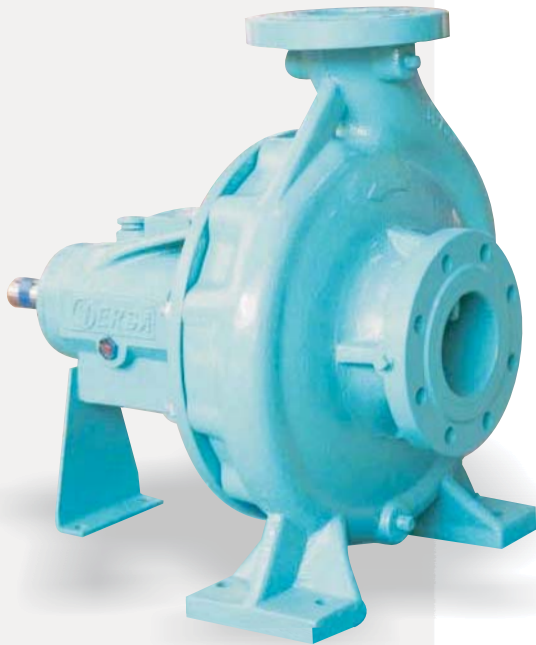


# V - SERIES



## Application

The Versa centrifugal pump is suitable for handling water and similar liquids mainly used in the following applications.

- Water Supply
- Air conditioning
- Irrigation
- Pressure boosting
- Fire Protection
- Heating and ventilating
- Industrial
- Refinery and process
- Chemical and pharmaceutical

## Design

Horizontal, single stage, end suction centrifugal pump, complying with the requirements of EN 733 (DIN 24255). The back pull out design allows for easy maintenance and repair as the rotating element may be removed without disturbing the system pipework. Removal of the rotating element is facilitated by the lifting eye on the bearing housing.



## Operating Data

		50Hz	60Hz
Pump sizes		32mm to 350mm	
Flow	up to	400L/s	288L/s
Head	up to	140m	108m
Temperature	up to	95°C	
Speed	up to	2900 rpm	3600 rpm
Pressure	up to	1600kPa	



**VERSA® PUMP**



ISO 9001-2008

# V - SERIES

## Construction

Horizontal, single stage, end suction with vertical discharge, complying with the requirements of EN 733 (DIN 24255). Most models are suitable for 1600kPa (16 bar) pressure except for larger pumps that are rated for 1000kPa (10bar). The pullbackout design allows for the maintenance of the pump without disturbing the pipework connected to the casing, or the pump alignment.

## Flanges

Pump flanges have raised faces and are to standards AS/NZS 4331.2, ISO 7005.2 16 bar. Gauge tapings are provided on suction and discharge flanges as standard.

## Impellers

The shrouded impellers have front seals and, either back vanes or rear seals with balance holes to provide hydraulic balance. Impellers are dynamically balanced, are keyed to the shaft and are located axially between the sleeve and impeller nut. Zinc free bronze impellers are fitted as standard.

## Casing

All pump casings are cast iron and radially split to permit removal of the rotating element. The vertical centre line discharge makes the casing self venting. Zinc free bronze wear rings are fitted as standard.

## Shaft

Stainless steel shafts are standard and are ground to fit the impeller, sleeve, bearings and coupling.

## Bearings

Grease Lubrication – Standard  
 Oil Lubrication – for high speed models (H)  
 Max. Pump Temperature 95°C  
 The Bearing arrangement consists of two identical single row deep groove ball bearings which are grease lubricated through grease nipples located in each bearing cover.

## Shaft Seal

The shaft sealing is carried out by means of mechanical seal with the option of packed gland.

**Mechanical Seal** - A single mechanical seal, with a ceramic stationary face and carbon rotating face is fitted as standard. The standard seal elastomer is nitrile and is suitable for up to 95°C temperature applications. The other seal components are AISI 304 stainless steel.

Options: Balanced seal – option M1  
 Cyclone separator – option S1

**Gland Packing** - Fitted with removable lantern ring and square plated packing. Packing is fitted over the sleeve to prevent shaft wear.

## Painting

Prior to painting, the pump is thoroughly cleaned of scale, weld splatter and any other foreign material. The pump is then painted with a high quality industrial enamel paint.

## Accessories

### Drive

The pump is only recommended for direct drive via a flexible spacer coupling. Spacer couplings enable the utilisation of the back pull out feature.

Where belt drives are necessary a separate jack (intermediate) shaft with bearings to carry the belt loads may be required.

All drive systems, where supplied by Versa Pump, are appropriately protected by suitable guards.

### Baseplate

Baseplates for electric drives are available in a variety of styles:

Standard

- Fixed and grouted directly to the foundation.

Anti Vibration

- Rigid baseplate on rubber mounts.
- Rigid baseplate on spring mounts.
- Rigid baseplate with inertia block base and spring mounts.

The baseplate is manufactured or fabricated from either cold formed (pressed) steel plate or from rolled steel channel sections.

## Pump Selection

For pump selection the hydraulic performance curves should be used. These curves are based on water at 15°C and SG equal to 1.0.

NPSH values are indicated on the performance curves. At least 0.5m should be added as a safety margin.

To overcome variations between actual and design system requirements it is recommended that the driver power exceeds the absorbed pump shaft power.

Absorbed Pump Shaft [kW]	Driver Power Reserve
Up to 7.5	Approx. 20%
7.5 - 40	Approx. 15%
Above 40	Approx. 10%



**VERSA® PUMP**



ISO 9001-2008

# V - SERIES

## General Operating Parameters

		Packed Gland	Mechanical Seal	
			Standard Seal	Option M1
Pressure	Maximum operating pressure*	1600kPa	1400kPa	1400kPa
	Maximum hydrostatic test pressure	2100kPa	2100kPa	2400kPa
	Maximum suction pressure 1450rpm	600kPa	900kPa	1000kPa
	Maximum suction pressure 2900rpm	400kPa	700kPa	1000kPa
Temperature	Packed gland	-20°C to 95°C		
	Mechanical Seal: Standard	-20°C to 95°C		
	Mechanical Seal Balanced: Option M1	-20°C to 95°C		
Speed	Maximum Speed*	3600 rpm		

\*refer tabular listing on page 5.

## Material Specifications

Material	Component	Nearest Equivalent Standard			
		Australian	British	American	EN
Cast Iron	Casing Back Cover Bearing Housing Bearing Cover Lantern Ring Wear Rings (Option)	AS1830/T220	BS1452: GR220	ASTM A48 Class 30	JL 1030
Zinc Free Bronze	Impeller Wear Rings	AS1565-1985 Alloy C90250	BS 1400-1973 CT1 906D	ASTM C 90700	CC480 K - GC
Bronze	Lantern Ring Bush	AS1565-C83600	BS1400-LG2	ASTM B584-C83600	-
Stainless Steel	Shaft Shaft Sleeve	AS2837 GR.420 AS2837 GR.316	BS970:420/S37 BS970:316	AISI Type 420 AISI Type 316	X20CR13 X10CRN1MOT118/10

## Pump Material Combinations

Part Description	Mechanical Seal Code 04 (A20C)	Packed Gland Code 07 (AXOC)	Packed Gland Code 09 (AXOJJ)
Casing	Cast Iron	Cast Iron	Stainless Steel
Impeller	Zinc Free Bronze	Zinc Free Bronze	Stainless Steel
Wear Rings	Zinc Free Bronze	Zinc Free Bronze	Stainless Steel
Shaft	Stainless Steel	Stainless Steel	420 Stainless Steel
Shaft Sleeve	Not Fitted	Stainless Steel	Stainless Steel
Spring Sleeve	Stainless Steel	Not Fitted	Not Fitted
Lantern Ring	Not Fitted	Cast Iron	Stainless Steel
Lantern Ring Bush	Not Fitted	Bronze	Stainless Steel
Gland	Not Fitted	Cast Iron	Stainless Steel
Seal Plate	Cast Iron	Not Fitted	Not Fitted

## Mechanical Seal Materials

Part Description	Standard	High Pressure Option M1
Seat	Ceramic	Silicon Carbide
Seal Face	Carbon	Carbon
Seal O Ring	Nitrile	Nitrile
Bellows	Nitrile	Nitrile
Retainer		
Drive Band	Stainless Steel	Stainless Steel
Spring Holder	AISI 304	AISI 316
Spring		

