Shaft Collar - Overview

Material Variations
Features: In addition to the industry standard material 1045 Carbon Steel, 304 Stainless Steel, 2017 Aluminum Alloy, threaded inserts are available. 1045 Carbon Steel and 304 Stainless Steel are also recommended.

Set Screw
Features: Headless types are also available.

Clamp
Features: Shaft damage from tightening can be avoided.

Tightening Torque of Clamp Type Shaft Collars
Definition of Max. Thrust Load
The testing method involves loading a collar to the specified load using a test load and then compressing the collar with a force. The compressive force is then measured using a load cell.

Testing Method
1. Mount the clamp type shaft collar on test stand and tighten with the specified tightening torque.
2. Apply the specified compressive force and measure the load.
3. Repeat Steps 1 and 2 until the specified load is reached.

Testing Conditions
1. Test with a load of 100 N (10 kg).
2. Test with a load of 200 N (20 kg).
3. Test with a load of 300 N (30 kg).
4. Test with a load of 400 N (40 kg).
5. Test with a load of 500 N (50 kg).
6. Test with a load of 600 N (60 kg).
7. Test with a load of 700 N (70 kg).
8. Test with a load of 800 N (80 kg).
9. Test with a load of 900 N (90 kg).
10. Test with a load of 1000 N (100 kg).

Nominal Max. Thrust Load
The compressive force at a load of 100 N (10 kg) is the nominal max. thrust load. This is a load that can be applied without damage to the collar.

Testing Torque of Clamp Type Shaft Collars
The testing method involves loading a collar to the specified load using a test load and then compressing the collar with a force. The compressive force is then measured using a load cell.

Testing Method
1. Mount the clamp type shaft collar on test stand and tighten with the specified tightening torque.
2. Apply the specified compressive force and measure the load.
3. Repeat Steps 1 and 2 until the specified load is reached.
4. Measure the compressive force at each load.

Nominal Max. Thrust Load
The compressive force at a load of 100 N (10 kg) is the nominal max. thrust load. This is a load that can be applied without damage to the collar.

Others
Features: Lighter weight but the threads may be damaged by repetitive tightening and loosening, therefore Threaded Insert Integrated Types are recommended.

For Sensor Bracket Mounting
Features: Tap sizes and hole pitches for direct mounting of sensor brackets are offered. 2017 Aluminum Alloy (aluminum) and 304 Stainless Steel (stainless steel) are recommended.

Others
Features: Lighter weight but the threads may be damaged by repetitive tightening and loosening, therefore Threaded Insert Integrated Types are recommended.

For Bearing Mounting
Features: For bearing inner ring retention. Repairs include collar, or other component, to the outer ring of the bearing, and the original collar is removed.

About Screw Tightening
Aluminum or plastic threads may be damaged by repetitive tightening and loosening of the screw.