EBSRAY PUMPS

V Series
Model V15
V Series – Model V15

Designed and precision built for efficient transfer of a variety of liquids over a wide range of viscosities with lubricating or non-lubricating characteristics.

Specifications
- Max Flow: to 345 L/min
- Max Differential Pressure: to 1100 kPa
- Viscosity range: <1 to 10,000 cSt
- Temperatures: to 100°C as standard

Features
- Quiet operation
- High overall efficiency
- Low maintenance – long life
- Internal wearing parts replaceable without removing pump from piping
- Variable mounting options. 90° or 180° port configuration
- Double ended shaft option
- Direct coupling to synchronous speed electric motors, speed variators, PTOs or engine driven
- Facility for close coupled hydraulic motor connection
- Belt drives
- Lightweight – Robust – Compact
- Positively actuated vanes
- Integral adjustable relief valve
- Mechanical Seals as standard
- CE marked, ATEX compliant for specific applications

Typical Services
- Transport tanker services
- Petroleum and fuel industries
- Chemical and pharmaceutical industries
- Power stations
- Paint industry
- Public utilities
- Edible oil industry
- Aviation industry

Common Liquid Applications
- Fuel oils
- Lube oils
- Distillate
- Petrol
- Kerosene
- Transformer oils
- Solvents
- Chemicals
- Edible oils
- Aviation fuels

Assured Quality and Performance
EBSRAY’s ISO 9001:2000 Quality Management System assures compliance with high safety and quality standards. All Ebsray V Series Model V15 pumps are manufactured under strict guidelines and procedures and are run tested prior to dispatch in order to ensure performance in accordance with pump specifications. The high standards of engineering design, manufacturing and testing combine to make the V15 pumps capable of a long and trouble-free service life.

Special Constructions
Contact EBSRAY or your local representative for advice on alternative arrangements to meet applications not outlined in this brochure.

Ebsray Pumps are designed and manufactured in Australia
High Pump Efficiency

Being of the ‘Sliding Vane Principle’ all EBSRAY V SERIES pumps will operate efficiently over a wide range of pressures, viscosities and speeds.

A typical illustration is shown in the diagram opposite, and under ideal conditions it is possible to attain higher efficiency than shown here. The diagram shows a typical performance of V Series Model V15.

\[
\begin{align*}
\text{Speed} &= 720 \text{ rpm} \\
\text{Kinematic Viscosity} &= 10 \text{ cSt}
\end{align*}
\]

Using these Graphs

**Example**

Flow 205 L/min  
Differential Pressure 850 kPa  
Viscosity 10 cSt

Select the 10 cSt graph. Trace a horizontal line from 205 L/min of Flow on the Y-axis and another line vertical upward from 850 kPa of Differential Pressure on the X-axis. At the point where the two lines intersect each other in the Flow curve graph, estimate the operating speed between the Flow curves, i.e. 960 rpm. Transfer vertically downward to the point where an imaginary 960 rpm Power Input curve would intersect. Draw a horizontal line from this point to the left and read off the required Power Input on the Y-axis, i.e. 4.2 kW. Motor selection is 5.5 kW at indicated speed. Pump may be directly coupled to a correctly rated 960 rpm synchronous motor. Please refer to notes on POWER INPUT on next page.
Notes
1. POWER INPUT (kW) specified is measured under precisely controlled testing conditions of speed, kinematic viscosity and differential pressure. Any variation in these parameters will alter POWER INPUT. Therefore adequate allowances must be made over and above POWER INPUTS indicated for losses due to drives, couplings, gearboxes, etc, as well as margins for variables such as viscosity change and bypass valve pressure rise when determining power required.
2. Graphs show speed ranges (rpm) to a safe maximum at which the pump may be run on a given viscosity.
3. Pump performance may be affected by NPSHa. This should be verified for each application.
4. Speeds shown in Red colour print are maximums. Ensure adequate NPSHa or contact EBSRAY.
5. For parameters outside those printed above contact EBSRAY or representative for details.
Features and Options

PORTS
- 3 - Ports, 90° or 180° configuration – for easy installation
- Flanges for screwed or welded pipe connections

CASING / BODY
- Lightweight Body in Aluminium
- O-Ring Seals on all pressure retaining joints – simple to service

RELIEF VALVE
- Low pressure rise
- Fully adjustable within spring range
- Full flow capability
- Replaceable Valve Seat

VANES / LINER
- Positively actuated synthetic Vanes
- Self compensation for wear
- Replaceable Liner in Cast Iron (Stainless optional)

Shaft Seals
- Mechanical Seals
- Carbon/Stainless/Viton as standard
- Lip Seals in Viton optional

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OPTIONAL FPC VALVE
Ebsray’s Flow and Pressure Control (FPC) valve allows manual unloading of the system pressure and also reduction of output flow without the need for reduction in pump speed. This feature enables the V15 to be used for bulk liquid transfer (high flow) as well as low flow application such as drum filling, aircraft refuelling, hose reel deliveries, etc., without the need for an expensive speed variator.
Dimensions

Pump Weight: 18 kg
Configuration as drawn: V1 - V2

Standard Materials of Construction
- **Body**: Aluminium
- **Liner**: Cast Iron (Stainless optional)
- **Rotor**: Cast Iron (Stainless optional)
- **Shaft**: High Tensile Steel (Stainless optional)
- **Vanes**: Synthetic
- **Bearing Housing**: Cast Iron (Stainless optional)

Multi Porting / Drive Configurations
Unique 3-ports pump design allows great versatility of mounting options. Ports permit pump to be set up as either 180° or 90° configuration. V2, V4 and V6 are the preferred types.

Note: All specifications and illustrations are typical only and subject to revision without notice. Certified data available on request.