

# 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 1100**

Quality Design Features Assure Long, Trouble-Free Service

**WIDE RANGE OF APPLICATIONS:**

- Coal Fine and Slurry
- Waste Paper Stock
- Clay and Water
- Iron Ore Slurry
- Process Water
- Black Liquor

**CAPABILITIES:**

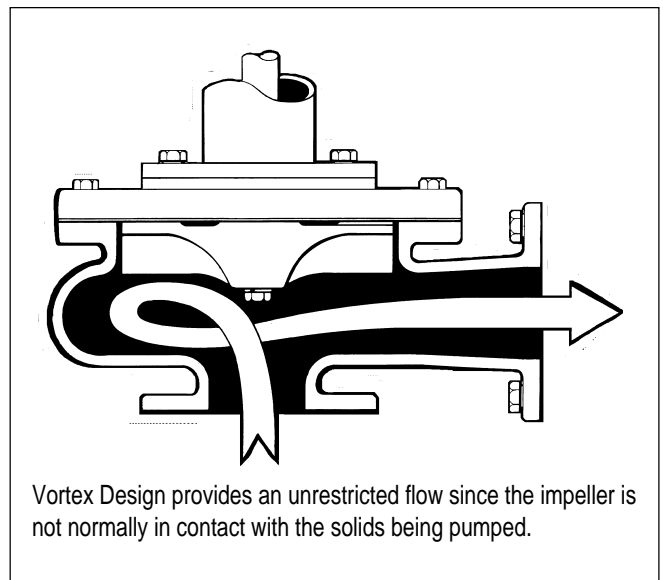
- Capacities to 1600 GPM
- Heads to 170 Feet
- Temperature to 400°F
- Pump Length to 6 Feet
- Shaft Diameter to 5"
- Construction: Cast Iron, 316 Stainless Steel, Alloy 20, CD4MC<sub>u</sub>
- Solids up to 4" Diameter Spheres

**CONSTRUCTION:****Standard**

- All iron
- Fully recessed impeller
- High thrust, double row thrust bearing
- Stress-proof steel shaft
- Round, square or oval cover plates
- External impeller adjustment
- Flanged suction and discharge on all sizes

**Options**

- Stainless steel fitted
- All stainless steel
- Alloy 20
- Heavy wall discharge pipe
- Special floor plate sizes and configurations
- Control panels
- Level controls
- V-Belt Drives



Vortex Design provides an unrestricted flow since the impeller is not normally in contact with the solids being pumped.

*All cantilever pumps are hydraulically selected and engineered at the factory*

### 1. Flexible Coupling

### 2. External Impeller Adjustment

High performance maintained without dismantling pump

### 3. Bearings

All bearings are located above the floor plate. Moisture-proof enclosure with (2) grease seals, purge type grease lubrication. Extra heavy construction incorporating long bearing span for increased shaft rigidity and long pump life.

### 4. Direct or Belt Drives

Direct drive with standard Nema "C" face motor- Belt drive with standard "T" frame motor mounting also available

### 5. Shafting

Rugged alloy accurately machined with taper to precision tolerances

### 6. Column

Heavy duty steel with welded flanges.

### 7. Shaft Sleeve (optional)

Protects shaft from abrasive particles at the throttle area.

### 8. Positive Machined Fits

Rabbit fit to assure positive alignment throughout pump construction.

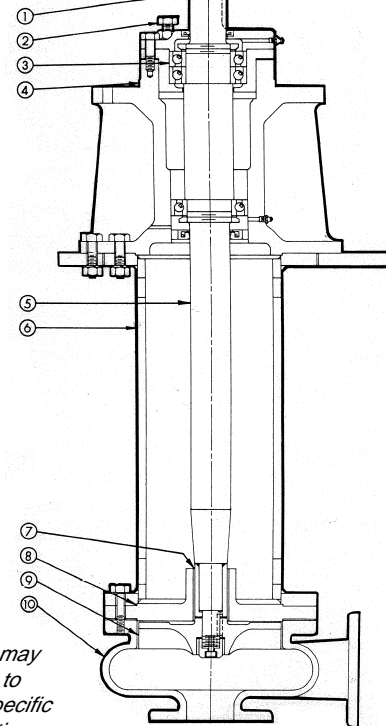
### 9. Impeller

Fully recessed vortex design eliminates clogging when handling large or fibrous solids. Eductor vanes reduce pressure and solid particle buildup behind the impeller.

### 10. Casing

Vortex-type concentric design. Extra heavy wall thickness for corrosion allowance. Designed to allow passage of large solids.

Typical Cross Section



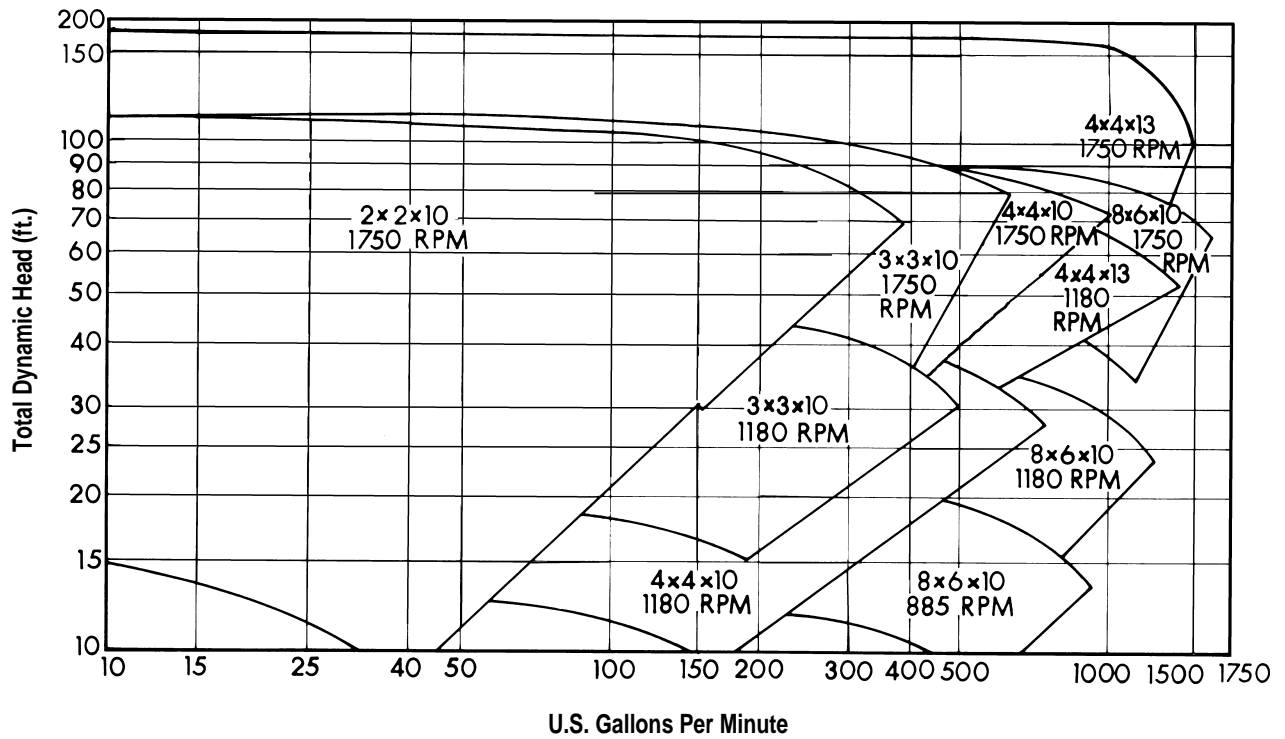
*Design may change to meet specific application.*

## Materials of Construction

Part Description	All Iron	316 Stainless Fitted	All 316 Stainless	Alloy 20
Support Head	Steel or Cast iron	Steel or Cast Iron	Steel or Cast Iron	Steel or Cast Iron
Thrust Bearing Housing, Bearing Cap	Steel	Steel	Steel	Steel
Thrust Bearing, Radial Bearing	Steel	Steel	Steel	Steel
Lip Seals	Nitrile	Nitrile	Nitrile	Nitrile
Shaft	Steel C1144	Stainless Steel AISI-316	Stainless Steel AISI-316	Alloy 20
Shaft Sleeve (optional)	Stainless Steel AISI-316	Stainless Steel AISI-316	Stainless Steel AISI-316	Alloy 20
Impeller Nut	Stainless Steel AISI-316	Stainless Steel AISI-316	Stainless Steel AISI-316	Alloy 20
Case Adaptor	Steel	Steel	Stainless Steel AISI-316	Alloy 20
Impeller	Cast Iron Class-30	Stainless Steel AISI-316	Stainless Steel AISI-316	Alloy 20
Casing	Cast Iron Class 30	Cast Iron Class 30	Stainless Steel AISI-316	Alloy 20
Column, Discharge Pipe, Discharge Elbow	Steel	Steel	Stainless Steel AISI-316	Alloy 20

# VERTIFLO PUMP COMPANY Performance Curves

## Series 1100 Composite Chart



Refer to Series 900 for Specific Vortex Performance Curves

1100

Performance at Casing Discharge Flange

Curves Show Performance with Liquid Having Specific Gravity 1.0 Viscosity • 30 SSU

CUSTOMER \_\_\_\_\_ CUSTOMER NO. \_\_\_\_\_

PROJECT \_\_\_\_\_

ENGINEER \_\_\_\_\_

CONTRACTOR \_\_\_\_\_

CONDITIONS: \_\_\_\_\_ GPM \_\_\_\_\_ TDH \_\_\_\_\_ HP \_\_\_\_\_ EFF% \_\_\_\_\_ IMP. DIA \_\_\_\_\_

**VERTIFLO PUMP COMPANY**

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**VERTIFLO SERIES 1200**

**Quality Design Features Assure Long, Trouble-Free Service**



**WIDE RANGE OF APPLICATIONS:**

- Industrial Process
- Corrosive Liquids
- Paint
- Waste Water
- Chemical Slurries

**CAPABILITIES:**

- Capacities to 3000 GPM
- Heads to 230 Feet
- Temperature to 400° F
- Pump Length to 6 Feet
- Shaft Diameter to 5"
- Construction: Cast Iron, 316 Stainless Steel, Alloy 20, CD4MC<sub>u</sub>

**CONSTRUCTION:**

**Standard**

- All iron
- Semi-open centrifugal impeller
- High thrust, double row thrust bearing
- Stress proof steel shaft
- Round, square or oval cover plates
- External impeller adjustment
- Flanged suction and discharge on all sizes
- Pump lengths up to 6 feet
- Shaft diameters to 5"

**Options**

- Stainless steel fitted
- All stainless steel
- Alloy 20
- Heavy wall discharge pipe
- Special floor plate sizes and configurations
- Control panels
- Level controls

*All cantilever pumps are hydraulically selected and engineered at the factory*

## 1. Flexible Coupling

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High performance maintained without dismantling pump

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All bearings are located above the floor plate. Moisture-proof enclosure with (2) grease seals, purge type grease lubrication. Extra heavy construction incorporating long bearing span for increased shaft rigidity and long pump life.

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Direct drive with standard Nema "C" face motor- Belt drive with standard "T" frame motor mounting also available

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Rugged alloy accurately machined with taper to precision tolerances

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Heavy duty steel with welded flanges

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Protects shaft from abrasive particles at the throttle area

## 8 Positive Machined Fits

Rabbit fit to assure positive alignment throughout pump construction

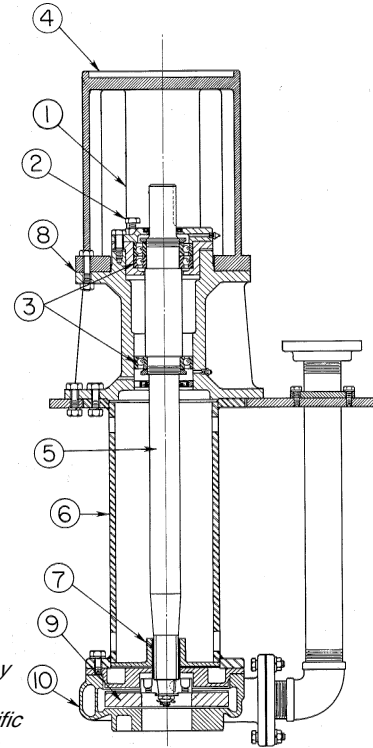
## 9. Impeller

Semi-open centrifugal design with balance ring and eductor vanes

## 10. Casing

Sizes 4 X 3 X 10 and larger are double volute. Heavy wall thickness for corrosion allowance

Typical Cross Section



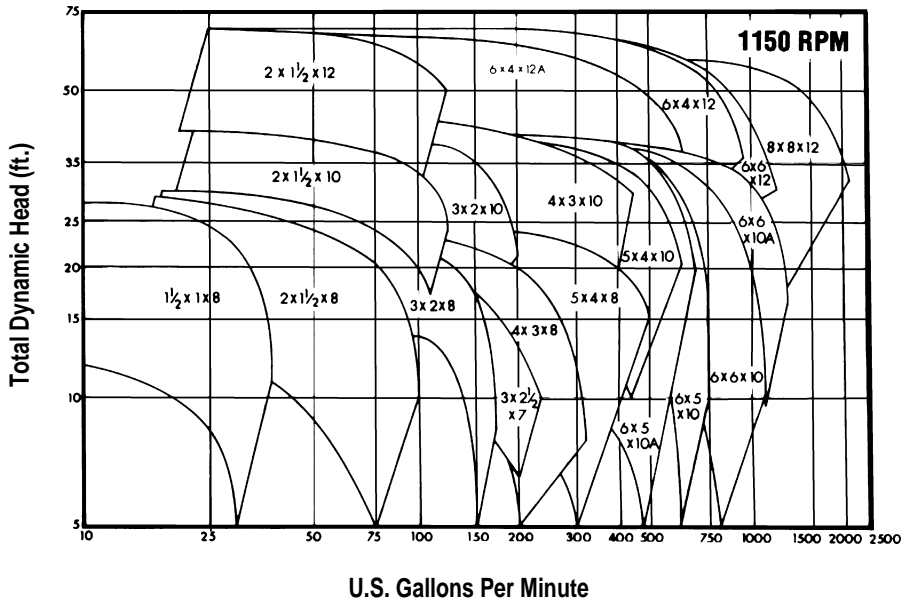
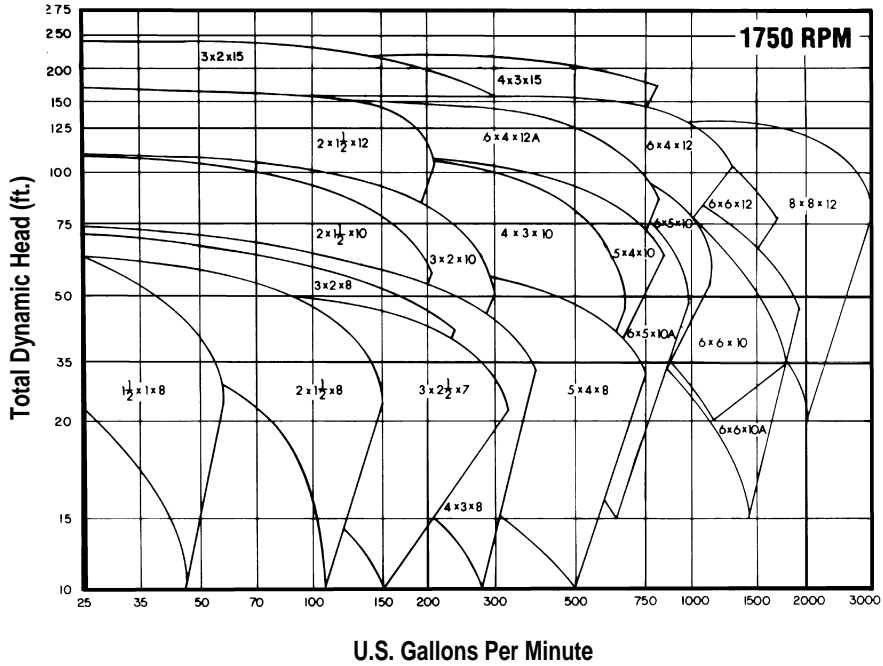
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CONDITIONS: \_\_\_\_\_ GPM \_\_\_\_\_ TDH \_\_\_\_\_ HP \_\_\_\_\_ EFF% \_\_\_\_\_ IMP. DIA \_\_\_\_\_

1200



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