



**IST-TM SERIES  
TORQUE MULTIPLIER  
OPERATION MANUAL**



### Attention

- ◆ Note the maximum output torque and magnification of the torque multiplier, and do not overload it, otherwise it will damage the appliance
- ◆ When tightening and disassembling the bolts, the torque wrench used should be evenly applied, and the fixing of the anti-force arm needs to be firm in the process of tightening and disassembling.
- ◆ The torque multiplier is a precision device. It must not be strongly impacted. Do not get wet, otherwise it will damage the device.

### Product introduction

The torque multiplier is driven by a combination of a circumference or a planetary gear at different combinations to drive the gear. The torque factor of each gear is 5, and the conventional ratio is 1:4.2, 1:16, 1:21.5, 1:26 series.

In planetary gear systems, torque is input and output via a sun gear. The rotation is driven by three or four planetary gears combined with the sun gear. The circumferential gear within the multiplier housing engages the inner planet gear, but the direction of rotation is opposite relative to the inner planet gear rotation.

The reaction arm prevents rotation of the outer casing integral with the circumferential gear, and rotates the planetary gear around the sun gear to drive the driving square to rotate, thereby outputting torque.

It is suitable for large bolt torques that cannot be used with external pneumatic or electric tools in many cases but cannot be controlled by ordinary manpower wrenches.

The torque multiplier allows the operator to easily obtain a wide range of output torques, accurately and efficiently multiplying the torque for easy installation and removal of the joint fasteners.

- ◆ Suitable for applications where space is limited and external power sources cannot be used.
- ◆ High-efficiency planetary gear set inputs small torque and outputs high torque.
- ◆ Torque multiplier output torque accuracy is  $\pm 5\%$ .
- ◆ Simple tool diameter for easy tool for maximum torque.



Anti-bounce safety devices have the following advantages:

1. If the accidental release occurs, the torque input device will not suddenly rebound in the direction of operation, ensuring the safety of the operator.
2. There is no anti-bounce safety device, and it is often necessary to confirm that there is no 360-degree cyclone in the torque device. Obstacle, because the obstacle can cause the multiplier to be unusable.
3. The anti-bounce safety device cooperates with the reaction point of the multiplier reaction arm to enable the multiplier to tighten the nut, and even if the torque multiplier is used upside down, it can support the weight multiplier itself.

Note: When the anti-bounce safety device is used for the construction of the lock nut, the high-magnification gear box (1:25 or higher) will generate a certain amount of recoil, and each time the input device is released (or loosened), A rebound action is generated, and the rebound direction is opposite to the operation direction. The function of the anti-rebound safety device is that when the resilience force is generated, the anti-rebound ratchet device maintains the elastic force without releasing. Before the construction of the lock nut, it must be confirmed that the anti-rebound safety device is compatible with the direction of the nut locking operation.

### Maintenance

- ◆ The internal oil of the multiplier is periodically changed every year.
- ◆ Do not damage the appearance of the multiplier.
- ◆ Non-professionals should not attempt to disassemble or repair.