V Series Model V25

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

**Specifications**
- Flow: up to 600 L/min (10 L/sec)
- Differential pressure to: 850 kPa
- Viscosity range: 0.5 to 10,000 cSt
- Temperatures to: 100°C

**Features**
- Quiet operation.
- High overall efficiency.
- Low maintenance – long life.
- Internal wearing parts replaceable without removing pump from piping.
- Variable mounting options:
  - Double ended shaft.
  - Direct coupling to synchronous speed electric motors, speed reducers, pto’s or engine driven.
  - Facility for close coupled hydraulic motor connection.
  - Belt drives.
  - 90° or 180° porting configurations.
- Lightweight – Robust – Compact.
- Positively actuated vanes.
- Integral adjustable bypass valve.

**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
- Transformer oils
- Lube oils
- Solvents
- Distillate
- Chemicals
- Petrol
- Edible oils
- Kerosene
- Aviation fuels

**Assured Performance**
All Ebsray V Series Model V25 pumps are run tested prior to despatch in order to ensure performance in accordance with pump specifications. The high standards of engineering design, manufacturing and testing combine to make our pumps capable of long life and trouble free service.

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

Ebsray Pumps are designed and manufactured in Australia.
Performance Data

Efficiency Graph

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 V25.

Speed = 720 rpm  
Kinematic Viscosity = 100 cSt

1 cSt

10 cSt

Using these Graphs
Example
Flow 420 L/min  
Differential Pressure 850 kPa  
Viscosity 100 cSt

Select the 100 cSt graph. Trace 420 L/min horizontally to its point of intersection with 850 kPa FLOW curve. Read required pump speed directly below, i.e. 710 rpm. Transfer vertically upwards to point of intersection with 850 kPa POWER INPUT curve. Read off required power input, i.e. 7.8 kW. Motor selection 9 or 11 kW at indicated speed or direct coupled to 720 rpm synchronous motor. (Recheck power input at synchronous speed if required.)
Notes
1. POWER INPUT (kW) specified is measured under precisely controlled test 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 or bypass valve overpressure when determining power required.
2. SPEED (Rpm/min) specified is the safe recommendation which the pump can attain when delivering full flow at the stated viscosity. Refer performance graphs.
3. Pump performance may be affected by NPSH available. This should be verified for each application.
4. For parameters outside those printed above contact EBSRAY or representative for details.
**Features**

**Design features promote high efficiency and long life**

- Multi Port Construction
- Lightweight Body Casting in high quality aluminium alloy
- Replaceable Bypass Valve Seat
- Shaft seals in Viton
- Dust Seal
- Heavy duty sealed grease packed Ball Bearings locked to shaft ensure positive axial location of rotor
- "O" Ring Seals on all pressure containing joints
- Robust high tensile alloy steel Double Ended Drive Shaft
- Low pressure rise fully adjustable Bypass Valve with full flow capability
- Fully enclosed non-drive Shaft End
- Positively actuated Sliding Vanes self compensating for wear

**Internal Pressure Relief Duct**

**Shaft Sealing**
Pressure in seal zone is minimised by diverting flow via internal pressure relief ducts to the suction (low pressure) side of the pump.

**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 V25 to be used for bulk liquid transfer (high flow) as well as drum filling (low flow) aircraft refueling, hose reel deliveries, etc., without the need for expensive speed reducers.

**Optional Mechanical Seal**
Mechanical seals in a variety of materials are available where unusual suction or system pressure conditions exist. Also where product compatibility necessitates their use.
Dimensions

Materials of Construction

BODY: ALLUMINUM ALLOY
LINER: CAST IRON
ROTOR: CAST IRON
SHAFT: HIGH TENSILE STEEL
VANES: SYNTHETIC
BEARING HOUSING: CAST IRON

Pump Weight 41.5kg (Type 53)
Pump Packed in Triwell Carton, 53kg.
564 x 483 x 504 mm.
Configuration Shown, V5/V6

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

V25 Porting/Drive Configurations

Multi Porting/Drive Configurations
Unique pump design allows great versatility of mounting options. Double ended drive shaft enables pump to be oriented to suit direction of rotation of PTO. Three ports permit pump to be set up as either 160° or 90° configuration. Only two standard assemblies of pump are required to fulfill all possible mounting configurations. V3, V4, V6 and V6 are the preferred types.

EBS-RAY PUMPS PTY. LIMITED
ACN 006 061 003
Head Office and Works
628 Pittwater Road
Brockvale NSW 2100 Australia
Telephone (01) 9935 0234
Fax (01) 9935 3625
www.ebsraypumps.com.au

ABN 52 000 361 003
Branch Office Victoria
Phone (03) 9776 2253
Fax (03) 9776 7312
Branch Office Queensland
Phone (07) 3290 7411
Fax (07) 3290 7422

DISTRIBUTED BY: