

# Non Pressurized Non Clog Submersible Pump “*nsew*” Series



*Heavy Slurry  
Up to 1.4 g/cm<sup>3</sup>*

# NON PRESSURIZED NON CLOG SUBMERSIBLE PUMP "nsew" series

## GENERAL DETAILS OF "SASEW" SERIES

### LIFTING HOOK

This heavy-duty pump set has four heavy-duty lifting hooks to make it easy to move and handle.

### ROTOR

The "HET" pump uses rotor is made of high-quality pressure die-cast aluminum with a balancing ring. (Copper Rotor provided on request)

### MOTOR

The "HET" pump motor is an "F" Class wire with insulating material "T" Class which stands at a higher temperature and high-temperature grease lubricated for bearings helps this higher class winding gives good life for the motor. "F" Class Complete motor as on Request.

### COOLING JACKET

The "HET" pump Cooling Jacket work forced convection cooling by the pumped fluid passing around the motor housing before discharge pumped liquid. Due to the reason pump to run for extended periods of time even if it is run dry in fresh air (when other pumps would overheat and burn out) or even if it is only semi-submerged without over heating. This is an integral part of the design and makes the option of additional motor cooling a redundant expense. (optional item - on request provided)

### SEMI OPEN IMPELLER

This feature assists the breakdown of large particles in the impeller that might ultimately lead to a blocked pump. There is little if any chance of the impeller becoming blocked as opposed to closed vane impellers which are often blocked and tend to stay blocked.

### AGITATOR/INDUCER

"HET" use Agitator / Inducer for mixing and breakdown solids and easy to suction from casing. Also we can reduce the bending of shaft when it comes with P/P particle or settle particle we kept close as possible the lower bearing.

### CABLE

The cable has a double sheathed Heavy duty Unarmoured with water & oil proof rubber with more resistant against damage. The IP 68 rated cable with gland seal against both inner & outer sheaths. So even if the cable is damage it is almost impossible insert water inside the motor.

### BEARING

Double Ball Bearing at Non-Drive End to give more life when pumping high-specific gravity slurry handling the pump.

### DISCHARGE OUTLET

"HET" PUMP 100 mm, 150 mm and 200 mm discharge outlet provided with various model & 150 mm & 200 mm outlet are supplied with removable discharge elbow, which are available with rubberline. Ceramic coating as per customer requirement for improved abrasion

### VOLUTE

To balance the hydraulic load and reducing vibration and extending of life of all parts like pump shaft, mech. seal "HET" use Single/Twin casing volute. Also improving performance in slurry application.

On Request provided Moisture & Thermal Sensor Protection (built) with pumpset. And Agitator arrangement with the pumpset

The "HET" non-clog abrasive / aerator submersible slurry pumps are designed to handle up to 2.0 kg/cm<sup>2</sup> of raw water. Solids up to 65 mm can be handled. The Submersible Bottom Suction Pump Range is suited to applications where solid particles have already settled out and need to be agitated before pumping. Featuring all metal construction and High Chrome hydraulic design, this pump is very durable and efficient.

The "HET" pump range is available with a wide range of accessories to fit the needs of each customer.

## # SPECIAL FEATURES

- "HET" Motor enclosure prevent electrical motor heating burnout.
- "HET" Motor with reserve power for direct online starting when its settled slurry solids.
- "HET" Pump equipped with non-pressurise mechanical seal due to that no effected pump media pressure.
- "HET" Pump equipped with Flexible double sheathed Pvc Insulated Cable as per customer requirement.
- "HET" Pump equipped with agitator / inducer to break-down and re-suspend settle solids at suction area.
- "HET" Pump equipped with motor cooling jacket & "F/H" Class winding & Aluminium Diecast rotor due to that more efficient and perform better in heavy slurry application.
- "HET" Pump casing is single/twin volute design due to that pump perform well and due to that avoid vibration effect and run smoothly in heavy slurry application.
- "HET" Pump provided additional feature on request like Thermistor Sensor for against heat protection of motor in dry run condition, Moisture Protection for water ingress in motor.
- "HET" Pump equipped with non-drive end double ball bearing and drive end also double ball bearing or angular contact bearing oversize for extend the motor life in slurry application.
- "HET" Pump wetted part are offer with NH-Hard material of casing or Tungsten /Ceramic coating (as per application) with Semi open Impeller material with Ni-hard or H-Chrome which batter perform and batter life in Slurry application.



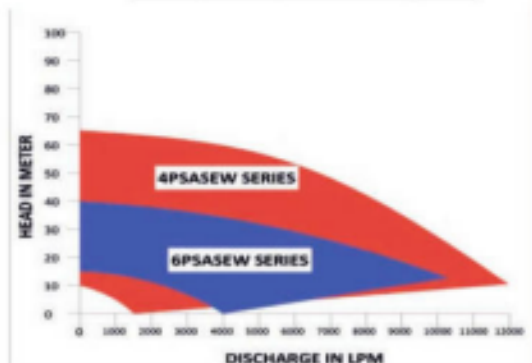
### NON-PRESSURISE MECHANICAL SEAL

"HET" Provided Non-Pressurise Mech. Seal with three seal arrangement. Two nos of seal at motor side for prevent leakage of water of submergence pressure. Due to non pressurise seal assembly arrangement pumping pressure not effected at motor end. And both seal are in oil bath. Also one more seal provided at pump side for prevent leakage from handle liquid with lipseal or Seal Washer arrangement due to that more life getting of mech. seal. The Motor seal is positioned directly below the lower bearing to give it maximum support and protection from vibration. Additional strainer for prevent small dust particle to mech. seal.

## SPECIFICATION

- Power : 7.5 KW to 90.0 KW
- Head : Up to 65 Meter.
- Disch. : Up to 1000 M3/Hr.
- Pole : 4/6/8
- Supply : 30, 50 Hz / 60 Hz, A.C.
- Solid : Up to 65 mm
- S.G. : Up to 2.0 Kg / CM<sup>2</sup>

## PERFORMANCE FAMILY CURVE



## ACCESSORIES

### CONTROL PANEL

"HET" Provided fully automatic control panel with protection of Earth Leakage, Overload Protection, Single Phase protection, Short circuit Protection, Thermal Protection (optional), Dry run protection, Phase failure, Under, Over voltage protection with Indoor & outdoor both option are available. Additional feature also provided on request.

### HEAVY DUTY HOSE PIPE

Heavy Duty Slurry Discharge Hose with operating pressure 7 kg/cm<sup>2</sup>, Synthetic Fabric embedded with Double Helical Wire Coils of 12swg2 standard length - 05 mtr.

### TOOL KIT

"HET" Provided tool-kit on request for preventive & Break down maintenance at site.

## MATERIAL OF CONSTRUCTION

- Motor Part : C.I. FG 260 /S.G.Iron/ As per Customer Req.
- Impeller : Hi-Chrome / S.S. 410 Harden/ Ni-Hard As per Req.
- Agitator / Inducer : Hi-Chrome / S.S. 410 Harden/ Ni-Hard As per Req.
- Casing : S.G. Iron/ Ni-Hard/ C.I. FG 260 With 3 to 5 % Nickel / As per customer req.
- Shaft : S.S. 431/ S.S. 410
- Mechanical Seal : Tungsten Carbide/ Tugsten Carbide
- Rubber Part : Viton / Nitrile /Silicon or As per req.
- Fastner : All faster S.S. 304 or As per req.
- Cable : Unarmoured/ Armoured type Double Sheathed Heavy duty water proof.
- Motor Winding : "F CLASS" And "H" Class On Request
- Rotor : Aluminum Rotor And Copper Rotor As per req.

## APPLICATION

- Mining Area - Coal, Stone, Copper Etc.
- Steel Plant - CHP & AHP Area & Other where slurry above 1.5 SG. and thick sludge
- Power Plant - CHP & AHP Area & Other where slurry above 1.5 SG. and thick sludge
- Industrial Slurry
- Sugar Industries, Stone Industries, Other Chemical & Fertilizer Industries where thick Sludge transfer require.
- Jetty area, Sea water application
- River Sand lifting application
- All other application where slurry particle solid up to 65 mm & S.G. Gravity above 1.5 to 2.0 Kg/cm<sup>2</sup>.
- Coal Mill, Slag Mill, Blastfurnace, Salting Plant