CYCLO DRIVE® INSTRUCTION MANUAL

This product should be handled, installed, and maintained by trained technicians. Carefully read this instruction manual before use.

Delivery inspection & installation
- Delivery inspection is required to ensure that shipping damage is not occurred or whether product is in operational condition. Ensure that nameplate informations are matched with your ordered specifications.
- Install or store the unit in clean, dry, well-ventilated, and dustless place. Make sure that there is no explosive material nearby.
- The unit should be installed in -10°C ~ +40°C ambient temperature and 85% maximum ambient humidity.
- Tension in chain or v-belt should be proper and perpendicular to the shaft.
- The parallelism, concentricity, and eccentricity between pulleys, gears, sprockets, or couplings should be as accurated as possible or it may cause damage to the unit.
- Sprocket, pulley, or gear tensioned point should be aligned as close as possible to shaft bearing.
- For oil-lubricated model, oil fill up is required before first-time operation. Use recommended oil lubricant for longer service life.
- At the initial operation, inspection is required for high noise, high heat rise, high vibration, or any other abnormal condition. In that case, contact nearby distributor.

Inspection & maintenance
- Be sure to cut off the power before maintenance, inspection, or service the unit.
- Change lubricant according to this instruction manual. Use proper recommended lubricants that matched ambient temperature with suggested.

Lubrication change interval
- Grease-lubricated model is filled with long-life grease for maintenance-free. However, disassembly to change the grease after 20,000 hrs. or 4~5 years of operation will ensure longer service life.
- Oil-lubricated model needs oil content checking every after 3,000 hrs. or 6 month of operation depend on which comes first. Inspect the oil guage for oil level. In case of low in level, fill up into the specified range, do not overfill.
- Change lubricant oil after long-term stoppage to ensure operational condition.
- Oil lubricant change is required after 10,000 hrs. or 3 years of operation depend on which comes first.

MITSUBISHI ELECTRIC AUTOMATION (THAILAND) CO., LTD.

MEATH-M-0612-M

Recommended grease brand (grease-lubricated model)

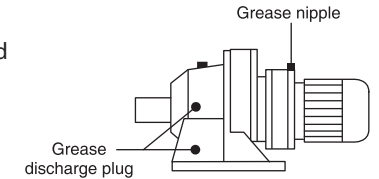| Ambient Temperature ° C (° F)	Shell Oil
-10 ~ 50 (14 ~ 122)	Shell Alvania Grease RA

Recommended mild EP oil brand (oil-lubricated model)

Ambient Temp. ° C (° F)	Shell Oil	Mobil Oil	Esso Oil	BP Oil	Caltex Oil	Gulf Oil
-10 ~ 5 (14 ~ 41)	Omala Oil 68	Mobilgear 626 (ISO VG68)	Spartan EP68	Energol GR-XP 68		EP Lubricant HD 68
0 ~ 35 (32 ~ 95)	Omala Oil 100 150	Mobilgear 627, 629 (ISO VG100, 150)	Spartan EP100 EP150	Energol GR-XP 100 GR-XP 150	Meropa 100 150	EP Lubricant HD 100 HD 150
30 ~ 50 (86 ~ 122)	Omala Oil 220 320 460	Mobilgear 630, 632, 633, 634 (ISO VG220~460)	Spartan EP220 EP320 EP460	Energol GR-XP 220 GR-XP 320 GR-XP 460	Meropa 220 320 460	EP Lubricant HD 220 HD 320 HD 460

Lubricant maintain & change
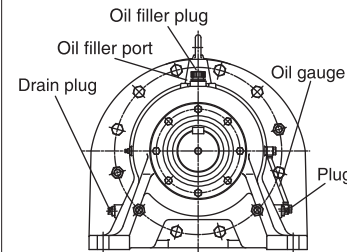
For grease-lubricated model
1. Operate the unit before the change, for well-spreaded greasing. then remove grease discharge plug out.
2. Use grease gun to fill grease into grease nipple.
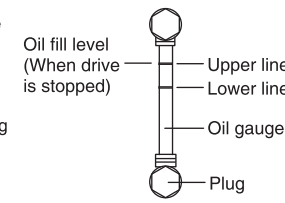3. Replace grease discharge plug back.

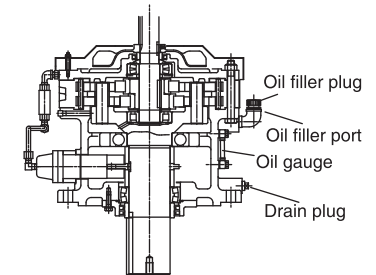
Grease-lubricated model

For oil-lubricated model
1. In case of oil change, drain out remained oil by remove drain plug, then replace drain plug back after drainage.
2. Remove oil filler plug and fill oil into oil filler port, check oil level from oil gauge.
3. Fill up to " upper line" of oil gauge, then replace oil filler plug back.

Oil-lubricated model, horizontal type

Oil gauge details

Oil-lubricated model, vertical type

Grease lubricant quantity (gram)

Lubrication portion	Frame size						
	606□	607□	608□	609□	610□	611□	612□
Reduction portion	25	25	65	90	140	200	330
Slow speed shaft bearing portion	35	35	70	100	100	90	120

Oil lubricant quantity (litre)

Type	Frame size			
	613□	614□	616□	617□
Horizontal	0.7	0.7	1.4	1.9
Vertical	1.1	1.1	1.0	1.9