

Safety And Operation Instructions

HPT High Pressure Coolant Through And Tension Float Tap Drivers For All CNC Tapping Cycles

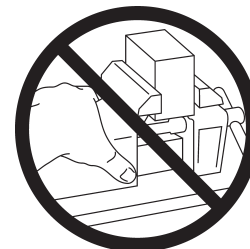
⚠️ WARNING To Avoid Serious Injury And Ensure Best Results For Your Tapping Operation, Please Read Carefully *All* Operator And Safety Instructions Provided For This Tapping Unit as well as all other safety instructions that are applicable, especially those for your machine tool.

⚠️ 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 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?
 - 5. Is machine stop set properly so tap does not bottom in work piece or fixture?
 - 6. Is work piece held rigidly against rotation and upward movement?
 - 7. Is drilled hole the correct size?
 - 8. Is clearance between the drilled hole and tap sufficient at start position to allow the tap to clear the hole upon retraction?
 - 9. Is the proper cutting fluid or coolant being used for lubricating the tap?
 - 10. If a bottom hole is being tapped is there sufficient chip clearance?
 - 11. Is the correct Tapmatic model for the specific job requirement being used? (Capacity should be reduced 25% for roll form taps.)
 - 12. Is machine retraction correct for tapping attachment being used?

References for this Safety Information include but are not limited to:

American National Standards Institute
ANSI B11.8-1983 (Adopted May 31, 1983
by Department of Defense)

Society Of Manufacturing Engineers
Tool and Manufacturing Engineers Handbook
Volume 1 Machining
(Library of Congress Catalog No. 82-060312)

Installation And Operation

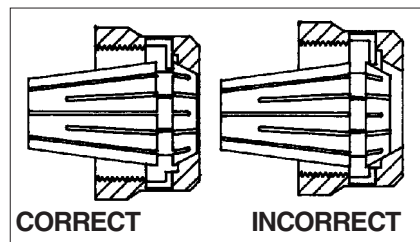
HPT Non-Reversing Tap Drivers

INSERTING THE TAP Steel Collet Spindle:

Select the proper steel collet for the tap. (Steel collets must be ordered separately.) Insert the collet into the nut being sure to fix pawl of collet nut with the seat of the collet for assembly and then mount into spindle.

Next, insert the tap and tighten collet nut firmly with wrenches provided.

IMPORTANT: Tap may slip or pull out of collet if clamping nut is not tightened firmly which can result in tap breakage or damage to tool. Be sure to use square drive, "GB," type steel collets whenever possible.



Steel Collets With Square Drive For Inch Tap Shanks

Series	Order No.	Tap Size	Shank Size	Square
#20 Series	21019	#8	.168	.131
	21020	#10	.194	.152
	21021	#12	.220	.165
	21022	1/4"	.255	.191
	21023	5/16"	.318	.238
	21024	7/16"	.323	.242
	21025	1/2"	.367	.275
21026	3/8"	.381	.286	
#32 Series	21050	1/2"	.367	.275
	21054	9/16"	.429	.322
	21058	5/8"	.480	.360
	21060	11/16"	.542	.406
	21064	3/4"	.590	.442
	21068	7/8"	.697	.523
	21070	1"	.800	.600

Steel Collet Seals For Use With Coolant Through Steel Collet Models

#20 Series Seals		#32 Series Seals	
Size	Catalog No.	Size	Catalog No.
(Complete Set 20 pcs.)	70121	(Complete Set 34 pcs.)	70133
3-3.5mm (.118-.138)	70121-35	3-3.5mm (.118-.138)	70133-35
3.5-4mm (.138-.157)	70121-40	3.5-4mm (.138-.157)	70133-40
4-4.5mm (.157-.177)	70121-45	4-4.5mm (.157-.177)	70133-45
4.5-5mm (.177-.197)	70121-50	4.5-5mm (.177-.197)	70133-50
5-5.5mm (.197-.217)	70121-55	5-5.5mm (.197-.217)	70133-55
5.5-6mm (.217-.236)	70121-60	5.5-6mm (.217-.236)	70133-60
6-6.5mm (.236-.256)	70121-65	6-6.5mm (.236-.256)	70133-65
6.5-7mm (.256-.276)	70121-70	6.5-7mm (.256-.276)	70133-70
7-7.5mm (.276-.295)	70121-75	7-7.5mm (.276-.295)	70133-75
7.5-8mm (.295-.315)	70121-80	7.5-8mm (.295-.315)	70133-80
8-8.5mm (.315-.335)	70121-85	8-8.5mm (.315-.335)	70133-85
8.5-9mm (.335-.354)	70121-90	8.5-9mm (.335-.354)	70133-90
9-9.5mm (.354-.374)	70121-95	9-9.5mm (.354-.374)	70133-95
9.5-10mm (.374-.394)	70121-100	9.5-10mm (.374-.394)	70133-100
10-10.5mm (.394-.413)	70121-105	10-10.5mm (.394-.413)	70133-105
10.5-11mm (.413-.433)	70121-110	10.5-11mm (.413-.433)	70133-110
11-11.5mm (.433-.453)	70121-115	11-11.5mm (.433-.453)	70133-115
11.5-12mm (.453-.472)	70121-120	11.5-12mm (.453-.472)	70133-120
12-12.5mm (.472-.492)	70121-125	12-12.5mm (.472-.492)	70133-125
12.5-13mm (.492-.512)	70121-130	12.5-13mm (.492-.512)	70133-130
		13-13.5mm (.512-.531)	70133-135
		13.5-14mm (.531-.551)	70133-140
		14-14.5mm (.551-.571)	70133-145
		14.5-15mm (.571-.591)	70133-150
		15-15.5mm (.591-.610)	70133-155
		15.5-16mm (.610-.630)	70133-160
		16-16.5mm (.630-.650)	70133-165
		16.5-17mm (.650-.670)	70133-170
		17-17.5mm (.670-.690)	70133-175
		17.5-18mm (.690-.710)	70133-180
		18-18.5mm (.710-.730)	70133-185
		18.5-19mm (.730-.748)	70133-190

Steel Collets With Square Drive For Metric Tap Shanks

	Series	Order No.	Shank Size	Square		
ER Collets With Square Drive	#20 Series	21077	4.5	3.4		
		21078	5.5	4.3		
		21079	6	4.9		
		21080	7	5.5		
		21081	8	6.2		
		21082	9	7		
		21083	10	8		
	#32 Series	21163	9	7		
		21164	10	8		
		21165	11	9		
		21166	12	9		
		21167	14	11		
		21168	16	12		
		Other Square Drive Metric Sizes Available On Request				

Safety And Operation Instructions

HPT Series: Coolant Through, Tension Float Tap Drivers With Steel Collet Spindle

HPT Non-Reversing Units For CNC Turning Centers or Machining Centers may be used with conventional CNC tapping cycle or rigid cycle.

Uses Steel Collets

Coolant Through The Spindle Capability Up To 1000 psi or 70 bar. Higher pressure available. Please consult factory.

Program Using Your Standard Rigid Tapping Cycle Or Conventional Tapping Cycle. For conventional tapping cycle, we recommend using a 100% feed rate according to tap pitch. In some cases a 98% feed rate may give best results.

HPT Models come with sealing disk nuts.		Capacity In 1010 Mild Steel	Model	Mount	Catalog No.	Collet Series	Weight	A	B	D	Axial Compensation
<p>1/8" OR 1/4" NPT ADAPTER ORDER SEPARATELY.</p>	<p>INTEGRAL STRAIGHT SHANK</p>	1/4"-1/2" M6-M12	HPT50	1" SS	4850120	#20 Series	1.016	44mm	1.100	3.49	.37
			25mm SS	48502520	2.416		5.18				
			HSK63A	25mm SS	4850H6320		1.1 Kg			5.44	132mm
			HSK100A	25mm SS	4850H10020		6 lb. 2.7 Kg.			5.44	138mm
		7/16"-1" M11-M25	HPT85	1" SS	4885132	#32 Series	2.016	63mm	1.968	4.34	.40
			25mm SS	48852532	1 Kg.		3.616				
			HSK63A	25mm SS	4885H6332		1.6 Kg.			6.29	153mm
			HSK100A	25mm SS	4885H10032		7 lb. 3.2 Kg.			6.29	160mm

For applications on CNC lathes, we offer pipe fitting adapters to go with 1" straight shank or 25mm straight shank models. Please order the size you would like separately: 1/8" NPT Adapter 733748, 1/4" NPT Adapter 733744

BT		CAT		HSK		NC Arbors Catalog No.	Bore Or Mount	Weight	G
			CAT-40	23951	1"	1.7 lb., .7 kg.	1.375, 35mm		
			CAT-45	23954	1"	3.6 lb., 1.6 kg.	1.375, 35mm		
			CAT-50	23953	1"	6 lb., 2.7 kg.	35mm, 1.064		
			BT-40	23952	1"	1.7 lb., .7 kg.	27mm		
			BT-45	23956	1"	4.5 lb., 2.0 kg.	1.675, 42.5mm,		
			BT-50	23955	1"	8 lb., 3.6 kg.	42.5mm, 1.875		
			HSK63A	23969	1"	3.5 lb., 1.5 kg.	3.020, 77mm		
			HSK80A	23973	1"	5.0 lb., 2.1 kg.	3.200, 81mm		
			HSK 100A	23971	1"	10.0 lb., 4.2 kg.	3.280, 83mm		

INSTALLING THE CNC ARBOR On Coolant Through Tools

INCORRECT

IF SCREW IS TIGHTENED WITHOUT PUSHING CAT OR BT OVER O-RING, IT LEAVES A GAP BETWEEN THE SHOULDER OF THE STRAIGHT SHANK AND THE BOTTOM OF THE CAT OR BT. WHEN TAPPING A HOLE THE O-RING COMPRESSES AND THE SCREW COULD BECOME LOOSE.

NOTE GAP

O-RING

CORRECT

PUSH CAT OR BT DOWN AGAINST SHOULDER OF THE STRAIGHT SHANK SO THAT O-RING GOES INSIDE THE SHANK. THEN TIGHTEN THE LOCKING SCREW.

SCREW STAYS TIGHT

NO GAP

Repair Service

HPT Non-Reversing Tap Drivers

MAINTENANCE: When your HPT holder is not in use, please be sure to dry it if wet from coolant and apply oil to prevent corrosion. If coolant somehow goes past seals and enters housing, remove button head screw from side of housing, drain coolant and add lubrication through hole. We recommend Prolong SPL100 Spray and EP2 Grease. Be careful not to over grease as this can effect tension float return.

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 without notification if total repair cost does not exceed 40% of the cost of a new tool."** Tapmatic will repair the tool and call to request your credit card # for invoicing.

IMPORTANT: Be sure to return the tool complete with the tap chuck nut, back jaw and if the tool is 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 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 3 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.

TAPMATIC®

The Tapping Specialists

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