


TSURUMI PUMP
**KTZ - SERIES
DEWATERING PUMPS**
**SAMPLE
SPECIFICATIONS**

1. SCOPE OF SUPPLY -

Furnish and install TSURUMI Model _____ Submersible Pump(s). Each unit shall be capable of delivering _____ GPM (_____ m³/min) at _____ Feet (_____ m) TDH. The pump(s) shall be designed to pump waste water, without damage during operation. The pump(s) shall be designed so that the shaft power required (BHP)/(kW) shall not exceed the motor rated output throughout the entire operating range of the pump performance curve. Pump(s) shall be of the top discharge, flow through design.

2. MATERIALS OF CONSTRUCTION -

Construction of major parts of the pumping unit(s) shall be as follows: Pump casing shall be gray cast iron, ASTM A48 CLASS 30B. Motor frame shall be gray cast iron, ASTM A48 CLASS 25B. Field adjustable/replaceable, wear plate shall be ductile cast iron. Impellers shall be of the multi-vane semi-open design and shall be high chrome cast iron. Impellers shall be equipped with back pump out vanes, slip fit to the shaft and key driven. Internal and external surfaces coming into contact with the pumpage shall be protected by a fused polymer coating. All exposed fasteners shall be stainless steel. All units shall be furnished with _____" NPT discharge connector.

3. MECHANICAL SEAL -

All units shall be furnished with a dual inside mechanical shaft seal located completely out of the pumpage, running in a separate oil filled chamber and further protected by an exclusionary oil seal located between the bottom seal faces and the fluid being pumped. The oil chamber shall be fitted with a device that shall provide positive lubrication of the top mechanical seal, (down to one third of the standard oil level). The device shall not consume any additional electrical power. Mechanical seals shall rated to preclude the incursion of water up to 42.6 PSI (98.4 Ft.) submergence. Units shall have silicon carbide mechanical seal faces. Mechanical seal hardware shall be stainless steel.

4. MOTOR-

The pump motor(s) shall be _____ HP., _____ kW., _____ V., 60 Hz. 3 Phase and shall be NEMA MG-1, Design Type B equivalent. Motor(s) shall be rated at _____ full load amps. Motor(s) shall have a 1.15 service factor and shall be rated for 20 starts per hour. Motor(s) shall be air filled, copper wound, class F insulated with built in thermal and over amperage protection for each winding. Motor shaft shall be 420 stainless steel, fitted with a replaceable 304(2 and 3 Hp.) or 403(10 and 15 Hp.) stainless steel shaft sleeve and shall be supported by two permanently lubricated, high temperature ball bearings, with a B-10 life rating at best efficiency point of 60,000 hours. Bearings on all units shall be single row, double shielded, C3, deep groove type ball bearing. Motors shall be suitable for across the line start or variable speed applications, utilizing a properly sized variable frequency drive.

5. POWER CABLE AND CABLE ENTRANCE -

Units up to 3 HP shall be supplied with a cable entrance that incorporates built in strain relief, a one piece, three way mechanical compression seal and a fatigue reducing cable boot. The pump power cable shall be suitable for submersible pump applications. The power cable on units 5 Hp and above shall be field replaceable utilizing standard submersible pump cable. The cable entrance shall incorporate built in strain relief and a combination three way mechanical compression sealing with a fatigue reducing boot. The cable entrance assembly shall contain a anti-wicking block to eliminate water incursion into the motor due to capillary wicking should the power cable be accidentally damaged.