

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**

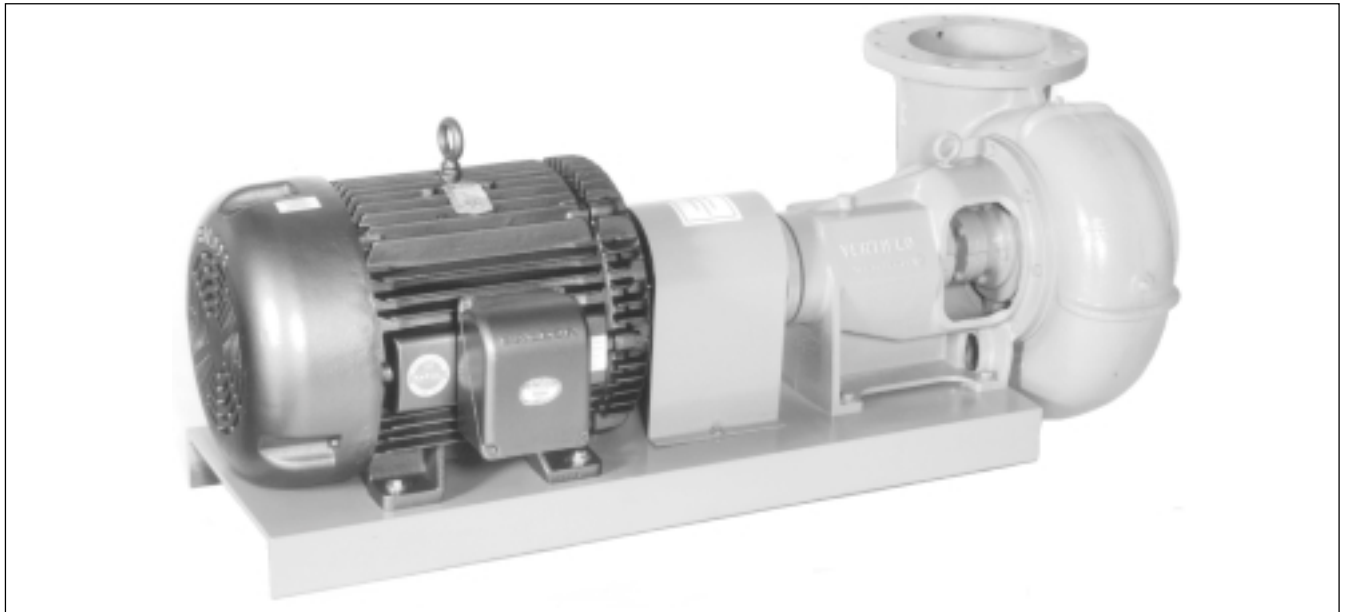
Horizontal End Suction
Pumps-Vortex Series 1500 and 1600

Horizontal Self-priming
Pumps- Centrifugal Series 2100

Engineering Sample Specifications

VERTIFLO Model 1434

Quality Design Features Assure Long, Trouble-Free Service



WIDE RANGE OF APPLICATIONS:

- Industrial Process
- Waste Water
- Chemicals
- Deionized Water
- Pollution Control
- Solids Pumping
- General Water Pumping

CAPABILITIES

- Capacities to 3600 GPM
- Heads To 160 Feet
- Temperature to 250° F
- Back Pull-Out Construction
- Semi-Open Impeller
- External Impeller Adjustment
- Packing or Mechanical Seal

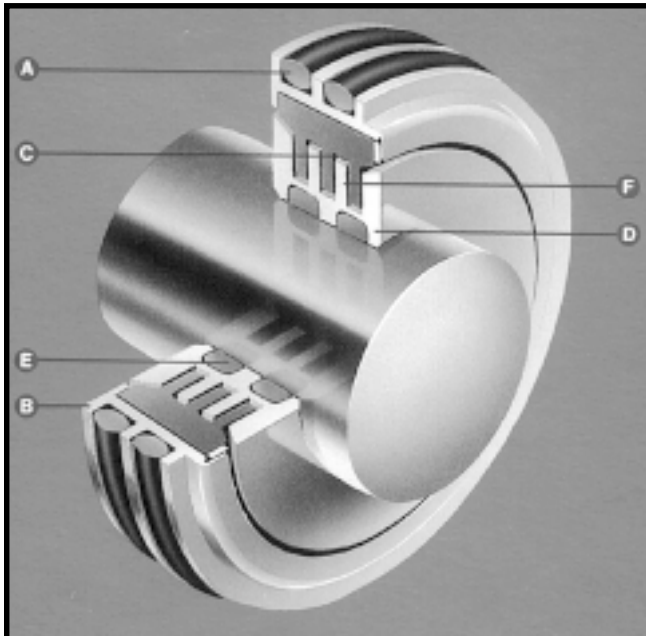
CONSTRUCTION:

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

Model 1434 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.

**John Crane Type 31 Series
Labri-Seal Bearing Protectors**



- A. Outer ring O-rings when space permits
- B. Stationary outer ring
- C. Inward projecting PTFE "fingers"
- D. Moving/free-floating inner ring
- E. Shaft-side inner ring O-rings
- F. Outward projecting stainless steel "fingers"

- Exclusive "finger-locking" design traps and blocks oil leakage.
- Stationary outer ring projects special PTFE composition "fingers" inward. They mesh perfectly with outward projecting steel "fingers" of moving/free floating inner ring. The flexible labyrinth blocks bearing oil. Leakage is virtually *zero*. Drag is virtually *zero*.
- Contamination threats from outside are blocked, too.

VERTIFLO Feature Selector

Standard

- All iron construction
- 416 stainless steel shaft
- Semi-open impeller
- 316 stainless steel shaft sleeve
- 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
- Dual volute casing 6x4x12 and larger

Options

- Labri-seal bearing protectors
- 316 stainless steel shaft
- 316 stainless steel impeller
- All 316 stainless steel or alloy 20 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
- Flexible coupling
- Steel mounting base
- Cartridge mechanical seal

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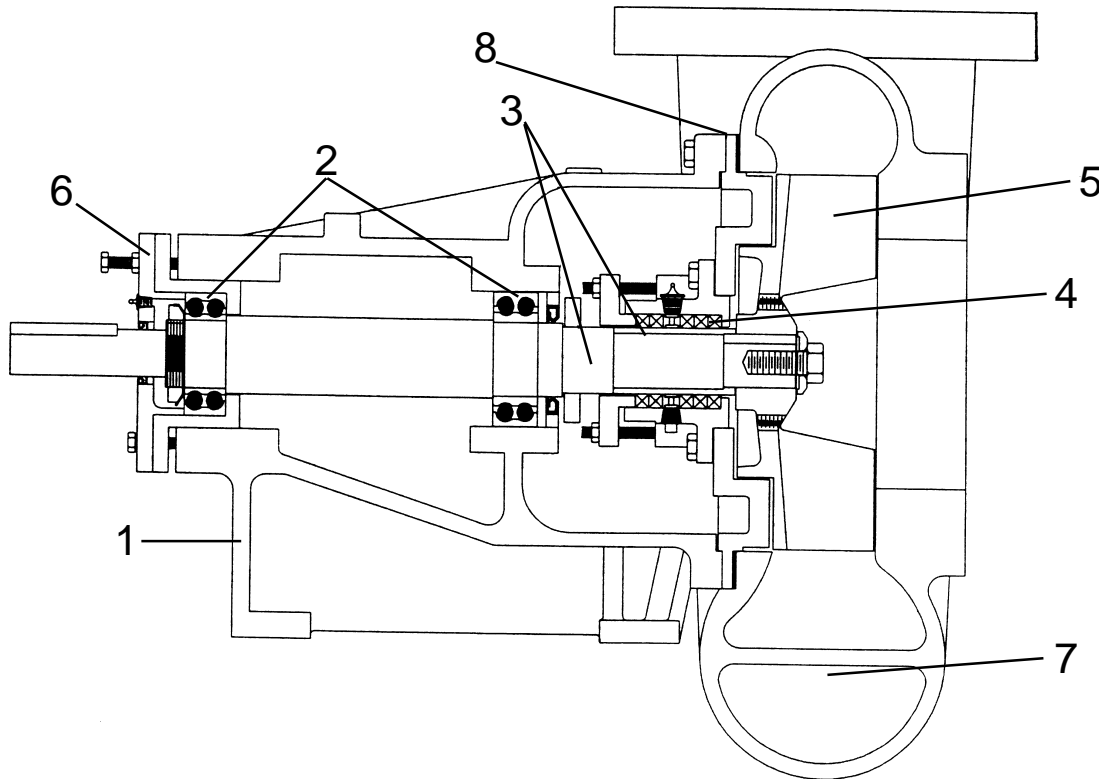
Design Details

Pump Shaft

- Rotation from driver end
- Diameter over shaft sleeve
- Diameter between bearings
- Diameter at coupling end
- Coupling key - square
- Bearing centers

Model 1434

- CW
- 2.125
- 2.500
- 1.500
- 0.375
- 9.750



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

Model 1434 contain a high capacity cartridge-mounted double row thrust bearing allowing use on high suction pressure applications. Radial bearing is double row and floats in a precision bored housing.

3. Shaft and Shaft Sleeve

A 416 stainless steel shaft is standard with a 316 stainless steel shaft sleeve. A 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. Oversized seal housing is ready to adapt for cartridge-type mechanical seal.

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. All impellers have a balancing ring. Impeller is keyed to shaft.

6. Impeller Adjustment

Power frame contains an external impeller adjustment 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. Sizes, 6 x 4 x 12 and larger, 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.

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