

Specifications for the

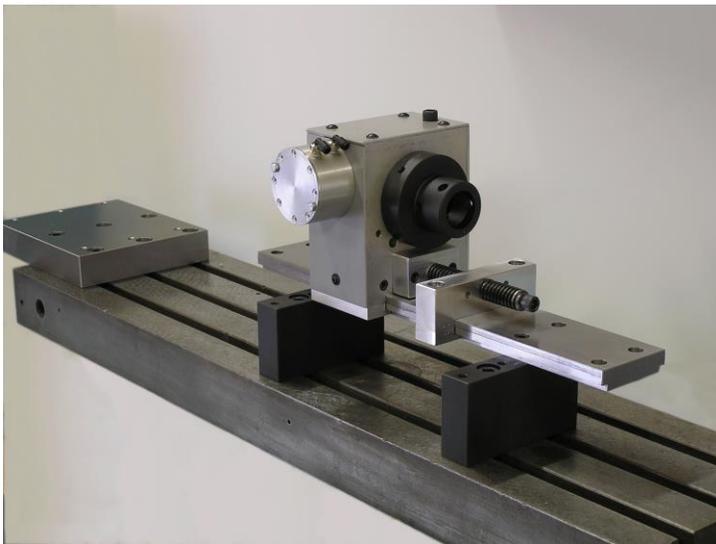
InTurn™ TAIL STOCK II

accessory for the InTurn™ Indexing Turning 4th axis



The InTurn™ series is the only CNC mill accessory that provides both Indexing and coordinated 4 axis motion with high speed turning, all under CNC control.

The TAIL STOCK II is specifically designed to compliment and enhance the unique capabilities of the InTurn™ Indexing and Turning 4th axis.



An evolution of the previous Tail Stock, the adds the ability to co-exist on the mill table with a typical mill vise. All of the controls and actuators have been moved up in the Tail Stock II to allow the head to be clamped in the mill vise.

The slide rail is mounted on steel blocks that straddle the vise allowing the Tail Stock II to be quickly set up on the mill without removing the vise.

100% duty cycle.

Production ready.

Dimensions:

5.8”H x 4.1”W x 6”L (head)

Center Height matches InTurn 4th axis

Hollow steel spindle spins on SKF sealed Ball bearings

1.25” Spindle thru hole

5C collet in spindle nose

Rotating parts balanced for 4,000 RPM operation

7075 aluminum plate frame construction

Reduces mass and draws heat off bearings

Pneumatic internal spindle lock

Manually adjusted internal spindle vibration damper

Mounting blocks are custom drilled to fit customer table.

Custom made to match buyer’s InTurn™ 4th axis center height.

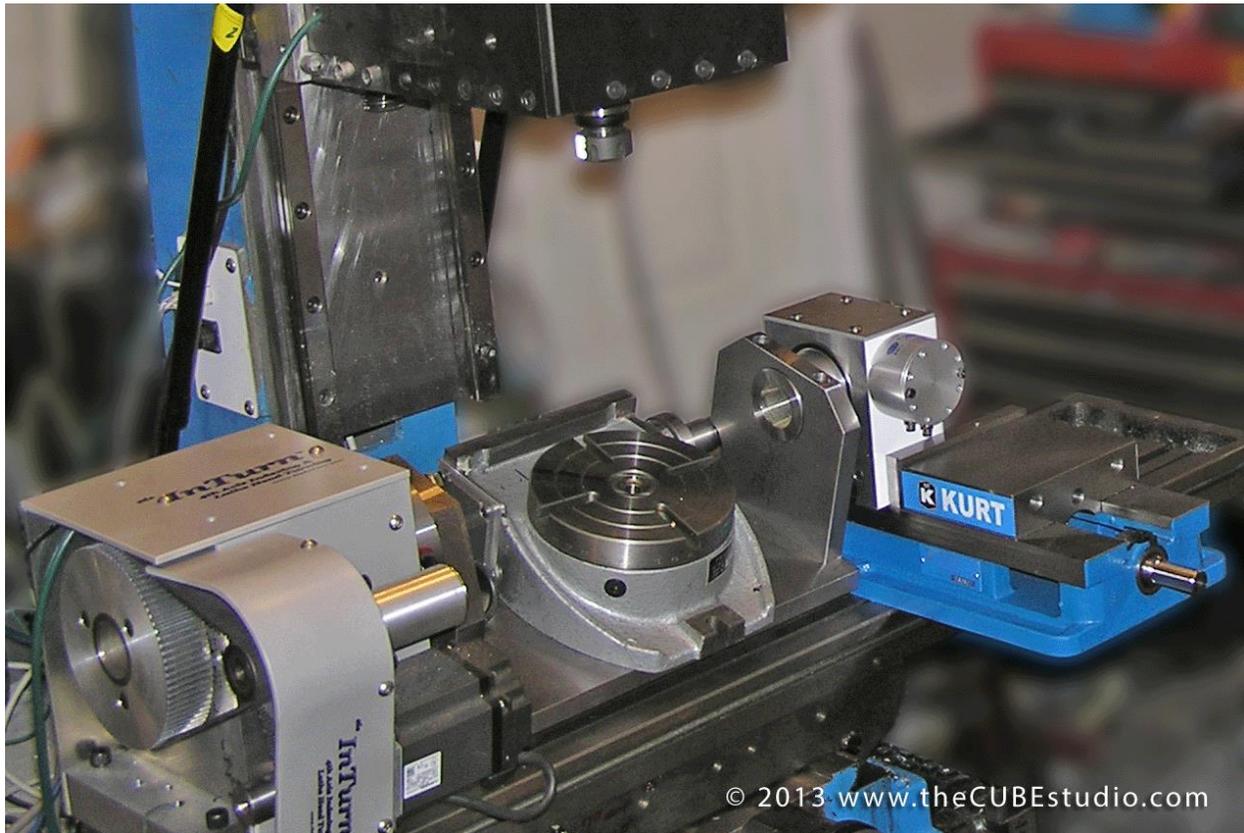
Mounting height is matched to customers mill vise.

.75” alloy steel lead screw follows Tail Stock Head

Locks in any position

Push and pull – can provide tension on work piece

18” long surface ground steel mounting slide

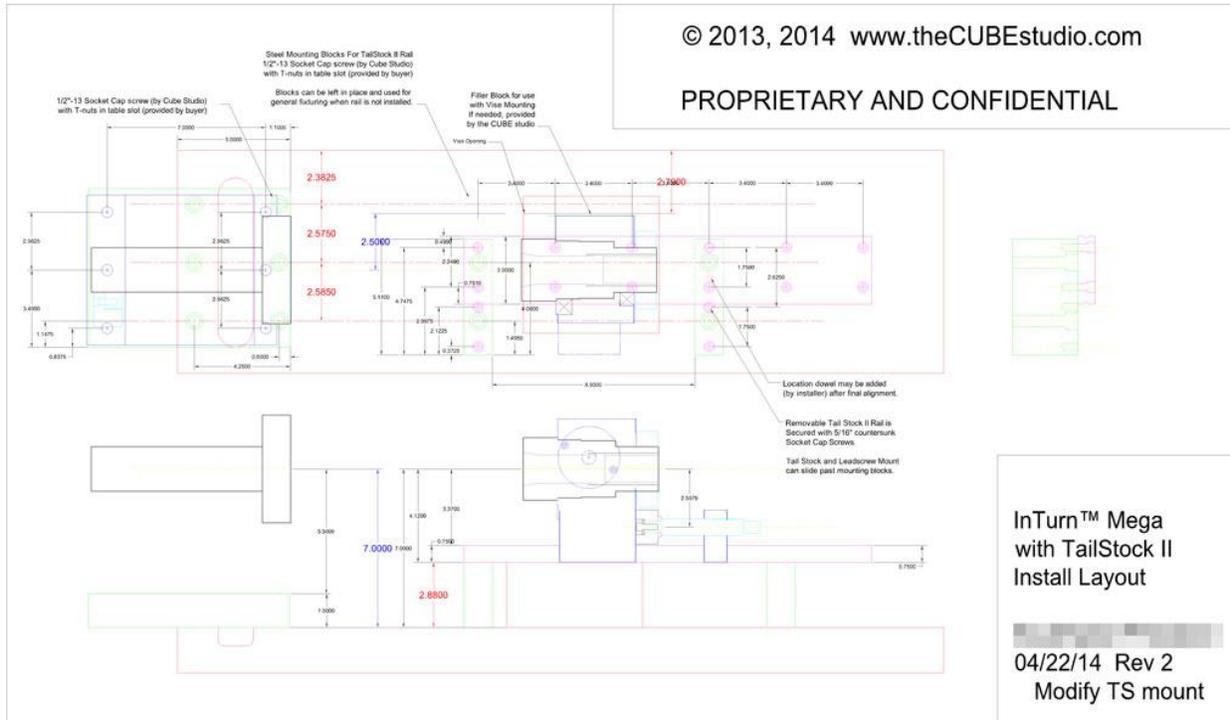


The InTurn™ Tail Stock II is specifically designed to compliment the unique features of the InTurn™ 4th axis and provides multiple services;

- **Traditional Tail Stock via Locked Spindle holding live center
Adapter allows 5C collet to hold standard Morse Taper**
- **Hollow 5C spindle holds long thru spindle workpiece or stock
Hold or pull or push stock.**
- **Rotates with the 4th axis for high speed turning.
Eliminate need for live center or steady rest.**
- **Inexpensive 5C mounted chuck becomes a rotating chuck.
Eliminated need for expensive rotating tail stock chucks.**
- **With 4 jaw 5C mounted chuck can hold irregular objects.
If you can grab anything on the workpiece, you can spin it.**
- **Provides far axle for trunnion table (as shown in photo).**

- **Internal damper quiets vibration for Trunnion or slender parts.**
Manually adjust amount of damping from zero to full lock.
- **Spindle lock provides positive lock for heavy or offset cuts.**
Pneumatic cylinder over rides damping and locks spindle.
On release, spindle returns to previous drag setting.
- **Pneumatic spindle lock is CNC controlled.**
CNC compatible relay and solenoid air valve included.
Positive spindle locking even when using vibration damping.
- **Holds round stock centered in 5C collet with no need for center drilling.**
- **Can impart tension on slender workpieces to increase rigidity.**
- **Index cut gears/pulleys/bolt patterns using any mandrel.**
The Tail Stock II bearing mounted spindle provides the rotation.

The Tail Stock II eliminates the single inconvenience of having indexing, workholding, high speed turning and coordinated 4 axis movement all resident on your mill table. The vice no longer needs to be taken down to use the Tail Stock. Just grab the Tail Stock head and clamp it in the vice. Longer or shorter part, no problem, just grab the Tail stock mounting rail. Open the vise jaws and with 4 bolts, the rail is in place straddling the vice, sitting on its steel mounting blocks. Because the blocks straddle the vise and are matched to the vise bed height, they can remain permanently bolted to the mill table. When not supporting the Tail Stock Slide, the block's four tapped holes can be utilized for all manner of fixturing and/or workpiece support.



The price of the InTurn™ Tail Stock II includes one iteration of a custom designed mounting scheme to match your InTurn™ 4th axis installation. Customer supplied measurements of the mill table, vise and vise position are used to tailor the InTurn™ 4th axis and InTurn™ Tail Stock II to your mill.

The InTurn™ Tail Stock II device is intended for use with the InTurn™ 4th axis only. The Tail Stock II can be ordered with new InTurn™ 4th axis or by existing owners of InTurn™ 4th axis machines.

Video: www.youtube.com/watch?v=k2F6100RKOE

(fast forward to approx. 6:50 to observe Tail Stock II)

InTurn™ models: www.theInTurn.com/InTurnComparison.pdf

(includes pricing for all products)

Questions: steve@thecubestudio.com