

## Cam Clutch Installation and Maintenance Instruction

**MZEU12(K),MZEU15(K),MZEU20(K),MZEU25(K),MZEU30(K),MZEU35(K),MZEU40(K),MZEU45(K),MZEU50(K),MZEU55(K),MZEU60(K),MZEU70(K),MZEU80(K),MZEU90(K),MZEU100(K),MZEU130(K),MZEU150(K)**



Thank you for buying Cam Clutch products.

Before installing or working on the product, confirm it is the correct size by checking its label and make sure you have the complete set of parts. If any part 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.
- Safety precautions in this manual are classified into two categories: "WARNING" and "CAUTION". These are defined as follows:

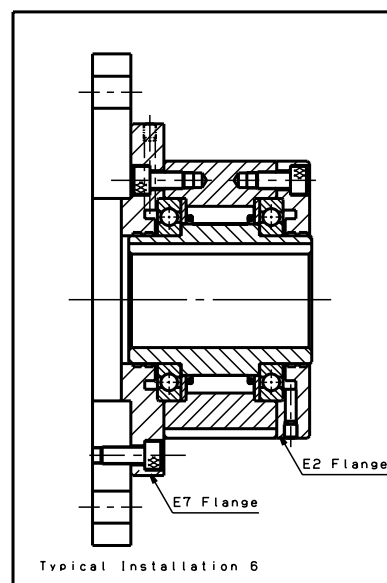
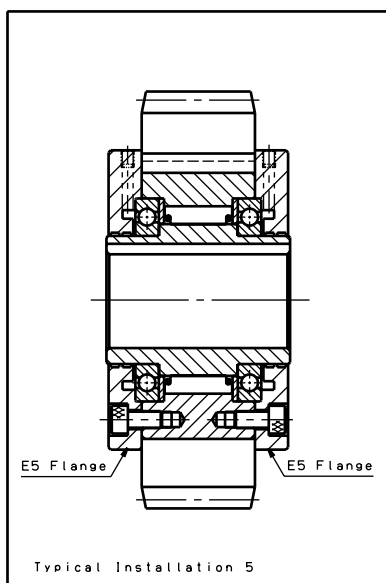
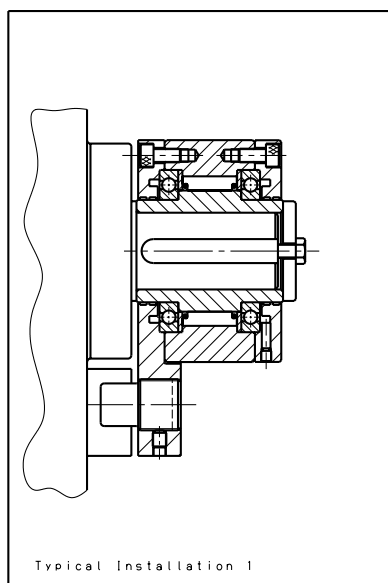
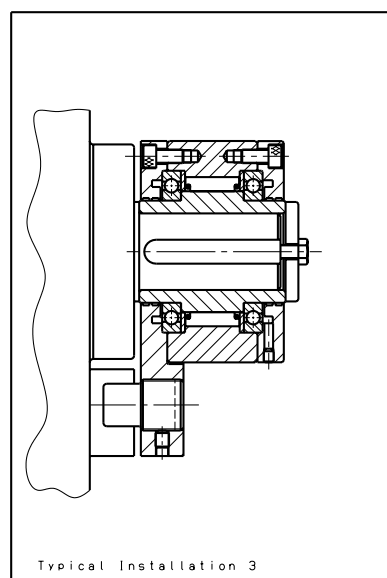
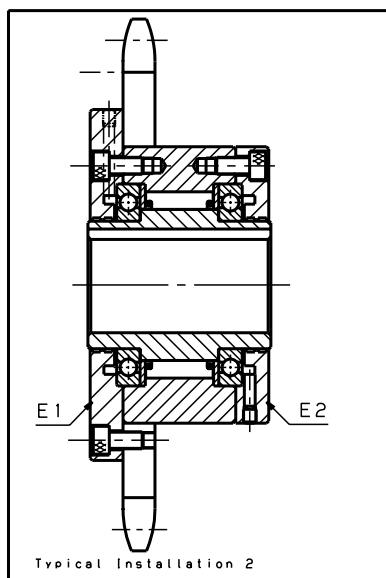
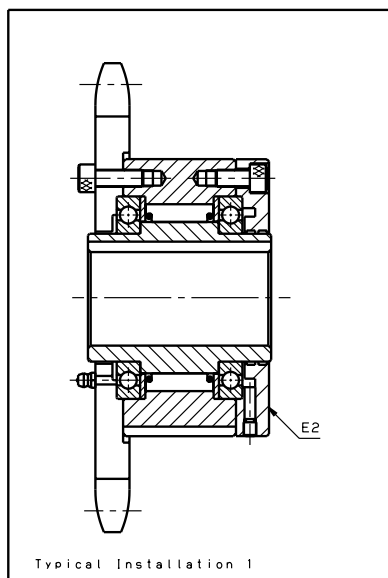
	<b>WARNING</b>	Death or serious injury may result from misusing the product without following the instructions.
	<b>CAUTION</b>	Minor or moderate injury, as well as damage to the product may result from misusing the product without following the instructions.

Notice that although categorized under "CAUTION", subjects discussed may lead to serious results depending on the situation.

	<b>WARNING</b>
<ul style="list-style-type: none"> <li>• Make sure turning forces are not applied to Cam Clutch or turning shaft of the equipment when conducting inspection or maintenance. Pay special attention to the back stopping application to prevent accidents.</li> <li>• Frequent starting and stopping will apply excessive force on the mounting. Verify mounting strength.</li> <li>• Inaccurate installation and mounting, various load conditions, wear and tear of parts, and life expectancy can all affect the performance of a Cam Clutch. Inspect and maintain periodically and install a safety device on your equipment.</li> <li>• Comply with Ordinance on Labor Safety and Hygiene 2-1-1 general standards.</li> </ul>	
	<b>CAUTION</b>
<ul style="list-style-type: none"> <li>• To ensure safety and optimal performance, carefully read this instruction manual in its entirety.</li> <li>• Confirm rotational direction prior to installing.</li> </ul>	

### ■ Installation and usage

1. MZEU series is a modular type Cam Clutch which is delivered as a MZEU series Basic type or MZEU-K series with option parts (E1, E2, E5, E7 flanges, E3 Torque arm and E4 cover) which are required as separate parts.
2. Model No's. MZEU12 to MZEU80 are pre-greased and require no lubrication. The operational temperature range is -40°C to +40°C. Model No's. MZEU90 to MZEU150 require oil lubrication. (Refer to lubrication and maintenance).
3. Model No's. MZEU12 to MZEU80 sprockets and other torque transmitting factors can be used with the standard flange. Refer to installation examples.
4. We recommend a Shaft tolerance of h7, and ISO R773 (DIN 6885.1) keyway is standard. Align the key to slide through the keyway smoothly before installation.
5. We recommend a tolerance of H7 for the sprocket and other parts.
6. Clean the surface of both ends of the outer race and the contact surfaces of the flange, sprocket and the other parts.
7. For Model No's. MZEU90 to MZEU150, apply seal adhesive to the surface of the outer race at both ends.
8. Check the direction of rotation.
9. When installing standard flanges, sprockets and other equipment to the clutch fit them around the bearings and screw the bolts into both ends of the outer race.
10. By installing both the flange and sprocket on the opposite side, the direction of rotation can be changed.
11. When mounting the clutch onto the shaft, apply pressure to inner race but never to the outer race.
12. For high speed Indexing applications (More than 50 c/m) a strong spring type is recommended.



#### ■ LUBRICATION AND MAINTENANCE

Model No's. MZEU12 to MZEU80 are pre-greased and require no lubrication. The operational temperature range is  $-40^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$ .  
Model No's. MZEU90 to MZEU150 require oil lubrication.

##### Recommended Grease for Model No's. MAEU12 to MZEU80

Brand	Ambient Temperature	
	$-5^{\circ}\text{C} \sim +40^{\circ}\text{C}$	$-40^{\circ}\text{C} \sim +40^{\circ}\text{C}$
Esso	—	Beacon 325J
Mobil	—	Mobil temp SHC100
Shell	Alvania Grease S2	Alvania Grease RA
BP	Energrelse LS2	Energrelse LT2
TOTAL	Multis 2	Aerorease 22

**Not e:** Do not Grease that contains EP additives.

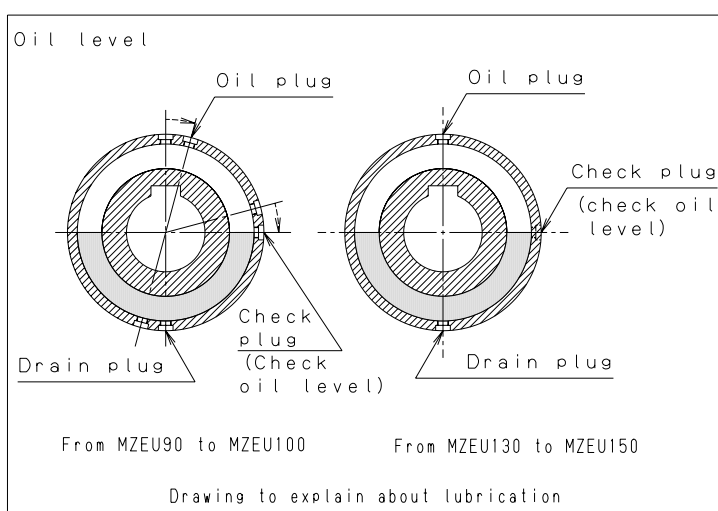
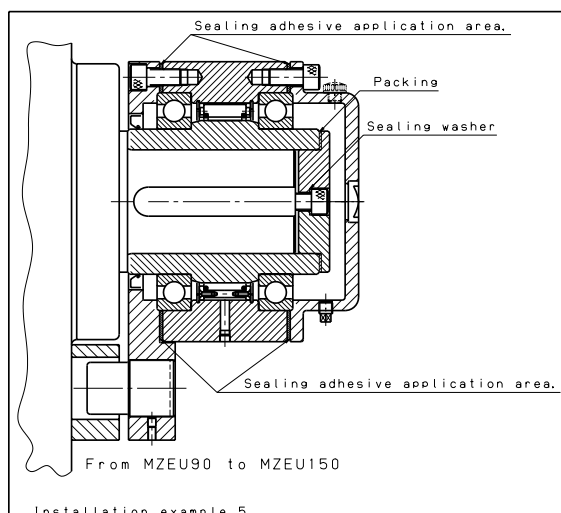
E1~E4 options are supplied with bolts for installation, and the grease nipple

##### Recommended oil for MZEU90 to MZEU150

Brand	Ambient Temperature	
	$-10^{\circ}\text{C} \sim +30^{\circ}\text{C}$	$+30^{\circ}\text{C} \sim +50^{\circ}\text{C}$
Esso	Teresso 32, Essolub D-3 10W, ATF Dexron	Essolub D-3 30
Mobil	ATF 220, Delvac 1310, DTE oil Light	Delvac 1330
Shell	Dexron II, Rimulla CT oil 10W	Rimulla CT oil 20W/20, 30
	Shell Clavus Oil 17, Rotella S Oil 10W	Rotella S Oil 20W/20, 30
BP	BP Energol THB32	—
TOTAL	Harmony 32	—

**Not e:** Do not use oil that contains EP additives.

Body (Basic type) is supplied with sealing adhesive.



1. Apply a suitable amount of oil before use.
2. As a general rule, the amount of lubricant should be level with the center of the shaft for overrunning or backstopping.
3. The E2 flange has three plugs. The E4 cover has a large plug for adding oil and two small plugs for checking and draining.
4. Place the plugs, so that one is at the top and one is at the bottom. The center one should be level with the center of the shaft.
5. Pour oil into the clutch until it overflows from check plug. After a few minutes, pour in more oil and check that it overflows again.

#### Maintenance

Model	Lubricant	Maintenance
MZEU12~MZEU80	Grease	From the grease nipple on the flange, the torque arm and the cover add grease every 3 months.
MZEU90~MZEU150	Oil	Initially, replace oil after 10 hours of operation. Then replace it every 3 months. In a dirty environment, we recommend replacement every month.

## Warranty

TSUBAKIMOTO CHAIN CO.: hereinafter referred to as "Seller"  
Customer: hereinafter referred to as "Buyer"  
Goods sold or supplied by Seller to Buyer: hereinafter referred to as "Goods"

1. **Warranty period without charge**  
18 months effective the date of shipment or 12 months effective the first use of Goods, including installation of Goods to Buyer's equipment or machines - whichever comes first.
2. **Warranty coverage**  
Should any damage or problem with the Goods arise within the warranty period, given that the Goods were operated and maintained under instructions provided in the manual, Seller would repair and replace at no charge once the Goods are returned to Seller. The following are excluded from the warranty.
  - 1) Any costs related to removing Goods from the Buyer's equipment or machines to repair or replace parts.
  - 2) Costs to transport Buyer's equipment or machines to the Buyer's repair shop.
  - 3) Costs to reimburse any profit loss due to any repair or damage and consequential losses caused by the Buyer.
3. **Warranty with charge**  
Seller will charge any investigation and repair of Goods caused by:
  - 1) Improper installation by failing to follow the instruction manual.
  - 2) Insufficient maintenance or improper operation by the Buyer.
  - 3) Incorrect installation of Goods to other equipment or machines.
  - 4) Any modifications or alterations of Goods by the Buyer.
  - 5) Any repair by engineers other than the Seller or those designated by the Seller.
  - 6) Operation in an inappropriate environment not specified in the manual.
  - 7) Force Majeure or forces beyond the Seller's control such as natural disasters and injustice done by a third party.
  - 8) Secondary damage or problem incurred by the Buyer's equipment or machines.
  - 9) Defected parts supplied, or specified by the Buyer.
  - 10) Incorrect wiring or parameter setting by the Buyer.
  - 11) The end of life cycle of the Goods under normal usage.
  - 12) Loss or damage not liable to the Seller.
4. **Dispatch Service**  
Service to dispatch a Seller's engineer to investigate, adjust or trial test Seller's Goods is at the Buyer's expense.
5. **Disclaimer**
  - 1) In our constant efforts to improve, TSUBAKIMOTO CHAIN CO. may change the contents of this document without notice.
  - 2) Considerable effort has been made to ensure that the contents of this document are free from errors. However, TSUBAKIMOTO CHAIN CO. makes no warranties with respect to the accuracy of information described herein. In the meantime, we would appreciate comments or reports on any inaccuracies or omissions found in this document to help us make timely amendments as necessary. Your cooperation is greatly appreciated.



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