

## Cam Clutch Installation and Maintenance Instruction

### MZ Series

**MZ15, MZ17, MZ20, MZ30, MZ35, MZ45, MZ60, MZ70**  
**MZ15G, MZ17G, MZ20G, MZ30G, MZ35G, MZ45G, MZ60G, MZ70G**


Thank you for choosing Tsubaki products.

Before installing or working on the product, check label for correct size and make sure you have the complete set of parts. If any parts is missing, contact your distributor immediately.

This manual should be considered an essential part of the unit and remain with the unit when redistributed.

### SAFETY

- Your Cam Clutch is a high quality, sophisticated unit which should be handled by experienced engineers only.
- For safety purposes, make sure this manual is easily accessible by the user at all times.
- To ensure safety and optimal performance, carefully read this instruction manual in its entirety.

 <b>WARNING</b>	<p>Death or serious injury may result from misuse, improper installation and/or improper maintenance of this product. Please refer to the detailed instructions provided in this manual for installation and maintenance specifications.</p>
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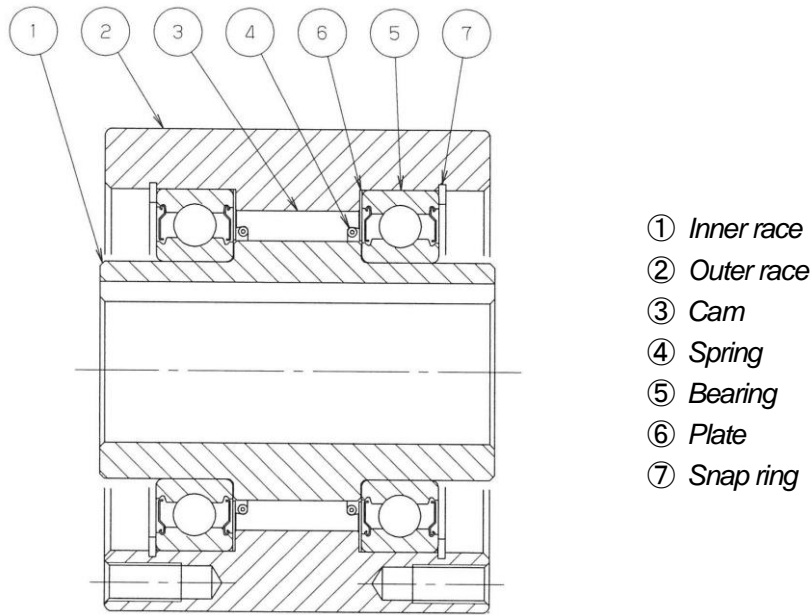
### WARNING

#### **USE CARE TO PREVENT INJURY COMPLY WITH THE FOLLOWING TO AVOID SERIOUS PERSONAL INJURY:**

1. Guards must be provided on all chain and sprocket installations in accordance with provisions of ANSI/ASME B15.1 - 2000 "Safety Standards for Mechanical Power Transmission Apparatus," and ANSI/ASME B20.1 - 2012 "Safety Standards for Conveyors and Related Equipment," or other applicable safety standards. When revisions of these standards are published, the updated edition shall apply.
2. Always lock out the power switch before installing, removing, lubricating or servicing a system which uses PTUC product.
3. When connecting or disconnecting PTUC products, eye protection is required. Wear safety glasses, protective clothing, gloves and safety shoes.
4. Improper installation or mounting, as well as operating conditions and maintenance, can affect the performance of a cam clutch. The cam clutch should be inspected regularly.

"PTUC is used by U.S. Tsubaki to designate "Power Transmission Unit Components." PTUC products include Cam Clutch DISCO, POWER-LOCK<sup>®</sup>, Shock Relay, Gearmotor, HF Drive, Shock Damper, Power cylinder<sup>™</sup>, Couplings, SCR variable speed motor and other like products manufactured by/for Tsubaki.

## 1. Construction



## 2. Installation and Usage

1. MZ and MZ-G Series Cam Clutch is shielded by shield bearings on both ends, packed with a special grease, and are ready for use.

No additional lubricant is required.

2. For attaching pulleys, gears or sprockets to the MZ Series Cam Clutches, insert hubs with the tolerance of table below along the inner surface of the outer race and screw the bolts (high tension) into the tapped holes on the clutch end.

To the MZ-G Series, use the outer race outer dimension with the tolerance below.

Model	Tolerance inch (mm)
MZ15	-.0010 to -.0020 (-0.025 to -0.050)
MZ17, 20, 30, 35	-.0012 to -.0024 (-0.030 to -0.060)
MZ45	-.0014 to -.0028 (-0.036 to -0.071)
MZ60, 70	-.0017 to -.0033 (-0.043 to -0.083)

Model	Tolerance inch (mm)
MZ15G, 17G, 20G	0 to +.0012 (0 to +0.030)
MZ30G, 35G	0 to +.0014 (0 to +0.035)
MZ45G, 60G, 70G	0 to +.0016 (0 to +0.040)

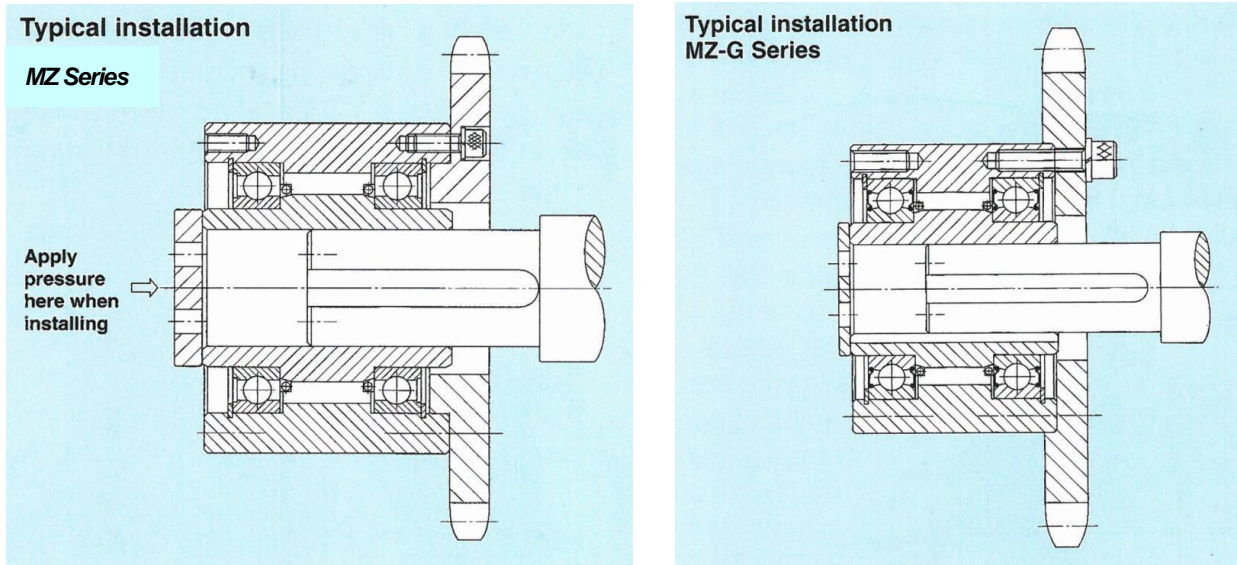
3. Recommended shaft tolerance is shown below.

Clutch Bore	Shaft Fit Guide
0 to 1.20 inches dia. 0 to 30mm dia.	Line fit to .0008 inches loose (0.020mm)
1.20 to 2.00 inches dia. 30mm to 50mm dia.	Line fit to .0010 inches loose (0.025mm)
2.00 to 3.15 inches dia. 50mm to 80mm dia.	Line fit to .0012 inches loose (0.030mm)

4. External thrust load should be supported by other devices, not by the Cam Clutch.

5. Use only a parallel key (DIN 6885.1 : ISO R773) to secure the clutch to the shaft. Do not use a tapered key.

6. When mounting the clutch onto the shaft, apply pressure to the inner race but never to the outer race. See the illustration below.



7. For vertical mounting, please consult TSUBAKI.

8. Ambient temperature range is 23°F(−5°C) ~ 104°F( +40°C). Please consult Tsubaki if it will be out of this range.

## 2. Lubrication

Pre-lubricated with grease. No lubrication maintenance required..

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