

VERTIFLO

The Vertical Pump Specialists

PUMPS FOR INDUSTRY

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Introduction & User List

Product Overview

Vertical Process Pumps Series 600

Vertical Sewage Pumps Series 700

Vertical Sump Pumps Series 800

Vertical Vortex Pumps Series 900

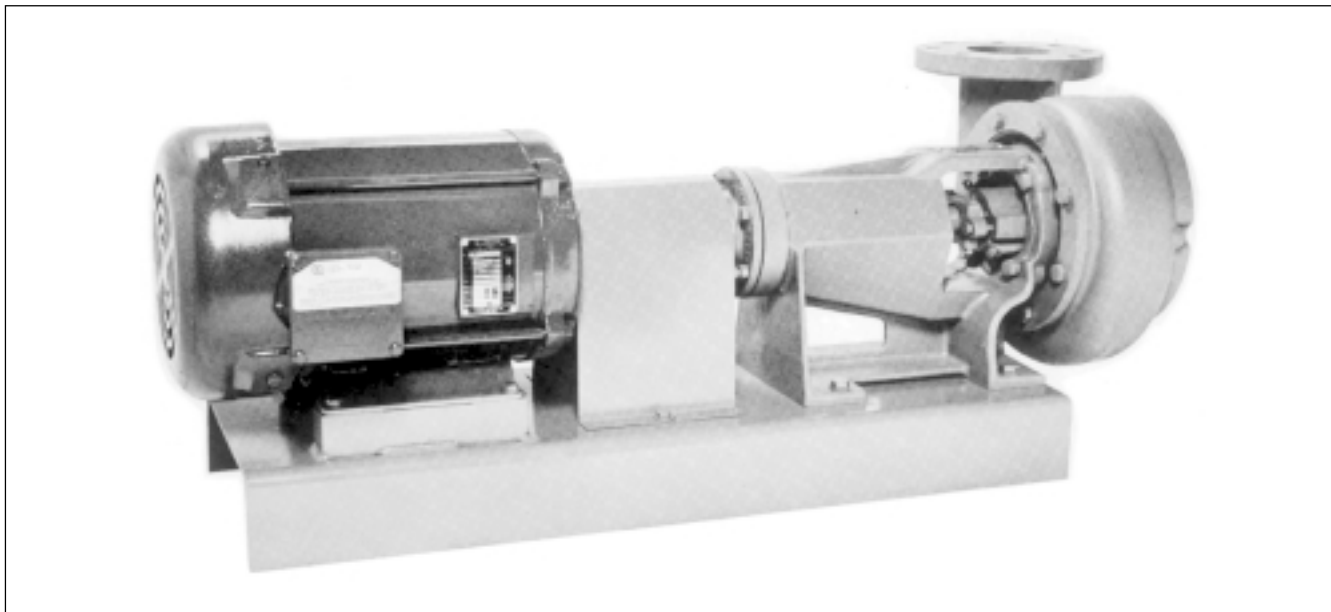
Vertical Cantilever Pumps Series 1100 and 1200

**Horizontal End Suction
Pumps-Centrifugal Series 1300 and 1400**

Horizontal End Suction
Pumps-Vortex Series 1500 and 1600

Horizontal Self-priming
Pumps- Centrifugal Series 2100

Engineering Sample Specifications

VERTIFLO SERIES 1400 Models 1420/1424**Quality Design Features Assure Long, Trouble-Free Service****WIDE RANGE OF APPLICATIONS:**

- Industrial Process
- Pollution Control
- General Pumping
- Spray Systems
- Deionized Water
- Waste Water
- Clear Liquids
- Corrosive Liquids
- Chemicals
- Acids
- Water

CAPABILITIES

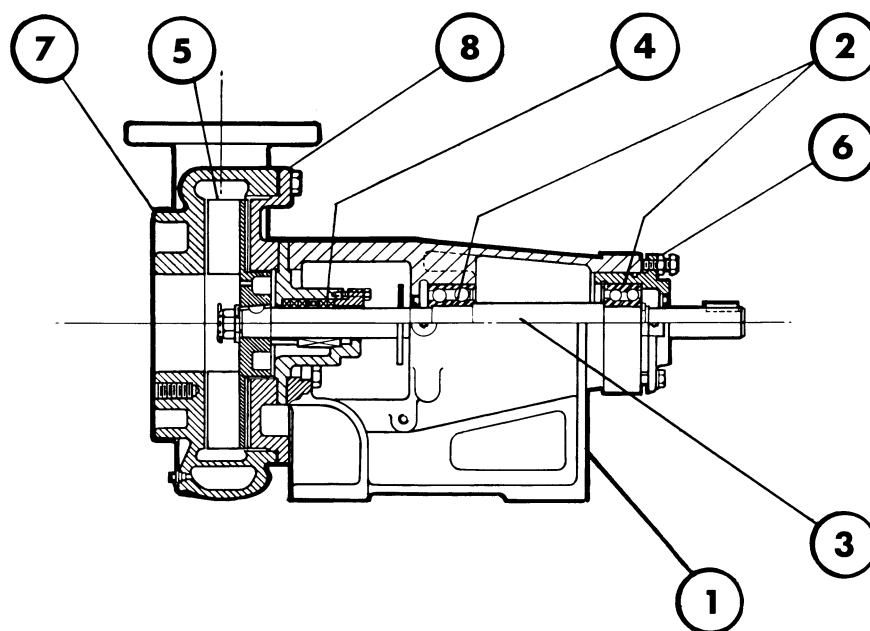
- Capacities to 1800 GPM
- Heads To 275 Feet TDH
- Temperature to 250° F
- Back Pull-Out Construction
- Semi-Open Impeller
- External Impeller Adjustment
- Packing or Mechanical Seal

CONSTRUCTION:

- Cast Iron
- 316 Stainless Steel Fitted
- All 316 Stainless Steel
- Alloy 20CD4MC_u

Series 1400 horizontal base-mounted end suction pumps are designed for use with any T or U frame motor, or with virtually any type of drive. VERTIFLO's base-mounted pumps are designed with back pull-out feature. This important feature allows for easy inspection or service/ maintenance (if ever needed) without disturbing the piping to the pump: an important cost saving feature.

Packing or various mechanical seal arrangements are available as standard options of this rugged, dependable product.

**1. Power Frame**

Rugged heavy duty cast iron design incorporating integrally cast support and ribbed mounting feet which assure a solid, dependable pump installation and operation. One frame fits all pump sizes. External impeller adjustment is standard. Grease lubrication of bearings is standard; oil lubrication available.

2. Bearings

Series 1400 contains a high capacity cartridge-mounted double row thrust bearing allowing use on high suction pressure applications. Radial bearing is single row or double row and floats in a precision bored housing.

3. Shaft

416 stainless steel, precision machined with preferred taper at impeller location. Positive attachment is provided with castellated impeller nut and cotter pin, which assures that the impeller will not back off the shaft if the pump is accidentally operated in reverse rotation. 316 stainless steel shaft is optional.

4. Shaft Sealing

Packed arrangement utilizes a 2-piece split gland, slinger, Teflon® split lantern ring and 5-ring packing set. Grease lubrication is standard with product or water flush available. Wide choice of John Crane and Durametallic mechanical seals of various configurations and materials are optional.

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5. Impeller

Semi-open design which accommodates passage of solids or fines. All impellers have balance holes near the impeller hub which reduce thrust load and pressure in the packing or seal area. Wiping vanes reduce axial loading and prevent dirt from entering the sealing area. Impeller is keyed to shaft with a positive taper fit to assure perfect attachment.

6. Impeller Adjustment

Every power frame contains an external impeller adjustment utilizing jackscrews which provides for clearance adjustment between the impeller vanes' face and casing. This adjustment feature compensates for internal wear. Expensive casing and impeller wearing rings are eliminated.

7. Casing

High efficiency volute design. 4X3X10 and larger sizes are double volute, containing a splitter, which reduces bearing loading and shaft deflection; thus extending bearing and packing or mechanical seal life. All suction and discharge openings are flanged for installation ease and integrity.

8. Back Pull-Out

All pumps* are designed with back pull-out feature which allows for removal of all pump rotating components without disturbing the piping connections. *except size 2X1 1/2X12

Standard

- All iron construction
- 416 stainless steel shaft
- Semi-open impeller
- Back pull-out design
- Packed stuffing box or mechanical seal
- External impeller adjustment
- Heavy duty power frame
- Regreaseable ball bearings
- Flanged suction and discharge on all sizes
- Flexible coupling
- Steel mounting base

Options

- 316 stainless steel shaft
- 316 stainless steel impeller
- All 316 stainless steel, alloy 20 or hastelloy construction (all wetted parts)
- Teflon® packing (standard in s.s. and alloy units)
- Single or double mechanical seal (various materials)
- Product or fresh water flush to packing or mechanical seal
- Oil lubricated bearings with sight level indicator
- Coupling guard (recommended)
- ODP, TEFC, XP motors
- Steam turbine drive
- Diesel or gasoline engine drive

Design Details		Model 1420	Model 1424
Pump Shaft	Rotation from driver end	CW	CW
	Diameter through stuffing box	1.250	1.500
	Diameter between bearings	1.750	1.750
	Diameter at coupling end	1.250	1.250
	Coupling key - square	0.250	0.250
	Bearing centers	6.692	6.692