



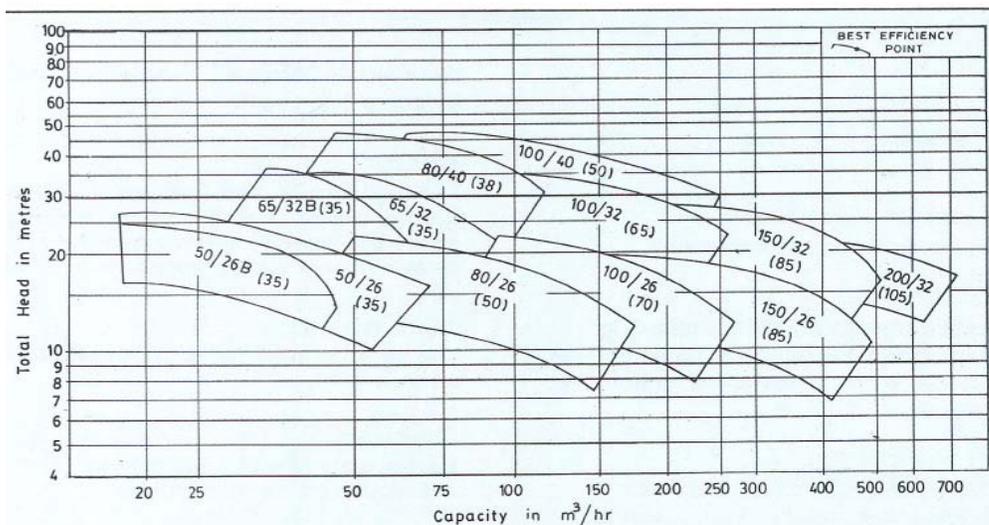
# KIRLOSKAR BROTHERS LTD.

## NON-CLOG SINGLE/TWO VANE ENCLOSED/SEMI OPEN IMPELLER SOLID HANDLING WITH OR WITHOUT CUTTER ARRANGMENT SUBMERSIBLE SEWAGE PUMPS TYPE - NS



These are single stage, single suction pumps with overhung non-clogging impeller. Pumps can be offered in stationary as well as transportable arrangements. The stationary arrangement is supplied with pump connector unit and the connector unit is connected to pump support bracket with rubber diaphragm to make leak proof joint **RANGE:** Delivery up to 300mm, Capacity up to 1800 m<sup>3</sup>/ hr, Head up to 90m, max. Permissible solid size up to 300 mm, **APPLICATION:** Screened sewage ,Raw sewage, Industrial waste water , Storm water ,Trench & tunnel water , Drain water , Mine Water etc. **PUMP CASING:** The radially split casing is provided with delivery nozzle cast integral with it. Suction is axial and delivery nozzle is central and horizontal. Specially designed semi-concentric casing results in reduced radial thrust and ensures vibration-free performance. Wide volute passage ensures non-clogging operation of the pump. **IMPELLER:** Impellers are of non-clog type which allow smooth passage of solids. Impellers are with single or multi vanes in semi-open, enclosed, or free flow designs to cater to wide applications. **SHAFT:** The high tensile steel shaft accurately machined and ground is supported by two ball bearings in the motor above the impeller. Shaft is designed to transmit the power without undue vibrations and deflections. The shaft is common for pump and motor of mono-block design. **MECHANICAL SEALS:** Two mechanical seals in tandem arrangement are provided to ensure no ingress of water or sewage in motor. **OPTIONAL FEATURES** A) Pumps can be supplied with "Cutter Fan" arrangement at suction to agitate the liquid B) Semi-open impellers can be provided with specially designed wear plate for cutting and tearing of soft, long fibrous material. **BEARINGS:** Bearings are grease lubricated and sealed for life, hence maintenance free. **DIRECTION OF ROTATION:** Clockwise when viewed from motor top. **DRIVE:** Motor is dry type submersible and cooled by liquid being handled. Motors are air tested for leak-free operation. Degree of protection for motor is IP68 as per IS:2147, Class of insulation : F, Voltage : 415V 10%, Frequency : 50 Hz. 5% ,Type of starting : As per requirement (DOL/Star Delta/ATS) **CABLE:** A specially designed cable, 1.1 kV grade having annealed tinned copper conductor, insulated with Electron Beam Irradiated cross-linked elastomeric compound (compatible for continuous operation at 1200 C) cores laid up with a proof cotton binder tape and sheathed overall with Electron Beam Irradiated Cross-linked HD HOFR elastomeric compound and generally conforming to IS 9968 Part I. The cable with this unique combination of insulating and sheathing material offers best resistance to acidic or alkaline sewage medium and to the effluent gases coming out of the sump. The cable is more flexible than PVC cable making coiling and handling easier and light in weight compared to PVC cable of the same size. **CONTROL PANEL :** Control panel consists of starter, switch, fuse and safety features. Safety features are: Single phasing prevention, Overload relays, Moisture sensing unit for detecting ingress of moisture or water into oil chamber. Liquid level controllers to avoid dry running. Under voltage / Reverse phasing **FLANGES:** Standard drilling to IS 6392 table 15.

Family Curve of NS Pump at 1450 rpm. - 50 Hz



Figures in bracket indicate maximum permissible solid size in mm

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