

VERTIFLO

The Vertical Pump Specialists

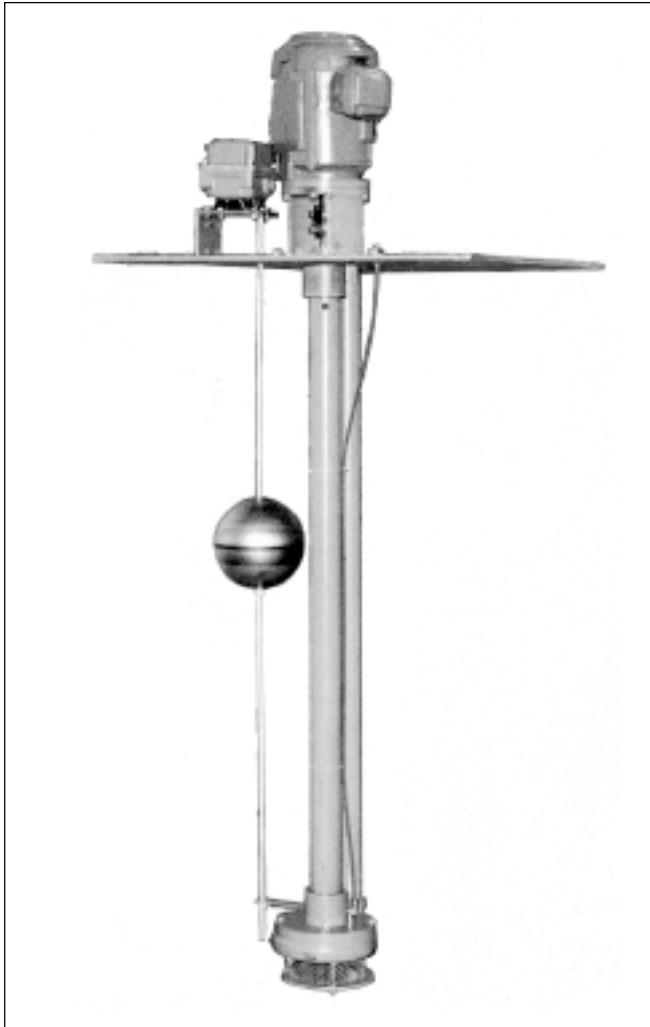
PUMPS FOR INDUSTRY

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Horizontal Self-priming Pumps- Centrifugal Series 2100
Engineering Sample Specifications

VERIFLO MODEL 814

Quality Design Features Assure Long, Trouble-Free Service



WIDE RANGE OF APPLICATIONS:

- Industrial Process
- Pollution Control
- Sump Drainage
- Hazardous, Toxic & Inflammable Liquids
- Clear Liquids
- Condensate
- Corrosive Liquids

CAPABILITIES:

- Capacities to 240 GPM
- Heads to 160 Feet TDH
- Temperature to 210° F
- Pit Depths to 7 Feet
- Construction: Cast Iron, Bronze Fitted, 316 Stainless Steel Fitted, All 316 Stainless Steel

CONSTRUCTION:

Standard

- Carbon graphite line-shaft bearings
- Carbon graphite intermediate bearings (Pump built for pit depth over 5'-0")(4'-0" @ 3500 RPM)
- High thrust, angular contact ball bearing
- Product lubricated line shaft bearings
- 316 stainless steel shaft
- Round or square cover plate
- Pump setting increments of 1'-0" for sump depths up through 7'-0"
- 316 stainless steel float
- Standard C face motors

Options

- Stainless steel fitted, bronze fitted or all stainless steel construction
- External flush for bearing lubrication
- Various float switch enclosures
- Various liquid level controls
- High water alarm
- Alarm bells and horns
- Control Panels

1. Motor Support

Assures positive alignment of motor and pump shaft with register fit. Normal thrust, vertical NEMA C face motor standard

2. Flexible Coupling

3. External Impeller Adjustment

High performance maintained without dismantling pump

4. Thrust Bearing

High thrust angular contact bearing. Permanently lubricated for life

5. Gas Tight Column Closure

Prevents vapor from escaping from column

6. Cover Plate

17 1/2" round or square

7. Column Pipe

Schedule 40 steel

8. Intermediate Bearing Assembly

Furnished as standard on pumps built for pit depths greater than 5'-0" at 1750 RPM and 4'-0" at 3500 RPM

9. Shafting

Accurately machined 316 stainless steel, 7/8" diameter to assure minimum deflection

10. Bearings

Carbon graphite - Product lubrication is standard. Designed for clean, non-abrasive liquids.

11. Impeller

Semi-open design for wide range of industrial applications, secured to shaft with taper fit by thread

12. Casing

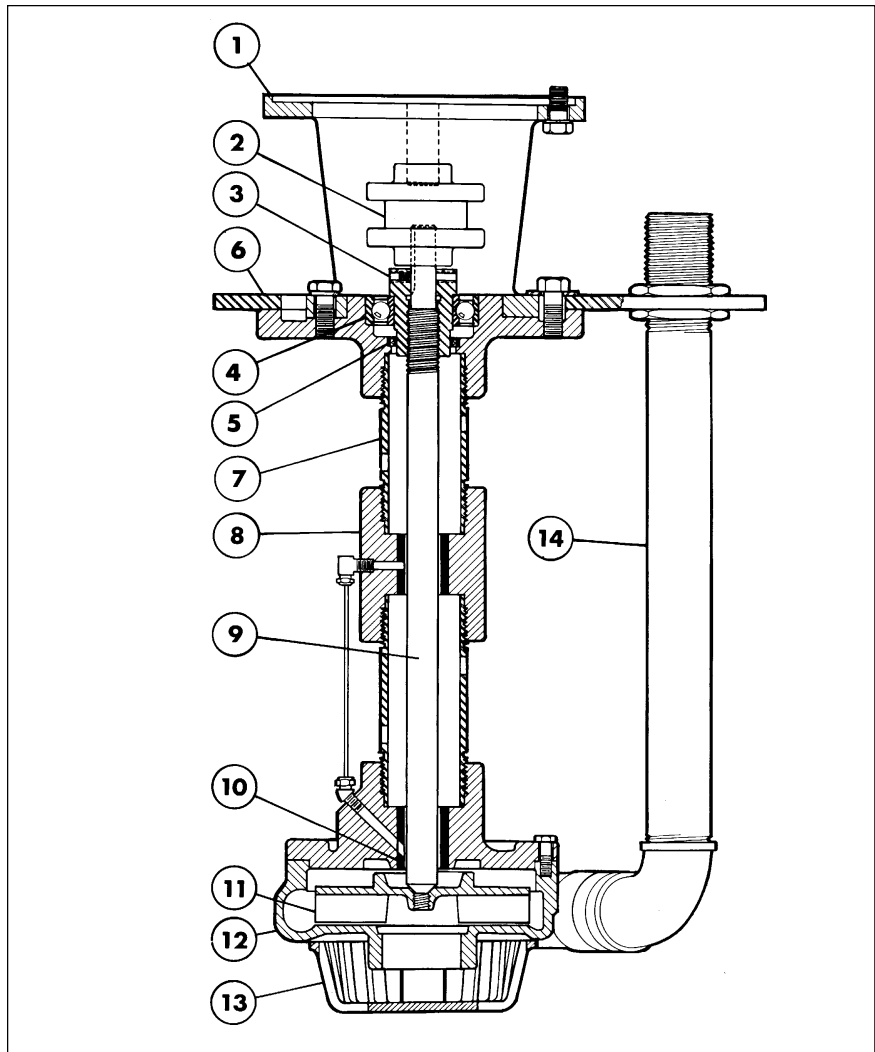
Heavy walled casting

13. Suction Strainer

Cast iron

14. Discharge Pipe

Schedule 40, threaded; flanged connection optional



Materials of Construction

Part Description	Standard Fitted	316 Stainless Fitted	All 316 Stainless
Motor Support	Cast Iron	Cast Iron	Cast Iron
Thrust Bearing Housing	Class 30	Class 30	Class 30
Shaft	Stainless Steel AISI-316	Stainless Steel AISI-316	Stainless Steel AISI-316
Column	Steel ASTM-A53	Steel ASTM-A53	Stainless Steel AISI-316
Bearing Housing	Cast Iron Class 30	Cast Iron Class 30	Stainless Steel AISI-316
Guide Bearings	Carbon Graphite	Carbon Graphite	Carbon Graphite
Impeller	Cast Iron Class 30	Stainless Steel AISI-316	Stainless Steel AISI-316
Casing	Cast Iron Class 30	Cast Iron Class 30	Stainless Steel AISI-316
Gasket	Vellumoid	Vellumoid	NA 700
Strainer	Cast iron Class 30	Cast iron Class 30	Stainless Steel AISI-316
Discharge Elbow	Cast Iron AISI-B164	Cast Iron AISI-B164	Stainless Steel AISI-316
Discharge Pipe	Steel ASTM-A53	Steel ASTM-A53	Stainless Steel AISI-316
Cover Plate	Steel HRS	Steel HRS	Steel HRS
Lip Seal	Nitrile	Nitrile	Nitrile

VERIFLO SERIES 800

Quality Design Features Assure Long, Trouble-Free Service



Series 800 Duplex

WIDE RANGE OF APPLICATIONS:

- Industrial Process
- Pollution Control
- Sump Drainage
- Flood Control
- Hazardous, Toxic & Inflammable Liquids
- Clear Liquids
- Condensate
- Corrosive Liquids
- Acids

CAPABILITIES:

- Capacities to 3000 GPM
- Heads to 230 Feet TDH
- Temperature to 350° F
- Pit Depths to 26 Feet
- Construction: Cast Iron, 316 Stainless Steel Fitted, All 316 Stainless Steel, Alloy 20, Hastelloy, CD4MC_u

800

CONSTRUCTION:

Standard

- Bronze bottom line shaft bearings
- Bronze intermediate bearings (pump built for pit depths over 6'-0")
- Semi-open impeller with balancing ring and wiping vanes
- High thrust, angular contact ball bearing
- Grease lubricated pump and line shaft bearings
- 416 stainless steel shaft
- Round, square or oval cover plates
- External impeller adjustment
- Pump setting increments of 1'-0" for pit depths up to 26'-0"
- Flanged discharge on all casings
- Standard C face motors

Options

- Stainless steel fitted, All stainless steel, Alloy 20, Hastelloy construction
- Various line shaft bearing designs
- 316 stainless steel shafting
- Cover plate with manhole, vent or special openings
- Vapor-proof construction
- Various float switch enclosures
- Various liquid level controls
- High water alarm
- Alarm bells and horns
- 316 stainless steel float rod
- 316 stainless steel float
- Below plate discharge "T"
- Special pump lengths



Series 800 Simplex

1. Motor Support

Assures positive alignment of motor and pump shaft with register fit. Normal thrust, vertical NEMA C face motor standard

2. Flexible Coupling

3. External Impeller Adjustment

High performance maintained without dismantling pump

4. Thrust Bearing

High thrust angular contact bearing. Moisture-proof enclosure, (2) grease seals, purge-type grease lubrication

5. Gas Tight Column Closure

Lip seal, grease lubricated

6. Cover Plate

Designed for specific unit. Optional sizes and gas-tight construction available

7. Column Pipe

Schedule 40 steel with welded flanges

8. Positive Machined Fits

Machined registered fits of column, bearing housing and casing

9. Intermediate Bearing Assembly

Optional designs for special applications. Furnished as standard on pumps built for pit depths greater than 6'-0"

10. Shafting

Accurately machined 416 stainless steel, 1 1/4", 1 1/2" or 2" diameter to assure minimum deflection

11. Pump Bearing Assembly

Heavy construction designed for maximum bearing loadings. Optional designs available

12. Bearings

Various materials available to suit most applications

13. Choker Ring

Restricts entrance of abrasives and solids into bottom bearing

14. Impeller

Semi-open design with balancing ring & wiping vanes for wide range of industrial applications, secured to shaft with taper fit by woodruff key, castellated nut, washer and cotter pin

15. Casing

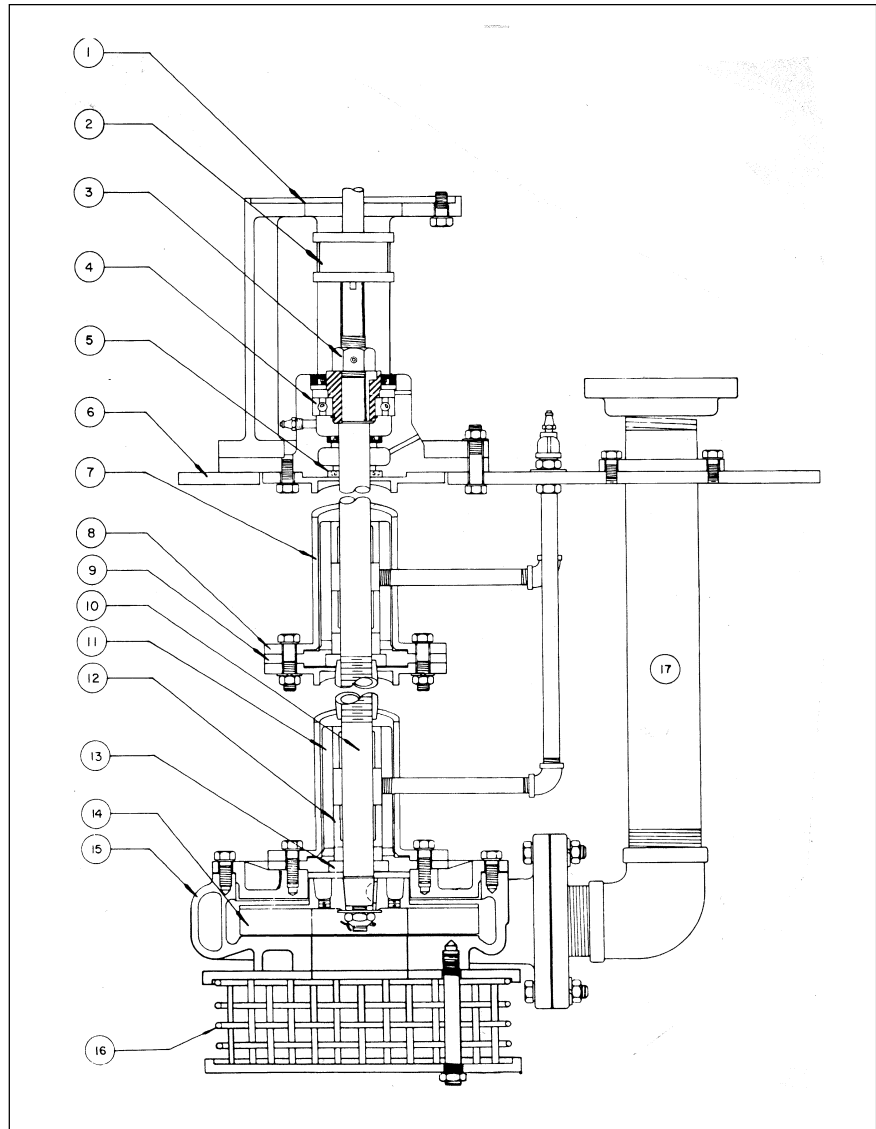
Flanged suction and discharge all sizes. Double volute design on all 4X3X10 and larger sizes

16. Suction Strainer

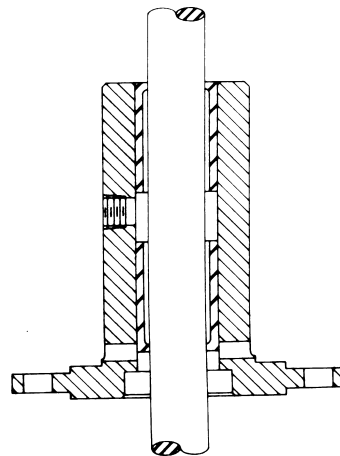
304 stainless steel

17. Discharge Pipe

1"-2 1/2" threaded, 3" and larger flanged. Below plate "T"-type discharge available



Standard Line Shaft Bearing Assemblies



Lower Bearing Assembly

The standard pump bearing assembly consists of choker ring and (2) guide bearing bushings compatible with the liquid. Standard bronze bearings furnished with grease lubrication. Optional: carbon graphite, rubber, Teflon*

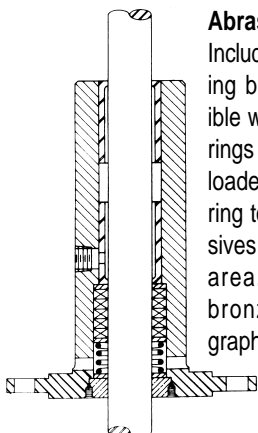
Intermediate Bearing Assembly

The standard intermediate assembly consists of (2) guide bearings compatible with the liquid and is standard when pit depth exceeds 6 feet. Standard bronze bearings furnished with grease lubrication. Optional: carbon graphite, rubber, Teflon*

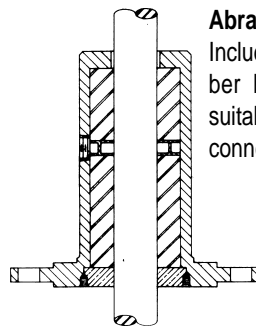
*E.I DuPont registered TM

Part Description	Standard Fitted	316 Stainless Fitted	All 316 Stainless	All Alloy 20
Motor Support, Thrust Bearing Housing	Cast Iron Class 30	Cast Iron Class 30	Cast Iron Class 30	Cast Iron Class 30
Shaft	Stainless Steel AISI-416	Stainless Steel AISI-316	Stainless Steel AISI-316	Alloy 20
Column	Steel ASTM-A53	Steel ASTM-A53	Stainless Steel AISI-316	Alloy 20
Bearing Housing	Cast Iron Class 30	Cast Iron Class 30	Stainless Steel AISI-316	Alloy 20
Guide Bearings	Bronze SAE 660	Bronze SAE 660	Graphite	Graphite
Casing Adaptor	Cast Iron Class 30	Cast Iron Class 30	Stainless Steel AISI-316	Alloy 20
Impeller	Cast Iron Class 30	Stainless Steel AISI-316	Stainless Steel AISI-316	Alloy 20
Impeller Trim	Stainless Steel AISI-316	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
Gasket	Vellumoid	Vellumoid	NA 700	NA 700
Strainer Plate	Cast Iron Class 30	Cast Iron Class 30	Stainless Steel AISI-316	Alloy 20
Strainer Basket	Stainless Steel AISI-304	Stainless Steel AISI-304	Stainless Steel AISI-316	Alloy 20
Discharge Elbow	Cast Iron AISI-B164	Cast Iron AISI-B164	Stainless Steel AISI-316	Alloy 20
Discharge Pipe	Steel ASTM-A53	Steel ASTM-A53	Stainless Steel AISI-316	Alloy 20
Cover Plate	Steel HRS	Steel HRS	Steel HRS	Steel HRS
Bearing Adaptor	Steel AISI-12L14	Steel AISI-12L14	Steel AISI-12L14	Steel AISI-12L14
Adjusting Nut	Steel ASTM-307	Steel ASTM-307	Steel ASTM-307	Steel ASTM-307
Lip Seal	Nitrile	Nitrile	Nitrile	Nitrile

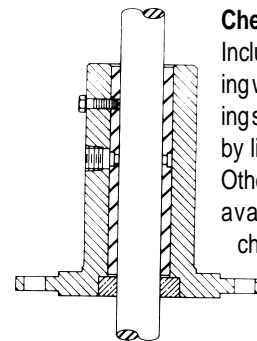
Alternate Line Shaft Bearing Assemblies



Abrasive Service - 1
Includes (2) guide bearing bushings compatible with the liquid, (5) rings of packing spring loaded and a choker ring to eliminate abrasives from the bearing area. Optional are bronze or carbon graphite.



Abrasive Service - 2
Includes (2) cutless rubber bearing bushings suitable for water flush connection.



Chemical Service
Includes (1) Teflon* bearing w/stainless steel locking screws and lubricated by liquid being pumped. Other bearing materials available for special chemical services.

NOTE: Bearing assemblies shown are typical for most pumping services. Unusual or severe services may necessitate changes in assembly design.

*E.I DuPont registered TM