

mody

ELECTRIC SUBMERSIBLE SEWAGE PUMP

MODY “MSPG” SUBMERSIBLE GRINDER PUMPS:

**DRY PIT
WET PIT
PORTABLE**

MOTORS:

2-POLE 10 - 15 HP

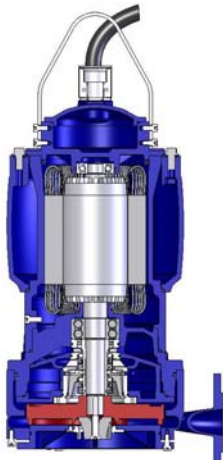
208V-230V-460V-575V/3PH/60HZ

FLOWS to 135 USGPM

HEADS to 350 FT TDH

**SEMI-OPEN, MULTI-
VANE, VORTEX TYPE
IMPELLER**

**DUPLEX STAINLESS
STEEL GRINDING
MECHANISM**



FEATURES

- 2-INCH DISCHARGE FLANGE
- UNIT INTERCHANGEABILITY WITH MOST ABS AND OTHER BRAND INSTALLATIONS
- HIGH EFFICIENCY MOTORS WITH CLASS H (180°C) INSULATION SYSTEM
 - EXTENDED SERVICE LIFE CYCLE
 - EXCELLENT FOR VFD APPLICATIONS
- SELF - CONTAINED "ECO-FRIENDLY" COOLING SYSTEM
 - NO EXTERNAL COOLING WATER SYSTEM REQUIRED
 - ELIMINATES FOULING FROM PUMPAGE COOLED DESIGNS
 - EXCELLENT FOR CONTINUOUS RUN, DRY PIT APPLICATIONS
- INTERCHANGEABLE MOTOR WITH MODY MSP2-80-2 PUMP MODEL
- "FAST - CHANGE" CARTRIDGE MECHANICAL SEALS WITH SILICON CARBIDE SEAL FACES
 - EXTENDED SERVICE LIFE CYCLE
 - EASY MAINTENANCE IN FIELD
 - NO SPECIAL TOOL REQUIREMENTS
- REDUCER SYSTEM - GRINDER MECHANISM CLEARANCE REDUCTION SYSTEM
 - EXTENDED SERVICE LIFE CYCLE
 - EASY MAINTENANCE OF CLEARANCES IN THE FIELD FOR EFFECTIVE GRINDING OPERATION
 - NO SPECIAL TOOL REQUIREMENTS
- SEMI-OPEN, MULTI-VANE, VORTEX TYPE IMPELLER
 - DUCTILE IRON
 - TRIMMED TO MATCH DUTY POINT
- "FAST - LOCK", QUICK-RELEASE, LATCH-BOLTS
 - EASY MAINTENANCE IN THE FIELD
- OIL TAP DRAIN

www.motralec.com

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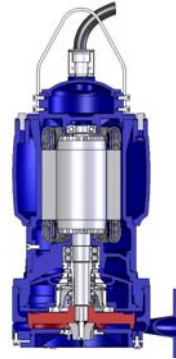
modity

ELECTRIC SUBMERSIBLE SEWAGE PUMP

MSPG GRINDER PUMP

SPECIFICATIONS

Impeller Type: Semi-open, Multi-vane, Vortex Style
Grinding Mechanism: Duplex Stainless Steel
Max. Temp. of Pumped Fluid: 104°F/40°C
Max. Starts/Stop Per Hour: 15
Max. Submergence: 66'/20m



MOTOR: NEMA B design, die cast aluminum squirrel cage rotor, induction motor rated for continuous duty with 1.15 service factor. “NEMA Energy Efficient Class”. Moisture resistant Class “H” (180°C temperature rating) insulated stator windings, watertight air-filled IP68 enclosure. UL listed components, rated for VFD operation in conformance with NEMA MG1-2003, Part 31. Designed by Siemens with 2, 4 and 6-pole speed options. Klixon temperature sensors embedded in stator windings for thermal overload protection. Moisture detection probes in main motor cavity and top-end power cable terminal chamber. Optional maintenance free closed loop cooling system available for dry pit or partial submerged continuous duty. Cooling system is separate from pumped liquid. No external cooling source required.

POWER SUPPLY: 208/230/460/575 volts +/-10%, 3-phase, 60-hz AC Supply.

BALL BEARINGS: The rotor shaft is carried by two ball bearings. The lower bearing is a double angular contact ball bearing, C3 with H7 fit, capable of carrying high thrust and radial loads. The upper bearing is a deep groove single row ball bearing, C3 with H7 fit. The bearings are filled with high temperature grease containing special anti-corrosive additive. The bearings are maintenance free for life.

POWER CABLE: 33'/10m in length, sized according to IEC, NEC or CSA standards, water/oil resistant EPR insulated, copper conductor flexible cable and additional control cable for moisture sensor and thermals, capable of continuous submerged operation underwater at temperatures to 90°C and to a depth of 66 feet. Additional cable lengths optional.

CABLE ENTRY / JUNCTION CHAMBER SEAL: The cable entry design does not require specific torque requirements to insure a watertight seal. The cable entry consists of a cylindrical elastomer grommet, flanked by stainless steel washers. A cable cap incorporating a strain relief mounts to the cable entry boss compressing the grommet ID to the cable while the grommet OD seals against the bore of the cable entry.

The junction chamber is isolated and sealed from the motor by means of sealing glands and O-rings. Electrical connections between the power cables and motor leads are made via a post type terminal board.

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SHAFT SEALS: Fast change cartridge, double mechanical shaft seal system with silicon carbide vs. silicon carbide upper and lower stationary and rotating faces in reservoir filled with USDA food grade oil. Oil tap drain feature for easy maintenance.

SEAL FAILURE EARLY WARNING SYSTEM: A moisture detection probe is provided in the seal oil chamber for detecting the presence of moisture. A relay device (by others) mounted in the pump control panel or in a separate enclosure sends a low voltage, low amperage signal to the probe. If moisture is present (determined by decreased resistance signals), the relay device energizes a warning light or shut-down circuit in the control panel, protecting the motor from damage.

FAST LOCK LATCH BOLTS: The pump includes fast lock / quick release mechanisms with 304 stainless steel latch bolts to allow easy removal of the motor unit from the pump volute without disturbing system piping and the need for special tools. With this feature, a volute hand-hole cover for cleanout access is not required.

IMPELLER: Semi-open, multi-vane, vortex type, specifically designed for grinder pump operation, dynamically balanced and trimmed to meet specified hydraulic operating conditions. The impeller slip fits onto the motor shaft with a drive key and is fastened to the shaft by a stainless steel lock screw which is mechanically prevented from loosening by a ratcheting washer assembly that is positively engaged.

CLEARANCE SYSTEM REDUCTION “REDUCER”: A replaceable grinding mechanism is securely fitted the pump casing by no less than 3 stainless steel set screws. The grinding mechanism is capable of axial adjustment to reduce clearance as wear takes place between the impeller and grinding mechanism to maintain efficient grinding action during the pumping operation. This adjustment does not require special tools.

MATERIALS OF CONSTRUCTION

Description	Material	www.motralec.com
Stator Casing	Cast iron ASTM A-48, Class 35	<input type="checkbox"/> service-commercial@motralec.com
Pump Volute/Casing	Cast iron ASTM A-48, Class 35	
Grinding Mechanism	AISI 329 duplex stainless steel	
Lifting Handle	AISI 316 stainless steel	
Impeller	Ductile iron ASTM A-395, Grade 60-40-18	
Shaft	AISI 431 stainless steel	
Shaft Sleeve	AISI 431 stainless steel	
Hardware	AISI 304 stainless steel	
Mechanical Seal	Fast change cartridge double with silicon carbide vs. silicon carbide faces	
O-Rings	Nitrile rubber	

SURFACE TREATMENT: Primer with Epoxy and subsequently coated with black air dry enamel.