6030 or 8030, you will need to determine if you have an "Inch" or "Metric" pitch machine. The procedure is very simple and can be found one of two ways for a positive identification.

Method #1

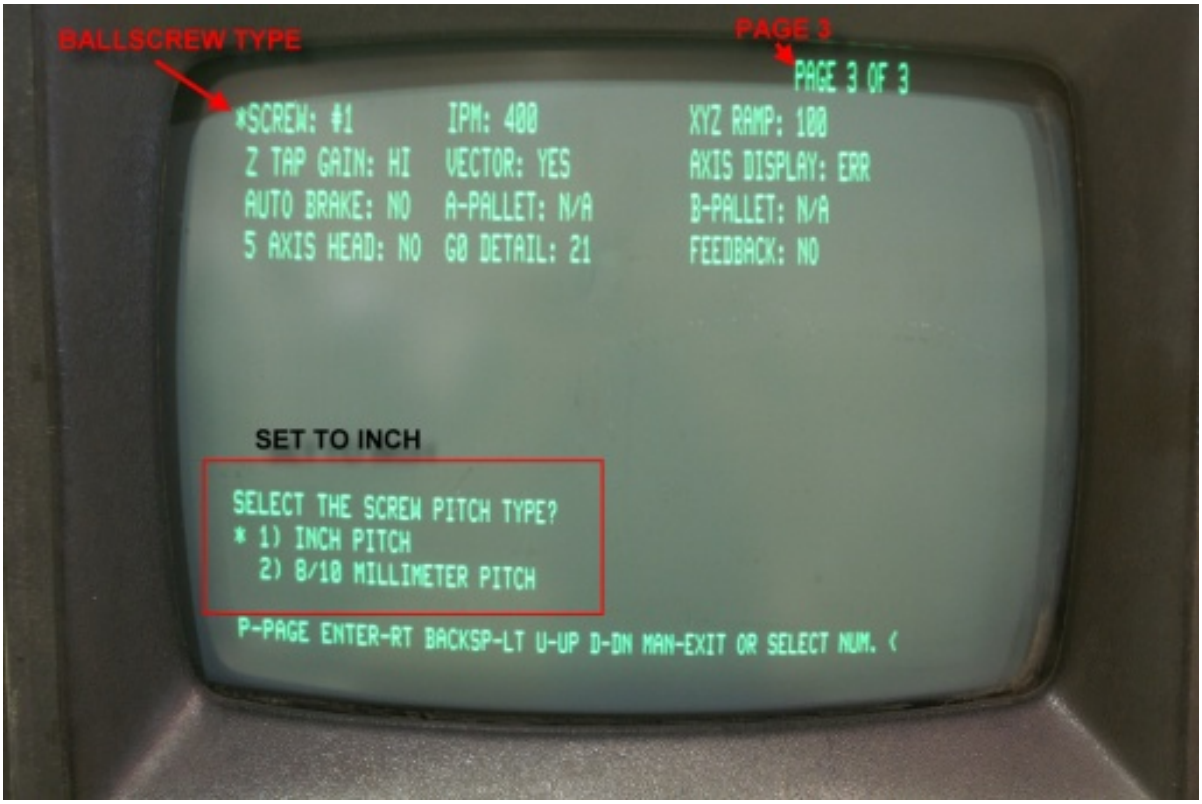
Look at photo #1. This is a shot of two ballscrews; the top being "Metric" and the bottom being an "Inch" pitch. Notice the spacing of the threads of both screws. The top is considered a "faster" pitch as the ball nut travels faster or further per revolution. The lower, slow pitch screw is an Inch Pitch. This is always the case on the screws which have the threads very close together. Anytime you have a screw that looks like that, it is an Inch pitch screw. **NOT SO FOR THE TOP SCREW!** Some screws which appear to be a "fast" pitch screw are actually inch. When your screws look like this, you must move to method #2 and/or #3 to determine the screw pitch of your machine.



Method #2

1. Power on your machine.
2. Press MANUAL until you are at the ENTER NEXT COMMAND prompt.
3. Type SETP then press ENTER.
4. You are now looking at the first (and depending on the version of your software, possibly the only page) page of your parameters. Press the P key to move from page to page. On page #3 at the top you will see the screw type. #1 is Inch. #2 is Metric. Note your screw type. See photo #2.
5. Press MANUAL to exit. Call FadalCNC.com to order what you need. We stock all of them.

NOTE: If you have no **SCREW PITCH TYPE parameter, you have an INCH machine.**



Method #3

1. Open the panel behind your monitor.
2. Look at the placard on the inside of the door. See photo #3.
3. If you have a newer machine, there will be an option box for MILLIMETER BALLSCREWS. If checked, you have a Metric ballscrew machine. If not, your machine has inch ballscrews. If you don't even have this option on the placard, look in the parameters to verify, but you likely have an inch machine.

Again, call us to order what you need. We stock all of them.