

# MIXED FLOW VOLUTE PUMPS

## DV RANGE



## TYPICAL APPLICATIONS

- **Raw Sewage**
- **Primary & Activated Sludge**
- **Screened Sewage**
- **Surface and Storm Water**
- **General Industrial Duties**
- **Power Station Re-circulation**
- **Dock Dewatering & Impounding**

BPL's robust range of Volute-Casing Mixed Flow Pumps is designed to handle sewage and effluent containing rags and other fibrous material. The high efficiency design ensures low running costs, fewer blockages, easy, non-intrusive maintenance and is suitable for all applications.



**Automatic Grease Lubricators**

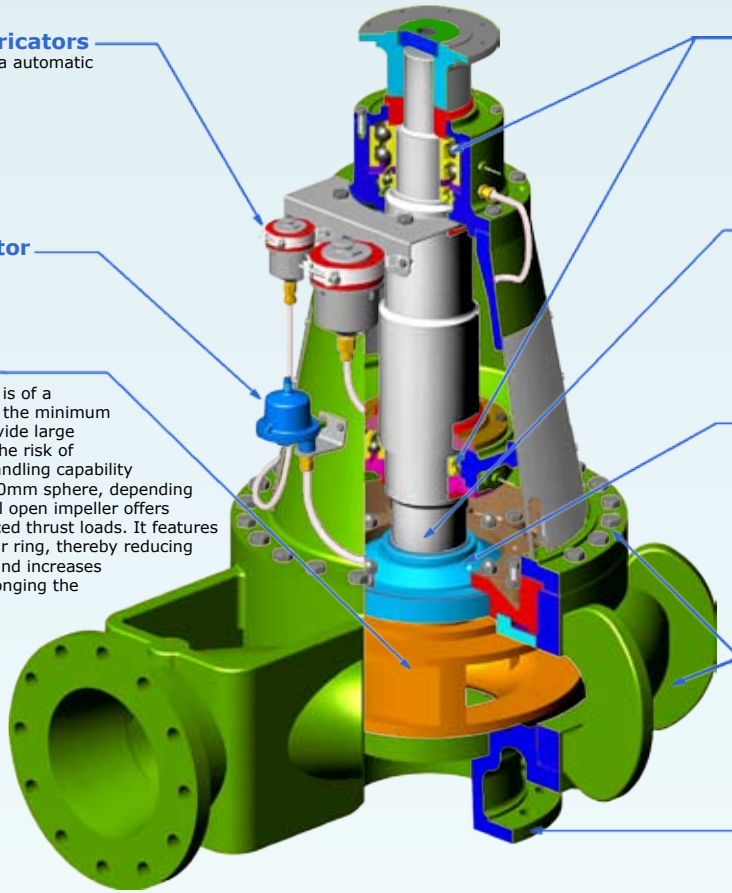
Bearing lubrication is normally via automatic grease lubricators.

**Automatic Air Eliminator**

For shaft seal housing.

**Impeller**

The high efficiency closed design is of a solid cast construction. It utilises the minimum number of blades in order to provide large passageways, thereby reducing the risk of blockage. The minimum solids handling capability of the range is between 100 & 170mm sphere, depending on pump frame size. The optional open impeller offers equally high efficiency with reduced thrust loads. It features a dam ring in addition to the wear ring, thereby reducing the rate of wear to a minimum, and increases maintenance intervals, thus prolonging the efficient operation of the pump.



**Bearings**

The thrust bearing assembly is designed to take all axial and radial loads. Design life normally exceeds 60,000 hours, depending on impeller type and duty.

**Pump Shaft**

The design incorporates a large diameter shaft with minimum bearing overhang to reduce the effects of shock loading and minimise deflection. The first critical speed is nominally in excess of 125% of the design running speed.

**Shaft Seals**

The shaft is sealed using either a soft-packed gland with lantern ring or alternatively a cartridge type mechanical seal which enables quick and easy replacement.

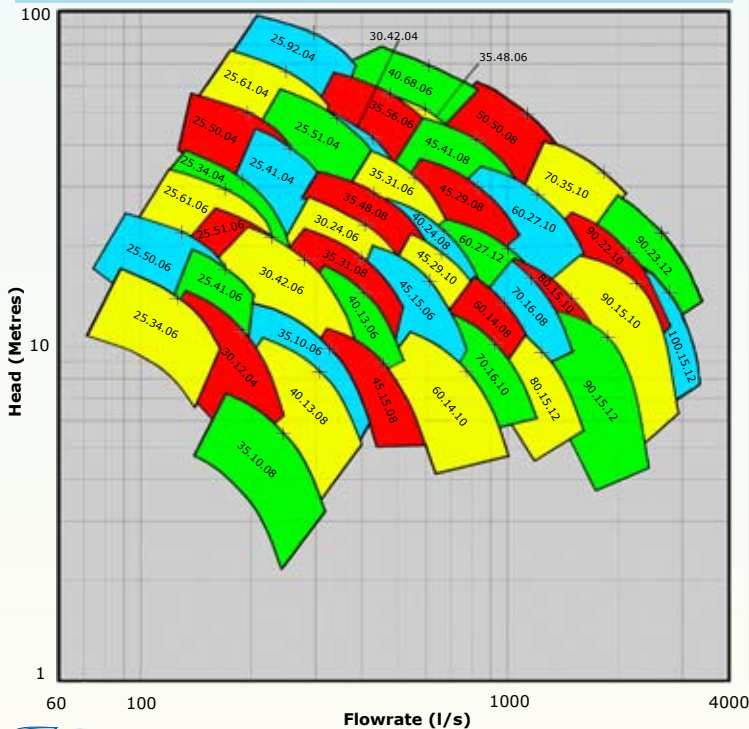
**Pump Casing, Suction Cover/ Shroud & Bearing Bracket**

The volute casing and bearing bracket are of substantial cast construction. Handhole covers and air release bosses are standard features. Adjustable wear plates are fitted to the back cover to enable running clearances to be maintained without the need to dismantle the pump. The closed impeller option incorporates a suction cover fitted with a renewable wear ring and rubber lining to withstand abrasion. The open impeller option incorporates a renewable suction shroud.

**Materials of Construction**

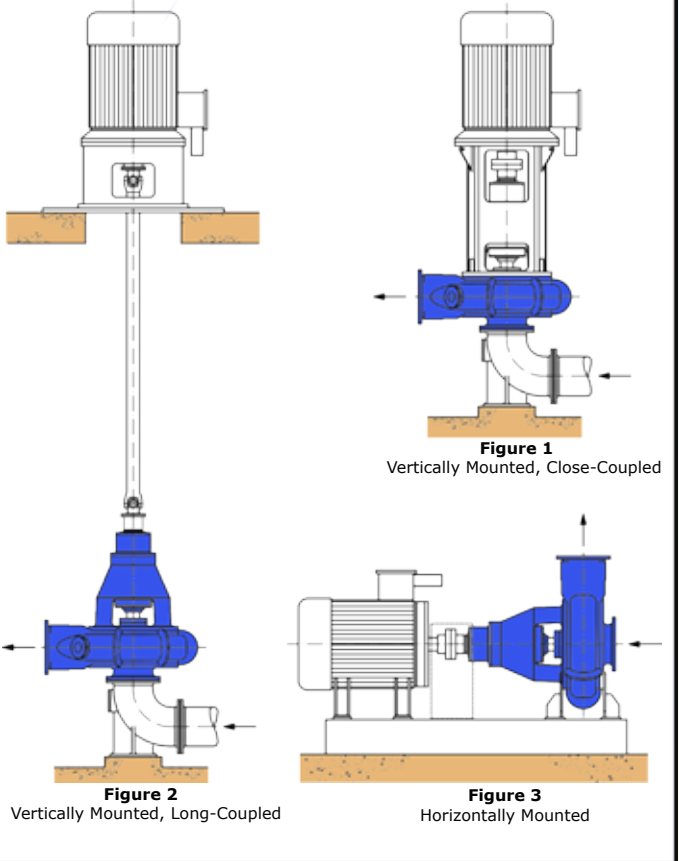
- Casing & Bearing Bracket - Ductile Iron BS EN 1563 Gr.420/12
- Suction Shroud - Ductile Iron BS EN 1563 Gr.420/12
- Impeller - Ductile Iron BS EN 1563 Gr.420/12
- Cast Components - Cast Iron BS EN 1561 Grade 250
- Pump Shaft - Carbon Steel BS 970 070 M20
- Shaft Seal - Cartridge type Mechanical Seal

Alternative material options and shaft sealing arrangements are available for pumping a range of liquids. Refer to BPL for further details.



**Typical Arrangements**

This robust and versatile solids handling pump can be installed in a variety of configurations, and is generally used in a dry well which is unlikely to flood.



**BEDFORD PUMPS LTD.**

Brooklands Woburn Road Industrial Estate, Kempston, Beds. MK42 7UH Tel: +44 (0)1234 852071  
 Fax: +44 (0)1234 856620 email: sales@bedfordpumps.co.uk Web: www.bedfordpumps.co.uk

