

# SUPPLEMENTARY INSTRUCTIONS MANUAL FOR LH12185

## PRIOR TO OPERATION

### Product Specifications



#### CAUTION

Do not operate this product under any conditions other than those for which it is specified. Failure to observe this precaution can lead to electrical shock, electrical leakage, fire, water leakage or other problems.

#### • Major Standard Specifications

Applicable Liquids	Property	Rain Water, Ground Water, Sand laden Water, 0 ~ 40°C
Pump	Impeller	Double-suction, Close-Type
	Shaft Seal	Double Mechanical Seal
	Bearing	Upper: Radial Roller Bearing Lower: Angular Ball Bearings, Back-to-back Duplex
Motor	Specifications	Dry type Submersible Induction Motor, 2-Pole
	Insulation	Class F
	Protection System (Built-in)	Miniature Protector
	Leak Sensors (Built-in)	Electrode and Float
	Lubricant	Turbine Oil VG32
Connection to Piping		JIS 10K Flange

#### • Standard specification (60Hz)

Model	Bore mm	Phase	Starting Method	Output kW	Max. Head m (feet)	Max. CAPACITY m <sup>3</sup> /min (GPM)	Weight kg
LH12185	300	3	Star Delta	185	94.5 (310)	14.0 (3698)	1965

**Note:** The weight (mass) given above is the operating weight of the pump itself, not including the cable.

## INSTALLATION

### Maximum allowable water pressure



#### CAUTION

Do not use at greater than the water pressure shown in the table.

Model	Flange Specification	Maximum water pressure
LH12185	JIS 10K	0.4MPa (4kgf/cm <sup>2</sup> )

# ELECTRICAL WIRING

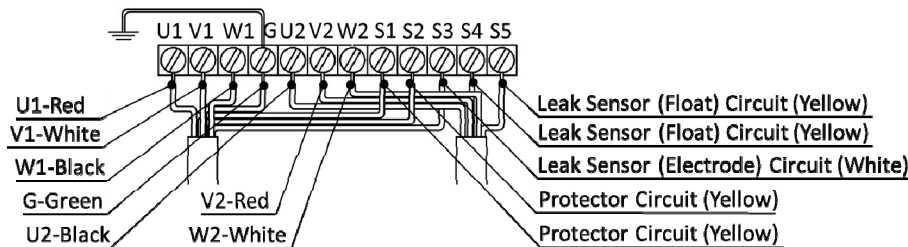
## Connecting the cabtyre cable

**⚠ WARNING** Before connecting leads to the terminals, make certain the power supply is turned off (circuit breaker, etc.), to avoid electrical shock, shorting, or unexpected starting of the pump, leading to injury.

**⚠ CAUTION** Do not use the pump if the cabtyre cable is worn or damaged, which can result in electric shock, shorting, or fire.

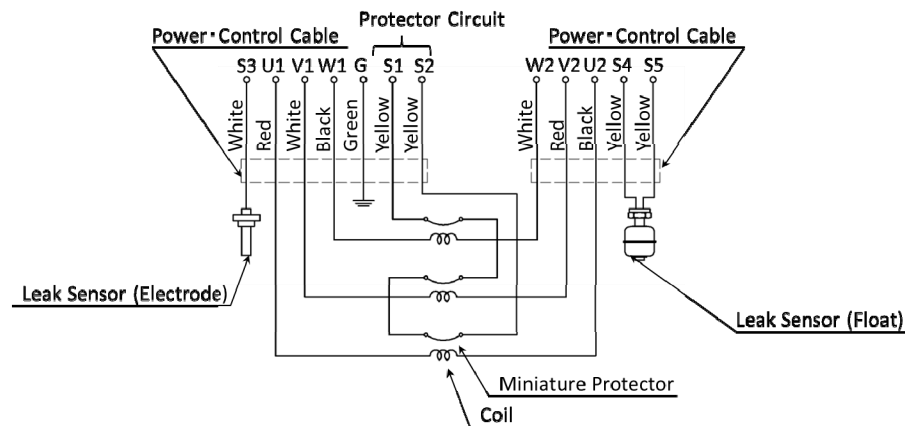
Connect the leads of cabtyre cable to the control panel terminals as shown in the diagram, being careful not to let the leads become twisted together.

Star-delta start



## Electrical circuit diagrams

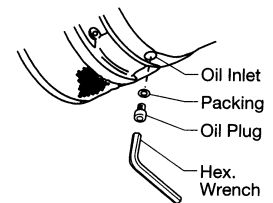
Star-delta start



# MAINTENANCE AND INSPECTION

## Oil inspection and Oil change

**⚠ WARNING** When the pump is tilted for inspecting or changing the oil, pay careful attention to the center of gravity and weight of the pump.



Inspecting Oil

Remove the oil plug and tilt the pump to drain a small amount of oil. If the oil is milky white or has water mixed in with it, the mechanical seal may be faulty. In this case the pump will need to be disassembled and repaired.

Model	Oil Quantity
LH12185	8,000ml

Replacing Oil

Remove the oil plug and drain all the oil, then replace it with the specified amount.

**Note:** Worn oil and other waste products should be disposed of by qualified agent, in accord with applicable local laws. The oil plug packing and O-ring should be replaced each time the oil is inspected or changed.

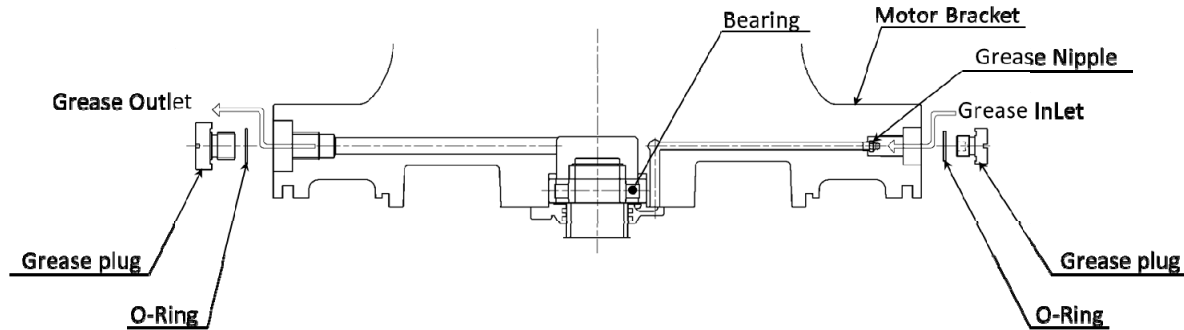
# Replacing bearing grease

Models with output 185kW require that bearing grease be replaced periodically.

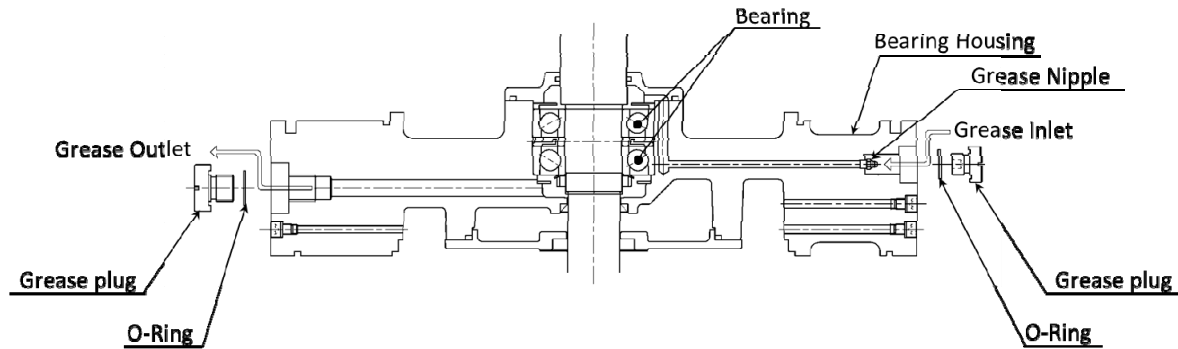
With the pump standing upright, supply and drain grease at the grease nipple on the bearing housing side of lower bearing, and at the grease nipple on the motor bracket side of upper bearing.

The table shows the different bearing types, specified amount of grease, initial supply of grease, and replaced frequency.

Upper Bearing



Lower Bearing



**Note:** Greasing generally is good for around 3,000 hours of use, but this can vary depending on the use conditions.

Model	Grease Type	Initial Amount	Refill Amount
LH12185	"RAREMAX SUPER" (Kyodo Yushi Co.Ltd) or equivalent *1	Upper: 270g ( 9.52 oz.)	Upper: 300g (10.58 oz.)
		Lower: 370g (13.15 oz.)	Lower: 400g (14.11 oz.)

Item	*1
Soap Type	di-Urea
Base Oil Type	Mineral Oil
Viscosity (40°C / 104°F)	94mm <sup>2</sup> /s (cSt)
Viscosity (100°C / 212°F)	10.5mm <sup>2</sup> /s (cSt)
Temperature Range	-40 to 150°C / -40 to 302°F
Dropping Point	253°C / 487°F
Penetration NLGI grade	2 to 3
Penetration (60 strokes 25°C / 77°F)	260
Penetration (100,000 strokes 25°C / 77°F)	365 max.