

SECTION 5

END SUCTION PUMPS

Hidrostat
PIONEERS IN PUMP TECHNOLOGY



Hidrostat end suction pumps are a range of quality screw centrifugal non clog pumps capable of not only pumping general effluent but also those liquors that are :-

- Containing **solids**, including rags
- **Viscous**
- Requiring **gentle handling**

Bearing frame options

Hidrostat manufacture various types of bearing frame.

Our **flexible direct coupled type** is a close coupled unit with the motor bolted directly onto the bearing frame. The flexible coupling is located within the cast bearing frame housing. The coupling halves are guided together by the motor mounting spigot ensuring no misalignment of shafts is possible.

Our long bearing frame type of bearing frame has a free shaft end on the pump enabling it to be coupled to the motor with most commonly used types of coupling, extended shafting or even belt drives.

Motors

The pumps can be driven by a choice of third party motor options with IP rating and voltage to suit clients requirements. e.g.

- ATEX [EEExd/EEExn] or safe area
- Eff 2 or high efficiency Eff 1
- Suitable for Inverter drives
- Flange or foot mounted

Motors can be provided with the following protection devices :-

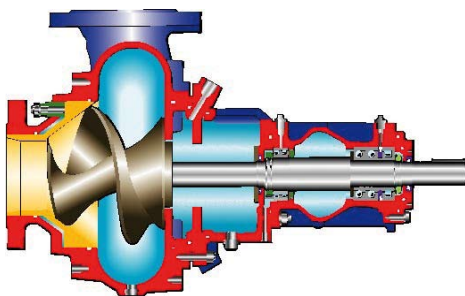
- Thermistor over-temperature protection
- Anti-condensation heaters

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Long bearing frame



Flexible direct coupled



A horizontally mounted belt driven pump

Mounting options

	Horizontally on a baseplate	Vertically on our special cast suction bend 'B.O. Mount'	Vertically on plinths with a sole plate 'F.O. Mount'
Flexible direct coupled	•	•	•
Long bearing frame type	•	*	*

* For these mounting options the motor has to be supported independently



6 off BO mounted 250 mm pump handling RAS



2 off FO mounted 400 kw pumps handling unscreened raw sewage

Pump Materials of Construction

The pumps can be supplied in the following standard range of materials

Designation	Features	Volute	Liner	Impeller
Code 1	Standard for general applications	Cast iron	Cast iron	Nodular iron
Code 2	Hardened liner to improve wear resistance	Cast iron	Chrome iron	Nodular iron
Code 3	Hardened liner and impeller to further improve wear resistance for particularly gritty liquors	Cast iron	Chrome iron	Molybdenum steel
Code 5	Stainless steel volute, liner and impeller to improve corrosion resistance to certain chemicals	Stainless steel	Stainless steel	Stainless steel

Other materials are available on request such as duplex stainless steel.

Impeller / liner clearance adjustment

All our pumps have the facility to adjust impeller and liner clearance. However there is an optional feature available which allows impeller and liner clearance to be modified using a simple external jacking screw arrangement. This enables quick and easy adjustment on site without the need to disassemble any of the pump parts, which reduces whole life costs by ensuring that the user can easily maintain pump efficiency to optimise energy costs.





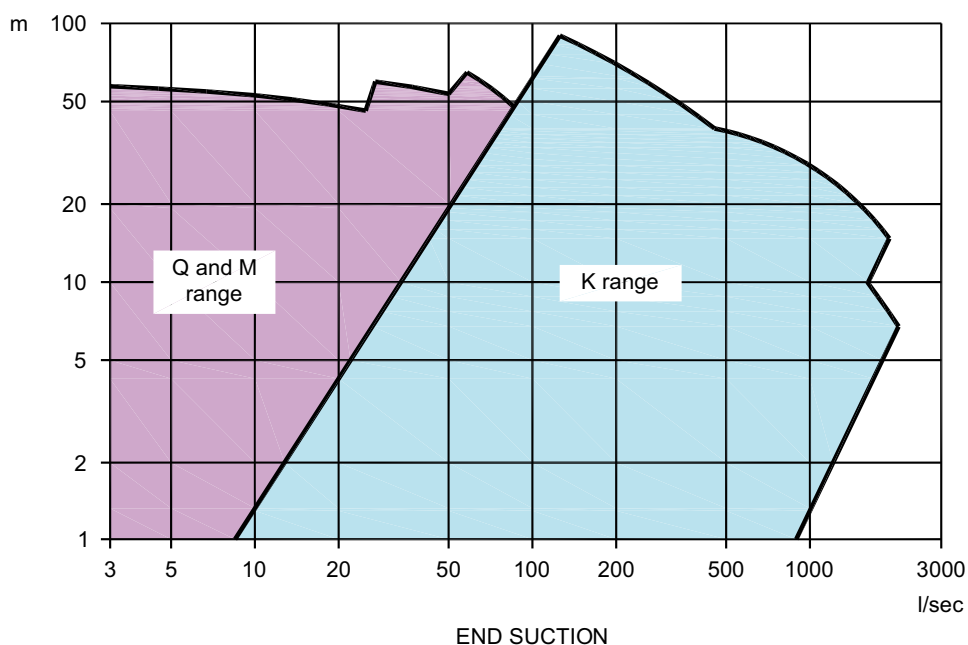
Mechanical seals

The pumps have double mechanical seals running in an oil chamber. Hidrostat have three types of mechanical seal as standard

Designation	Features	Face materials	Body	Elastomers
'G'	Standard for general waste water applications	Silicon carbide / tungsten carbide	St.St.	Nitrile
'M'	Seal spring is rubber booted for protection against debris intrusion, and materials of faces increase abrasion resistance	Silicon carbide / tungsten carbide	St.St.	Nitrile
'X'	Seal is multi-spring design & has a complete stainless housing and body	Silicon carbide / tungsten carbide	St.St.	Nitrile / Viton

Other elastomer materials are available on request

General pump range chart



Installations at large sewage inlet pumping stations



10 off L20K [500 mm] inlet pumps.
Duty 980 l/s @ 24 m



M28K [700 mm] raw sewage pump with 500 ks motor.
Duty 1500 l/s @ 25 m