

MICRO DIAL INDICATING TORQUE SCREWDRIVER MODEL MTD

OPERATING INSTRUCTION

MTD **MTD Model**



To use this product properly and safely, please read this manual carefully before use. If you have any question about the product and its operations, please contact your nearest distributor or TOHNICHI MFG. CO., LTD.

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1 Warnings

- Wear safety glasses.
A tip of MTD bit is pointed. Wear a protective gear such as safety glasses.
- Free from adhesion of lubricant such as oil and grease.
Failure to observe this may cause your hand to slip during tightening or measurement, resulting in an accident or injury.
- No any cracks, scars nor rust.
Failure to observe this may cause damage, resulting in an accident or injury.

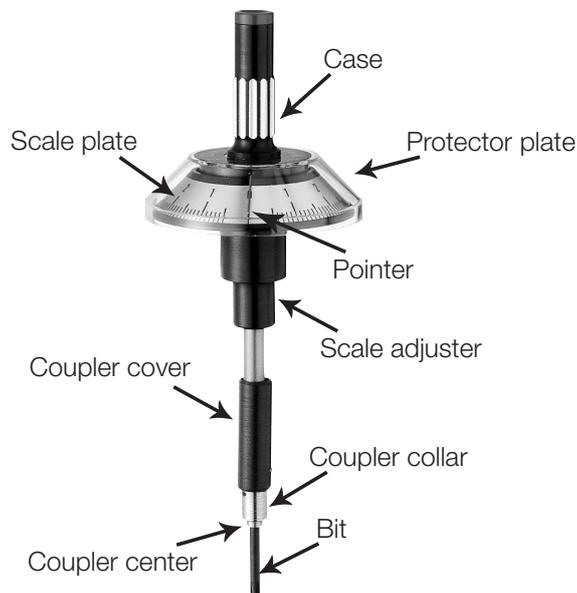
2 Cautions

- Do not run the torque screwdriver over the maximum allowable torque.
Exceeding the maximum torque may cause accuracy failure and damage.
- Do not drop nor give a strong impact to the torque screwdriver.
This torque screwdriver is designed for precision measurement.
- Use a suitable bit for a thread groove.
If the dimension and shape of the bit nose do not fit, the torque screwdriver may damage a tightening/measuring part such as a screw head.
- Do not leave the torque screwdriver in a wet condition.
In case water is adhered, wipe it off immediately. Avoid storing the torque screwdriver in a high-temperature and humidity place. Failure to observe this may cause rust, resulting in accuracy deterioration and damage on the product.
- Do not use the torque screwdriver in a dusty environment.
When dust enters inside, it may cause accuracy deterioration.

3 Features

- Direct-reading style torque screwdriver for very small torque inspection
- Suitable for inspecting tightened very small screws and measuring initial rotary torque such as motors.
- Torsion bar mechanism enables accurate measurement.
- With bi-directional scale plate, it can be used for retightening and loosening torque testing.
- Provided with a convenient presetting function for precision tightening work.

4 Names of Parts



5 How to Use

- Replace MTD Bit

- (1) Insert MTD Bit

Push up coupler collar, insert MTD bit deeply into the hole of the coupler center. Release the collar and it returns back itself by a built-in spring.

- (2) Remove MTD Bit

Push the coupler collar toward the scale plate to remove the bit. MTD bit comes off from the coupler center. When it's hard to remove, use a pliers to pull it.

- Adjusting Zero Point

- (1) Zero Point Setting

MTD scale plate is designed rotatable. With holding coupler cover, turn the lower part of scale adjuster slowly to adjust MTD pointer correctly to 0, Zero. Fig. 1 and Fig. 2



Fig. 1

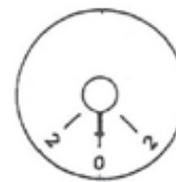


Fig. 2

- (2) Presetting

Called presetting method. Set the pointer to your target torque in advance. When tightening torque is reached to the target, the pointer is on zero. Holding the coupler cover, turn the lower part of scale adjuster slowly to adjust MTD pointer to the specified torque.

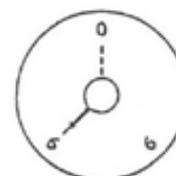
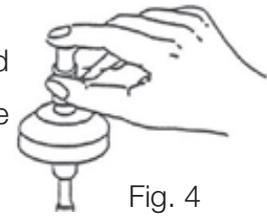


Fig. 3

- Holding MTD Torque Screwdriver

As shown in Fig. 4, nip the knurled part of the case with a thumb and middle finger, and place an index finger on the top to hold the torque screwdriver.



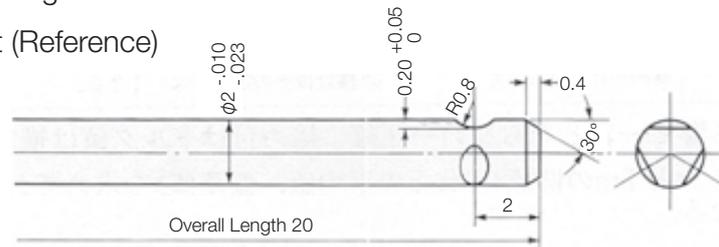
Operating thumb and middle fingers to measure torque.

- Measuring Torque with a Special Jig

When making a special jig on your own, care should be taken to strike a balance between right and left torques. (In case of a horizontal shaft) It is convenient to manufacture the bit by cutting off the nose of the accessory bit. See Fig. 5 to manufacture.



- Root Shape of Bit (Reference)



6 Specifications

Accuracy $\pm 3\%$

S.I. Model	Torque Range [mN·m]		Metric Model	Torque Range [gf·cm]		American Model	Torque Range [ozf·in]		Overall Length [mm]	Weight [g]	Standard Accessory Bit	Direction
	Min.-Max.	Grad.		Min.-Max.	Grad.		Min.-Max.	Grad.				
MTD1MN	0.1-1	0.02	10MTD	1-10	0.2	-	-	-	110	22	# 0	↻
MTD2MN	0.3-2	0.05	20MTD	3-20	0.5	-	-	-	100	21		
MTD5MN	0.5-5	0.1	50MTD	5-50	1	MTD07Z	0.1-0.7	0.02				
MTD10MN	1-10	0.2	100MTD	10-100	2	MTD1.4Z	0.2-1.4	0.02	132	23		

Note 1: MTD models require Tohnichi made bits.

Designs and specifications are subject to change without notice.



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