

## Safety and Operation Instructions MH Marking Heads



### Safety Precautions and Instructions

**To avoid serious injury and ensure best results for your application, please read carefully *all* operation and safety instructions for your Marking Head, as well as all other safety instructions that are applicable, especially those for your machine tool.**

**Proper Clothing:** The moving spindle of a machine 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 moving spindle. Steel-toed boots should also be worn in any machine environment.

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



**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.

**Do not attempt to compress by hand:** It requires considerable force to compress the marking head. Do not attempt to compress by hand. You could be injured.

**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 is moving. Areas of operation include the immediate point of marking and all transmission components including the Marking Head. Never bring your hand, other body parts or anything attached to your body into any of these areas until the machine is stopped.

**Be aware of any other applicable safety instructions or requirements.**

## Marking Head Operations

Thank you for purchasing a Tapmatic Marking Head. Please read this instruction sheet carefully before using the tool.

1. Choose machine for the marking operation. Virtually any milling, turning, or drilling machines, either manual or CNC may be used.
2. Choose the marking text and follow the type setting instructions for setting up the marking tool.
3. The Marking Head is loaded in the machine's spindle or tool holding system (tool post or turret) then aligned and positioned on the work piece. See Orientation instructions.
4. The Marking Head is immediately ready for the piece needing to be marked.
5. The Marking Head is advanced against the work piece surface for compression stroke "C" shown in the drawing. This compression stroke will charge and launch the inertia system which triggers the movement of the marking head's impact.

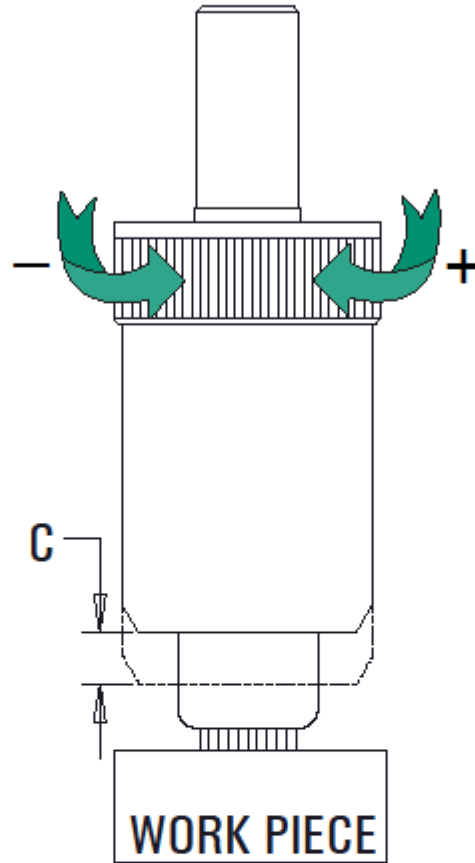
MH 1/2 C= 12mm or 1/2"  
 MH 3/4 C= 18mm or 3/4"

6. The force needed to charge the tool to the point of launch are the following.

MH 1/2 120 kg Max.  
 MH 3/4 208 kg Min to 338 kg Max.

Please note that softer springs are available for the MH 1/2 if the minimum setting is too high for a more delicate work piece or soft material.

7. The marking depth is adjusted by turning the knurled housing as shown in the drawing at right.
8. The hardness of the material and number of characters and size of the characters influence the force needed for marking. More or larger characters required greater marking forces.
9. It is also possible to impact the mark a second time for a deeper impression.
10. At the top of the shank there is a hole for draining possible condensation or coolant inside the head. It is not necessary to use coolant for the marking operation and we recommend you avoid directing any coolant on the Marking Head when possible.



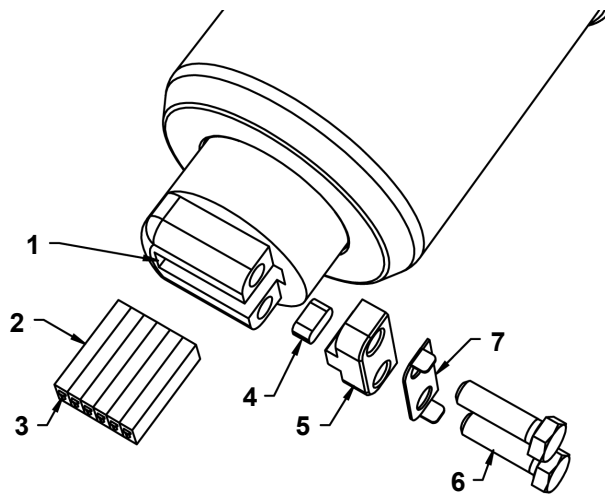
### Programming on CNC Machines

Simply rapid approach the surface of the work piece to a distance of 1mm above the part. Then advance against the surface by the compression distance "C" recommended for your Marking Head using a feed rate of 2000 mm/min or 75 inch/min. Then immediately rapid back to a clearance plane 25mm or 1" away from the part.

Example: Work piece surface is Z0.0

M6T1	Load Marking Head
M19	Orient, lock spindle
G90	Absolute movement
G0 X...Y...	Rapid to X Y location
G0 Z1.0	Rapid to 1mm above
G1 Z-12.0 F2000	Compress 12mm
G0 Z25.0	Rapid away 25mm

**Setting the Type**



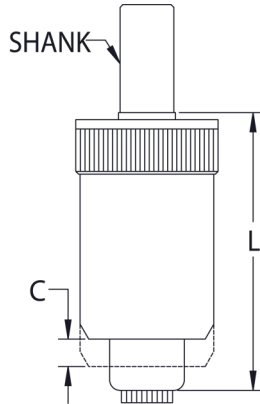
1. Place the steel type (3) in the type seat (1) in the mirror image of the desired mark.
2. It is important to center the type (3) in the holder (1) to prevent undue wear to the marking head. This can be easily accomplished with the use of blank type spacers (2) in conjunction with the bracket (5).
3. Do not over tighten the bolts (6), but leave a small space between the bracket (5) and the type holder (1) in order to leave the elastic insert (4) working.
4. Align the head of the bolts (6) to allow the ears of the lock plate (7) to be folded against the flats of the bolt heads for security. Extra lock plates are provided.

**Orientation of mark on work piece:** The marking position can be set by the orientation of the straight shank as it is held in the machine. You can hold the straight shank of the marking head in collet chucks or end mill type holders. Clamp securely against the round shank with the type holder oriented in the desired position.

**IMPORTANT:** On machining centers, be sure to lock the machine spindle in the tool change orientation position so that it will not rotate. Use a code like M19 for example to lock machine spindle in the tool change position.

### How to Order

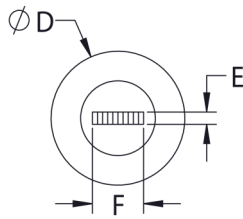
Please select the Marking Head with the shank to fit your application. Please order accessories like standard type or custom stamps separately. Please note the Marking Head accepts standard type directly or you can use one of the separate Type Holders for quick replacement of characters and fast change over.



#### MH Marking Heads

Model	Order No	Shank	E	F	D	L	C	Weight kg
MH 1/2	575020TH	20 mm	6.4	24.5	62	128	12	1.6
	575025TH	25 mm						
	575075TH	3/4"						
	575010TH	1"						
	575003TH	#3 Morse						
MH 3/4	577525TH	25 mm	6.4	40	86	172	18	3.4
	577510TH	1"						

Note: The impact force of each marking head may be adjusted by turning the knurled sleeve. For softer materials like plastic we also have the ability to deliver a Marking Head with lighter springs. Please just let us know the details about your specific application for a recommendation.

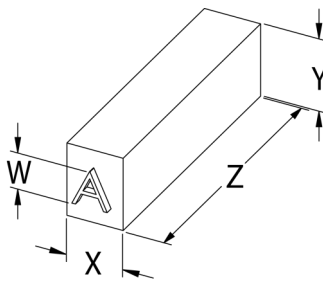


#### Standard Type Dimensions

W	X	Y	Z	Order No 26 Letters	Order No 10 Numbers	Order No Blank Spacer
1	1.6	6.4	22.2	5707111006	5707101000	5707014002
1.5	1.6	6.4	22.2	5707112009	5707102003	5707014002
2	2	6.4	22.2	5707113001	5707103006	5707015005
2.5	2.4	6.4	22.2	5707114004	5707104009	5707016008
3	3.2	6.4	22.2	5707115007	5707105001	5707017000
4	4	6.4	22.2	5707120001	5707118008	5707021008
5	4.8	6.4	22.2	5707117002	5707106004	5707018003
6	6.5	9.5	19	5707950*	5707951*	5707952*

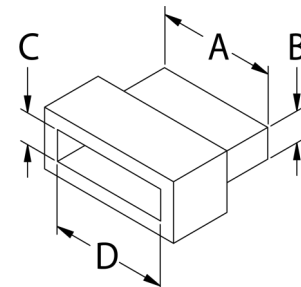
Note: To order individual letters or numbers please use the set order code shown above followed by the desired character. For example 5707111006D for the letter D character with height of 1mm.

\* Only for use with type holder 5775THILG



#### Type Holders for fast change over

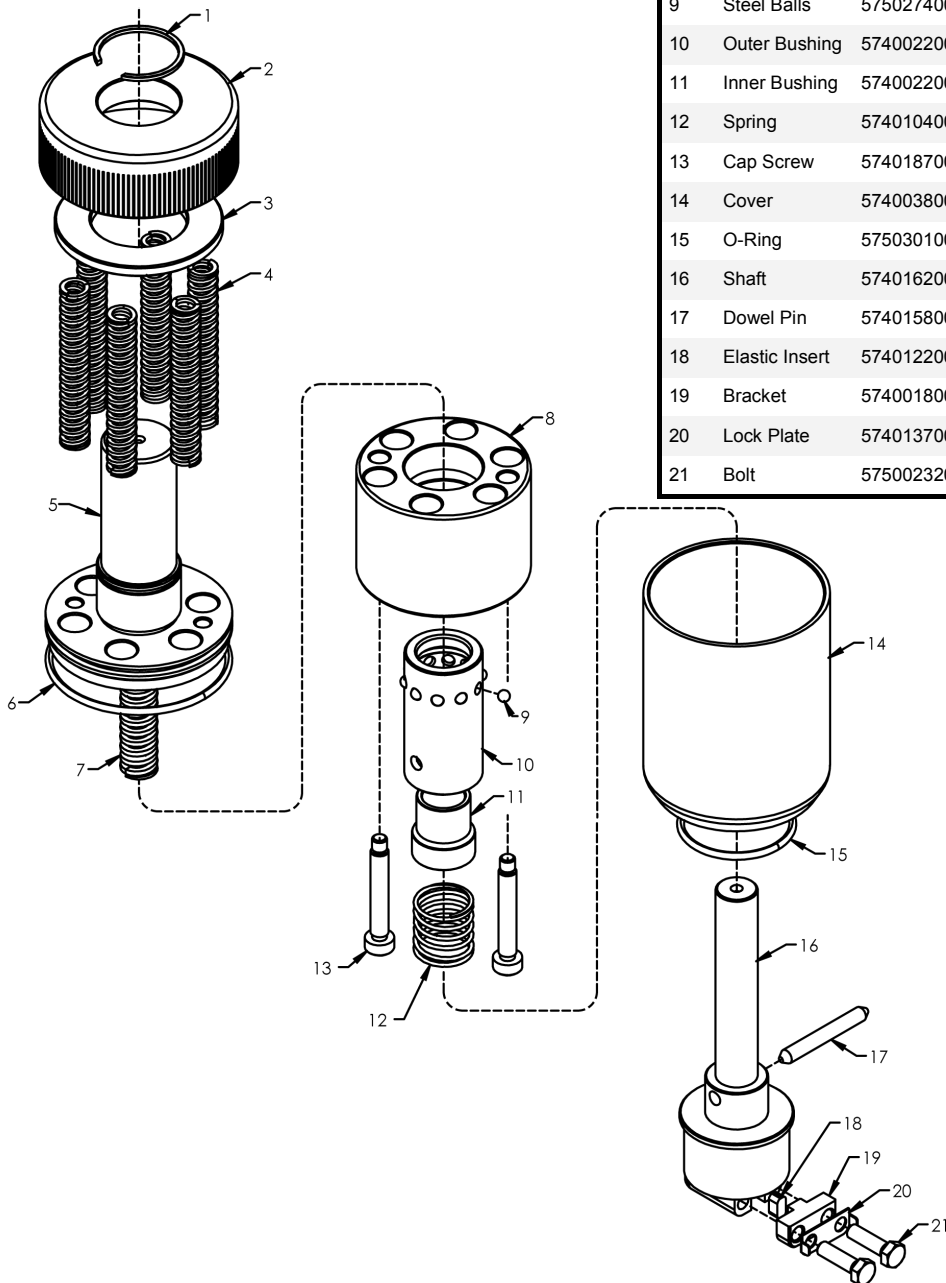
Model	Order No	A	B	C	D
MH 1/2	5750THI	24	6.35	6.4	24
MH 3/4	5775THI	40	6.35	6.4	40
MH 3/4	5775THILG	40	6.35	9.6	40



Custom stamps are also available on request.

**Parts List**

Pos	Description	MH 1/2 No	MH 3/4 No	Qty
1	Lock Ring	575023100022	575023100026	1
2	Preload Nut	574007100060	574007100110	1
3	Spring Guide	574000500040	574000500070	1
4	Spring	575071603006	575071603025	6
5	3/4 Shank	574001000150		1
5	1 Shank	574001000160	574001000200	1
5	Morse Taper 3	574001000180		1
5	25mm Shank		574001000190	1
6	O-Ring	575030100064	575030100119	1
7	Spring	575071603013	575071601023	1
8	Body	574011000050	574011000060	1
9	Steel Balls	575027400047	575027400040	8
10	Outer Bushing	574002200081	574002200100	1
11	Inner Bushing	574002200090	574002200110	1
12	Spring	574010400010	574010400130	1
13	Cap Screw	574018700020	574018700030	2
14	Cover	574003800050	574003800100	1
15	O-Ring	575030100054	575030308103	1
16	Shaft	574016200060	574016200100	1
17	Dowel Pin	574015800010	574015800020	1
18	Elastic Insert	574012200110	574012200110	1
19	Bracket	574001800070	574001800070	1
20	Lock Plate	574013700010	574013700010	1
21	Bolt	575002320541	575002320541	2



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 cost does not exceed 40% of the cost of a new tool." Tapmatic will repair the tool and call to request credit card number for invoicing.

**Cost Notification:** Tapmatic will FAX a cost notification to you, soliciting your approval before repairs are completed. If it is determined that a tool cannot be repaired, at the customer's request, Tapmatic will return the disassembled parts. We are not able to reassemble a tool 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 tools 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 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 shipment by overnight or second day before we agree to upgrade your repair order to priority service. Typical turn around, 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**