

TAPMATIC

Safety and Operation Instructions

TIC Tension Compression Tap Holders With Internal Coolant and Quick-Change

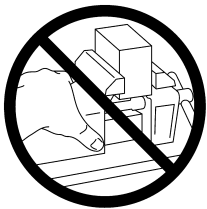
WARNING: To Avoid Serious Injury And Ensure Best Results for Your Tapping Operation, Please Read Carefully All Operator and Safety Instructions provided for this tapping attachment as well as all other safety instructions that are applicable, especially those for your machine tool.

1. Proper Clothing: the rotating spindle of a machine tool can snag loose fitting clothing, jewelry or long hair. Never wear jewelry, long sleeves, neckties, gloves or anything else that could become caught when operating a machine tool. Long hair must be restrained or netted to prevent it from becoming entangled in rotating spindle.

2. Proper Eye Protection: Always wear safety glasses with side shields to protect your eyes from flying particles.



3. Proper Work Piece Fixturing: Never hold the work piece or the vise it is held in, by hand. The work piece must be clamped firmly to the table of the machine so that it cannot move, rotate or lift.



4. Always Be Aware Of The Potential Hazards Of A Machining Operation: sometimes working with your machine can seem routine. You may find that you are no longer concentrating on the operation. A feeling of false security can lead to serious injury. Always be alert to the dangers of the machines with which you work. Always keep hands, body parts, clothing, jewelry and hair out of the areas of operation, when the machine spindle is rotating. Areas of operation include the immediate point of machining and all transmission components including the tapping attachment. Never bring your hand, other body parts or anything attached to your body into any of these areas until the machine spindle is completely stopped.

5. Be aware of any other applicable safety instructions / requirements





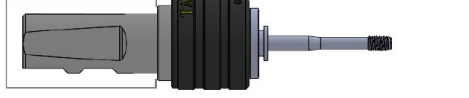



CHECK LIST FOR GOOD TAPPING.

1. Never use this unit before reading all safety instructions for this attachment as well as the machine it is to be used on.
2. Is the tap sharp and of correct design for current job?
3. Is tap in proper alignment with drilled hole?
4. Is machine speed correct?
5. Is machine feed correct?
6. Is machine stop set properly so tap does not bottom in work piece or fixture?
7. Is work piece held rigidly against rotation and upward movement?
8. Is drilled hole the correct size?
9. Is clearance between the drilled hole and tap sufficient at start position to allow the tap to clear the hole upon retraction?
10. Is the proper cutting fluid or coolant being used for lubricating the tap?
11. If a bottom hole is being tapped is there sufficient chip clearance?

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INSERTING QUICK-CHANGE ADAPTER	REMOVING QUICK-CHANGE ADAPTER
<p>1. Fix tap holder shank</p> 	<p>1. Push grip sleeve in direction of shank and hold it.</p> 
<p>2. Put in quick-change adapter; Important: Watch position of the driver and groove.</p> 	<p>2. Remove quick-change adapter.</p> 
<p>3. Push grip sleeve in direction of the shank and hold it</p> 	<p>3. Let go of grip sleeve.</p> 
<p>4. Push adapter back. 5. Let go of grip sleeve. It should move forward. Important: Check whether grip sleeve is in front position.</p> 	<p> Important: The adaptor must not be changed while The machine spindle rotates.</p>

THROUGH HOLE TAPPING: Easily performed by setting the machine feed correctly for the thread pitch or slightly slower. Then stop, reverse, and retract when desired depth is reached.

BOTTOM HOLE TAPPING:

CAUTION! It should be noted that the TIC Tap Drivers have **No Neutral** (release position. The machine spindle rotation **must be Stopped/Reversed** to stop tap from advancing further into the hole.)

CONTROLLED DEPTH TAPPING: Set machine feed correctly for thread pitch or slightly slower. Then reverse and retract when desired depth is reached. The TIC series tools feature a collapsible hard-start. The hard-start ensures that the tap will begin cutting consistently from the same axial position at each hole location resulting in accurate tapping depth control. If sufficient force is applied in compression against the hard start, it will collapse, putting the tap holder into a standard compression mode.

PROGRAMMING:

1. Utilize tapping cycle of machine.
2. Set machine feed at tap pitch or slightly slower, for example 95% of tap pitch feed rate.
3. Clearance plane (minimum standard amount recommended by machine builder for tension-compression tapping).
4. For through holes or blind holes with sufficient chip clearance, machine feed to desired depth, reverse and retract.

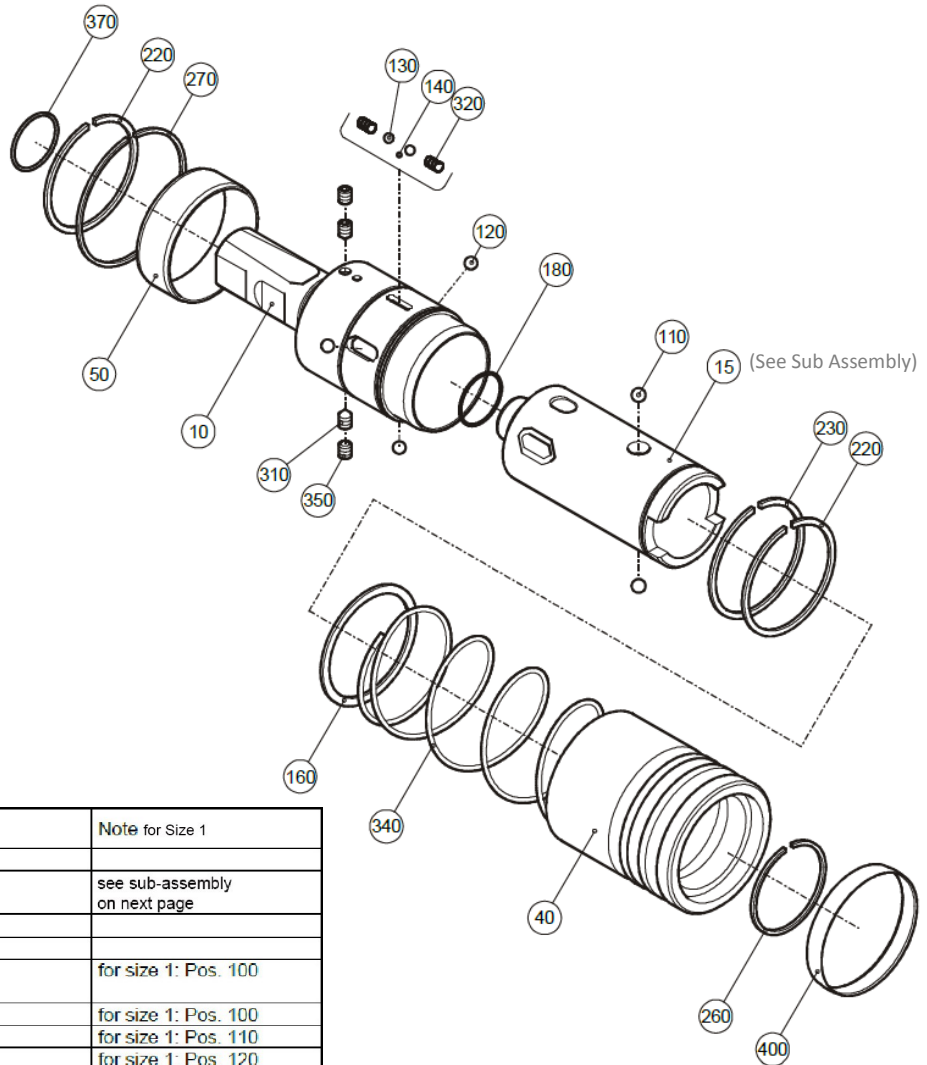
TAP LUBRICATION: To ensure maximum tap life, the proper lubricant should be used. **For internal coolant the maximum pressure is 50 bar, or 700 psi.**

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*Drawing corresponds to TIC2 or TIC3



Pos.	Quantity	Description	Note for Size 1
10	1	Tap holder shank	
15	1	TIC Drive Spindle Unit - pre-assembled	see sub-assembly on next page
40	1	Grip sleeve	
50	1	Cover sleeve	
110	2	Ball for size 4: 3x	for size 1: Pos. 100
120	3	Ball	for size 1: Pos. 100
130	2	Ball	for size 1: Pos. 110
140	1	Ball	for size 1: Pos. 120
160	1	Disc	sometimes not necessary
180	1	O-ring	for size 1: Pos. 160
220	2	Retaining ring for size 4: Pos. 190, 1x	for size 1: Pos. 210
230	1	Retaining ring	not necessary for size 1
260	1	Retaining ring	for size 1: Pos. 240
270	1	Retaining ring	for size 1: Pos. 330
310	2	Thread pin	for size 1: Pos. 320
320	2	Compression spring	for size 1: Pos. 250
340	1	Compression spring	for size 1: Pos. 260
350	2	Thread pin	for size 1: Pos. 470
370	1	O-ring	only for shank DIN1835 for size 1: Pos. 290
400	1	Marking ring	



When ordering, please advise Position No. Type, Size, and Shank

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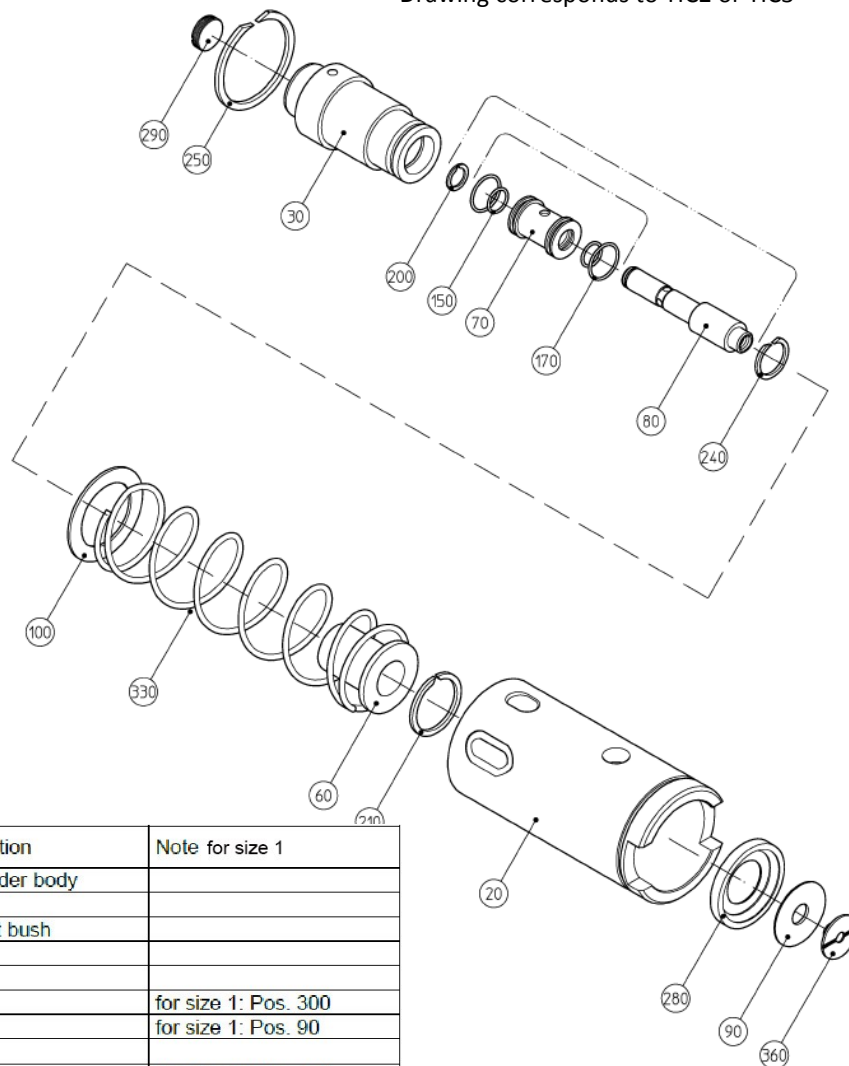
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Sub-Assembly (Pos. 15) Drive Spindle from previous drawing

Drawing corresponds to TIC2 or TIC3



Pos.	Quantity	Description	Note for size 1
20	1	Tap holder body	
30	1	Bush	
60	1	Content bush	
70	1	Bush	
80	1	Tube	
90	1	Disc	for size 1: Pos. 300
100	1	Disc	for size 1: Pos. 90
150	2	O-ring	
170	2	O-ring	for size 1: Pos. 140
200	2	Retaining ring	for size 1: Pos. 180
210	1	Retaining ring	for size 1: Pos. 190
240	1	Retaining ring	for size 1: Pos. 230
250	1	Retaining ring	for size 1: Pos. 220
280	1	Seal	for size 1: Pos. 170
290	1	Screw	for size 1: Pos. 280
330	1	Compression spring	for size 1: Pos. 270
360	1	Nozzle	for size 1: Pos. 340



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For Parts Ordering:

Due to the type of tap holder (size, shank) the position numbers may vary.

The position number of the spare parts depends on the size of the quick-change tap holder and tap holder shank.

For inquiries or orders, please indicate the following data:

-Article number of the quick-change tap holder and the required position from the spare parts list together with the appropriate quantity.

OR

-Exact description of the quick-change tap holder consisting of type, size, and the tap holder shank. Please also indicate, the required position number from the spare parts list and appropriate quantity.

Ordering Examples:

Tap Holder Part Number: TIC2-025
 Required Spare Parts: Compression Spring Pos. 340
 Quantity: 1 Piece

OR

Tap Holder: TIC
 Size: 2
 Shank: 25mm
 Required Spare Parts: Compression Spring Pos. 340
 Quantity: 1 Piece

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REPAIR POLICY

MAINTENANCE

When your TIC holder is not in use, please be sure to dry it, if wet from coolant, and apply oil to prevent corrosion.

Repair Service is available at:

Attention:

Repair Department
Tapmatic Corporation
802 Clearwater Loop
Post Falls, ID 83854

To Expedite Repair: Return tool direct to Tapmatic corporation, by United parcel Service and enclose the following statement with your purchase order. "Authorization given to repair and return tool if total repair cost does not exceed 40% of the cost of a new tool." Tapmatic will still send you cost notification for the actual charges prior to repairing the tool, and we will call to request credit card information for invoicing.

IMPORTANT: Be sure to return the tool complete with the tap chuck nut, and if applicable the back jaw and if a reversing unit, include stop arm. Otherwise, we will add these missing parts to every non-warranty repair.

Cost Notification: Tapmatic will FAX a cost notification to you, soliciting your approval before repairs are completed.

If it is determined that a tapping attachment cannot be repaired, at the customer's request, Tapmatic will return the disassembled parts. We are not able to reassemble tapping attachments using damaged or worn out parts.

Optional Return Procedure: Tools may also be returned for repair through your local Tapmatic Distributor. They will ship the tool to us and include instructions for the repair and return. You may already have an open account with them, which facilitates the handling of invoicing.

Priority Service: Tapmatic services tapping attachments returned for repair in the order in which they are received. All tools will be evaluated and repaired within three weeks from the date they arrive subject to receiving the customer's approval to proceed with the repair.

Priority is given to the tools shipped to us by overnight or second day.

If a repair is sent to us by UPS ground or similar service it can also be given priority. Just call and let us know if you need priority service and advise if you would like the tool returned to you by overnight or second day. In the interest of fairness, to all our customers, we ask that you approve return shipment by overnight or second day before we agree to upgrade your repair order to priority service. Typical turnaround, not including shipping time, for priority repairs is 5-7 days subject to receiving the customer's approval to proceed with the repair.

If we can answer any questions, please call our toll free number: 800 395 8231.

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