

VERTIFLO

The Vertical Pump Specialists

PUMPS FOR INDUSTRY

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Vertical Process Pumps Series 600

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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

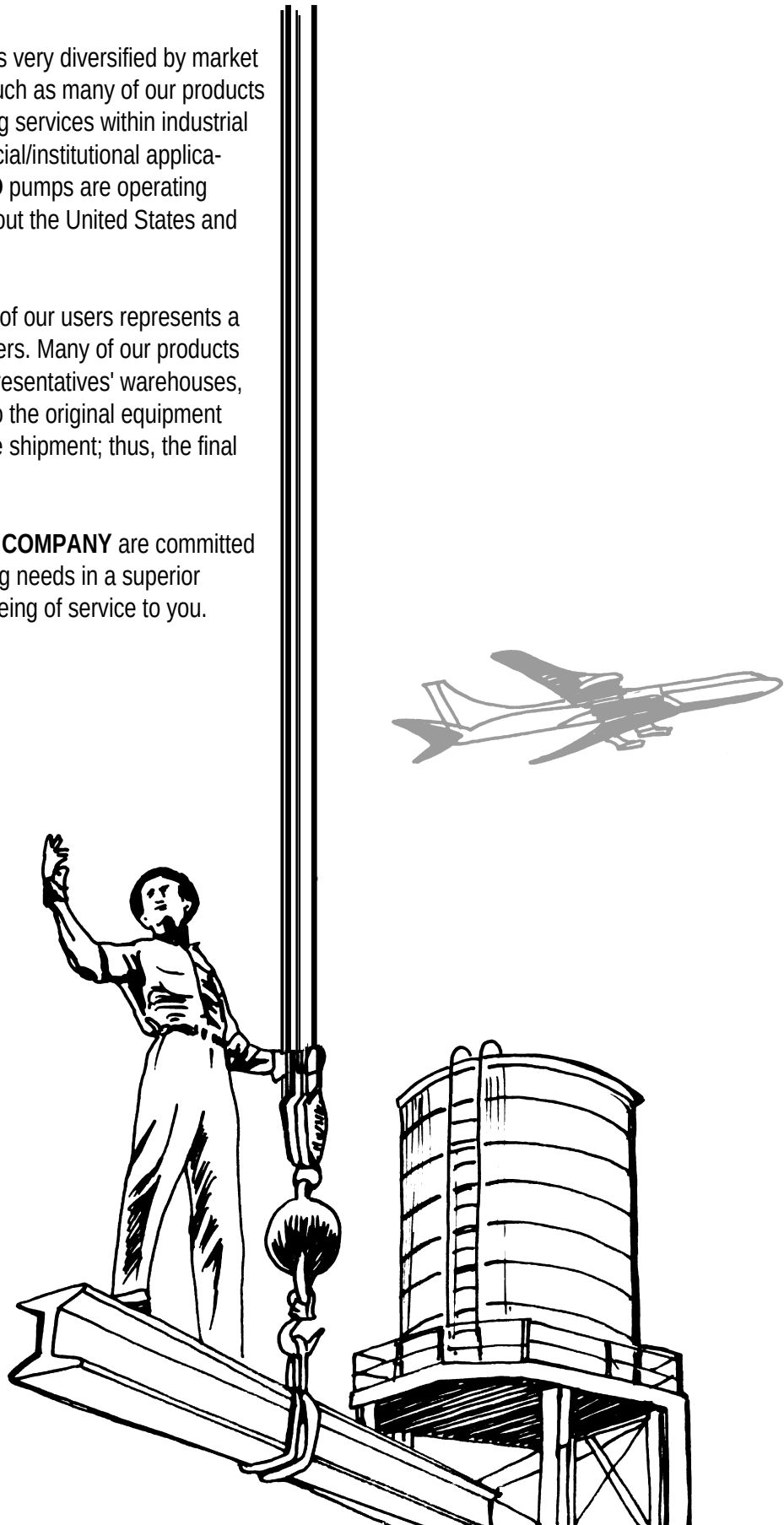
Engineering Sample Specifications

A Complete Line of Pumps for Industry

VERTIFLO's customer base is very diversified by market and market segment, in as much as many of our products are applied for similar pumping services within industrial process, utilities and commercial/institutional applications. Over 20,000 **VERTIFLO** pumps are operating extremely successful throughout the United States and the world.

The accompanying partial list of our users represents a small percentage of actual users. Many of our products are shipped to our Sales Representatives' warehouses, to an installing contractor or to the original equipment manufacturer (OEM) for future shipment; thus, the final destination is often unknown.

All of us at **VERTIFLO PUMP COMPANY** are committed to serve your ongoing pumping needs in a superior manner. We look forward to being of service to you.



Our Clients Served World-Wide

STEEL / METALS

Alcoa
Allied Metals
Allied Tube &
Conduit
American Wire &
Cable
AK Steel
Anchor Die Set
Armco Steel
Baylor Steel
Bethlehem Steel
Brooklyn Steel
Cameron Iron Works
Chase Brass & Copper
Continental Steel
Central Foundry Div.,
GMC
Cyclops Corporation
Empire Detroit Steel
Division
Faultless Hardware
Great Lakes Steel
Interlake Steel
Ingersoll Steel
Koppers Compnay
LTV Steel
Mercury Stainless
Midland Steel Products
Monroe Forgings
PPG Industries
Pittsburgh Tube
Reynolds Metals
Revere Ware
Rouge Steel
Southwire Corp.
USX Corporation
Weirton Steel

AIRLINE / AEROSPACE

American Airlines
Boeing
General Electric
Kennedy Space Center
Lockheed
McDonnell-Douglas
NASA
Sykorsky Aircraft
TWA
United Airlines

PHARMACEUTICALS

Astrazeneca
The Upjohn Co.
Eli-Lilly
Lederle Laboratories
Pfizer
Merck

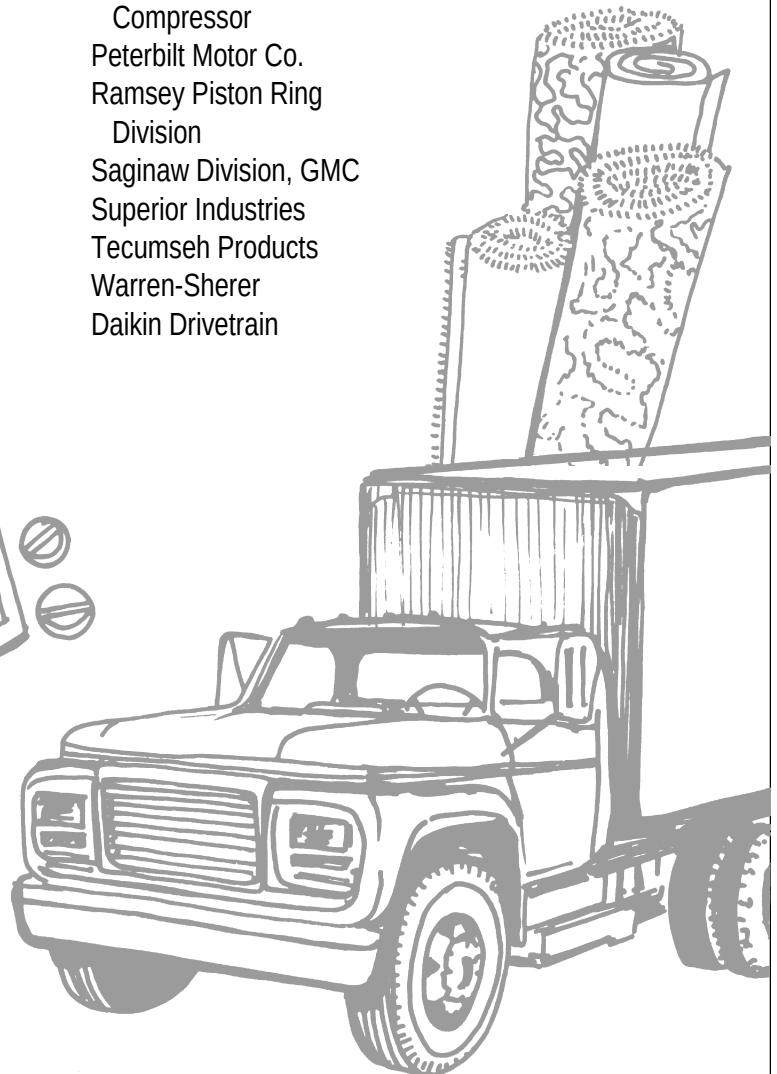


AUTOMOTIVE

AM General
Briggs & Stratton
Caterpillar Corporation
Chrysler Corporation
Cummins Engine
Delco-Remy Div., GMC
Eaton Corporation
Fischer Guide
Ford Motor Company
General Motors Corp.
Holley Replacement
Parts
Honda Corporation
Jaguar International
Mack Truck
Michigan Automobile
Compressor
Peterbilt Motor Co.
Ramsey Piston Ring
Division
Saginaw Division, GMC
Superior Industries
Tecumseh Products
Warren-Sherer
Daikin Drivetrain

TEXTILES / FABRIC

Avondale Mills
Bally Ribbon Mills
Celanese Fibers
Coats and Clark
Cone Mills
Dart Polymers
E.I. DuPont
Fabricolor
Galaxy Carpet
Jennity Fabrice
Star Fibers
Shaw Industries
Sherex Polymers
Spinner & Yarn
Union Buffalo Mille
World Carpet



Our Clients Served World-Wide

ELECTRICAL /ELEC- TRONICS

Advanced Circuitry
Dana Corporation
Eaton Corporation
Ford Microelectronics
General Electric
Hewlett Packhard
IBM
I.T.E. Electrical
Products
Johnson Controls
Martin Marietta
McGraw Edison Power
Motorola Corporation
R.C.A. Corporation
Rockwell Corporation
Westinghouse Corp.

DEFENSE / MILITARY / ENERGY

Arnold Air Force Base
Cavalier Air Force Base
Elieson Air Force Base
Hercules, Inc.
Indiana Army
Ammunition Plant
McConnell Air Force Base
Naval Air Rework Facility,
Virginia
Patuxent Naval Station
Pine Bluff Arsenal
Tinker Air Force Base
U.S. Dept. of Energy
U.S. Marines
U.S. Navy
Utah Air National Guard
Westinghouse-Hanford
Wright-Patterson Air
Force Base
Fort Bragg
Robbins Air Force Base

CHEMICALS / FUEL / REFINING

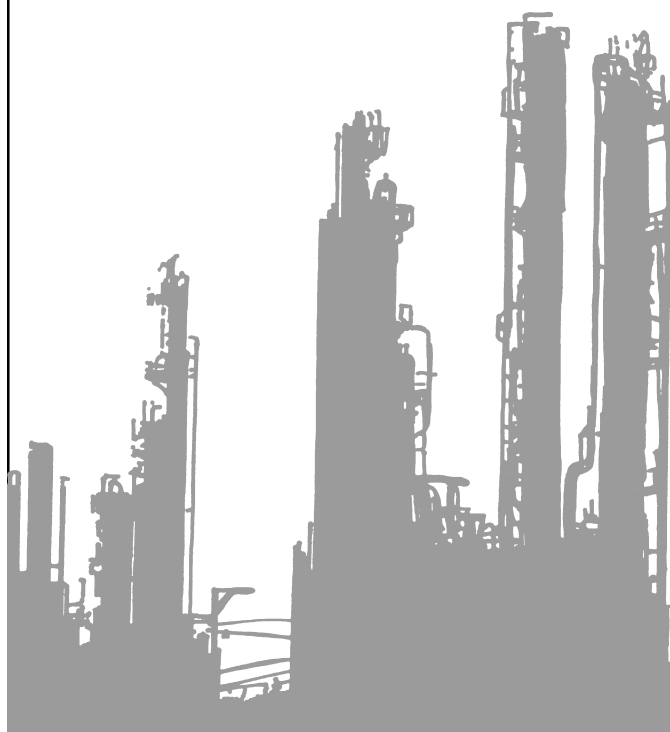
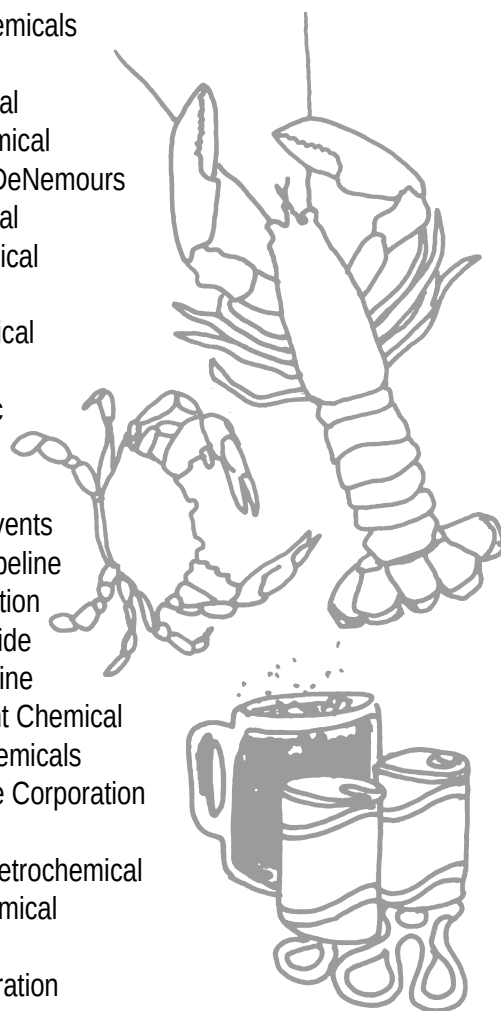
Air Products & Chemicals
Allied Chemical
Allied Colloids
American Cyanamid
Amoco Oil
Arco Chemical
Aristech Chemical
Ashland Oil
Baker Performance
Chemicals
B.F. Goodrich Chemicals
B.P. Oil
Borden Chemical
Celotex Corporation
Chem-Fleur International
Chevron USA
Concord Chemicals
Conoco
Dow Chemical
DuBois Chemical
E.I. Dupont DeNemours
Elan Chemical
Exxon Chemical
Exxon USA
Hatco Chemical
GATX
Hercules, Inc
Mobil Oil
Monsanto
National Solvents
Off Shore Pipeline
Olin Corporation
Pacific Chloride
Phillips Pipeline
Philip A. Hunt Chemical
Polyvinyl Chemicals
Quaker State Corporation
Shell Oil
Southwest Petrochemical
Stauffer Chemical
Unocal
Witco Corporation
Occidental Chemical

COMMERCIAL FISHING/ PROCESSING/ CANNING

Artic Alaska Seafoods
Dakota Creek Industries
Marco Shipbuilding
Nelbro Packing Co.
Tacoma Boatbuilding Co.
Trident Seafoods
Universal Seafoods
Ward's Cove Packing

CAN MANUFACTURERS

American Can
Continental Can
Crown Cork & Seal
Miller Container
National Can
Schlitz Container



Our Clients Served World-Wide

PAPER / PULP / PUBLISHING

Appleton Papers
Brandywine Paper Board Mills
Donnelly Corporation
Fiberboard Corporation
Hammermill Paper
International Paper
Mead Paper
Nekoosa Paper
Scott Paper
Simpson Timber
Specialists Paper Mills
Strathmore Paper Co.
Taylor Publishing

FOOD PROCESSING / BEVERAGE

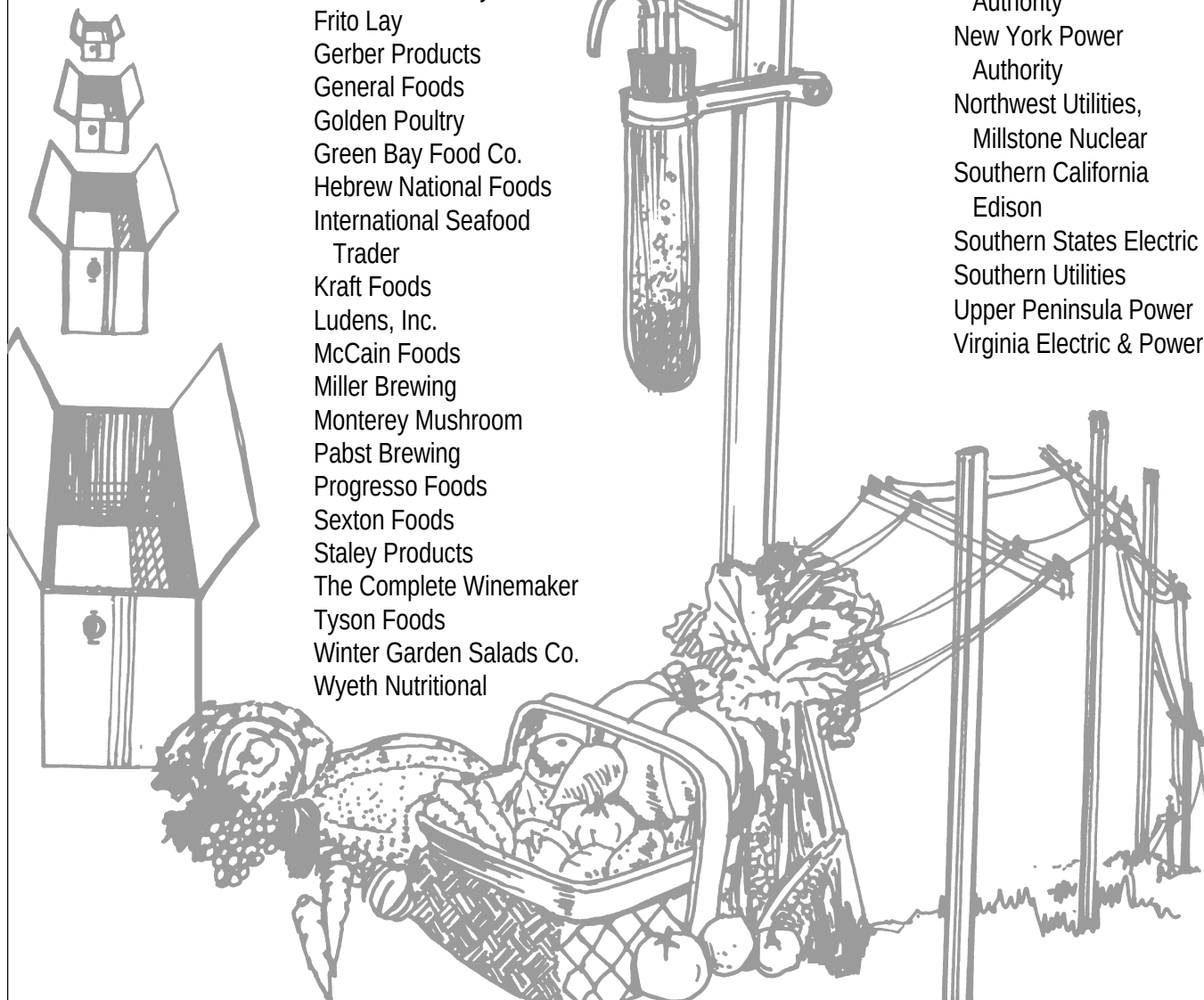
Alpo Pet Foods
APV Baker
American Fructose
American Potato
Aunt Jane Foods
Borden Foods
Brock Candy
Butterball Turkey
C & H Sugar
Campbell, Inc.
Carolina Corn Products
Chef-Pierre
Contadina
Corn Products
Diamond Country Foods
Frito Lay
Gerber Products
General Foods
Golden Poultry
Green Bay Food Co.
Hebrew National Foods
International Seafood Trader
Kraft Foods
Ludens, Inc.
McCain Foods
Miller Brewing
Monterey Mushroom
Pabst Brewing
Progresso Foods
Sexton Foods
Staley Products
The Complete Winemaker
Tyson Foods
Winter Garden Salads Co.
Wyeth Nutritional

SOAPS / DETERGENTS / LOTIONS

Andrew Jergens
Colgate-Palmolive
Helene Curtis
Procter & Gamble
Lever Brothers

UTILITIES

Arkla Gas Co.
Associated Electric Cooperative
Carolina Power & Light
Cincinnati Gas & Electric
City of Long Beach, CA
City of St. Louis, MO
Consolidated Edison
Consumer's Power
Dayton Power & Light
Delmarva Power & Light
Duke Power
Duquesne Power & Light
Jacksonville Power Authority
New York Power Authority
Northwest Utilities, Millstone Nuclear
Southern California Edison
Southern States Electric
Southern Utilities
Upper Peninsula Power
Virginia Electric & Power



A Complete Line of Pumps for Industry

SERIES 600
MODEL 629 & 636
Industrial Vertical
Process Pump



- Capacities to 3000 GPM
- Heads to 230 Feet
- Temperature to 180° F
- Column Extensions of 12", 15" & 21"
- Construction: Cast Iron, 316 Stainless Steel Fitted, 316 Stainless Steel, Alloy 20

SERIES 700
MODEL 720 & 724
Vertical Non-Clog
Sewage Ejector



- Capacities to 1500 GPM
- Heads to 100 Feet
- Pit Depths to 26 Feet
- Construction: Cast Iron

SERIES 800
MODEL 814, 820, 824 & 832
Industrial Vertical Immersion
Sump Pump



- Capacities to 3000 GPM
- Heads to 230 Feet
- 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

A Complete Line of Pumps for Industry

SERIES 900

MODEL 920, 924 & 932

Industrial Vertical Immersion
Vortex Sump Pump



- Capacities to 1600 GPM
- Heads to 170 Feet
- Temperature to 350°F
- Pit Depths to 26 Feet
- Solid Handling up to 4" Diameter Shperes
- Construction:
Cast Iron,
316 Stainless Steel Fitted,
All 316 Stainless Steel,
Alloy 20,
CD4MC_u

SERIES 1100

MODEL 1101, 1102 & 1103

Industrial Vertical Cantilever
Vortex Pump



- Capacities to 1600 GPM
- Heads to 170 Feet
- Temperature to 400°F
- Pump Length to 6 Feet
- Shaft Diameter to 5"
- Solid Handling up to 4" Diameter Shperes
- Construction:
Cast Iron,
316 Stainless Steel,
Alloy 20,
Hastelloy,
CD4MC_u

SERIES 1200

MODEL 1201, 1202 & 1203

Industrial Vertical
Cantilever Centrifugal Pump



- Capacities to 3000 GPM
- Heads to 230 Feet
- Temperatures to 400°F
- Pump Length to 6 Feet
- Shaft Diameter to 5"
- Construction:
Cast Iron,
316 Stainless Steel,
Alloy 20,
Hastelloy,
CD4MC_u

Industrial Horizontal End Suction Pumps

MODEL 1312 Close-Coupled

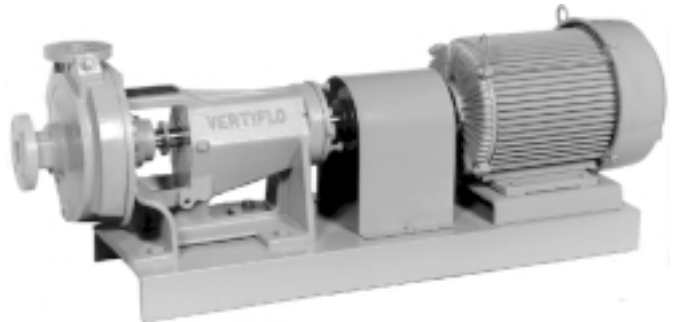
- Capacities to 240 GPM
- Heads to 160 Feet
- 1750 and 3500 RPM
- Back Pull-Out Construction
- Mechanical Seal
- Semi-Open Impeller
- Construction: All Iron, Bronze Fitted, 316 Stainless Steel Fitted, All 316 Stainless Steel



MODEL 1400LF Base-Mounted, Low Flow Pump

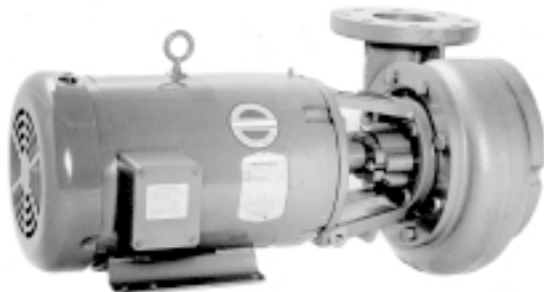
- Capacities to 50 GPM
- Heads to 345 Feet
- Temperature to 250° F
- Back Pull-Out Construction
- Radial Vane Impeller
- External Impeller Adjustment
- Packing or Mechanical Seal
- Construction: Ductile Iron, Bronze Fitted, 316 Stainless Steel Fitted, All 316 Stainless Steel

***Also available
as vertical wet
pit pump***



SERIES 1300 MODEL 1320, 1326 & 1334 Close-Coupled

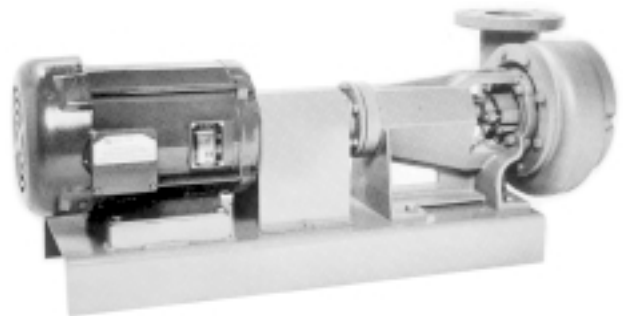
- Capacities to 3600 GPM
- Heads to 275 Feet
- Temperature to 250° F
- Back Pull-Out Construction
- Semi-Open Impeller
- Packing or Mechanical Seal
- Construction: Cast Iron, 316 Stainless Steel Fitted, All 316 Stainless Steel, Alloy 20, CD4MC_u



Series 1300

SERIES 1400 MODEL 1420, 1424 & 1434 Base-Mounted

- Capacities to 3600 GPM
- Heads to 275 Feet
- Temperature to 250° F
- Back Pull-Out Construction
- Semi-Open Impeller
- Packing or Mechanical Seal
- Construction: Cast Iron, Stainless Steel Fitted, All 316 Stainless Steel, CD4MC_u



Series 1400

Industrial Horizontal End Suction Pumps

SERIES 1500 **MODEL 1520, 1524** **& 1534**

Base-Mounted
Vortex

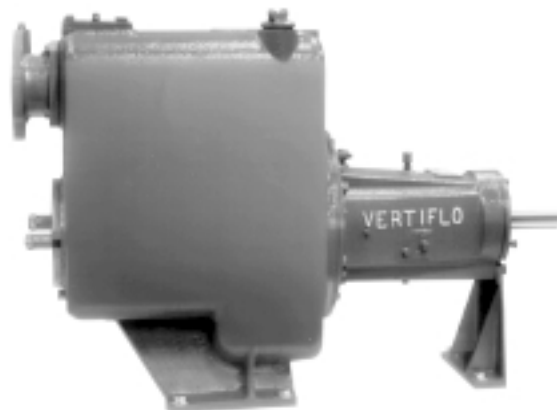
- Capacities to 1600 GPM
- Heads to 170 Feet
- Temperature to 250° F
- Back Pull-Out Construction
- Fully Recessed Vortex Impeller
- External Impeller Adjustment
- Packing or Mechanical Seal
- Construction: Cast Iron, Alloy 20
316 Stainless Steel Fitted,
All 316 Stainless Steel, CD4MC_u



Series 1500

SERIES 2100 Trash- and Solids- Handling Self-Priming Centrifugal Pump

- Capacities to 1300 GPM
- Heads to 112 Feet TDH
- Sizes: 3", 4" and 6"
- Solids Handling: Up to 3"
Diameter Sphere
- Suction Lifts to 25 Feet
- Construction: Cast Iron,
All 316 S.S., All CD4MC_u,
316 S.S. Fitted, CD4MC_u Fitted



SERIES 1600 **MODEL 1620, 1626** **& 1634**

Close-Coupled
Vortex

- Capacities to 1600 GPM
- Heads to 170 Feet
- Temperature to 250° F
- Back Pull-Out Construction
- Fully Recessed Vortex Impeller
- External Impeller Adjustment
- Packing or Mechanical Seal
- Construction: Cast Iron,
316 Stainless Steel Fitted,
Alloy 20, All 316 Stainless Steel,
CD4MC_u



Series 1600

VERTIFLO

The Vertical Pump Specialists

PUMPS FOR INDUSTRY

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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

VERIFLO SERIES 600, MODELS 629 & 636

Quality Design Features Assure Long, Trouble-Free Service



WIDE RANGE OF APPLICATIONS:

- Industrial Spray Washer
- Pickling / Bonderizing
- Spray Booths
- Coolant Systems
- Filtration Systems
- Pollution Control
- E-Coat Paint Systems

CAPABILITIES:

- Capacities to 3000 GPM
- Heads to 230 Feet
- Temperature to 180° F
- Column Extensions of 12", 15" & 21"
- Construction: Cast Iron, 316 Stainless Steel Fitted, 316 Stainless Steel, Alloy 20

600

CONSTRUCTION:

Standard

- All iron construction
- Stress-Proof alloy steel shaft
- External impeller adjustment
- Cartridge type thrust bearing housing and cap
- Double row thrust bearing
- Semi-Open impeller with balancing ring and wiping vanes
- 12" flanged column extension
- Steel cover plate
- Schedule 40 discharge pipe
- Cast iron motor support
- Flexible coupling

Options

- Stainless steel fitted, All stainless steel or Alloy 20 construction
- Pump down feature
- Suction piping
- Column extension available for 15" or 21" extensions
- Oversize cover plates
- Fabricated steel chairs for "T" or "U" frame foot mounted motors

Shaft Sizes

Model Number 629.....2 1/4"
Model Number 636.....2 1/2"

1. Motor Support

Assures positive alignment of motor and pump shaft with register fit. Normal thrust, vertical NEMA C face motor standard. Fabricated steel chair mount is an option.

2. External Impeller Adjustment

Locking jack screws provide impeller adjustment without dismantling pump or piping

3. Bearings

Grease lubricated, heavy-duty ball bearings- Double row thrust bearing standard

4. Power Frame

Heavy duty cast iron, line bored and machined to assure correct alignment of rotating element

5. Column Closure

Replaceable lip seals prevent moisture and dirt from entering lower bearing

6. Cover Plate

Designed for specific unit. Carbon steel standard, alloy plates optional

7. Positive Machine Fits

Machined registered fits of column, power frame, throttle housing and casing

8. Column Pipe

Schedule 40 steel pipe with welded flanges

9. Shaft

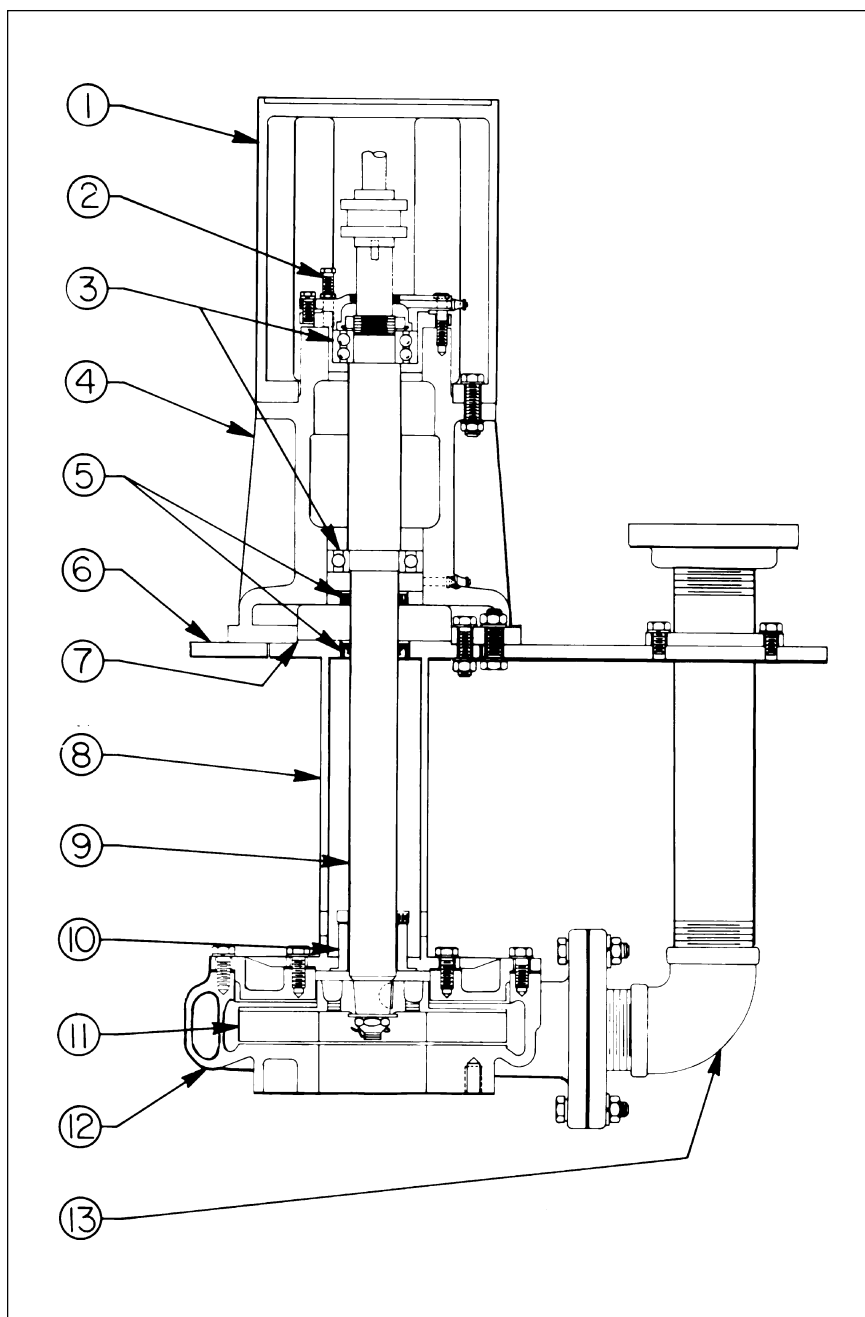
Accurately machined, stress-proof steel assures minimum deflection

10. Throttle Bushing

Register fit assures positive alignment between column and casing. Throttle bushing restricts flow of liquid entering column.

11. Impeller

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

**12. Casing**

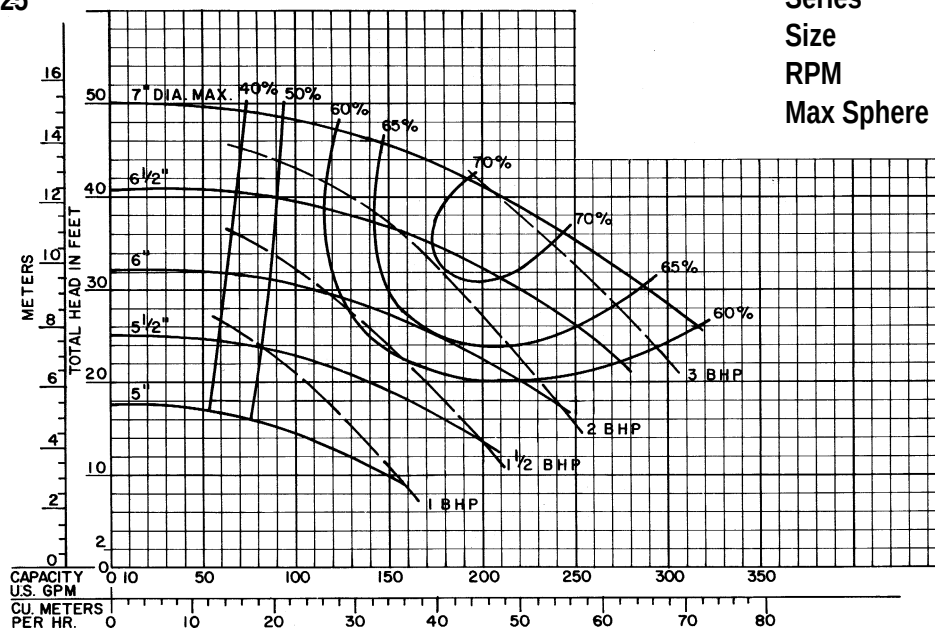
Flanged suction and discharge. Double volute design on all 4 X 3 X 10 and larger sizes

13. Discharge Pipe

1" - 2 1/2" threaded; 3" and larger flanged

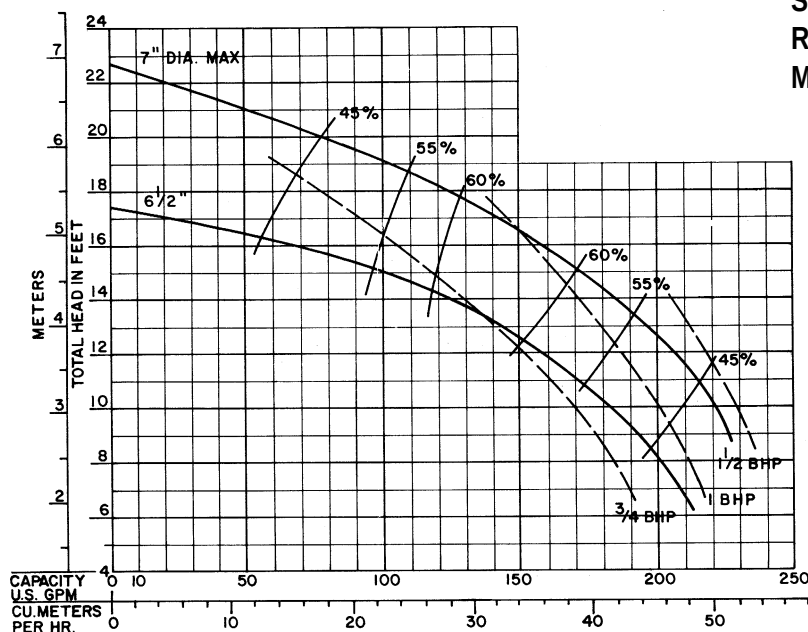
VERTIFLO PUMP COMPANY Performance Curves

Curve PV-1525



Series 600
Size 3 X 2 1/2 X 7
RPM 1750
Max Sphere 1

Curve RV-1525



Series 600
Size 3 X 2 1/2 X 7
RPM 1150
Max Sphere 1

600

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

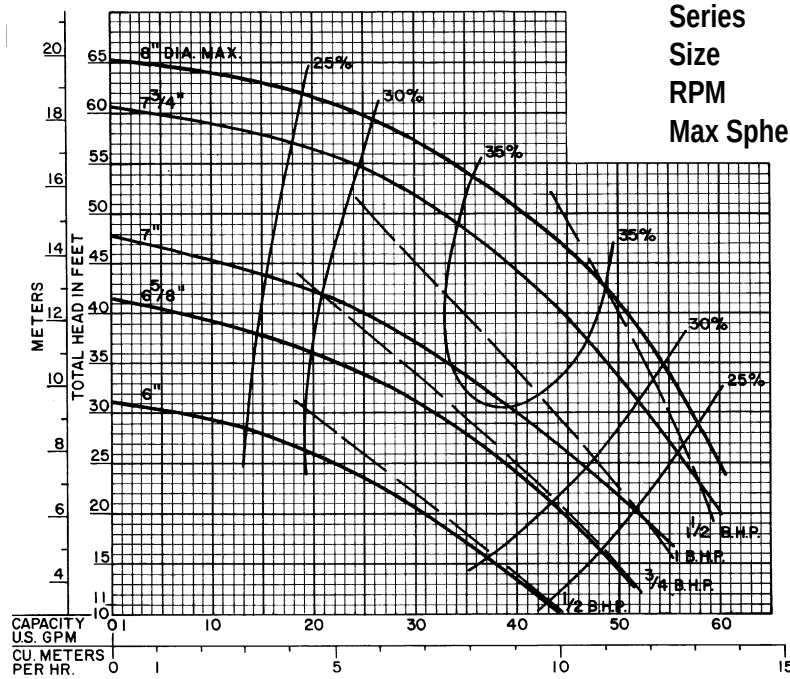
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

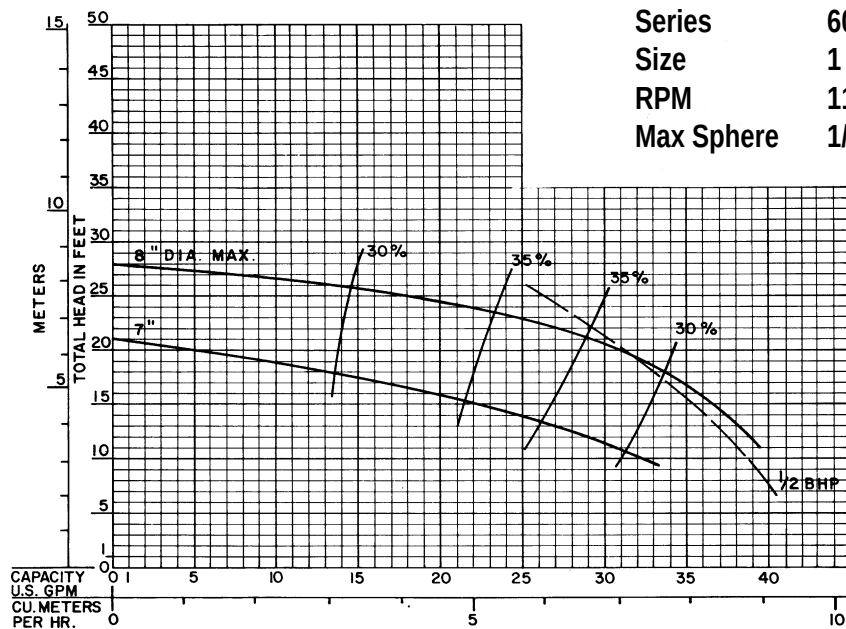
VERTIFLO PUMP COMPANY Performance Curves

Curve AS-1610



Series 600
Size 1 1/2 X 1 X 8
RPM 1750
Max Sphere 1/4

Curve BS-1610



Series 600
Size 1 1/2 X 1 X 8
RPM 1150
Max Sphere 1/4

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

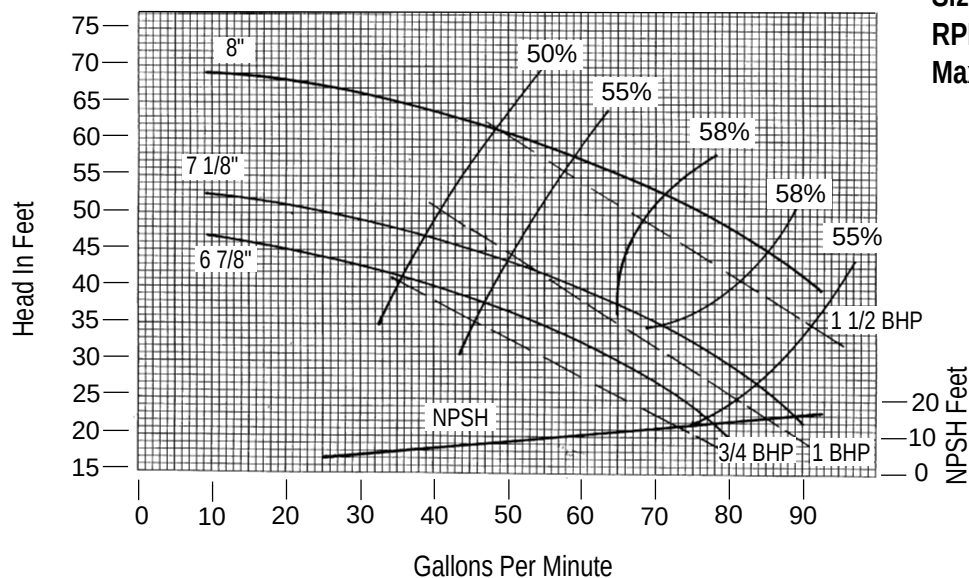
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

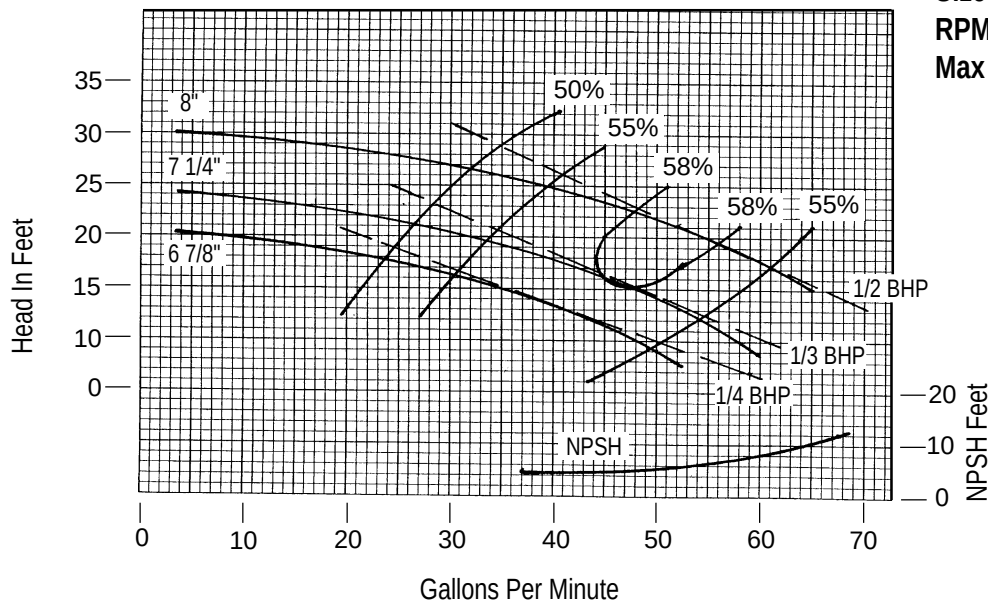
VERTIFLO PUMP COMPANY Performance Curves

Curve AS-1612



Series 600
Size 1 1/2 X 1 1/4 X 8
RPM 1750
Max Sphere 5/16

Curve BS-1612



Series 600
Size 1 1/2 X 1 1/4 X 8
RPM 1150
Max Sphere 5/16

600

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

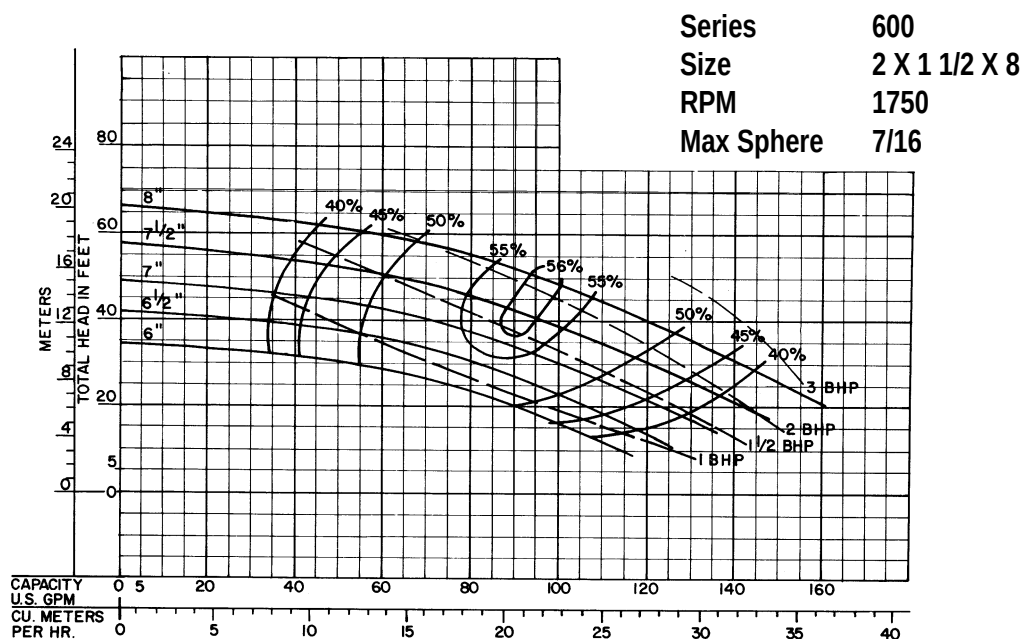
ENGINEER _____

CONTRACTOR _____

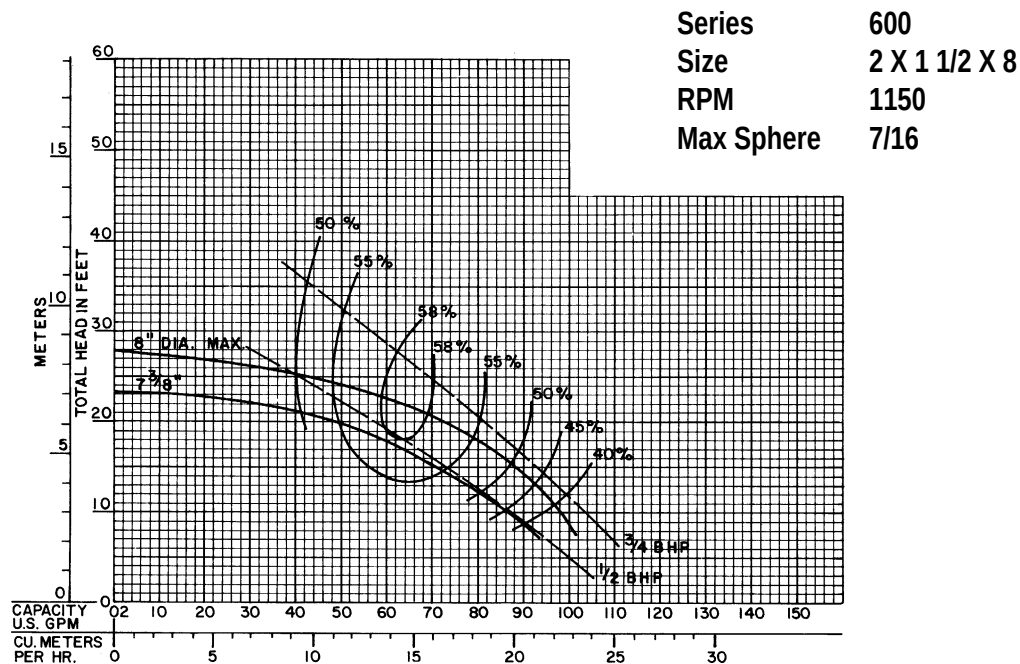
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve BS-1615



Curve CS-1615



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

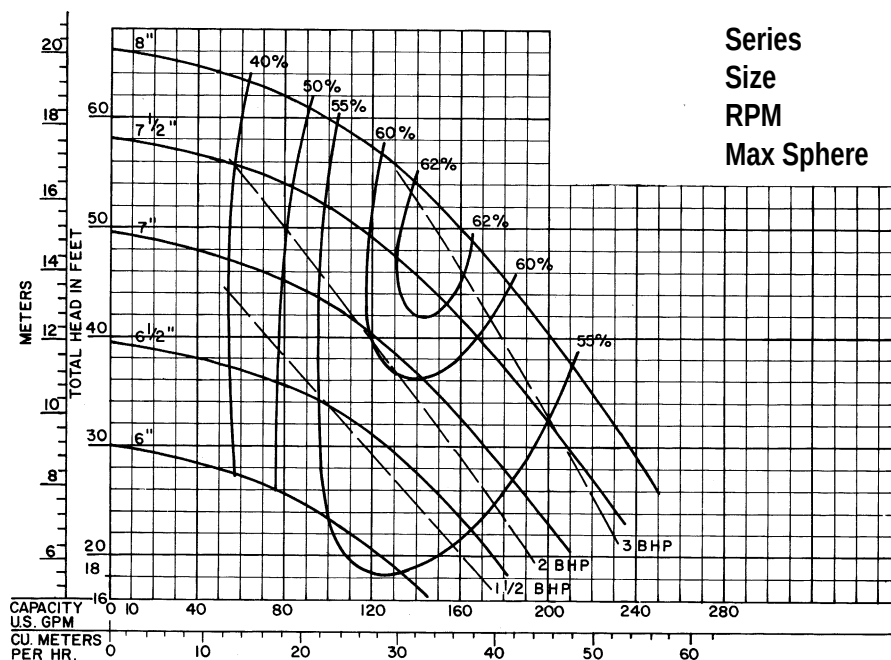
ENGINEER _____

CONTRACTOR _____

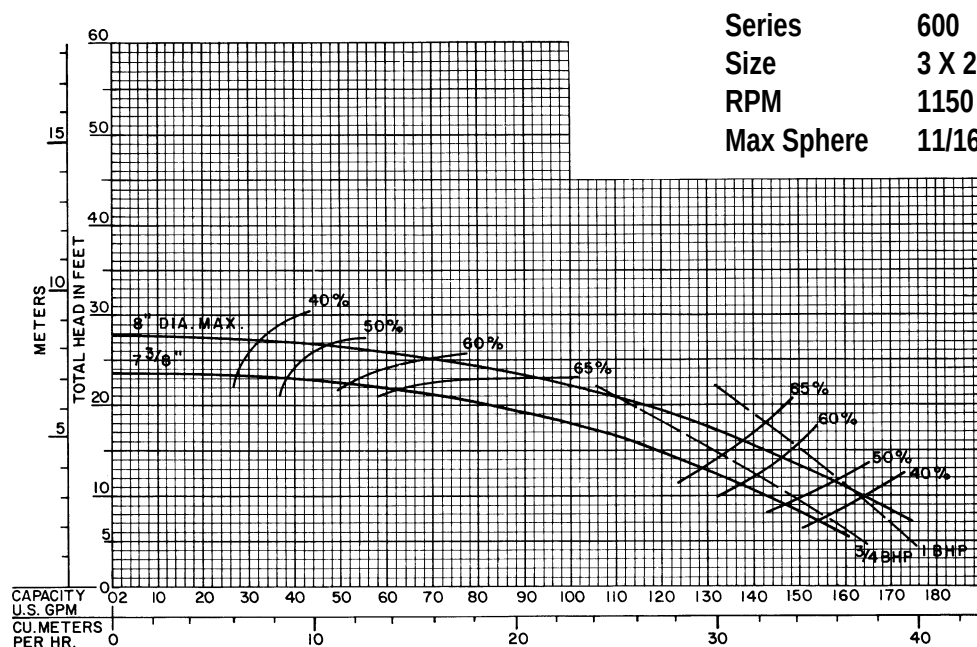
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve CS-1620



Curve DS-1620



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

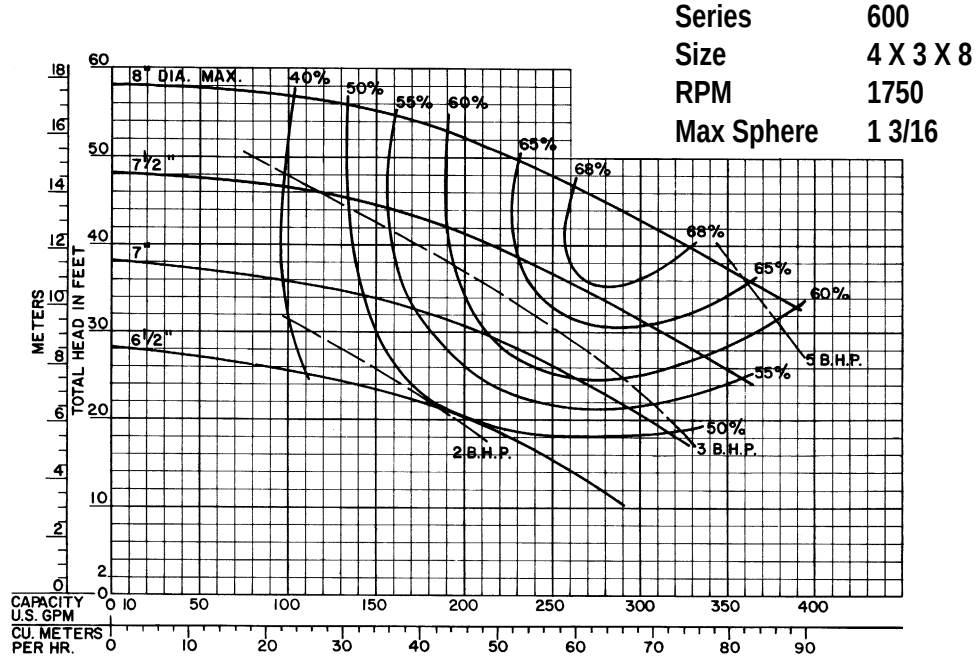
ENGINEER _____

CONTRACTOR _____

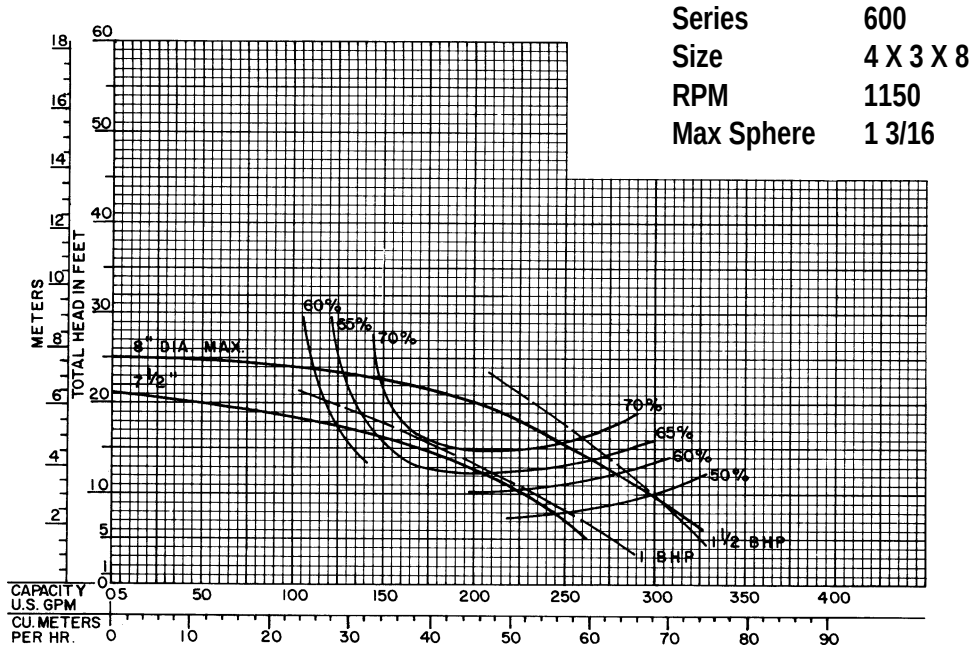
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve CS-1630



Curve DS-1630



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

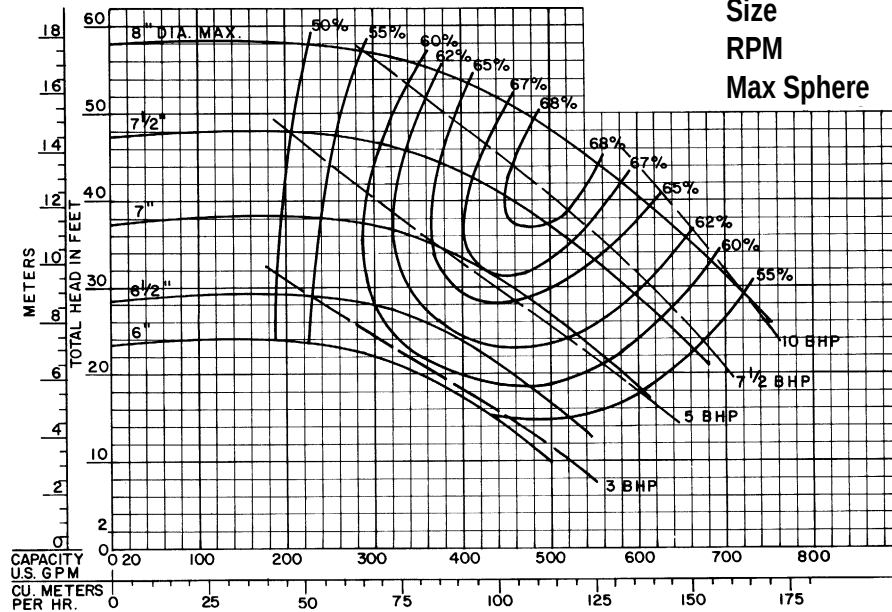
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

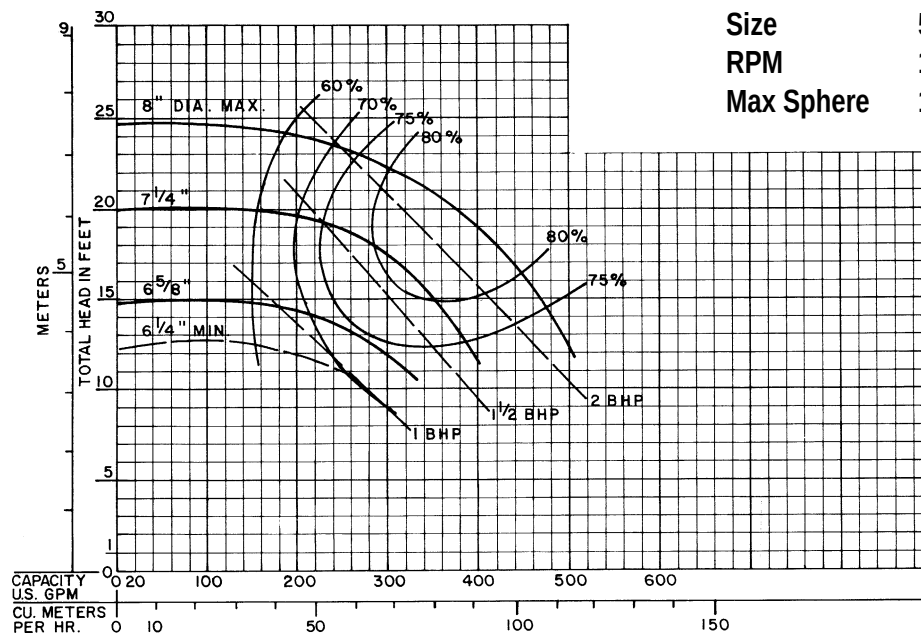
VERTIFLO PUMP COMPANY Performance Curves

Curve ES-1640



Series 600
Size 5 X 4 X 8
RPM 1750
Max Sphere 15/16

Curve DS-1640



Series 600
Size 5 X 4 X 8
RPM 1150
Max Sphere 15/16

600

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

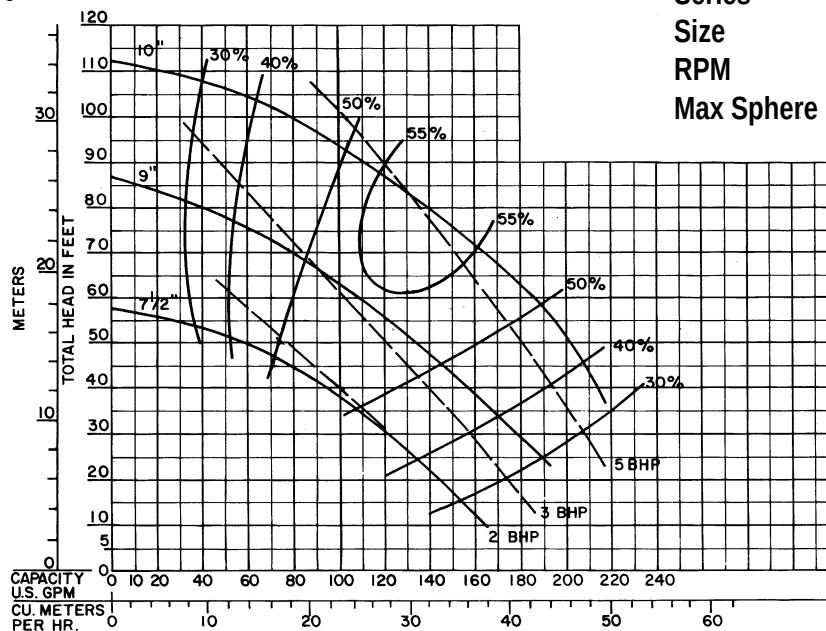
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

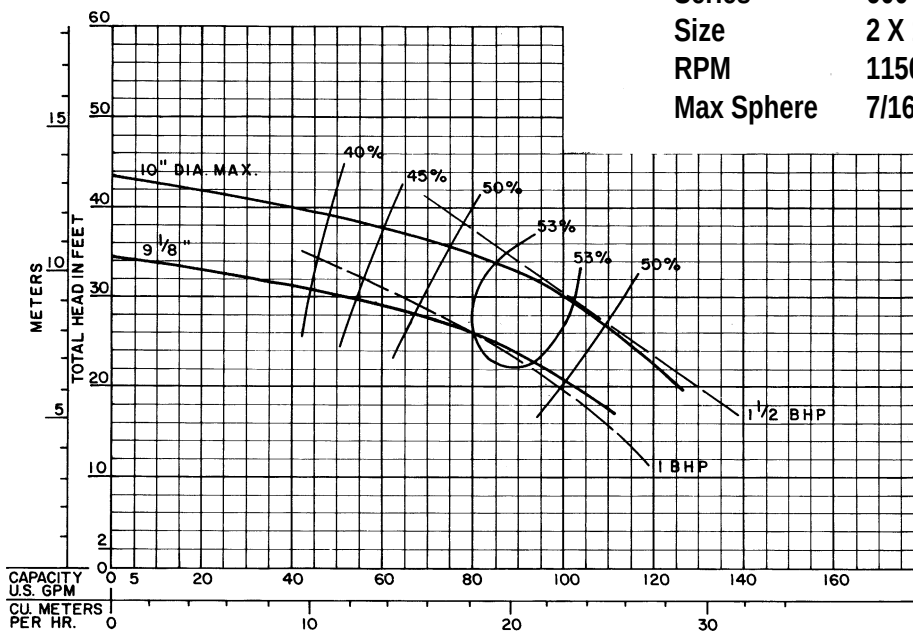
VERTIFLO PUMP COMPANY Performance Curves

Curve SM-1915



Series 600
Size 2 X 1 1/2 X 10
RPM 1750
Max Sphere 7/16

Curve TM-1915



Series 600
Size 2 X 1 1/2 X 10
RPM 1150
Max Sphere 7/16

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

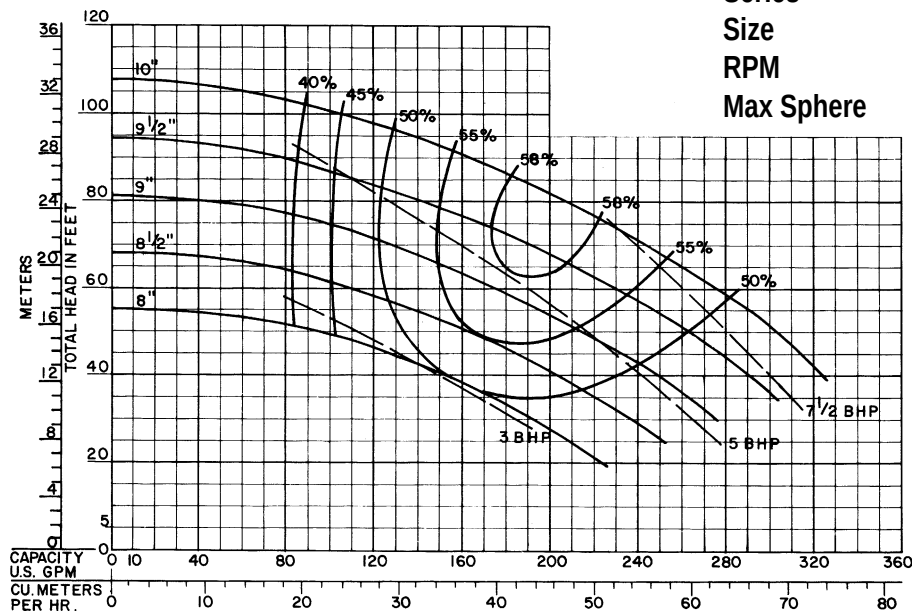
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

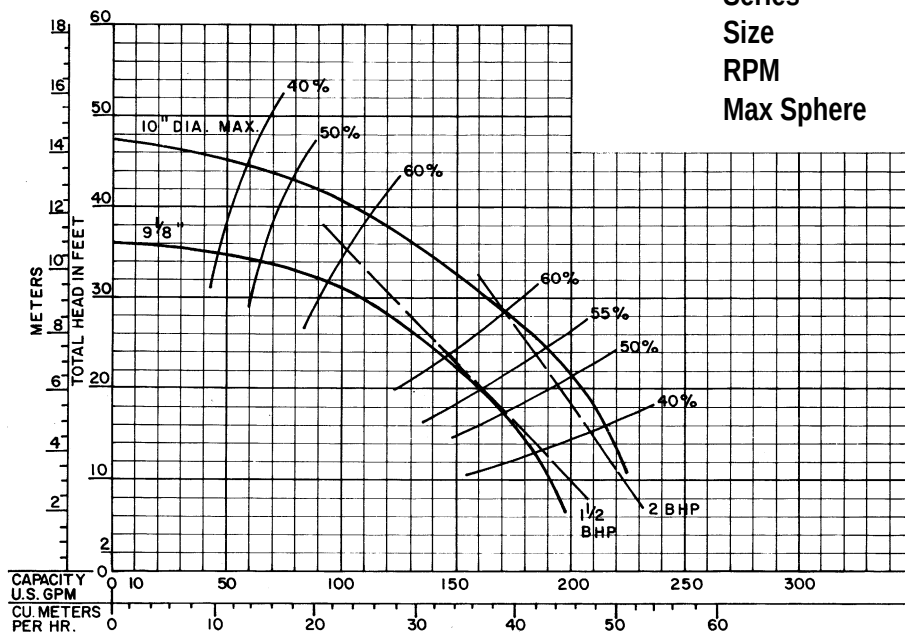
VERTIFLO PUMP COMPANY Performance Curves

Curve JM-1720



Series 600
Size 3 X 2 X 10
RPM 1750
Max Sphere 11/16

Curve KM-1720



Series 600
Size 3 X 2 X 10
RPM 1150
Max Sphere 11/16

600

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

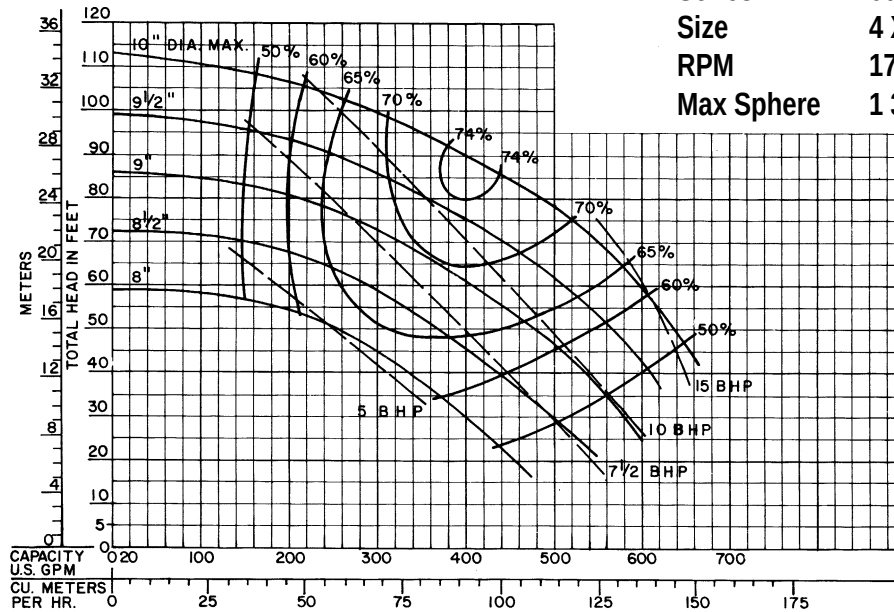
ENGINEER _____

CONTRACTOR _____

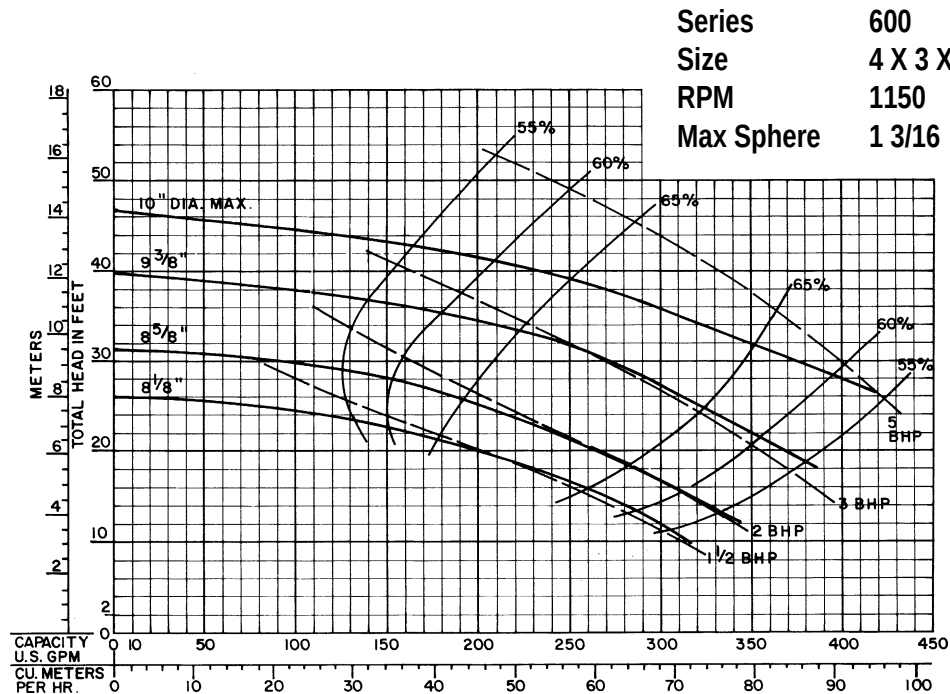
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve RM-1730



Curve SM-1730



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

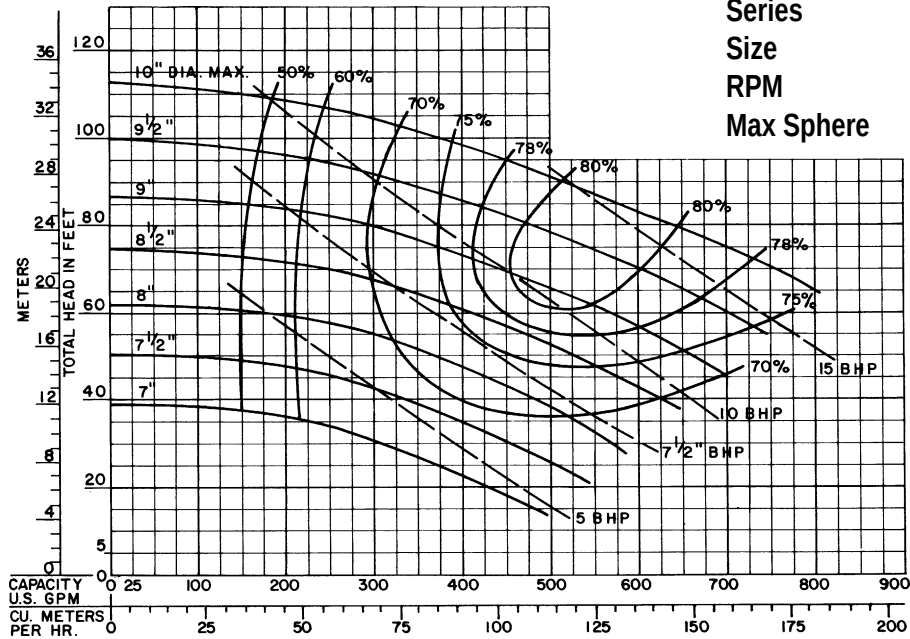
ENGINEER _____

CONTRACTOR _____

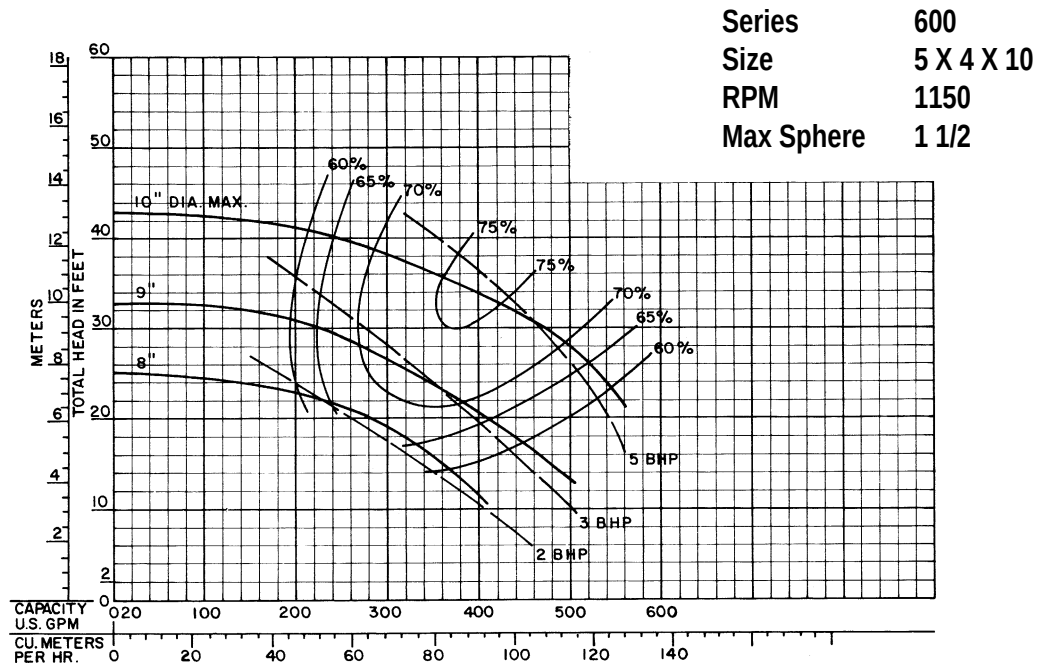
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve TM-1740



Curve UM-1740



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

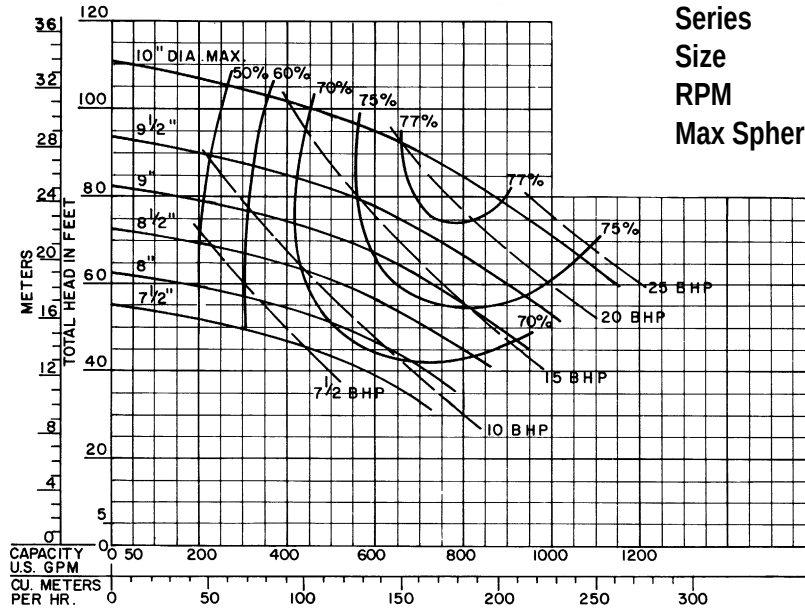
ENGINEER _____

CONTRACTOR _____

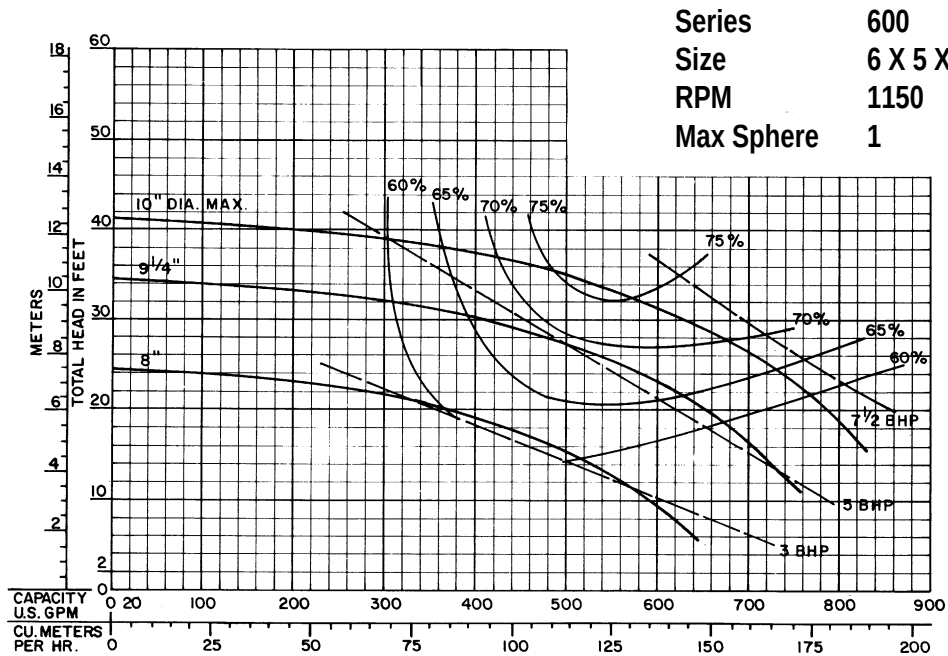
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve UM-1750



Curve VM-1750



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

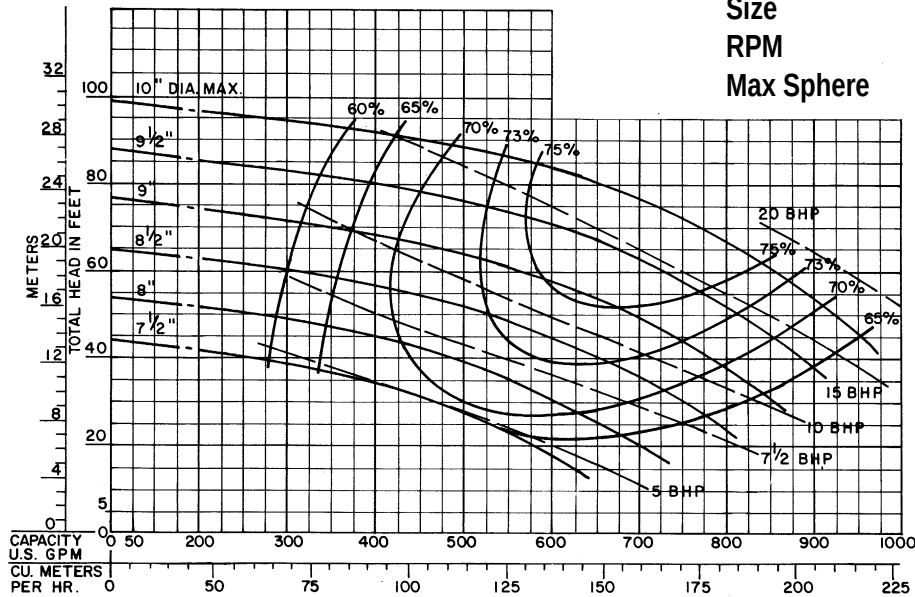
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

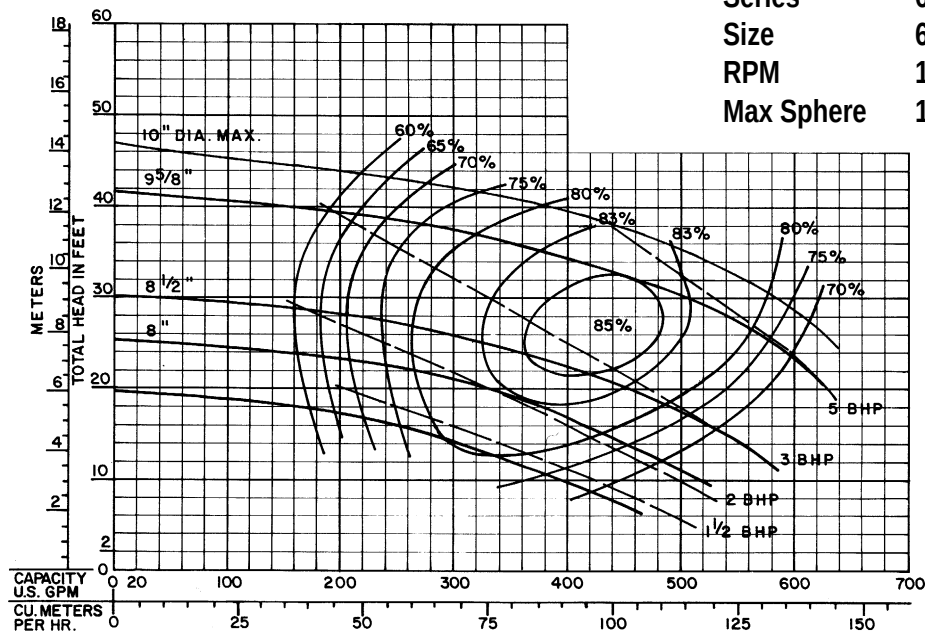
Curve SM-1750

Series 600
Size 6 X 5 X 10A
RPM 1750
Max Sphere 1 1/2



Curve SM-1850

Series 600
Size 6 X 5 X 10A
RPM 1150
Max Sphere 1 1/2



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

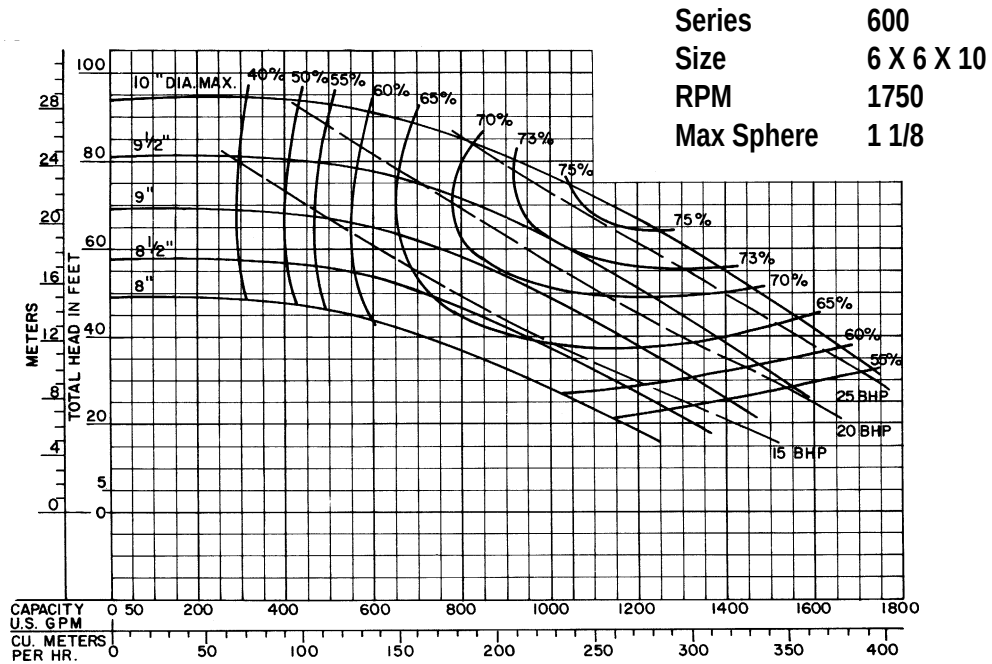
ENGINEER _____

CONTRACTOR _____

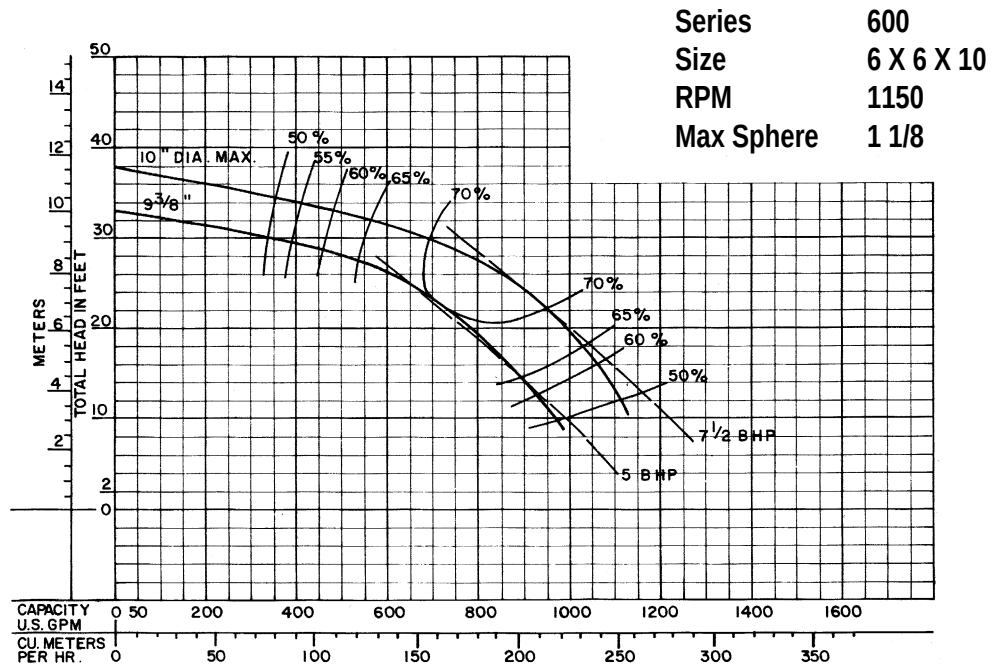
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve TM-1760



Curve TM-1860



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

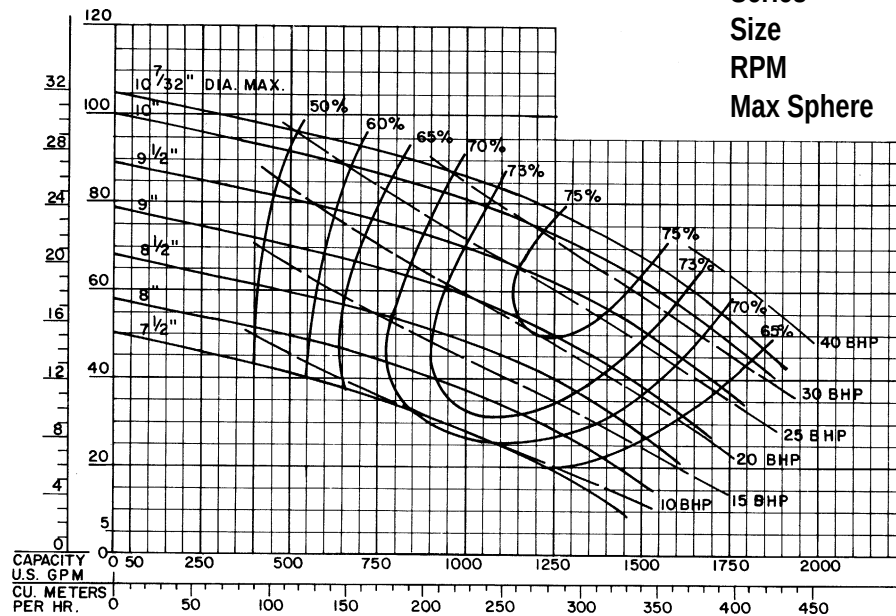
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

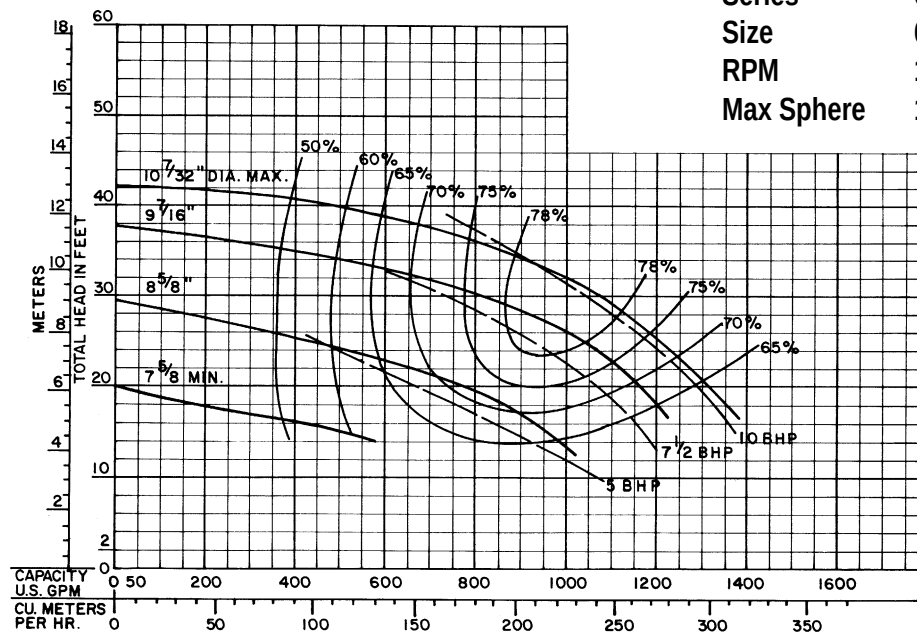
VERTIFLO PUMP COMPANY Performance Curves

Curve LM-1760



Series 600
Size 6 X 6 X 10A
RPM 1750
Max Sphere 1 9/16

Curve LM-1860



Series 600
Size 6 X 6 X 10A
RPM 1150
Max Sphere 1 9/16

600

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

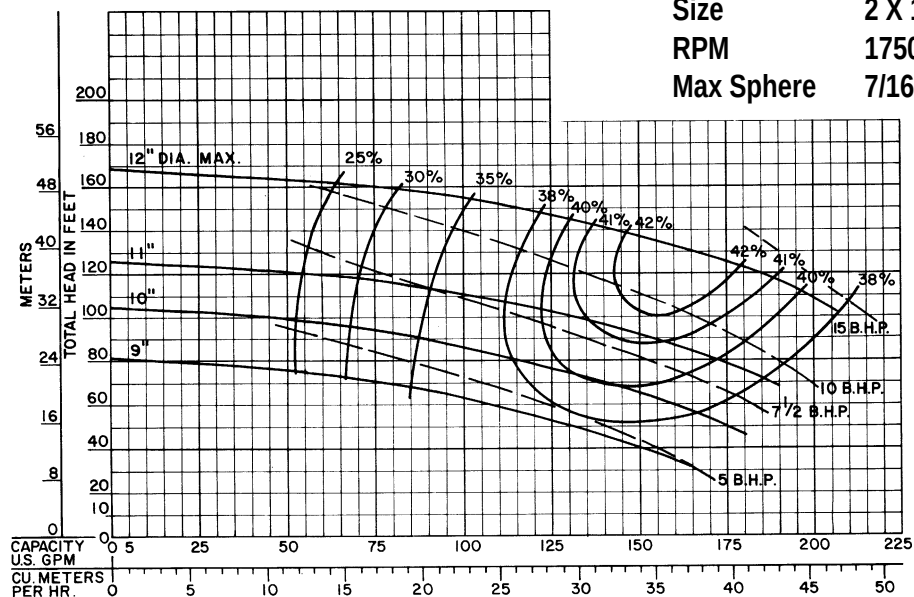
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

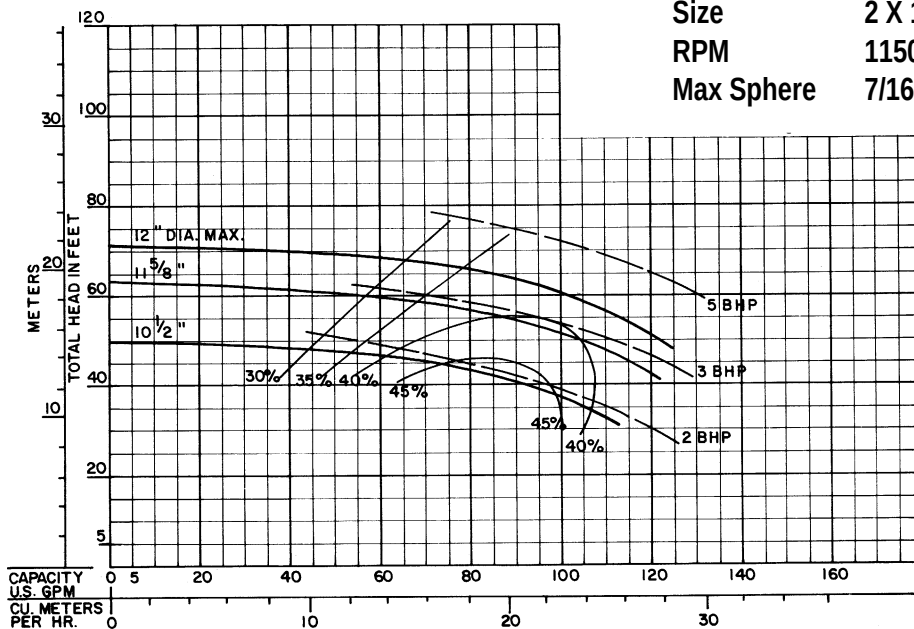
Curve KL-1915

Series 600
 Size 2 X 1 1/2 X 12
 RPM 1750
 Max Sphere 7/16



Curve LL-1915

Series 600
 Size 2 X 1 1/2 X 12
 RPM 1150
 Max Sphere 7/16



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

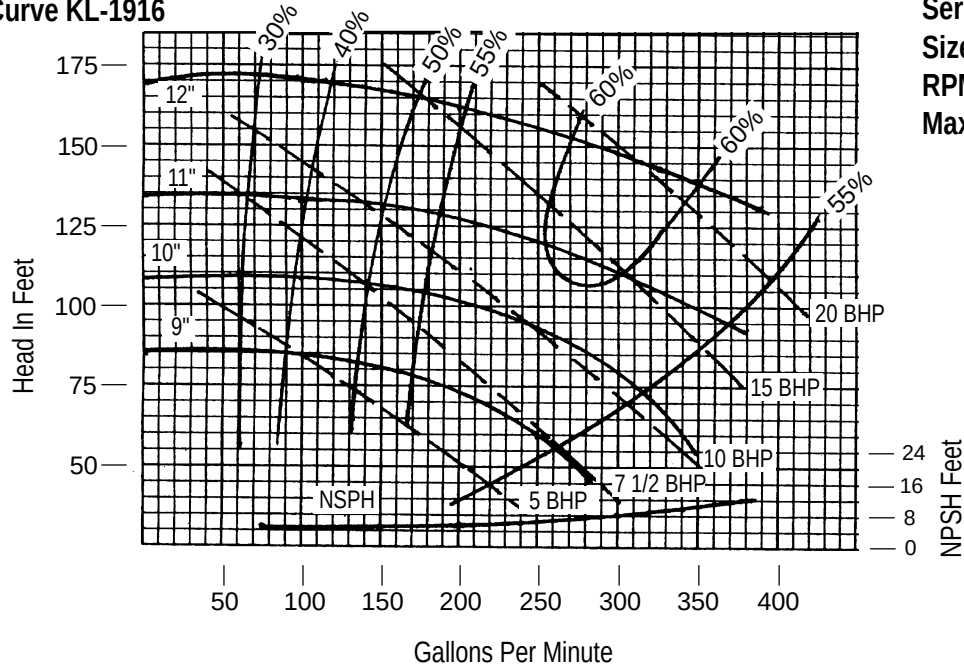
ENGINEER _____

CONTRACTOR _____

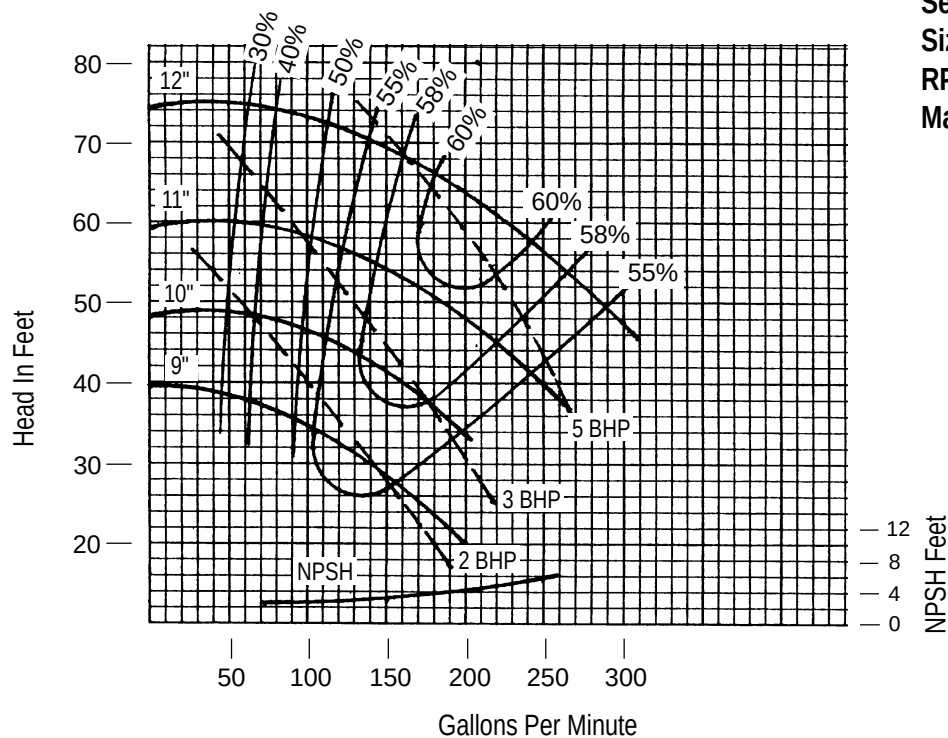
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve KL-1916



Curve LL-1916



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

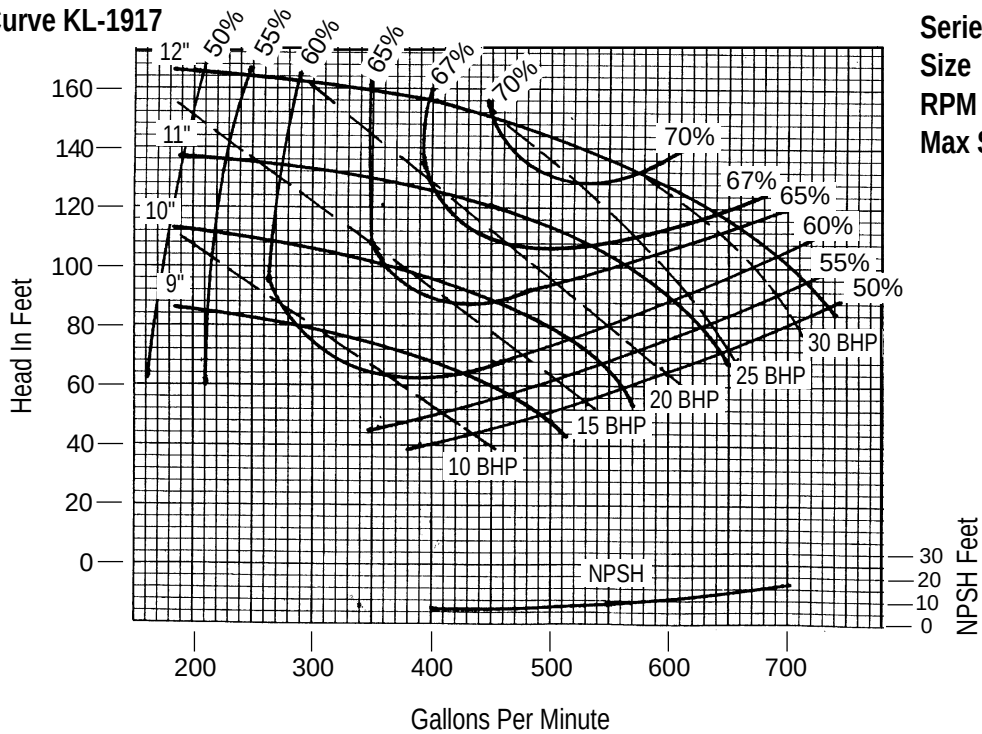
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

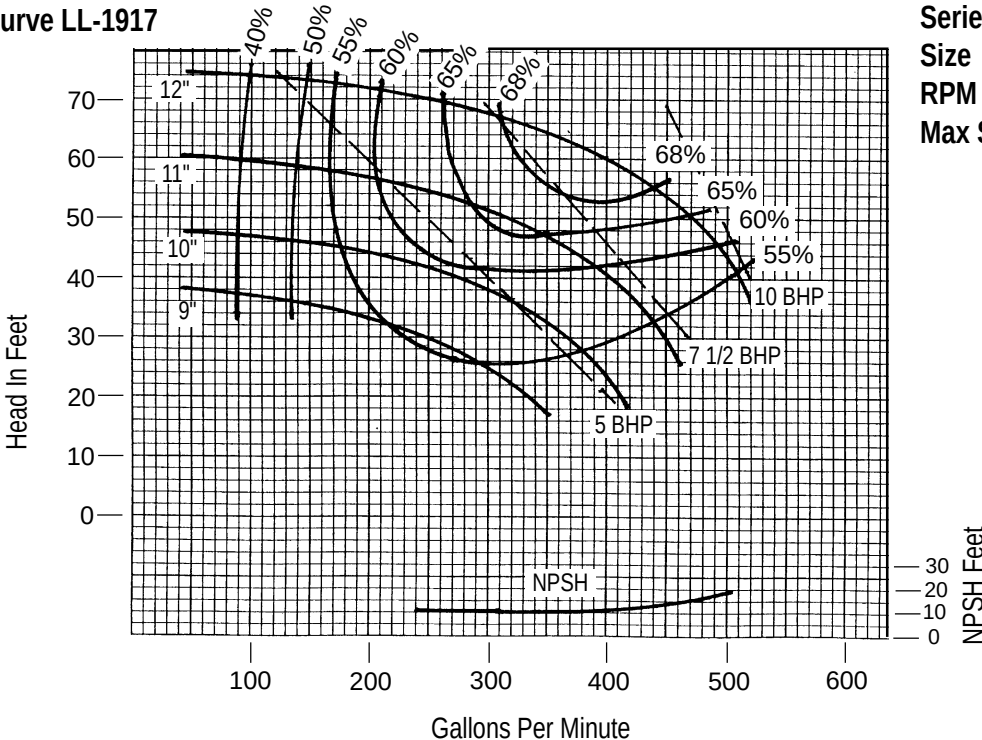
VERTIFLO PUMP COMPANY Performance Curves

Curve KL-1917



Series 600
Size 4 X 3 X 12
RPM 1750
Max Sphere 1 1/4

Curve LL-1917



Series 600
Size 4 X 3 X 12
RPM 1150
Max Sphere 1 1/4

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

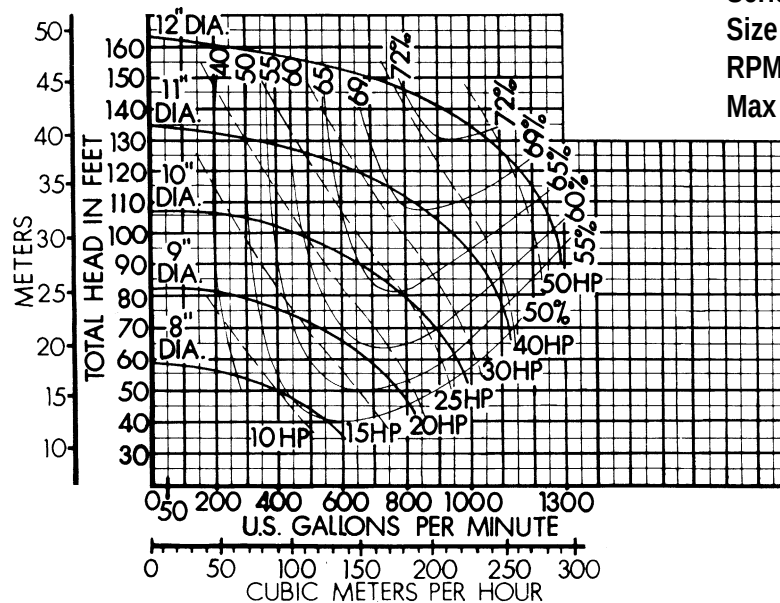
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

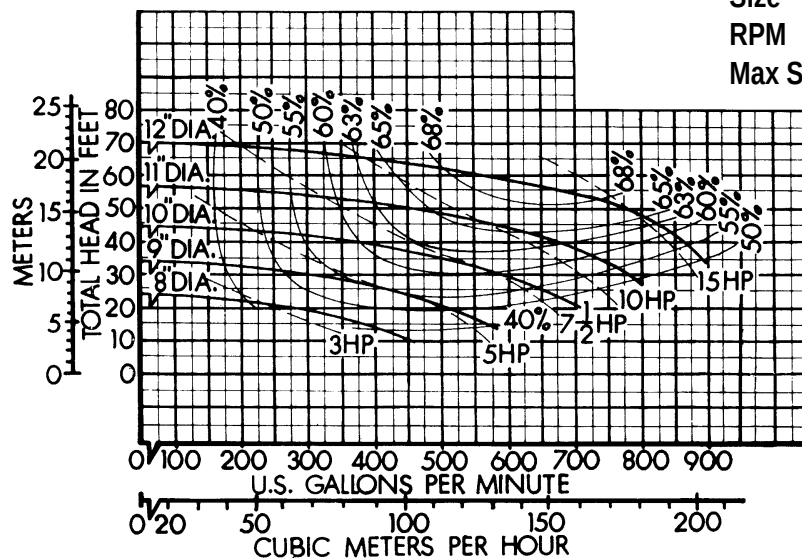
VERTIFLO PUMP COMPANY Performance Curves

Curve 64124



Series 600
Size 6 X 4 X 12
RPM 1750
Max Sphere 1 1/2

Curve 64126



Series 600
Size 6 X 4 X 12
RPM 1150
Max Sphere 1 1/2

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

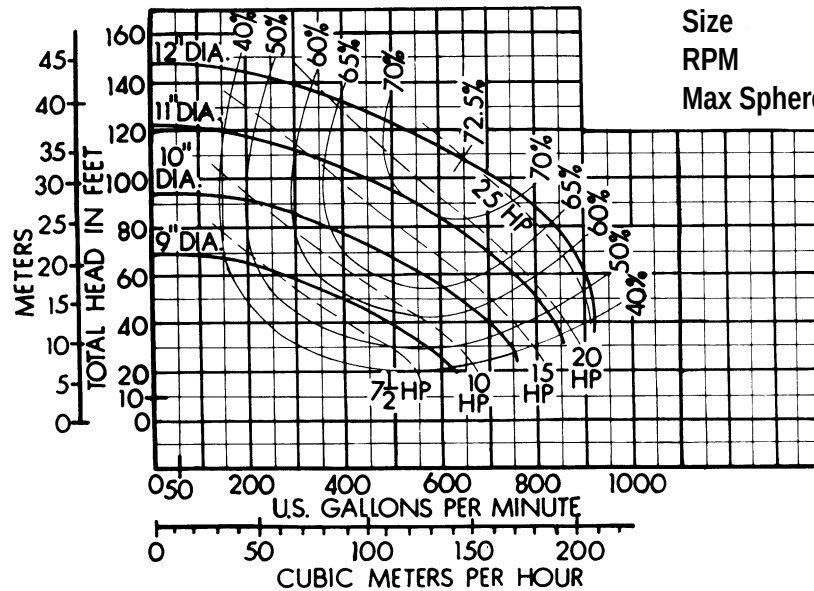
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

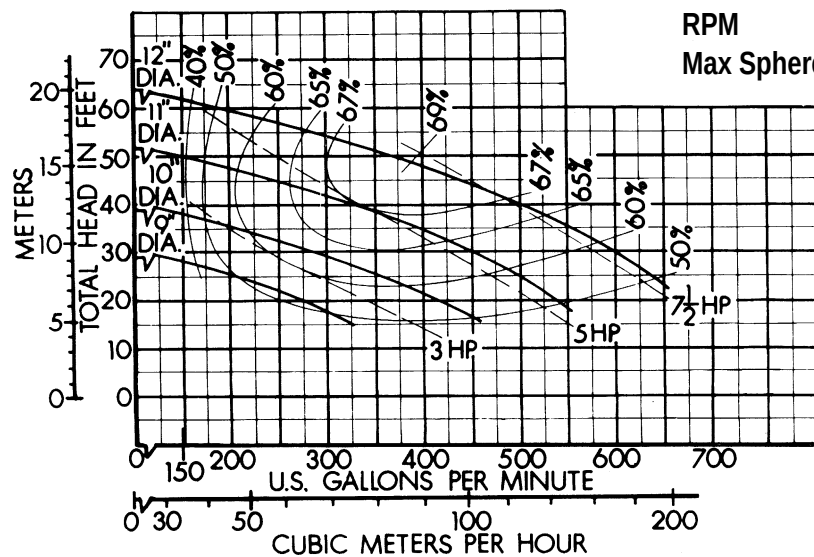
VERTIFLO PUMP COMPANY Performance Curves

Curve 6412A4



Series 600
Size 6 X 4 X 12A
RPM 1750
Max Sphere 1 1/8

Curve 6412A6



Series 600
Size 6 X 4 X 12A
RPM 1150
Max Sphere 1 1/8

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

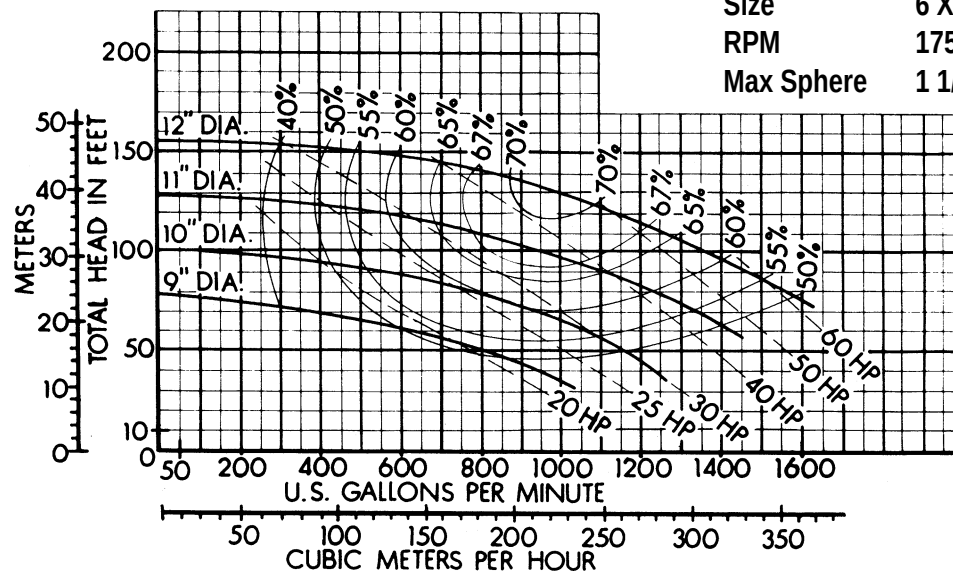
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

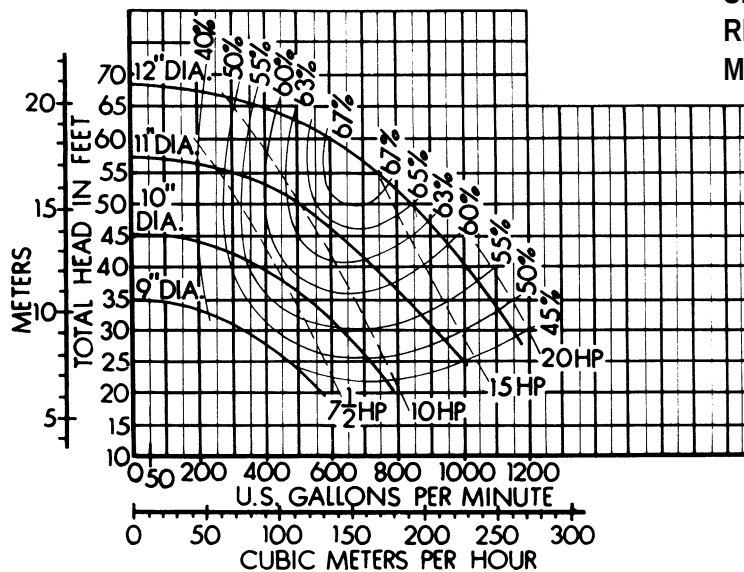
Curve 66124

Series 600
Size 6 X 6 X 12
RPM 1750
Max Sphere 1 1/2



Curve 66126

Series 600
Size 6 X 6 X 12
RPM 1150
Max Sphere 1 1/2



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

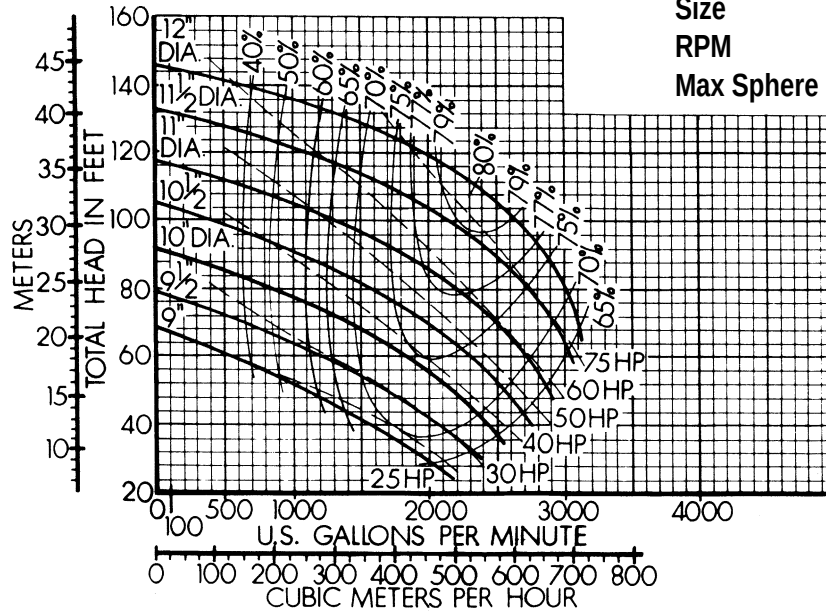
ENGINEER _____

CONTRACTOR _____

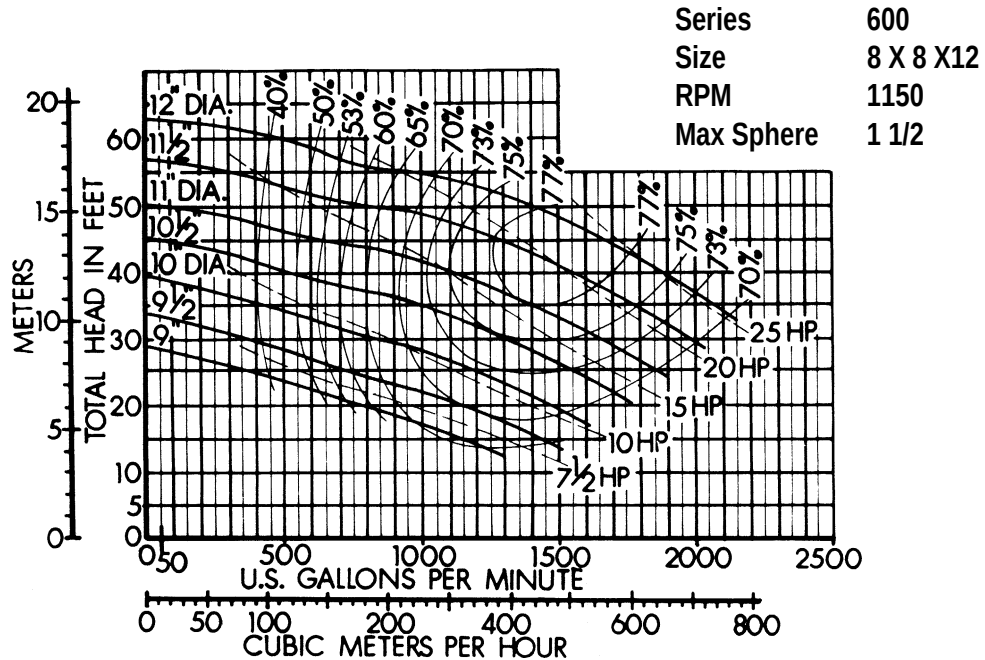
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve 88124



Curve 88126



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

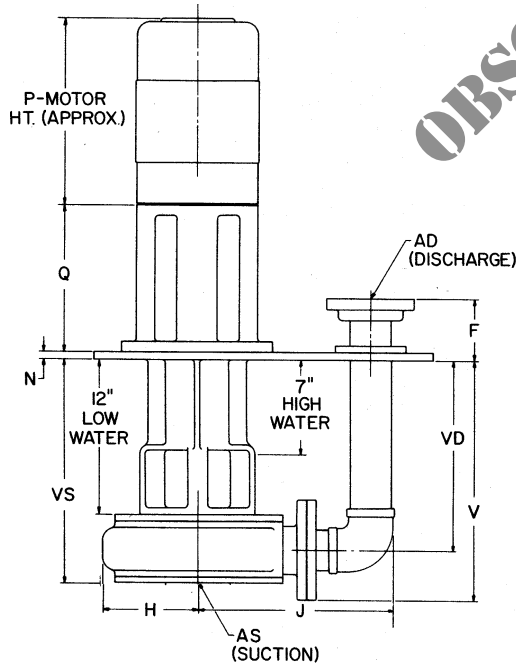
PROJECT _____

ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

624 - TCD Process Pump "C" Face Motor w/Discharge Pipe



PUMP DATA

SIZE	AD ⁽¹⁾	AS ⁽¹⁾	B	D	E ₁	EE ₁	F	H	J ⁽²⁾	L ⁽²⁾	M ⁽²⁾	N	O ₁	O ₂	V	VD	VS	C
3x2 1/2 x 7	2 1/2 3	3	18	26	8	12	4 5	5 5/8	13 1/2 14 1/4	11 3/8 12	3 7/8 4 7/8	1/2	6	5 3/4	17 3/8	14 1/8	16 1/2	7 3/4 7 1/8
1 1/2 x 8	1 1 1/2	1 1/2	18	26	8	12	3 1/2 3 3/4	5 1/4	10 3/8 11 1/8	9 3/8 9 3/4	3 1/4 3 3/8	1/2	5 1/2	5 1/4	15 3/4	13 3/8	15 1/4	6 3/8 6 1/2
1 1/2 x 1 1/4 x 8	1 1/2 2	1 1/2	18	26	8	12	3 1/2 4	5 5/8	11 1/4 11 7/8	10 10 3/8	3 1/4 3 3/8	1/2	5 5/8	5 1/4	16	13 3/8	15 1/2	6 3/4 7
2 x 1 1/2 x 8	1 1/2 2	2	18	26	8	12	3 1/2 4	5 1/2	11 1/4 11 7/8	10 10 3/8	3 1/4 3 3/8	1/2	5 7/8	5 1/4	16 1/8	13 3/8	15 3/4	6 3/4 7
3 x 2 x 8	2 3	2 1/2	18	26	8	12	4 4 1/2	5 7/8	12 3/8 14 1/8	11 3/8 11 7/8	3 3/8 4 1/8	1/2	6 1/4	5 1/2	16 3/4	13 3/8	16	7 3/4
4 x 3 x 8	3 4	4	18	26	8	12	5 5 1/2	6 1/8	15 3/8 16 3/8	13 3/8 13 7/8	6 1/8 6 3/8	1/2	6 3/4	5 3/4	17 7/8	14 1/8	16 7/8	7 1/4
5 x 4 x 8	4 5	5	21	30	9 1/2	14	5 1/2 5 7/8	7 1/4	17 1/4 18 3/8	14 1/2 15	5 3/4 6 1/4	1/2	8 1/4	6 3/8	18 7/8	14 3/8	17 1/4	8 3/4
2 x 1 1/2 x 10	1 1/2 2	2	18	26	8	12	3 1/2 4	6 3/8	12 1/2 13	11 1/4 11 3/8	3 1/2 3 3/4	1/2	6 3/4	6 3/8	16 1/8	13 3/8	15 3/4	7 3/4
3 x 2 x 10	2 3	3	18	26	8	12	4 4 1/2	6 3/8	13 3/8 15 1/8	12 3/8 12 7/8	4 3/8 5 1/8	1/2	7 1/4	6 1/2	16 3/4	13 3/8	16	7 3/4
4 x 3 x 10	3 4	4	21	30	9 1/2	14	5 5 1/2	7 1/4	17 1/4 18 1/4	15 15 1/2	6 3/8 7	1/2	7 3/4	6 3/8	17 3/4	14	16 1/2	8 1/2
5 x 4 x 10	4 5	5	24	36	11	17	5 1/2 5 7/8	7 3/4	19 1/4 20 3/8	16 1/2 17	7 1/4 7 3/4	5/8	8 3/4	7 1/2	18 3/4	14 1/4	17	9 1/4
6 x 5 x 10	5	6	24	36	11	17	5 1/2	8 3/8	20 3/8 22 1/8	17 1/2 18	8 1/4 8 3/4	5/8	9 3/4	7 1/2	19 1/4	14 1/4	17 1/2	9 1/4
6 x 5 x 10 A	6	6	24	36	11	17	5 1/2	8 3/8	22 1/8 22 1/2	18 1/2 18 3/4	8 3/8 8 3/4	5/8	9 3/4	7 1/2	19 1/4	14 1/4	17 1/2	10 1/4
6 x 6 x 10	6	6	28	42	13	20	5 1/2	10 1/4	25 25 1/2	19 3/8 19 3/4	8 3/4 8 3/8	5/8	11 3/4	8 3/4	20	14 1/2	17 3/8	10 7/8
6 x 6 x 10 A	8	8	28	42	13	20	5 1/2	10 1/4	25 25 1/2	19 3/8 19 3/4	8 3/4 8 3/8	5/8	11 3/4	8 3/4	20	14 1/2	17 3/8	10 7/8
2 x 1 1/2 x 12	1 1/2 2	2	20	26	9	12	3 1/2 4	8	13 3/8 14 1/2	12 13	3 1/2 3 3/8	1/2	8 3/4	7 7/8	16	13 1/2	17 1/4	9 1/8 9 3/8

(1) ALL FLANGES ARE 125° ANSI

(2) DIMENSIONS VARIES DUE TO THREADED FITTINGS

MOTOR DATA

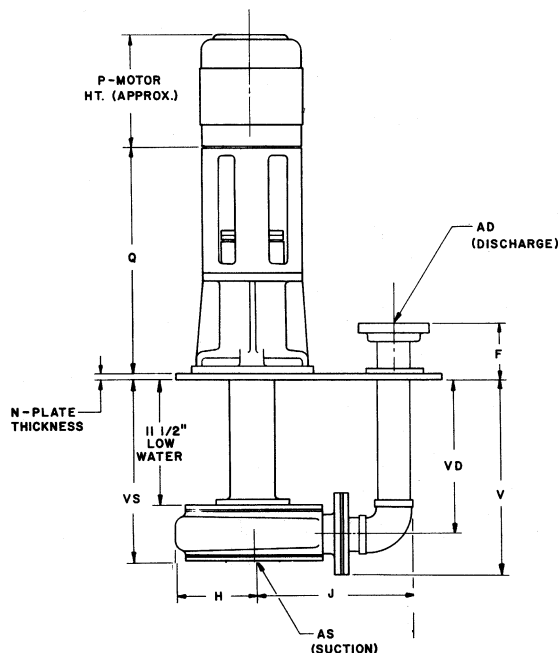
FRAME	P	Q
56 C	12 1/2	9 7/8
143 TC - 145 TC	12 1/2	9 7/8
182 TC - 184 TC	13 1/2	11 3/8
213 TC - 215 TC	17	11 3/8
254 TC - 256 TC	22	11 3/8
284 TC - 286 TC	24	12
324 TSC - 326 TSC	26	12 7/8

Not for construction unless certified, some dimensions may vary ± 1/2". Pump Construction: _____

CUSTOMER _____ CUSTOMER NO. _____
 PROJECT _____ SERIAL NO. _____
 ENGINEER _____ LOCATION _____
 CONTRACTOR _____
 PUMP Model _____ Size _____ Curve No. _____ GPM _____ Head _____ SP. GR. @ Temp. _____
 DATA _____
 MOTOR Mfr. _____ HP _____ RPM _____ Volt-Phase-Cycle _____ Frame ENC. _____ Furnished by _____ Mounted by _____
 DATA _____
 Shop Order _____ Certified by _____ Date _____

629 - TCD Process Pump "C" Face Motor w/Discharge Pipe

PUMP DATA

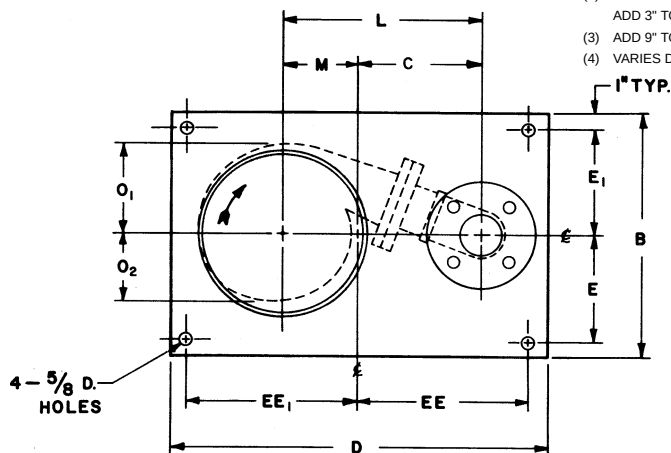


SIZE	(1) AD	(1) AS	B	D	E ₁	EE ₁	(4) F	(4) H	(4) J	(4) L	M	N	O ₁	O ₂	(3) (2) V	(3) (2) VD	(3) (2) VS	C
3x2 1/2x7	2 1/2	3	18	26	8	12	4	5 5/8	13 1/2	11 5/8	3 7/8	1/2	6	5 3/4	17 7/8	14 1/2	16 1/2	7 3/4
	3						5		14 1/2	12	4 7/8							7 1/8
1 1/2x1x8	1 1/2	1 1/2	18	26	8	12	3 1/2	5 1/4	10 5/8	9 5/8	3 1/4	1/2	5 1/2	5 1/4	15 3/4	13 3/4	15 1/4	6 3/4
	1 1/2						3 1/2		11 1/8	9 7/8	3 3/8							6 1/2
1 1/8x1 1/4x8	1 1/2	1 1/2	18	26	8	12	3 1/2	5 3/8	11 1/4	10	3 1/4	1/2	5 5/8	5 1/4	16	13 3/4	15 1/2	6 3/4
	2						4		11 7/8	10 5/8	3 3/8							7
2x1 1/2x8	1 1/2	2	18	26	8	12	3 1/2	5 1/2	11 1/4	10	3 1/4	1/2	5 7/8	5 1/4	16 1/8	13 3/4	15 3/4	6 3/4
	2						4		11 7/8	10 5/8	3 3/8							7
3x2x8	2	2 1/2	18	26	8	12	4	5 7/8	12 5/8	11 1/8	3 3/8	1/2	6 1/4	5 1/2	16 3/4	13 3/4	16	7 3/4
	3						4		14 1/8	11 1/8	4 1/8							
4x3x8	3	4	18	26	8	12	5	6 1/8	15 5/8	13 3/8	6 1/8	1/2	6 5/8	5 3/4	17 7/8	14 1/2	16 7/8	7 1/4
	4						4 1/2		16 5/8	13 3/8	6 5/8							
5x4x8	4	5	21	30	9 1/2	14	5 1/2	7 1/4	17 1/4	14 1/2	5 3/4	1/2	8 1/4	6 3/8	18 7/8	14 3/4	17 1/4	8 3/4
	5						5 1/2		18 3/8	15	6 1/4							
2x1 1/2x10	1 1/2	2	18	26	8	12	3 1/2	6 3/8	12 1/2	11 1/4	3 1/2	1/2	6 3/4	6 3/8	16 1/8	13 3/4	15 5/8	7 3/4
	2						4		13	11 1/2	3 3/4							
3x2x10	2	3	18	26	8	12	4	6 7/8	13 7/8	12 3/8	4 3/8	1/2	7 1/4	6 1/2	16 3/4	13 3/4	16	7 3/4
	3						4		15 1/8	12 3/8	5 1/8							
4x3x10	3	4	21	30	9 1/2	14	5	7 1/4	17 1/4	15	6 1/2	1/2	7 3/4	6 3/8	17 3/4	14	16 1/2	8 1/2
	4						4 1/2		18 1/4	15 1/2	7							
5x4x10	4	5	24	36	11	17	5 1/2	7 3/4	19 1/4	16 1/2	7 1/4	5/8	8 3/4	7	18 3/4	14 3/4	17	9 1/4
	5						5 1/2		20 3/8	17	7 3/4							
6x5x10	5	6	24	36	11	17	5 1/2	8 3/8	20 7/8	17 1/2	8 1/4	5/8	9 3/4	7 1/2	19 1/4	14 3/4	17 3/8	9 1/4
6x5x10A	6	6	24	36	11	17	5 1/2	8 3/8	22	18	8 3/4	5/8	9 3/4	7 1/2	19 1/4	14 3/4	17 3/8	9 1/4
6x6x10	6	6	28	42	13	20	5 1/2	10 1/4	22 1/2	18 1/2	8 3/8	5/8	11 1/8	8 3/4	20	14 1/2	17 3/8	10 1/8
6x6x10A	8	6	28	42	13	20	5 1/2	10 1/4	25	19 3/8	8 3/4	5/8	11 1/8	8 3/4	20	14 1/2	17 3/8	10 7/8
2x1 1/2x12	1 1/2	2	20	26	9	12	3 1/2	13 3/8	13 3/8	12 3/8	3 1/2	1/2	8 3/8	7 7/8	16	13 1/2	17 1/4	9 3/8
	2						4	8	14 1/2	13	3 3/8							9 3/8

- (1) ALL FLANGES ARE 125" ANSI
(2) ALL DIMENSIONS FOR 12" EXTENSION
ADD 3" TO "V" DIMENSION FOR 15" EXTENSION
(3) ADD 9" TO "V" DIMENSION FOR 21" EXTENSION
(4) VARIES DUE TO THREADED FITTINGS

MOTOR DATA

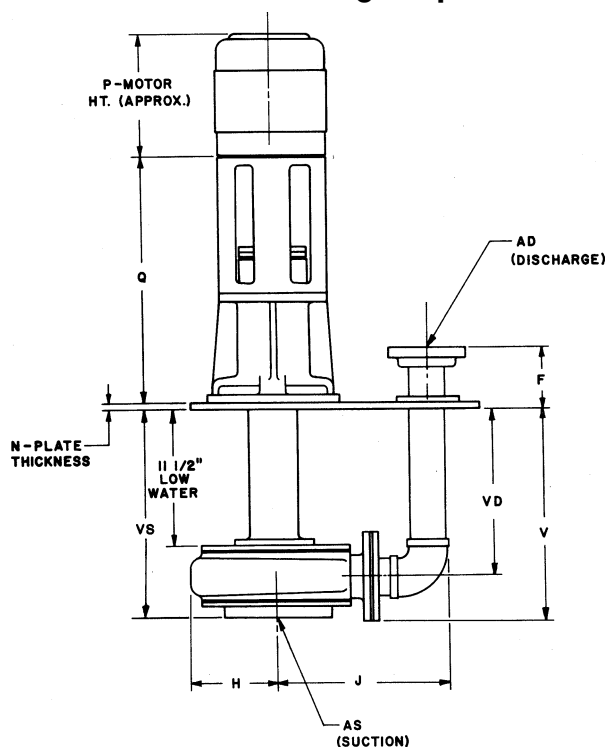
FRAME	P	Q
56 C	12 1/2	18 7/8
143 TC	12 1/8	18 7/8
145 TC	12 1/2	18 7/8
182-184 TC	13 1/2	20 1/2
213 TC	15 1/2	20 1/2
215 TC	17	20 1/2
254 TC	20 1/8	20 1/2
256 TC	21 7/8	20 1/2
284 TC	22 3/8	21 1/4
286 TC	23 7/8	21 1/4
324 TC	24 3/4	21 3/4
326 TC	26 1/8	21 3/4
364 TC	26 1/2	22 3/8
365 TC	27 1/2	22 3/8



Not for construction unless certified, some dimensions may vary $\pm 1/2$ ". Pump Construction: _____

CUSTOMER _____ CUSTOMER NO. _____
 PROJECT _____ SERIAL NO. _____
 ENGINEER _____ LOCATION _____
 CONTRACTOR _____
 PUMP Model Size Curve No. GPM Head SP. GR.@Temp. Pump Length Plate
 DATA _____
 MOTOR Mfr. HP RPM Volt-Phase-Cycle Frame ENC. Furnished by Mounted by
 DATA _____
 Shop Order _____ Certified by _____ Date _____

636 - TCP Process Pump "C" Face Motor w/Discharge Pipe



PUMP DATA

SIZE	3x2x12	4x3x12	6x4x12 6x4x12A	6x6x12	8x8x12
AD	2 3	3 4	4 5 6	6 8	8
C	10 1/2	10 1/2	11 7/8	12	15
AS	3	4	6	6	8
B	24	24	24	28	32
D	36	36	36	42	48
E ₁	11	11	12	14	17
E ₂	11	11	10	12	13
EE	17	17	17	20	23
⁽¹⁾ F	5	6	6	5 1/2	6 5/8
H	8	8 1/2	9 3/8	10 1/4	13
⁽¹⁾ J	15 3/4	17 1/4	18 19	21 22	22 3/4 25
⁽¹⁾ L	14 1/4 15	15 3/4 16 1/8	17 17 1/2 18	18 3/4 19 5/8	23
⁽¹⁾ M	3 3/4 4 1/2	5 1/4 5 5/8	5 5/8 6 1/8	6 3/4 7 5/8	8
N	5/8	5/8	5/8	5/8	5/8
O ₁	7 3/4	9	10	11	14 1/8
O ₂	8 3/8	8 1/8	8 5/8	9 1/2	11
V	17 17 1/4	17 1/4 18	18 1/8 18 5/8 19 1/8	19 3/8 20 5/8	20 7/8
VD	14	13 1/2	13 5/8	13 7/8	14 1/8
VS	16 1/4	15 7/8	16 3/8	17 1/8	18 5/8

MOTOR DATA

FRAME	P	Q
56 C	12 1/2	20 1/2
143 TC	12 1/8	20 1/2
145 TC	12 1/2	20 1/2
182-184 TC	13 1/2	20 1/2
213 TC	15 1/2	20 1/2
215 TC	17	20 1/2
254 TC	20 1/8	20 1/2
256 TC	21 1/8	20 1/2
284 TC	22 3/8	21 1/4
286 TC	23 3/8	21 1/4
324 TC	24 3/4	21 3/4
326 TC	26 1/8	21 3/4
364 TC	26 1/2	22 3/8
365 TC	27 1/2	22 3/8

Not for construction unless certified, some dimensions may vary $\pm 1/2"$. Pump Construction: _____

CUSTOMER _____	CUSTOMER NO. _____
PROJECT _____	SERIAL NO. _____
ENGINEER _____	LOCATION _____
CONTRACTOR _____	
PUMP Model _____	Size _____
Curve No. _____	GPM _____
Head _____	SP. GR.@Temp. _____
Pump Length _____	Plate _____
DATA _____	
MOTOR Mfr. _____	HP _____
RPM _____	Volt-Phase-Cycle _____
Frame _____	ENC. _____
Furnished by _____	Mounted by _____
DATA _____	
Shop Order _____	Certified by _____
Date _____	

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VERTIFLO

The Vertical Pump Specialists

PUMPS FOR INDUSTRY

CONTENTS:

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 700**Quality Design Features Assure Long, Trouble-Free Service****WIDE RANGE OF APPLICATIONS:**

- Industrial Wastes
- Sanitary Wastes
- Process Wastes
- Rendering Wastes
- Pollution Control

CAPABILITIES:

- Capacities to 1500 GPM
- Heads to 100 Feet
- Pit Depths to 26 Feet
- Construction: Cast Iron

**STANDARD MATERIALS
OF CONSTRUCTION**

Part Description	Materials
Motor Support Thrust Bearing Housing	Cast Iron, Class 30
Shaft	Stainless Steel AISI-416
Column	Steel ASTM-A53
Bearing Housing	Cast Iron, Class 30
Guide Bearings	Bronze SAE 660
Casing, Suction cover, Impeller	Cast Iron, Class 30
Impeller Trim	Stainless Steel AISI- 316
Discharge Pipe	Steel ASTM - A53
Cover Plate	Steel HRS
Adjusting Nut	Steel ASTM-307
Double Lip Seal	Nitrile

CONSTRUCTION:**Standard**

- Bronze bottom line shaft bearings
- Bronze intermediate bearings (pit depths over 6'-0")
- Fully enclosed 2 vane non-clog design with wiping vanes
- High-thrust angular contact ball bearing
- External impeller adjustment
- Grease lubricated pump and line shaft bearings
- 416 stainless steel shaft
- Round or square cover plates with vent and inspection openings
- Gas-tight construction
- Pump setting increments of 1'-0" for sump depths up to 26'-0"

- Flanged discharge on all casings
- Long radius discharge elbow
- Standard C face motors

Options

- Various line shaft bearing designs
- 316 stainless steel shafting
- Oval pump mounting plate
- 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"
- Basins
- Simplex & duplex 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 Bearings

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

5. Gas Tight Column Closure

Double lip seal, grease lubricated

6. Cover Plate

Designed for specific unit. Carbon steel standard

7. Column Pipe

Schedule 40 steel with welded flanges

8. Positive Machined Fits

Machine 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" or 1 1/2" 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 specifications

13. Choker Ring

Restricts entrance of abrasives and solids into bottom bearing area

14. Impeller

Fully enclosed 2 vane non-clog design with wiping vanes which reduce axial loading and prolongs bearing life. Wiping vanes aid in keeping particles from behind impeller and pump bearing assembly. Impeller is secured to shaft by taper fit with woodruff key, nut.

15. Casing

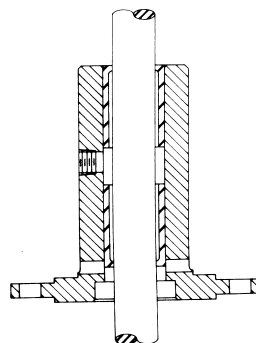
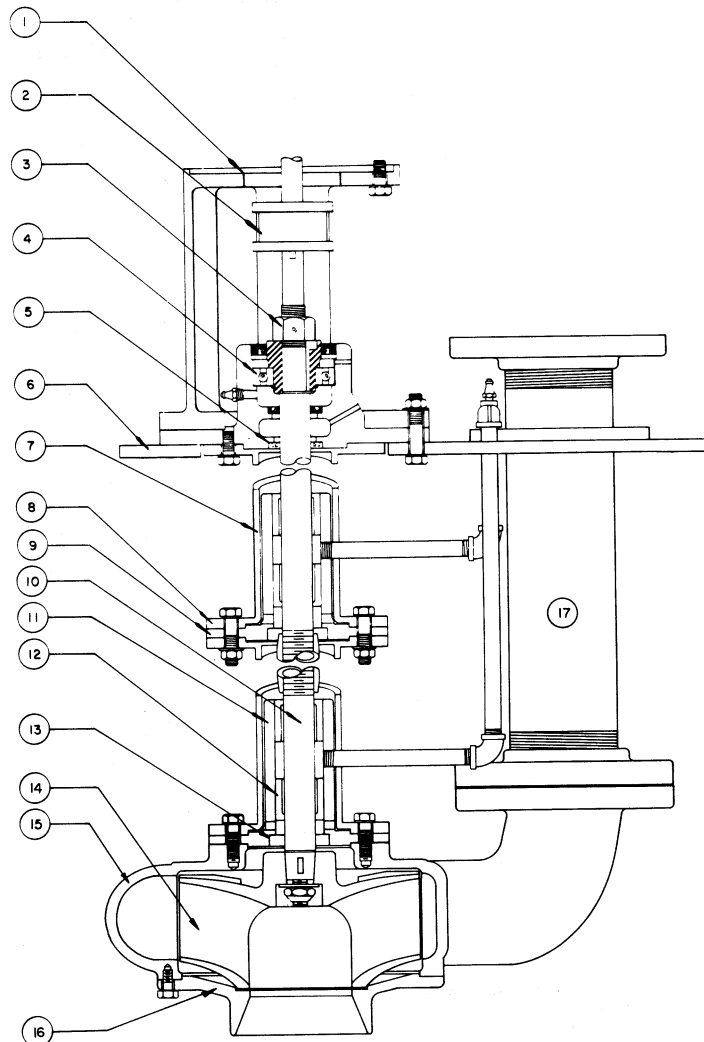
Flanged discharge all sizes. Designed specifically for solids handling. Incorporates long radius elbow, reducing friction loss

16. Suction Cover

Removable on all pumps for easy inspection, cleaning or servicing

17. Discharge Pipe

All sizes flanged. Below plate "T"-type discharge available



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 pressurized grease lubrication. Optional: rubber or carbon graphite.

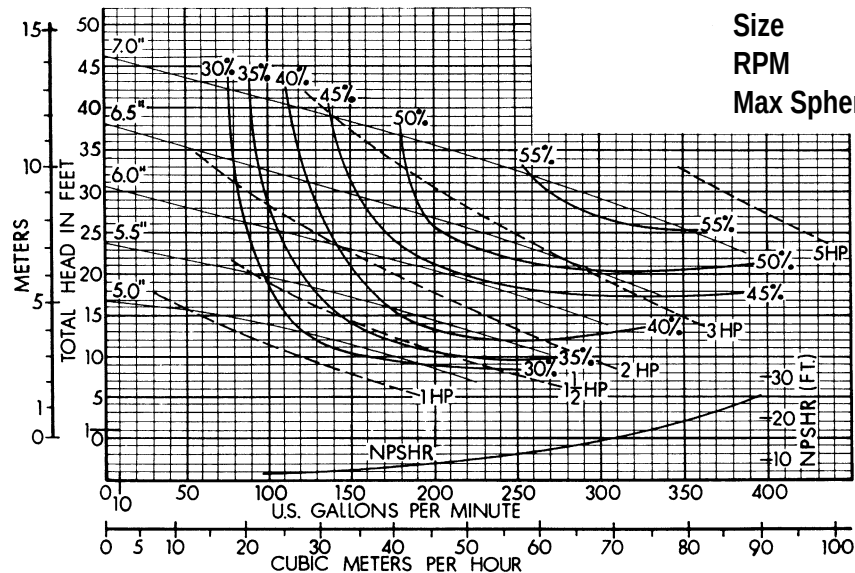
Intermediate Bearing Assembly

The standard intermediate bearing assembly consists of (2) guide bearings compatible with the liquid and is standard when pump length exceeds 6 feet. Standard bronze bearings furnished for pressurized grease lubrication. Optional: rubber or carbon graphite.

Model Number	Shaft Size	Column Pipe Size	Quantity of Bushings Bottom Bearing
720	1.250	4.00	2
724	1.500	4.00	2

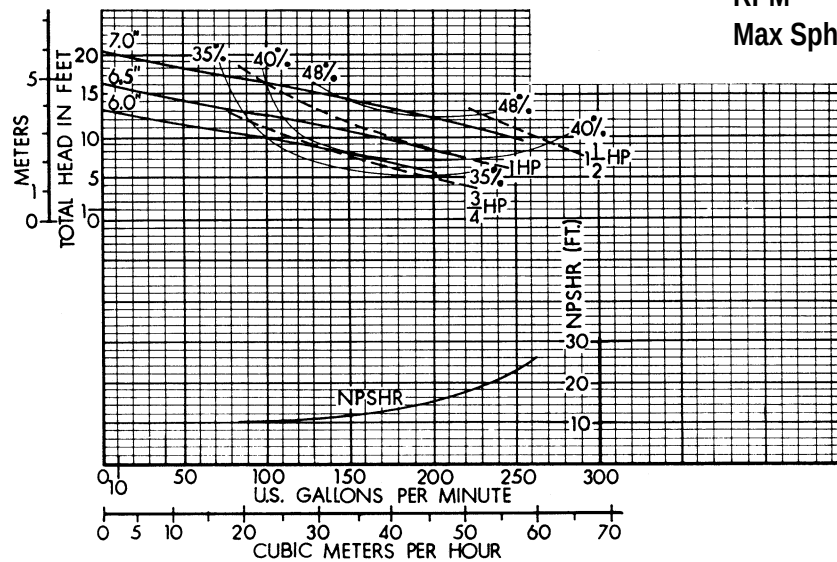
VERTIFLO PUMP COMPANY Performance Curves

Curve 3374



Series 700
Size 3 X 3 X 7 X 2
RPM 1750
Max Sphere 2

Curve 3376



Series 700
Size 3 X 3 X 7 X 2
RPM 1150
Max Sphere 2

700

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

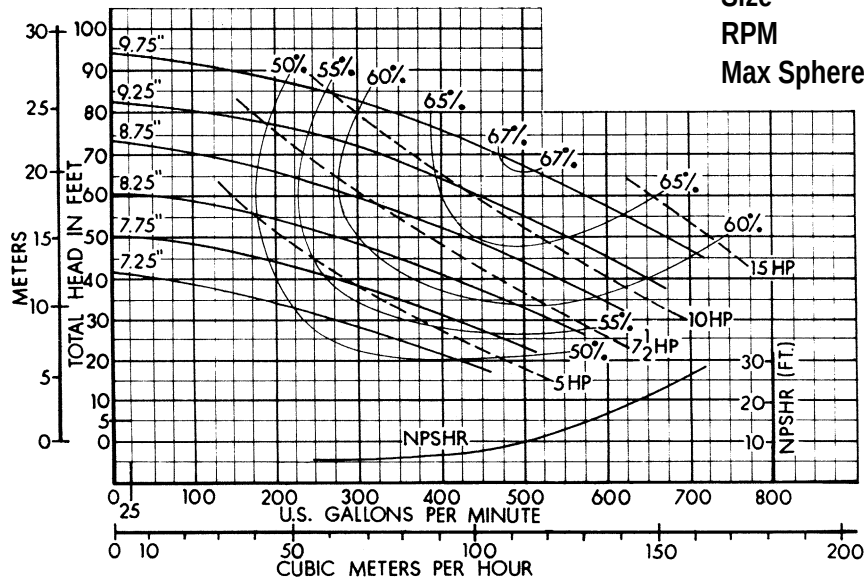
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

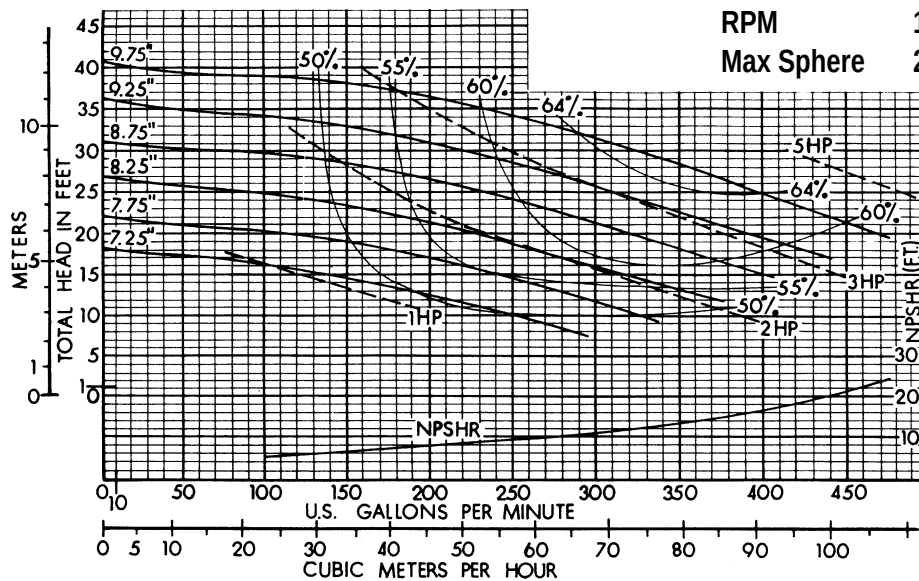
Curve 3394

Series 700
 Size 3 X 3 X 9.75 X 2
 RPM 1750
 Max Sphere 2



Curve 3396

Series 700
 Size 3 X 3 X 9.75 X 2
 RPM 1150
 Max Sphere 2



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

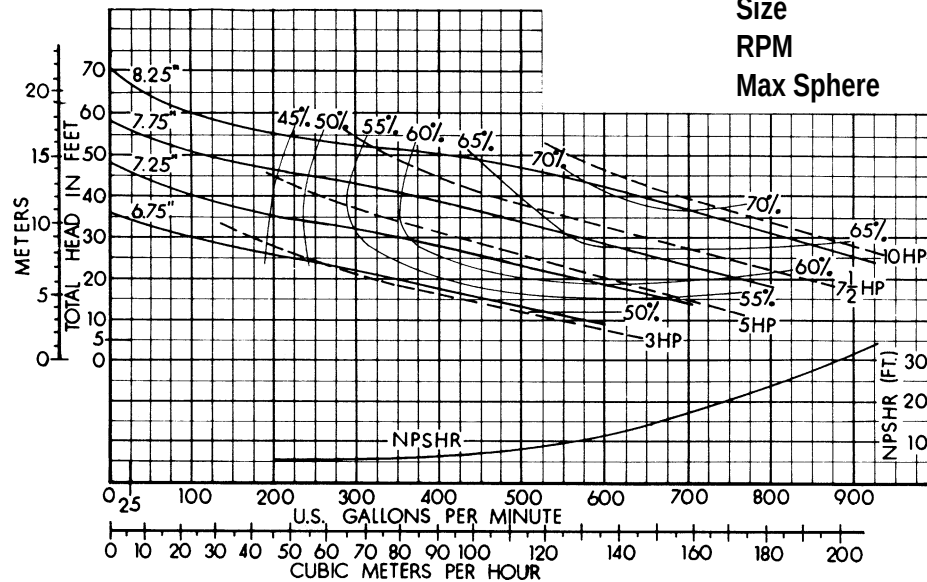
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

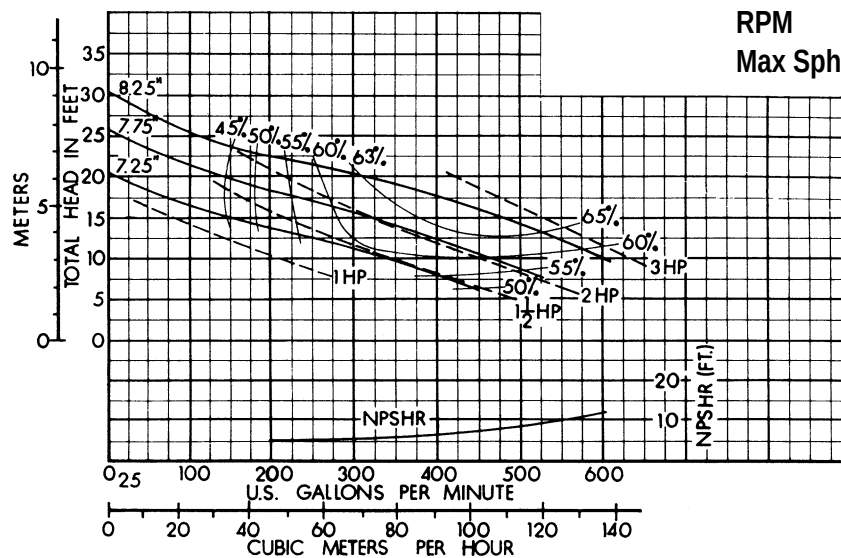
Curve 4484

Series 700
Size 4 X 4 X 8.25 X 2.5
RPM 1750
Max Sphere 2.5



Curve 4486

Series 700
Size 4 X 4 X 8.25 X 2.5
RPM 1150
Max Sphere 2.5



700

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

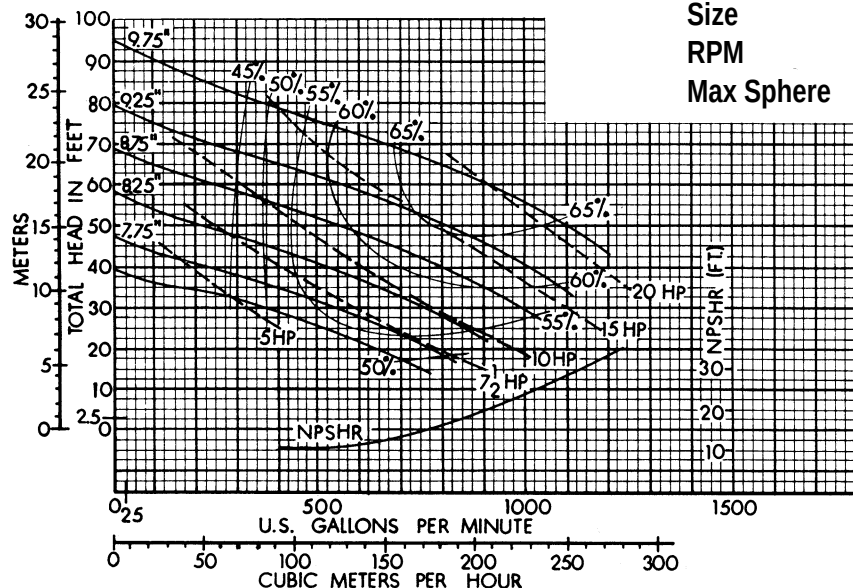
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

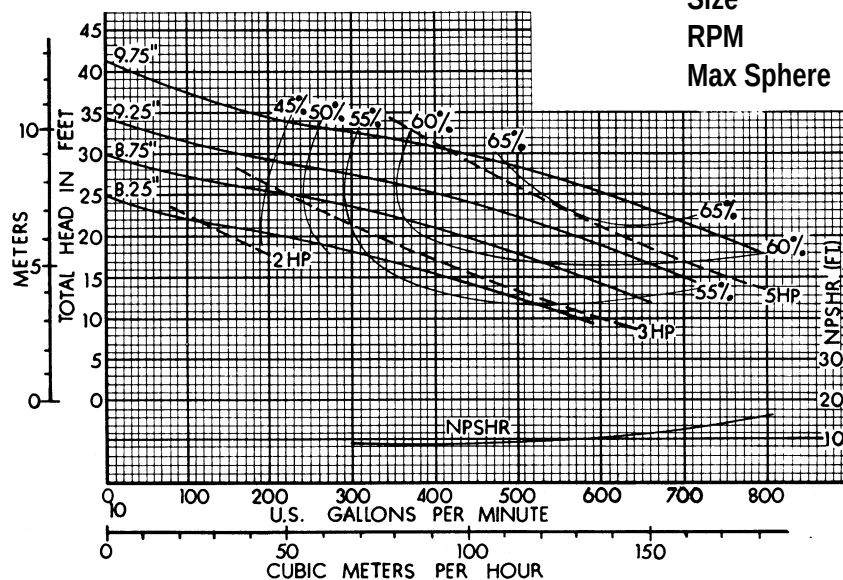
Curve 4494

Series 700
 Size 4 X 4 X 9.75 X 3
 RPM 1750
 Max Sphere 3



Curve 4496

Series 700
 Size 4 X 4 X 9.75 X 3
 RPM 1150
 Max Sphere 3



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

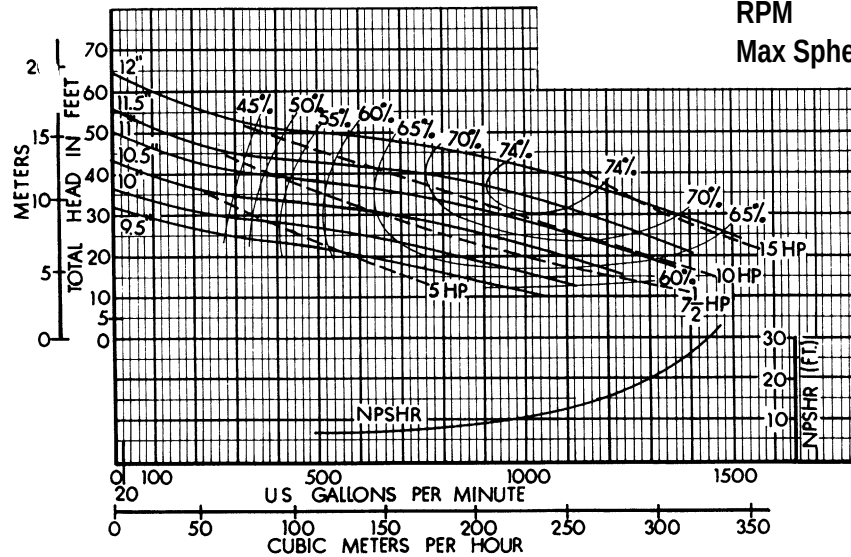
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve 55126

Series 700
 Size 5 X 5 X 12 X 3
 RPM 1150
 Max Sphere 3



700

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

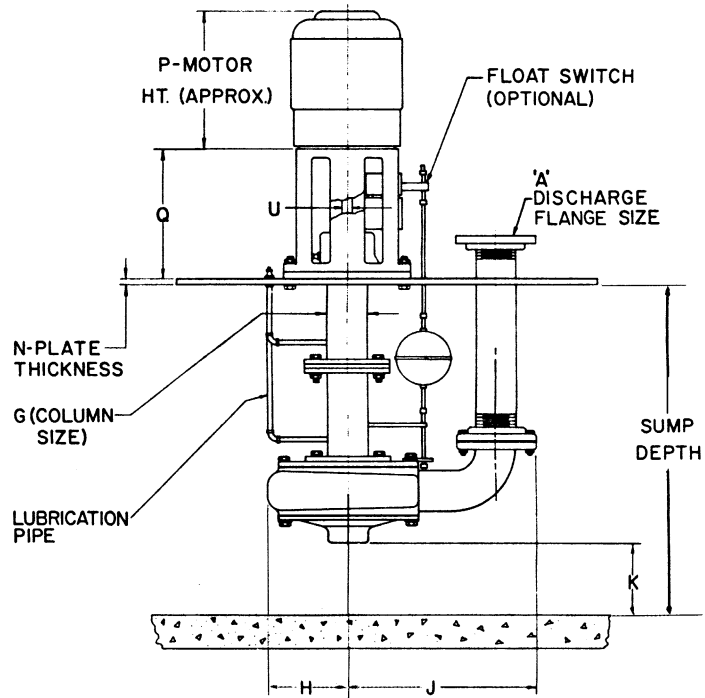
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

700 Series Basic Oval

PUMP DATA

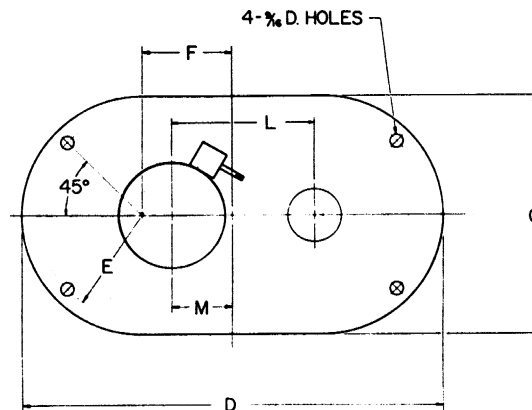
SIZE	3x3x7	3x3x9¾	4x4x8¼	4x4x9¾	5x5x12
A SUC. DISC.	3	3	4	4	5
B MIN.	2	2	3	3	4
B MAX.	20	18	18	17	15
C	18	18	21	21	22
D	26	26	30	30	32
E	8	8	9½	9½	10
F	4	4	4½	4½	5
G	3½	4	4	4	4
H	6⅞	7⅞	7½	8⅞	10⅞
J	13¾	13¾	15½	15½	17
K	4⅜	4⅜	3⅝	3⅝	3⅝
L	10	10	11	11	12
M	3⅞	3⅞	3¾	3¾	3¼
N	¾	¾	¾	¾	½
U	7/8	1⅞	1⅞	1⅞	1⅞



MOTOR DATA

FRAME	P	Q
56 C	10⅞	12
143 TC	10	12
145 TC	10⅞	12
182-184 TC	13½	12
213 TC	15½	12
215 TC	17	12
254 TC	20⅞	12
256 TC	21⅞	12
284 TC	22⅞	13
286 TC	23⅞	13
324 TC	24¾	13½
326 TC	26⅞	13½
364 TC	26½	16⅞
365 TC	27½	16⅞

"K" Dimension shown is for a pump built for a 2' through 6' pit depth. For each additional column section, subtract 3/8" from "K."



Not for construction unless certified, some dimensions may vary $\pm 1/2"$. Pump Construction: _____

CUSTOMER _____	CUSTOMER NO. _____
PROJECT _____	SERIAL NO. _____
ENGINEER _____	LOCATION _____
CONTRACTOR _____	
PUMP Model _____	Size _____
Curve No. _____	GPM _____
Head _____	SP. GR.@Temp. _____
Pump Length _____	Plate _____
MOTOR Mfr. _____	HP _____
RPM _____	Volt-Phase-Cycle _____
Frame _____	ENC. _____
Furnished by _____	Mounted by _____
Shop Order _____	Certified by _____
Date _____	

700 Series Simplex

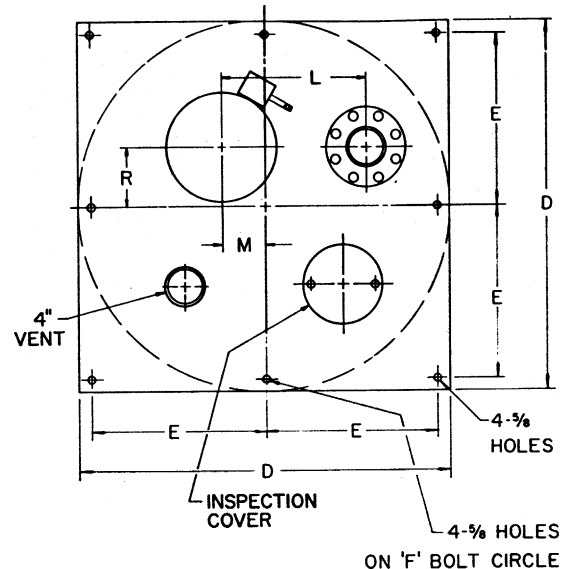
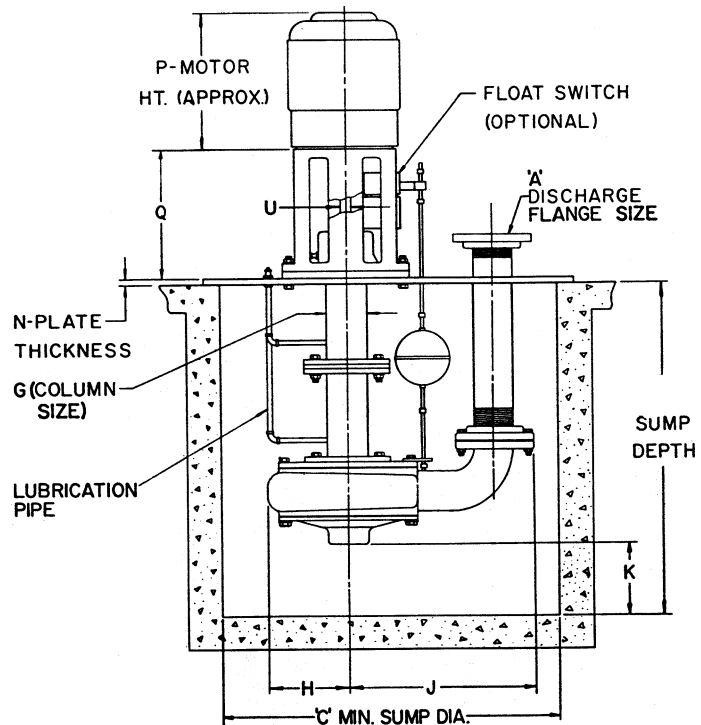
PUMP DATA

SIZE	3x3x7	3x3x9 ³ / ₄	4x4x8 ¹ / ₄	4x4x9 ³ / ₄	5x5x12
A SUC. DISC.	3	3	4	4	5
B MIN.	2	2	3	3	4
B MAX.	20	18	18	17	15
C MIN.	24	24	30	30	30
D MIN.	28	28	34	34	34
E	13	13	16	16	16
F	26	26	32	32	32
G	3 ¹ / ₂	4	4	4	4
H	6 ¹ / ₈	7 ⁵ / ₈	7 ¹ / ₂	8 ¹ / ₈	10 ¹ / ₈
J	13 ³ / ₄	13 ³ / ₄	15 ¹ / ₂	15 ¹ / ₂	17
K	4 ³ / ₈	4 ³ / ₈	3 ⁵ / ₈	3 ³ / ₈	3 ¹ / ₈
L	10	10	11	11	12
M	3 ¹ / ₄	3 ¹ / ₄	5	5	3 ³ / ₈
N	³ / ₈	³ / ₈	³ / ₈	³ / ₈	³ / ₈
R	1 ⁵ / ₈	1 ⁵ / ₈	0	0	0
U	7 ⁷ / ₈	1 ¹ / ₈	1 ¹ / ₈	1 ¹ / ₈	1 ¹ / ₈

MOTOR DATA

FRAME	P	Q
56 C	10 ⁷ / ₁₆	12
143 TC	10	12
145 TC	10 ⁷ / ₁₆	12
182-184 TC	13 ¹ / ₂	12
213 TC	15 ¹ / ₂	12
215 TC	17	12
254 TC	20 ¹ / ₈	12
256 TC	21 ¹ / ₈	12
284 TC	22 ³ / ₈	13
286 TC	23 ³ / ₈	13
324 TC	24 ³ / ₄	13 ¹ / ₂
326 TC	26 ¹ / ₈	13 ¹ / ₂
364 TC	26 ¹ / ₂	16 ⁵ / ₈
365 TC	27 ¹ / ₂	16 ⁵ / ₈

"K" Dimension shown is for a pump built for a 2' through 6' pit depth. For each additional column section, subtract 3/8" from "K."



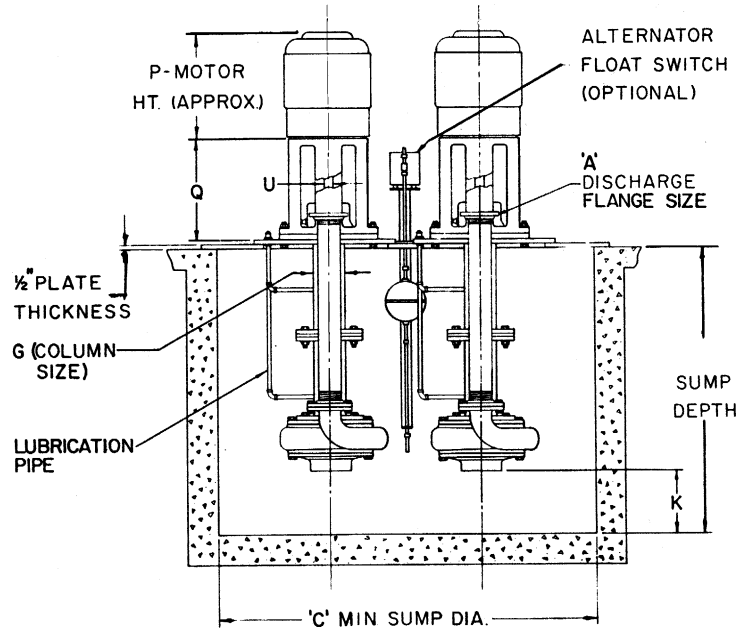
Not for construction unless certified, some dimensions may vary $\pm 1/2$ ". Pump Construction:

CUSTOMER _____	CUSTOMER NO. _____
PROJECT _____	SERIAL NO. _____
ENGINEER _____	LOCATION _____
CONTRACTOR _____	
PUMP Model _____	Size _____
Curve No. _____	GPM _____
Head _____	SP. GR.@Temp. _____
Pump Length _____	Plate _____
MOTOR Mfr. _____	HP _____
RPM _____	Volt-Phase-Cycle _____
Frame _____	ENC. _____
Furnished by _____	Mounted by _____
Shop Order _____	Certified by _____
Date _____	

700 Series Duplex

PUMP DATA

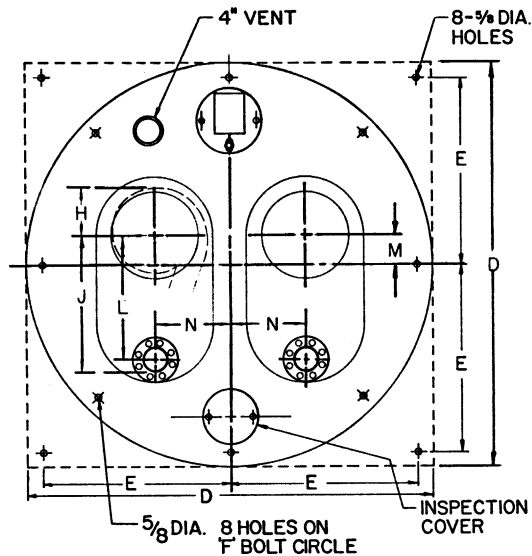
SIZE	3x3x7	3x3x9 ³ / ₄	4x4x8 ¹ / ₄	4x4x9 ³ / ₄	5x5x12
A SUC. DISC.	3	3	4	4	5
B MIN.	2	2	3	3	4
B MAX.	20	18	18	17	15
C MIN.	36	42	48	48	48
D	46	46	54	54	54
E	22	22	25 ¹ / ₂	25 ¹ / ₂	25 ¹ / ₂
F	44	44	51	51	51
G	3 ¹ / ₂	4	4	4	4
H	6 ¹ / ₈	7 ⁵ / ₈	7 ¹ / ₂	8 ¹ / ₈	10 ¹ / ₈
J	13 ³ / ₄	13 ³ / ₄	15 ¹ / ₂	15 ¹ / ₂	17
K	4 ⁷ / ₈	4 ⁷ / ₈	4 ¹ / ₈	3 ⁷ / ₈	3 ⁵ / ₈
L	10	10	11	11	12
M	2	2 ⁷ / ₈	3 ³ / ₄	3 ³ / ₄	3 ¹ / ₄
N	9 ¹ / ₂	9 ¹ / ₂	12 ⁵ / ₈	12 ⁵ / ₈	12
U	7 ⁷ / ₈	1 ¹ / ₈	1 ¹ / ₈	1 ¹ / ₈	1 ¹ / ₈



MOTOR DATA

FRAME	P	Q
56 C	10 ⁷ / ₁₆	12
143 TC	10	12
145 TC	10 ⁷ / ₁₆	12
182-184 TC	13 ¹ / ₂	12
213 TC	15 ¹ / ₂	12
215 TC	17	12
254 TC	20 ¹ / ₈	12
256 TC	21 ¹ / ₈	12
284 TC	22 ³ / ₈	13
286 TC	23 ³ / ₈	13
324 TC	24 ³ / ₄	13 ¹ / ₂
326 TC	26 ¹ / ₈	13 ¹ / ₂
364 TC	26 ¹ / ₂	16 ⁵ / ₈
365 TC	27 ¹ / ₂	16 ⁵ / ₈

"K" Dimension shown is for a pump built for a 2' through 6' pit depth. For each additional column section, subtract 3/8" from "K."



Not for construction unless certified, some dimensions may vary $\pm 1/2$ ". Pump Construction: _____

CUSTOMER _____	CUSTOMER NO. _____
PROJECT _____	SERIAL NO. _____
ENGINEER _____	LOCATION _____
CONTRACTOR _____	
PUMP Model _____	Size _____
Curve No. _____	GPM _____
Head _____	SP. GR.@Temp. _____
Pump Length _____	Plate _____
MOTOR Mfr. _____	HP _____
RPM _____	Volt-Phase-Cycle _____
Frame _____	ENC. _____
Furnished by _____	Mounted by _____
Shop Order _____	Certified by _____
Date _____	

VERTIFLO

The Vertical Pump Specialists

PUMPS FOR INDUSTRY

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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

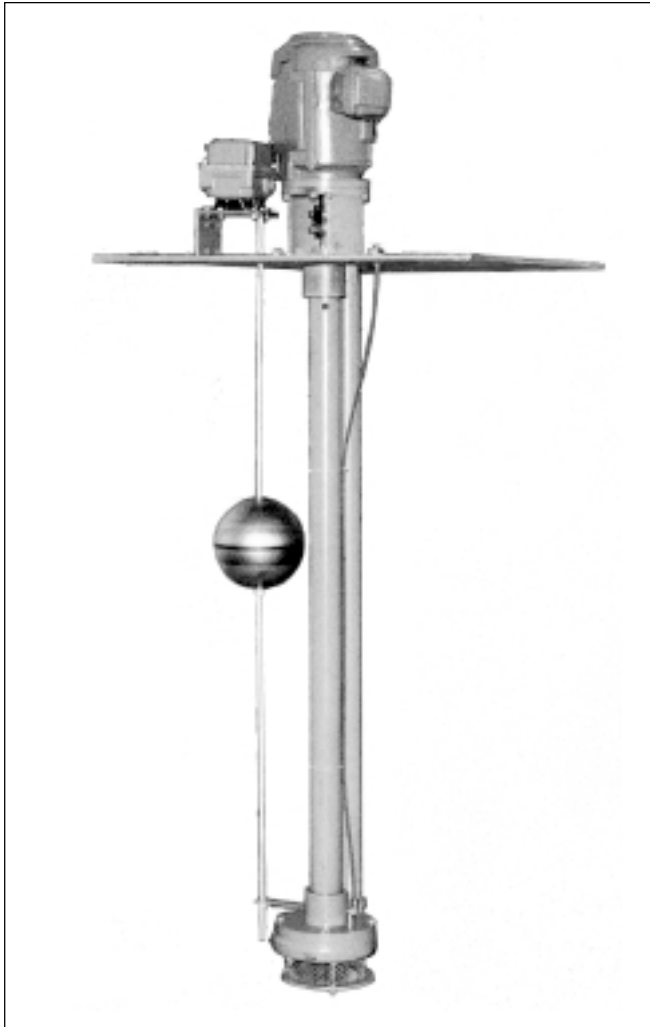
Horizontal End Suction
Pumps-Vortex Series 1500 and 1600

Horizontal Self-priming
Pumps- Centrifugal Series 2100

Engineering Sample Specifications

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

800

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

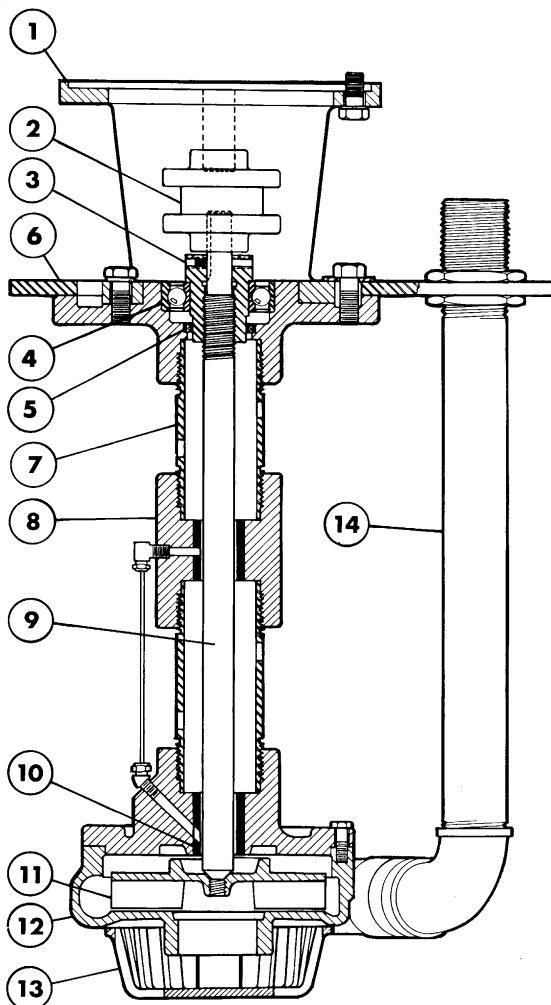
Heavy walled casting

13. Suction Strainer

Cast iron

14. Discharge Pipe

Schedule 40, threaded; flanged connection optional



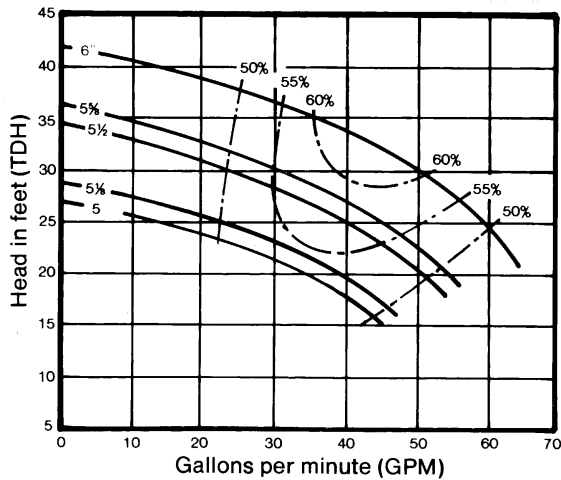
Materials of Construction

Part Description	Standard Fitted Cast Iron	316 Stainless Fitted Cast Iron	All 316 Stainless Cast Iron
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

VERTIFLO PUMP COMPANY Performance Curves

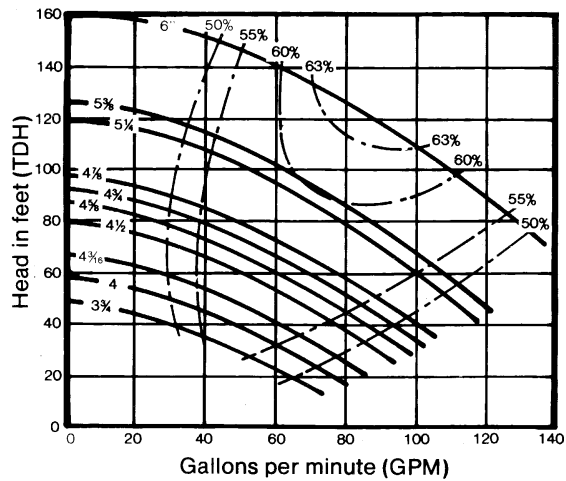
Series 800 / Model 814 Size 1 1/2 X 1 X 6

1750 RPM



HP	SF	DIA
3/4	1.15	6
	1.00	6
1/2	1.15	5 5/8
	1.00	5 1/2
1/3	1.15	5 1/8
	1.00	5

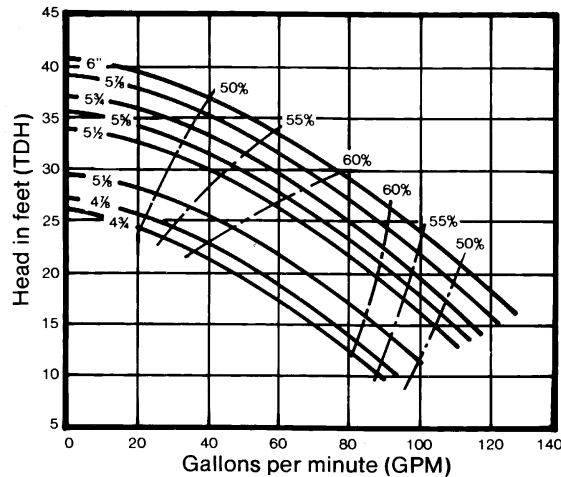
3500 RPM



HP	SF	DIA	HP	SF	DIA
5	1.15	6	1 1/2	1.15	4 5/8
	1.00	6		1.00	4 1/2
3	1.15	5 3/8	1	1.15	4 3/16
	1.00	5 1/4		1.00	4
2	1.15	4 7/8			
	1.00	4 3/4			

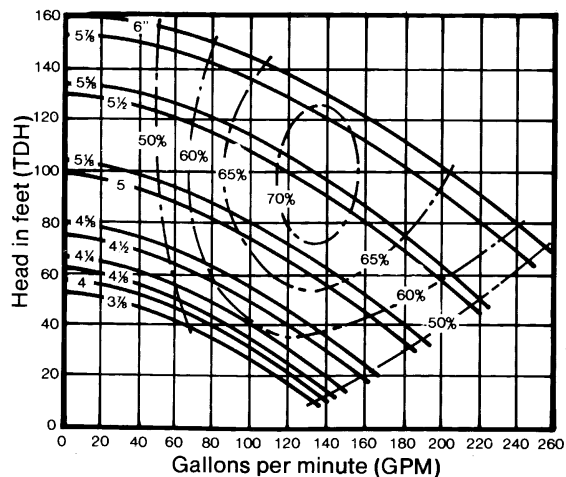
Series 800 / Model 814 Size 2 X 1 1/2 X 6

1750 RPM



HP	SF	DIA	HP	SF	DIA
1 1/2	1.15	6	3/4	1.15	5 5/8
	1.00	6		1.00	5 1/2
1	1.15	5 7/8	1/2	1.15	5 1/8
	1.00	4 7/8		1.00	4 7/8

3500 RPM



HP	SF	DIA	HP	SF	DIA
7 1/2	1.15	6	2	1.15	4 5/8
	1.00	5 7/8		1.00	4 1/2
5	1.15	5 5/8	1 1/2	1.15	4 1/4
	1.00	5 1/2		1.00	4 1/8
3	1.15	5 1/8	1	1.15	4
	1.00	5		1.00	3 7/8

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

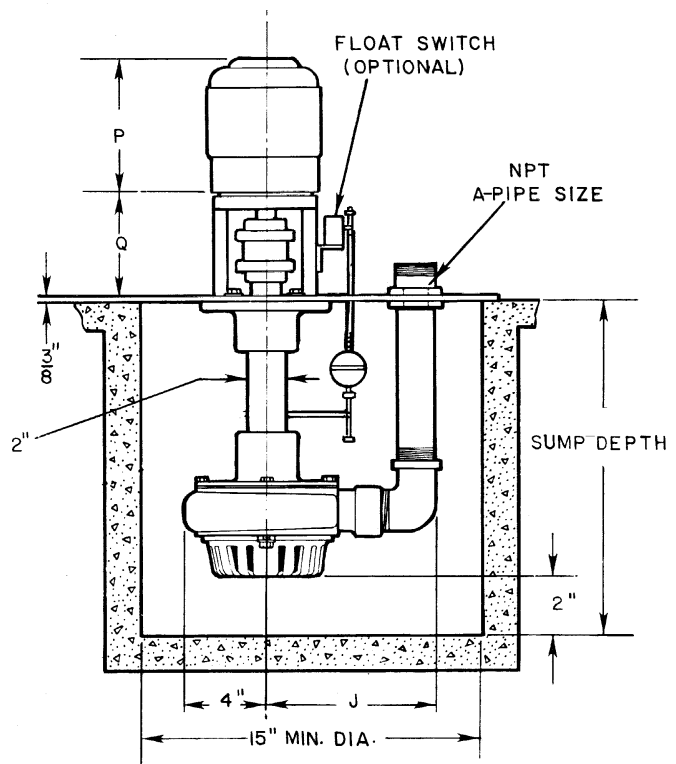
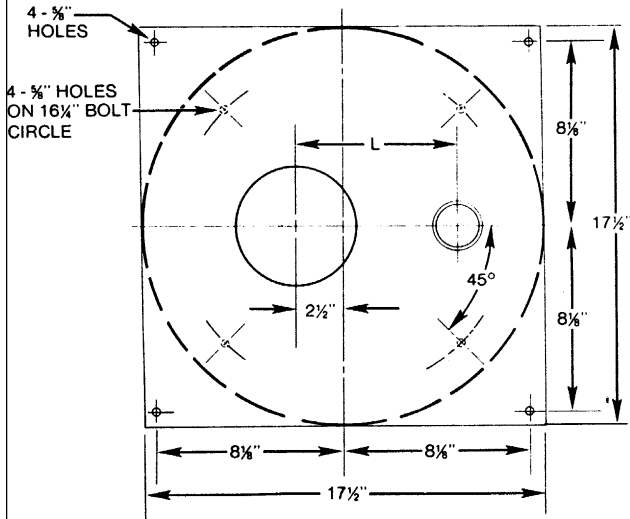
PROJECT _____

ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

814 Simplex Sump Pump



PUMP DATA

SIZE	A	C	J	L
1 1/2 x 1 x 6	1	2 to 12 Feet*	7 1/2	6 1/2
	1 1/2		8 1/4	7
2 x 1 1/2 x 6	1 1/2	2 to 12 Feet*	8 1/2	7 1/4
	2		9 1/4	7 3/4

* Sump Depth is in 1 Foot Increments

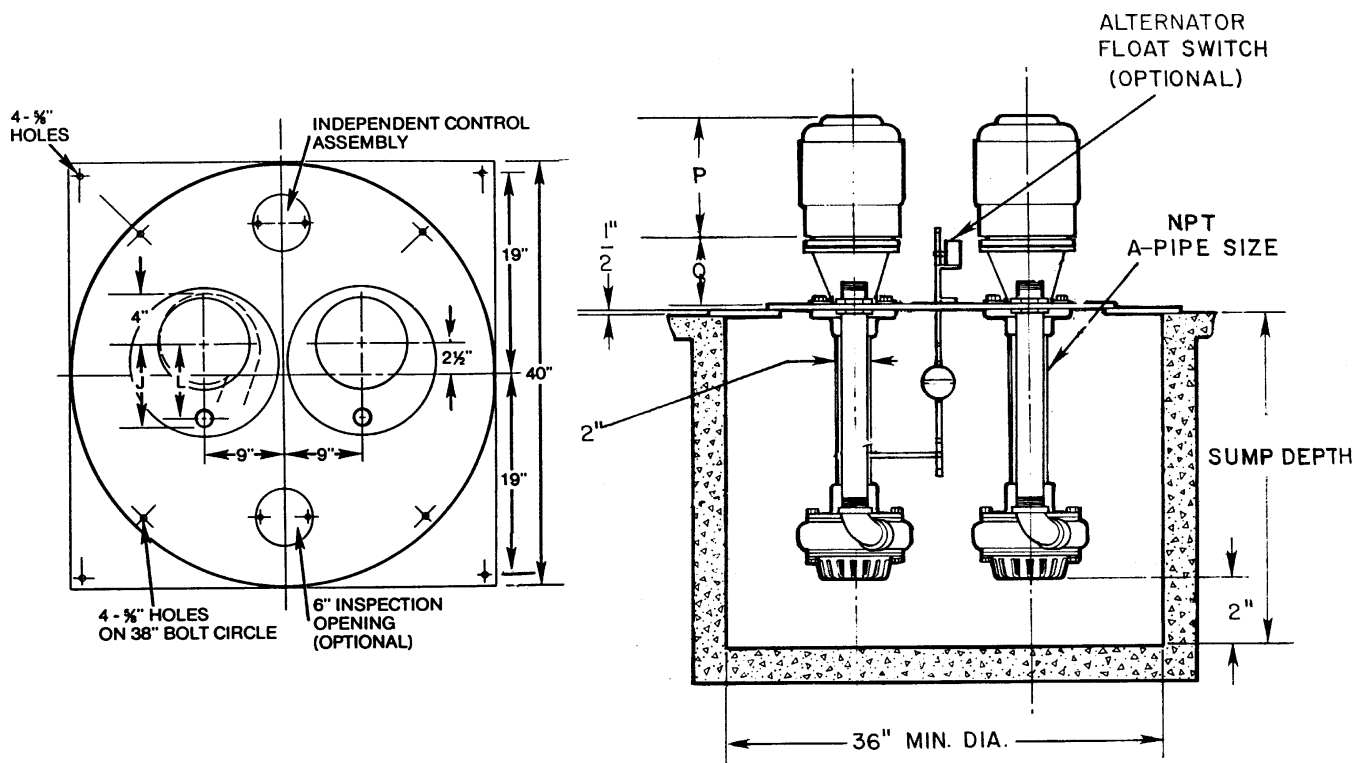
MOTOR DATA

FRAME	P	Q
56 C	12 1/8	5 5/8
143 TC - 145TC	12 1/4	5 5/8
182TC - 184TC	15 7/16	6 3/8
213TC - 215TC	16 11/16	6 3/8

Not for construction unless certified, some dimensions may vary $\pm 1/2$ ". Pump Construction: _____

CUSTOMER _____ CUSTOMER NO. _____
 PROJECT _____ SERIAL NO. _____
 ENGINEER _____ LOCATION _____
 CONTRACTOR _____
 PUMP Model Size Curve No. GPM Head SP. GR.@Temp. Pump Length Plate
 DATA _____
 MOTOR Mfgr. HP RPM Volt-Phase-Cycle Frame ENC. Furnished by Mounted by
 DATA _____
 Shop Order _____ Certified by _____ Date _____

814 Duplex Sump Pump



PUMP DATA

SIZE	A	C	J	L
1½ x 1 x 6	1	2 to 12 Feet*	7½	6½
	1½		8¼	7
2 x 1½ x 6	1½		8½	7¼
	2		9¼	7¾

MOTOR DATA

FRAME	P	Q
56 C	12⅞	5⅞
143 TC - 145TC	12¼	5⅞
182TC - 184TC	15⅞	6⅞
213TC - 215TC	16⅞	6⅞

* Sump Depth is in 1 Foot Increments

Not for construction unless certified, some dimensions may vary ± 1/2". Pump Construction: _____

CUSTOMER _____ CUSTOMER NO. _____
 PROJECT _____ SERIAL NO. _____
 ENGINEER _____ LOCATION _____
 CONTRACTOR _____
 PUMP Model Size Curve No. GPM Head SP. GR.@Temp. Pump Length Plate
 DATA _____
 MOTOR Mfgr. HP RPM Volt-Phase-Cycle Frame ENC. Furnished by Mounted by
 DATA _____
 Shop Order _____ Certified by _____ Date _____

VERTIFLO 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

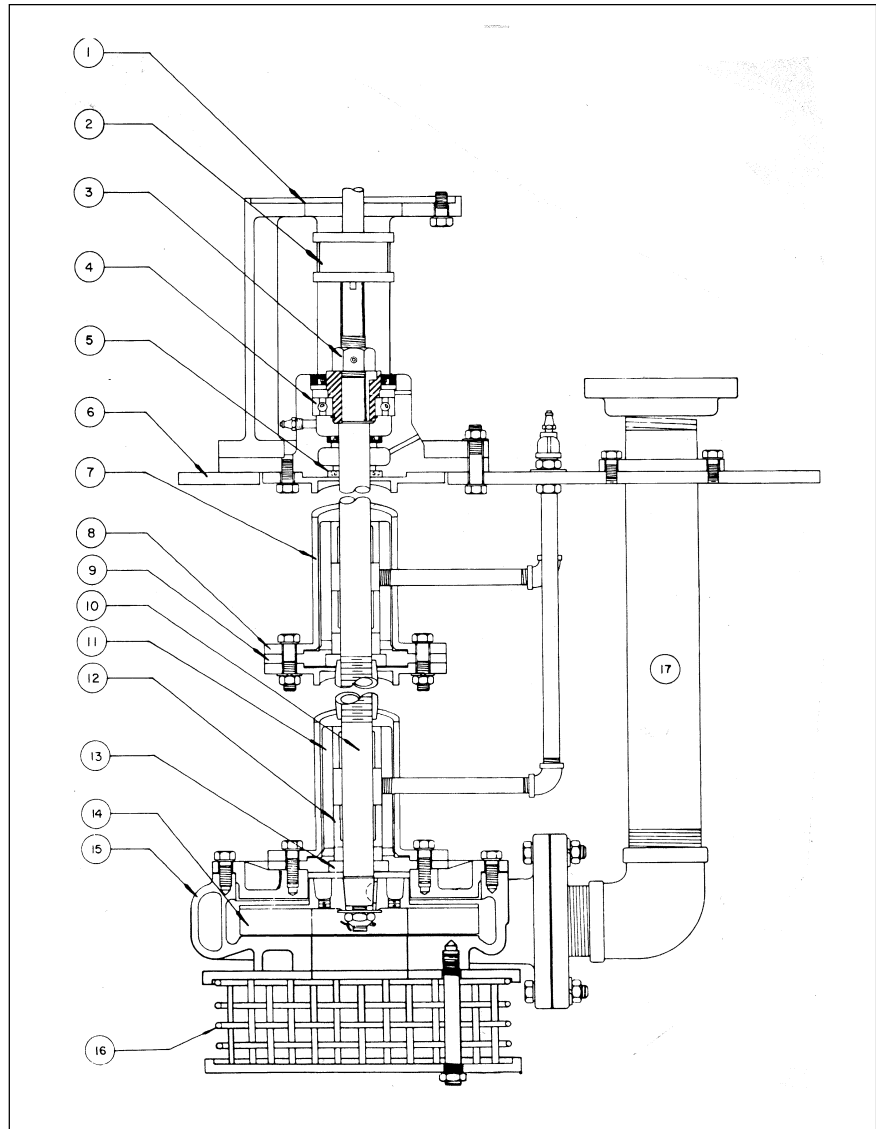
Flanged suction and discharge all sizes. Double volute design on all 4X3X10 and larger sizes

16. Suction Strainer

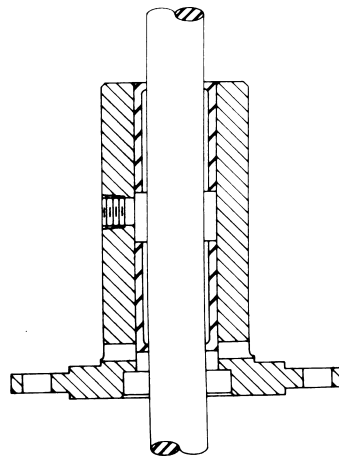
304 stainless steel

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*

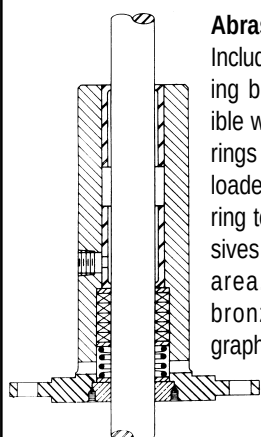
Intermediate Bearing Assembly

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*

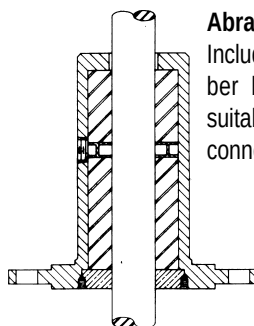
*E.I DuPont registered TM

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

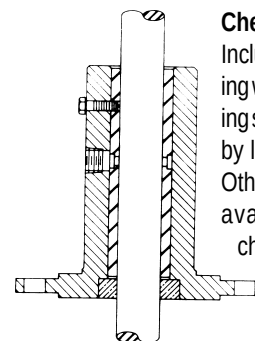
Alternate Line Shaft Bearing Assemblies



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.



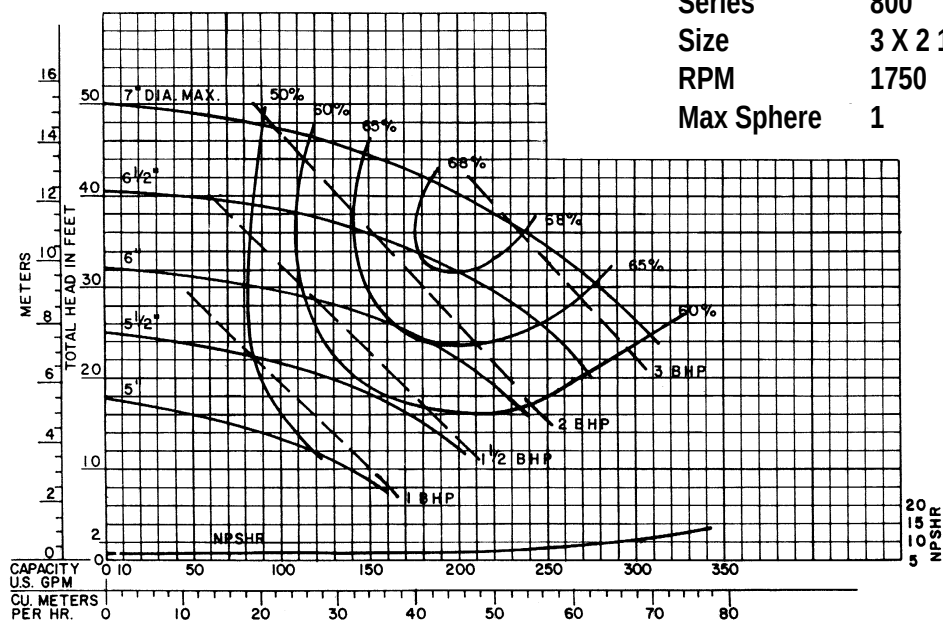
Chemical Service
Includes (1) Teflon* bearing w/stainless steel locking screws and lubricated by liquid being pumped. Other bearing materials available for special chemical services.

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

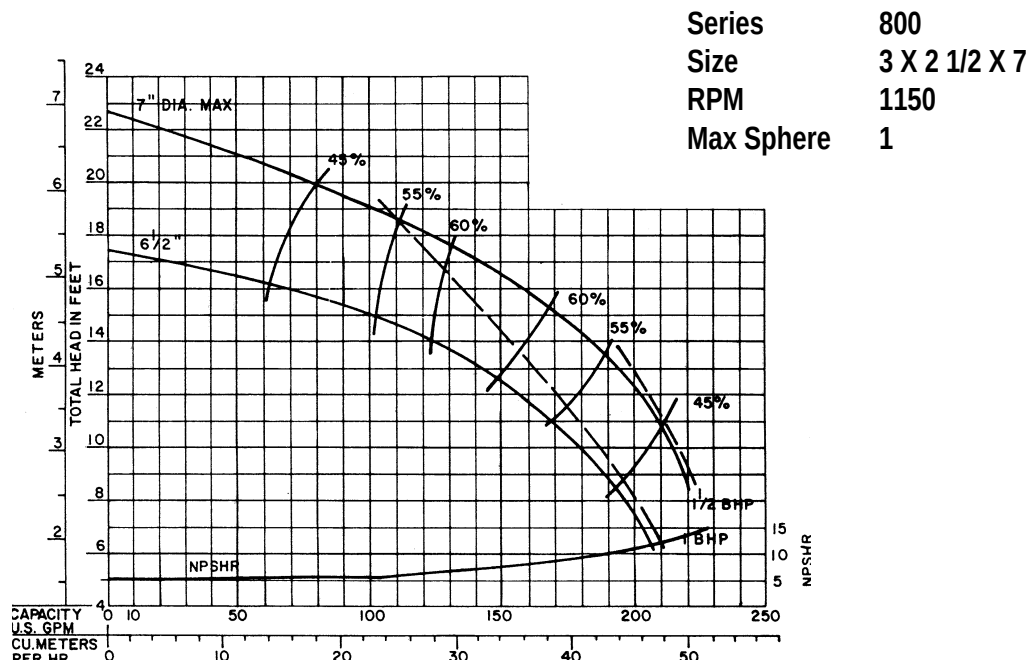
*E.I DuPont registered TM

VERTIFLO PUMP COMPANY Performance Curves

Curve PV-1525



Curve RV-1525



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

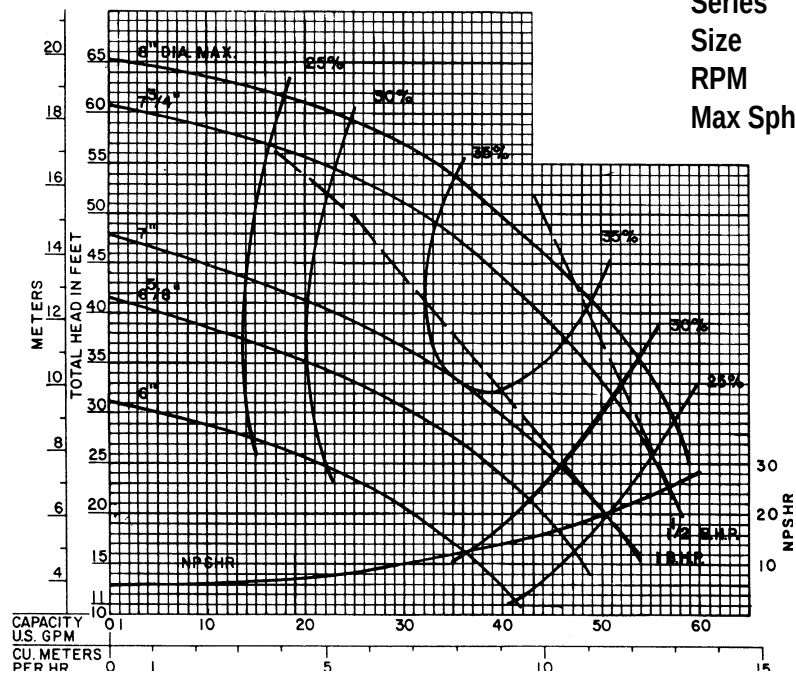
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

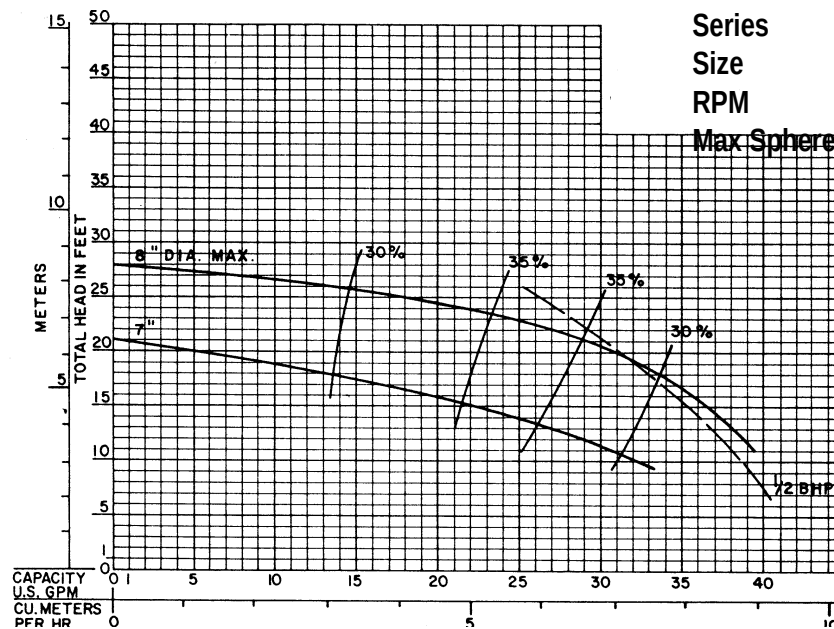
VERTIFLO PUMP COMPANY Performance Curves

Curve AS-1610



Series 800
Size 1 1/2 X 1 X 8
RPM 1750
Max Sphere 1/4

Curve BS-1610



Series 800
Size 1 1/2 X 1 X 8
RPM 1150
Max Sphere 1/4

800

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

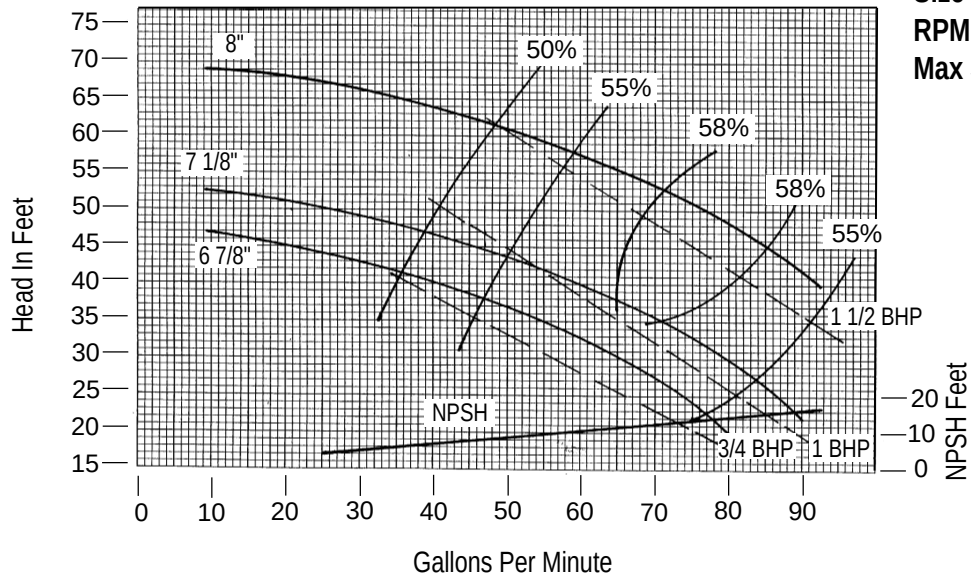
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

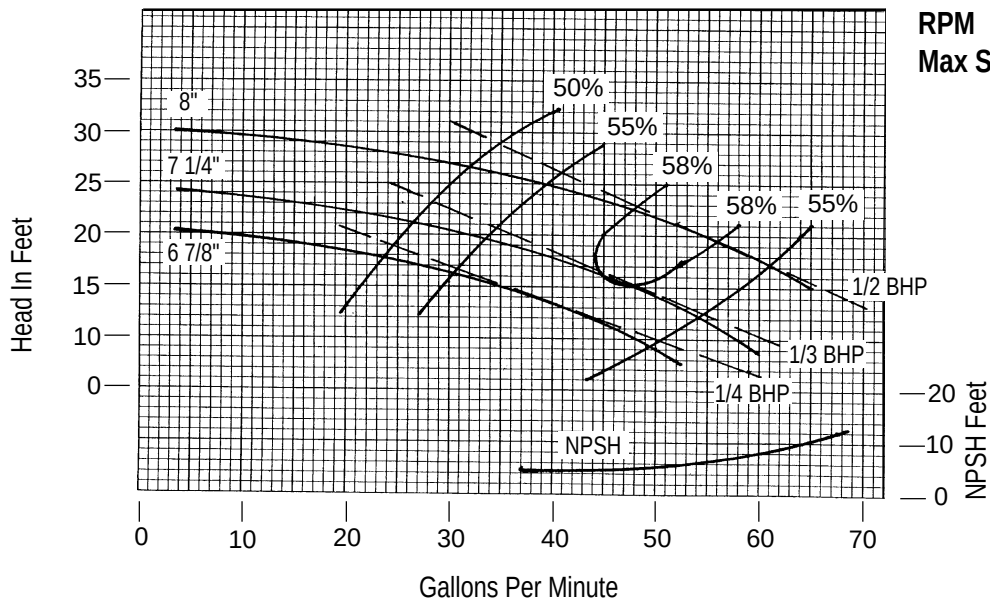
Curve AS-1612

Series 800
Size 1 1/2 X 1 1/4 X 8
RPM 1750
Max Sphere 5/16



Curve BS-1612

Series 800
Size 1 1/2 X 1 1/4 X 8
RPM 1150
Max Sphere 5/16



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

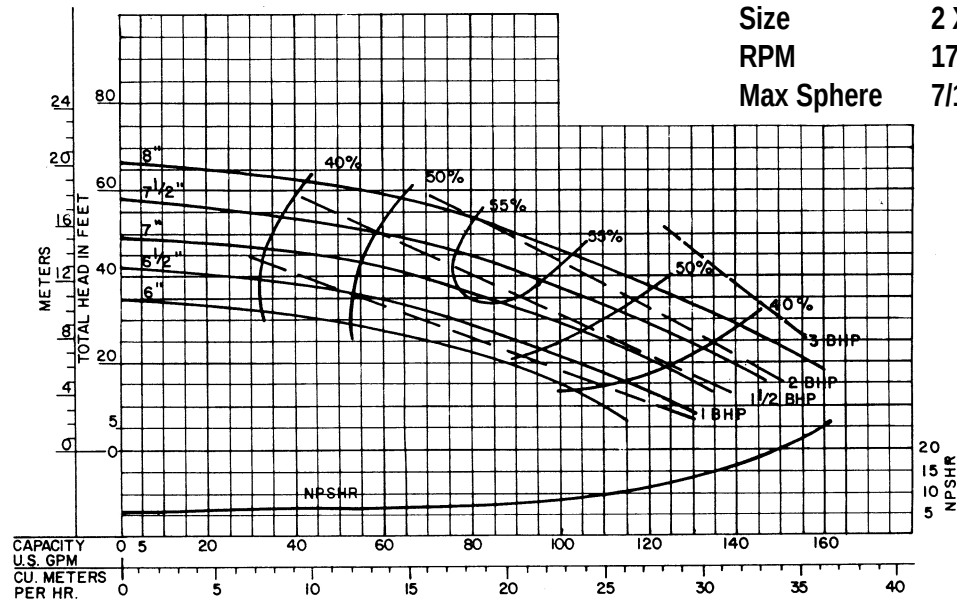
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

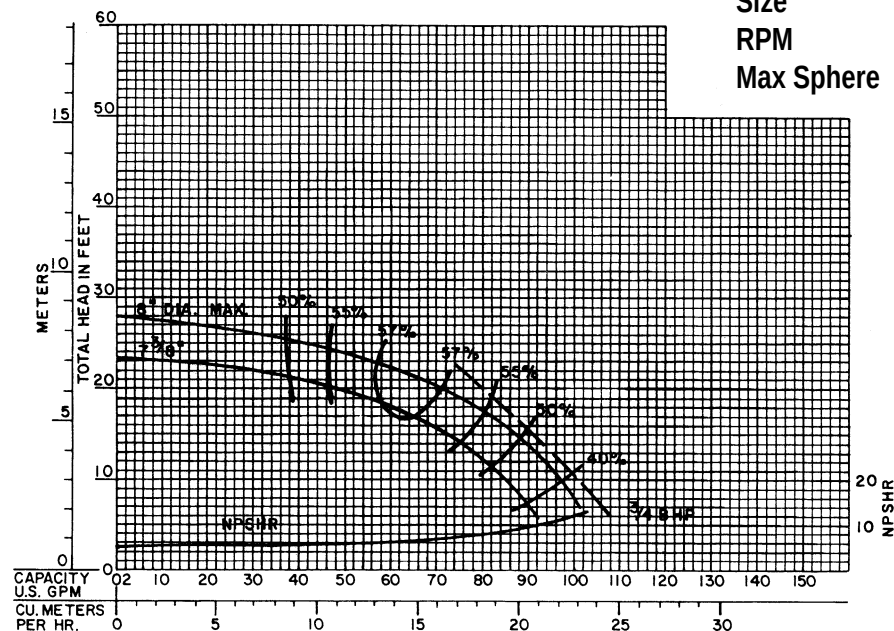
Curve BS-1615

Series 800
Size 2 X 1 1/2 X 8
RPM 1750
Max Sphere 7/16



Curve CS-1615

Series 800
Size 2 X 1 1/2 X 8
RPM 1150
Max Sphere 7/16



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

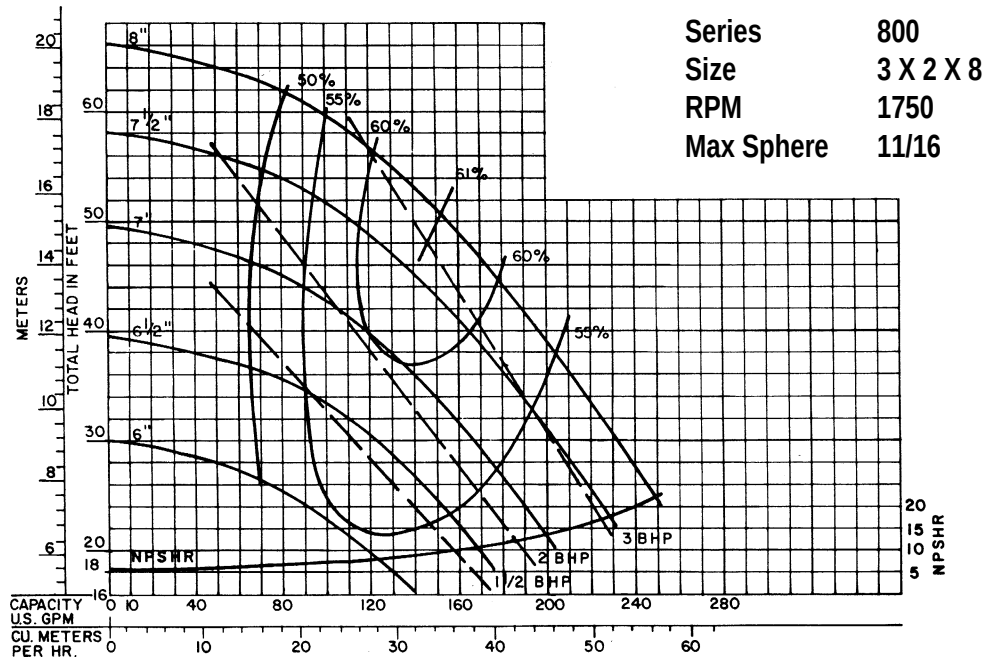
ENGINEER _____

CONTRACTOR _____

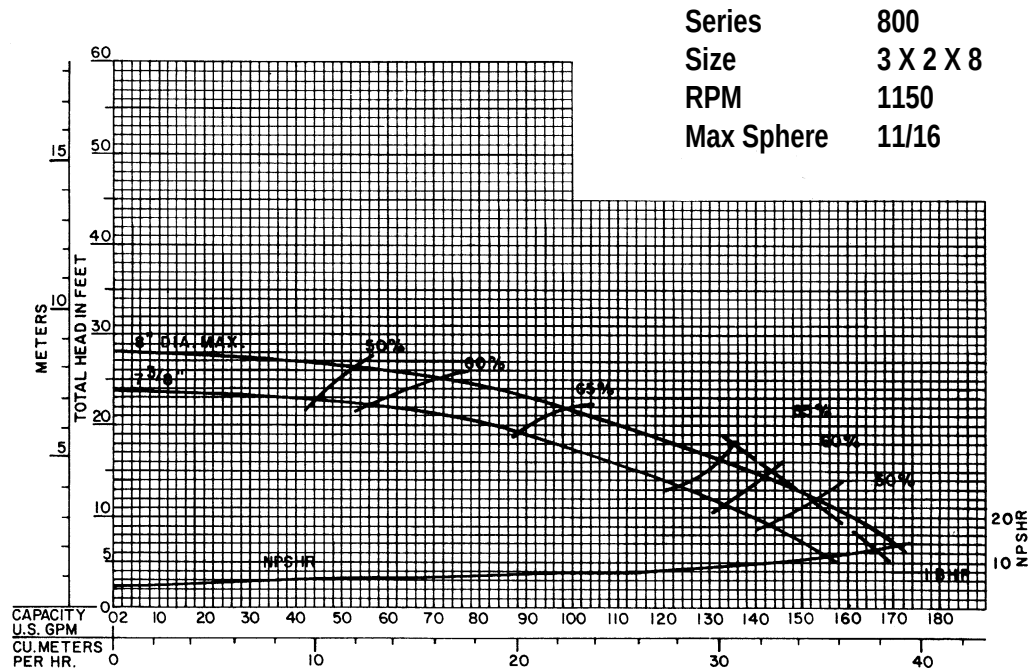
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve CS-1620



Curve DS-1620



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

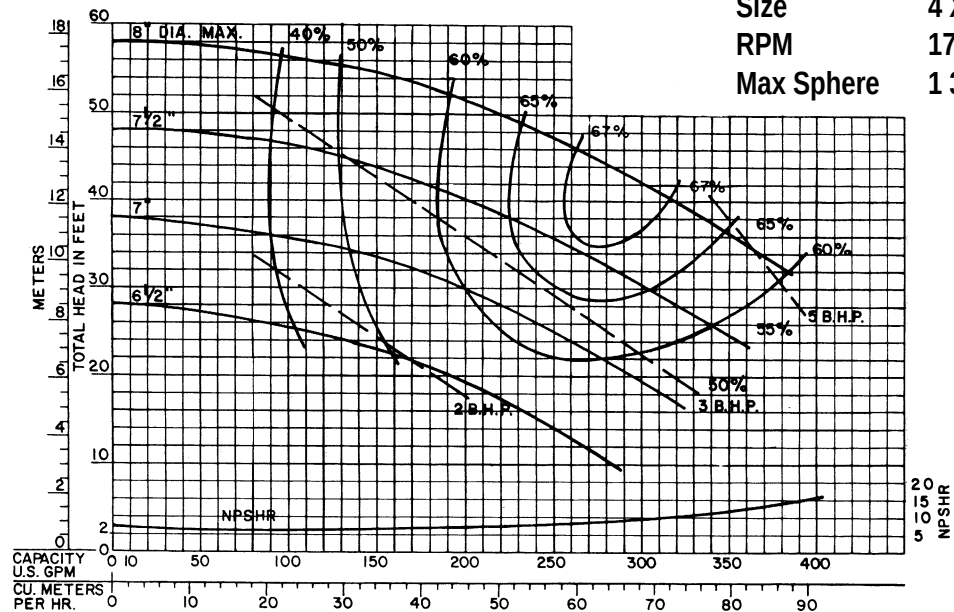
ENGINEER _____

CONTRACTOR _____

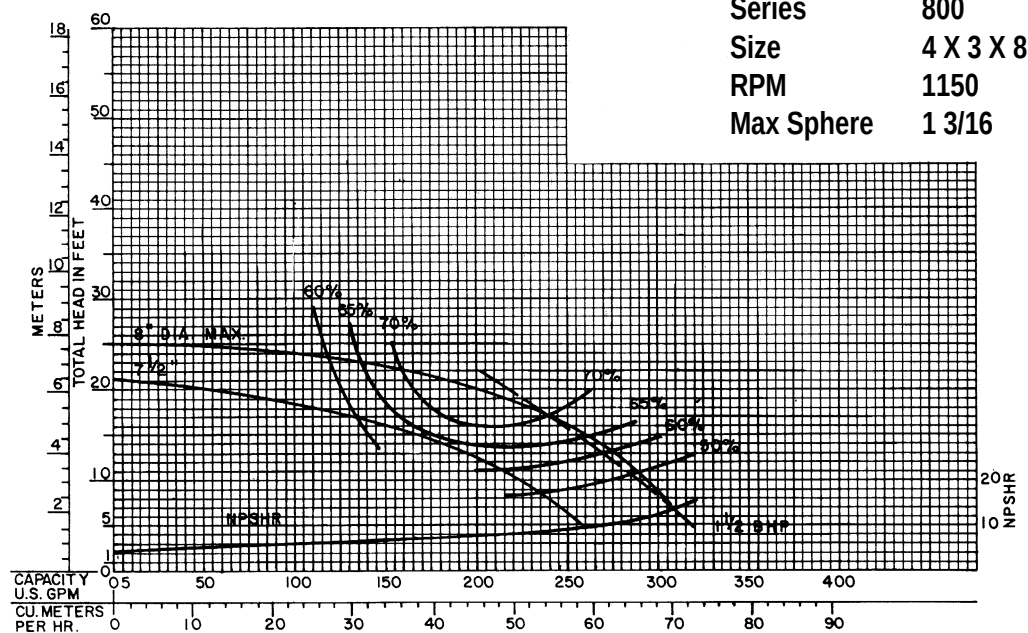
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve CS-1630



Curve DS-1630



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

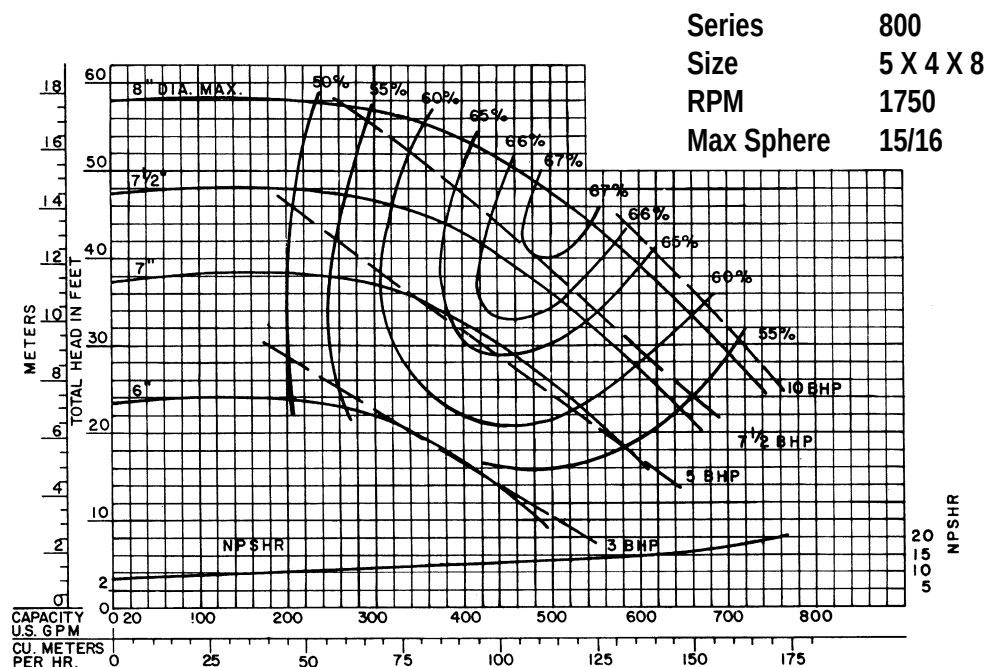
ENGINEER _____

CONTRACTOR _____

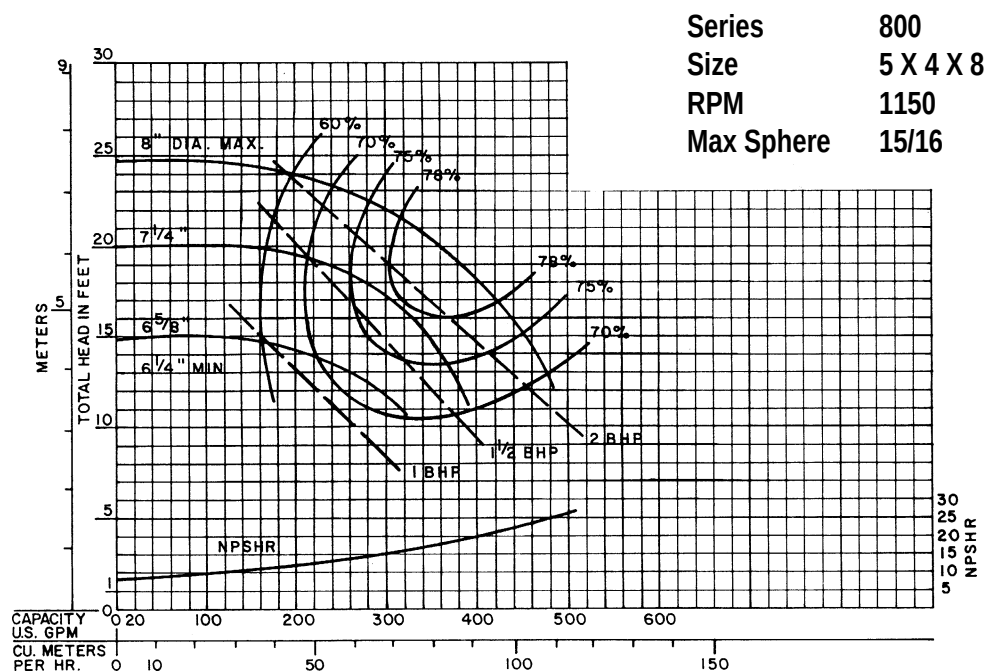
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve ES-1640



Curve DS-1640



Performance at Casing Discharge Flange

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CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

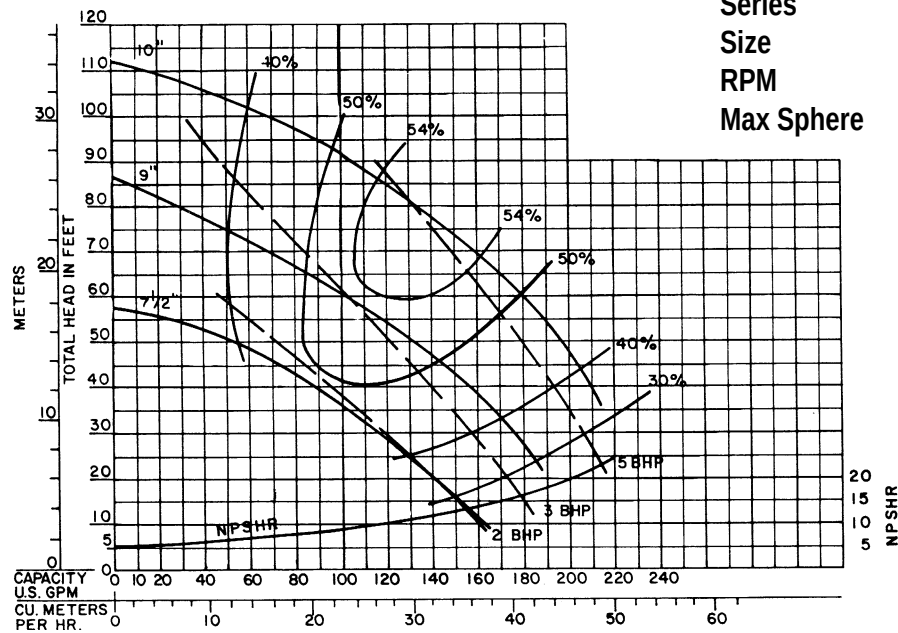
ENGINEER _____

CONTRACTOR _____

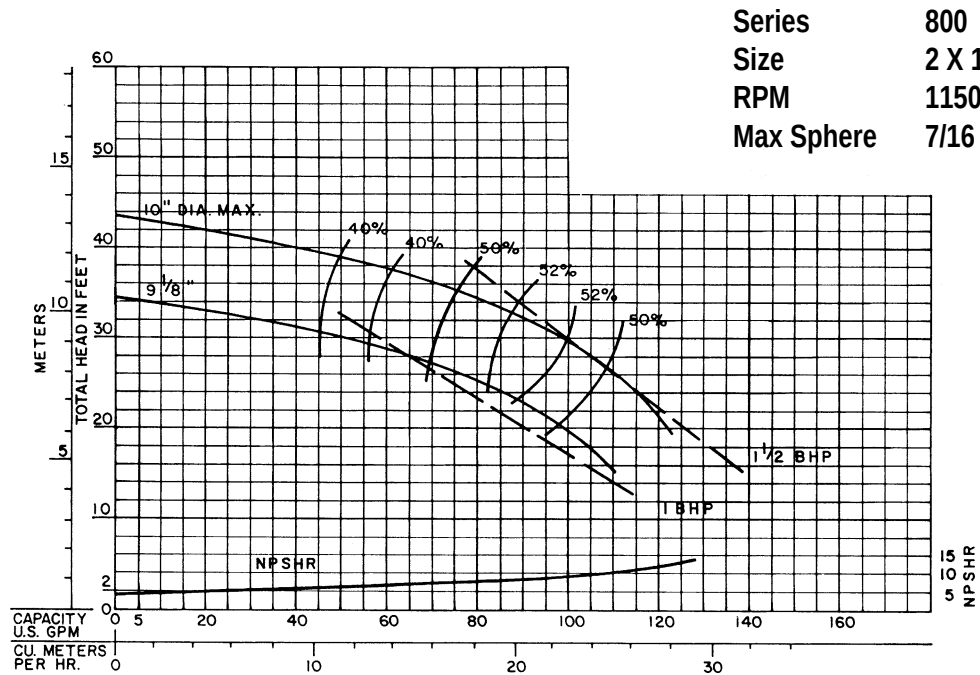
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve SM-1915



Curve TM-1915



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

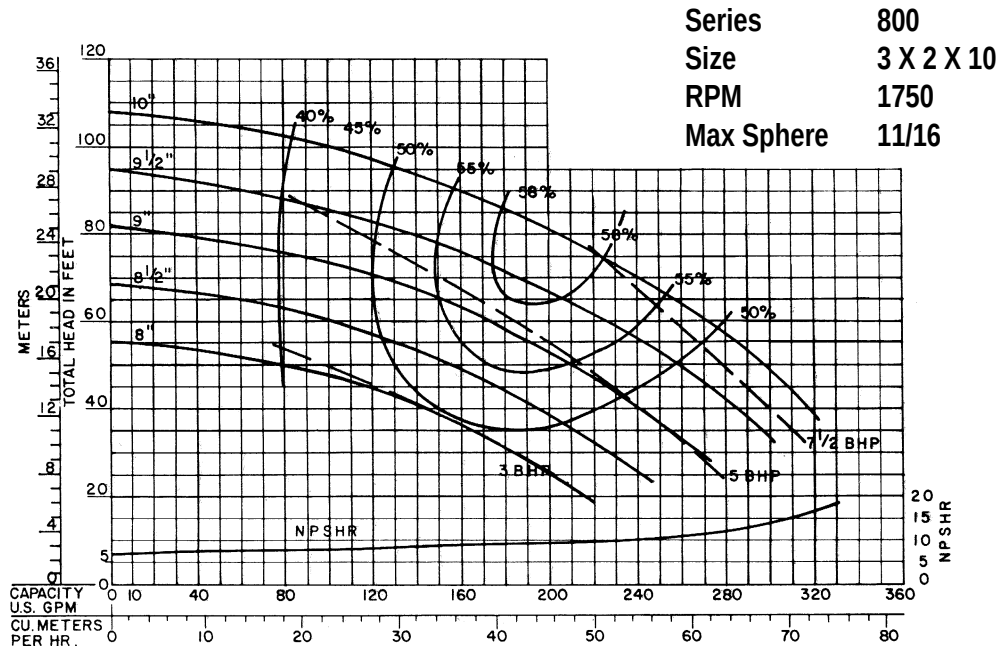
ENGINEER _____

CONTRACTOR _____

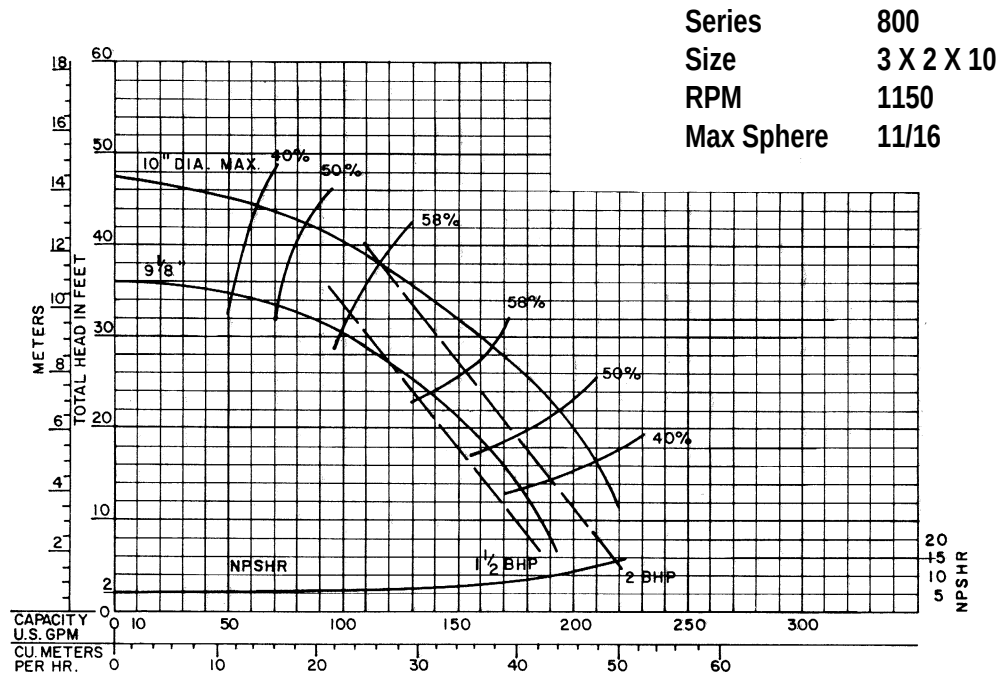
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve JM-1720



Curve KM-1720



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

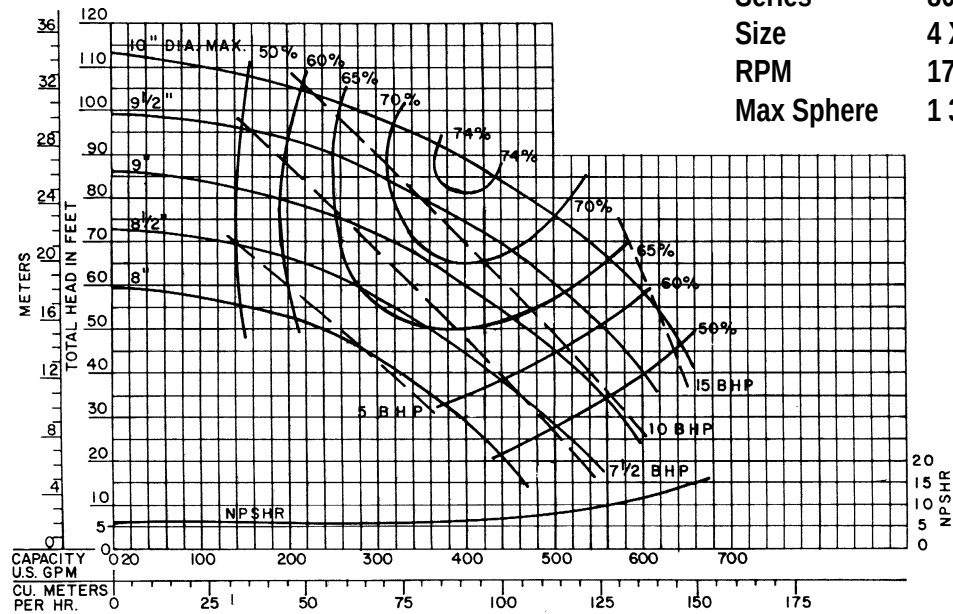
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

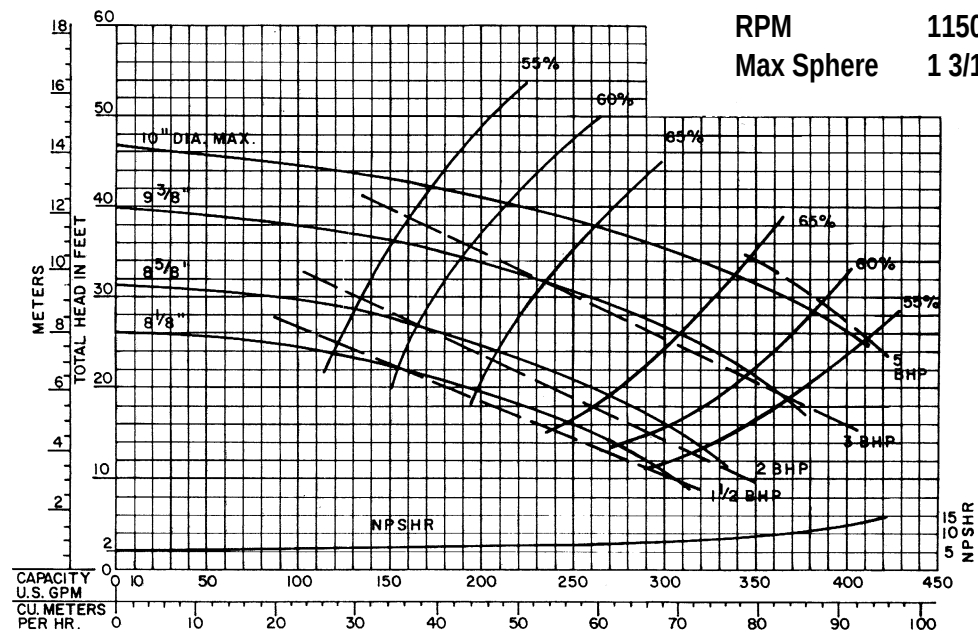
VERTIFLO PUMP COMPANY Performance Curves

Curve RM-1730



Series 800
Size 4 X 3 X 10
RPM 1750
Max Sphere 1 3/16

Curve SM-1730



Series 800
Size 4 X 3 X 10
RPM 1150
Max Sphere 1 3/16

800

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

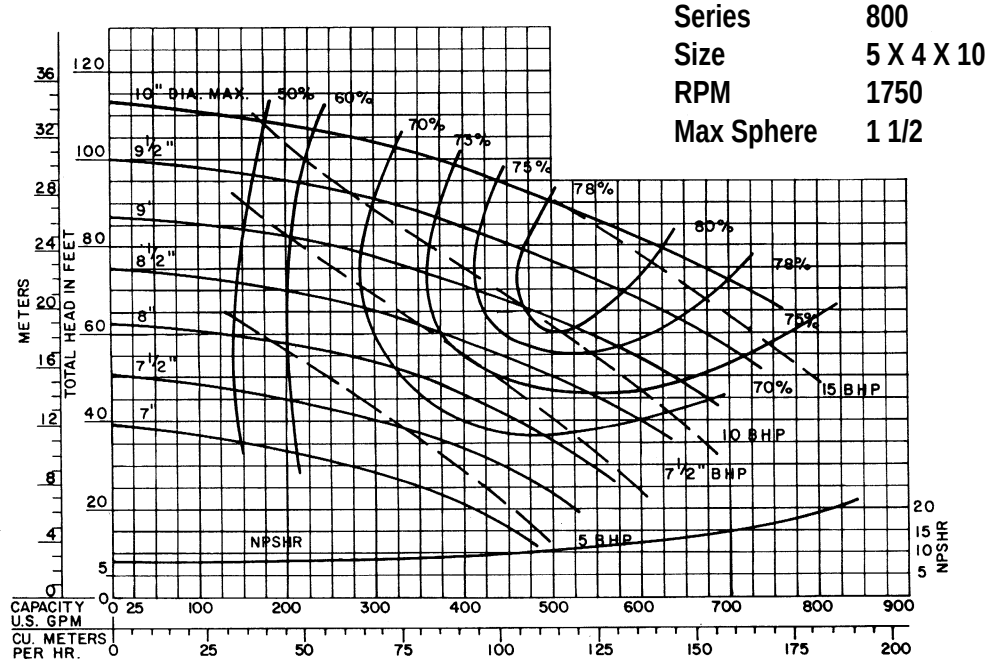
ENGINEER _____

CONTRACTOR _____

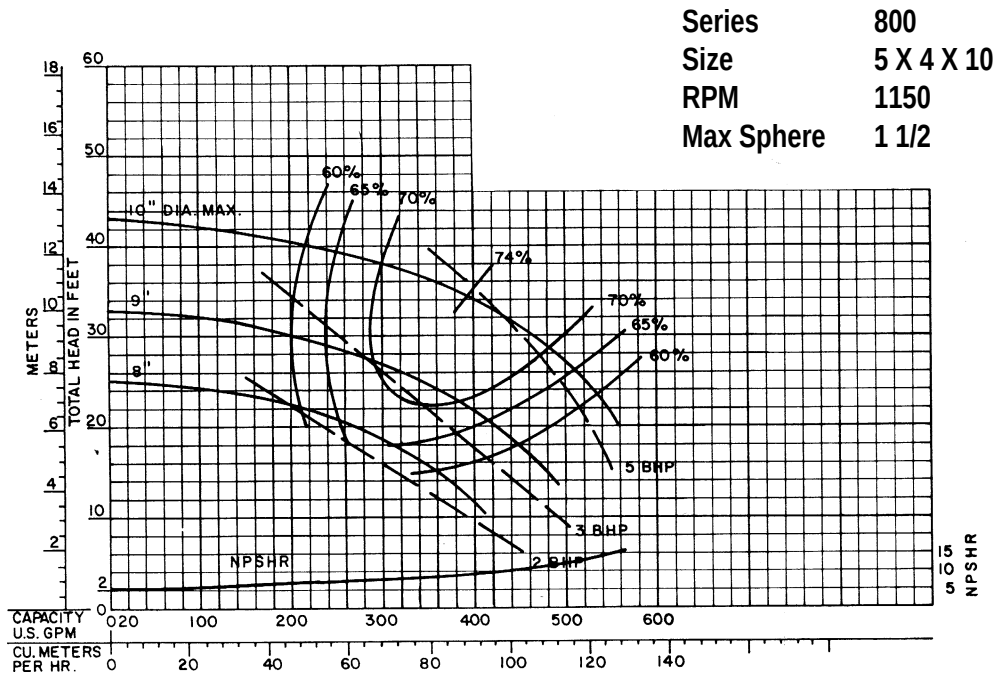
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve TM-1740



Curve UM-1740



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

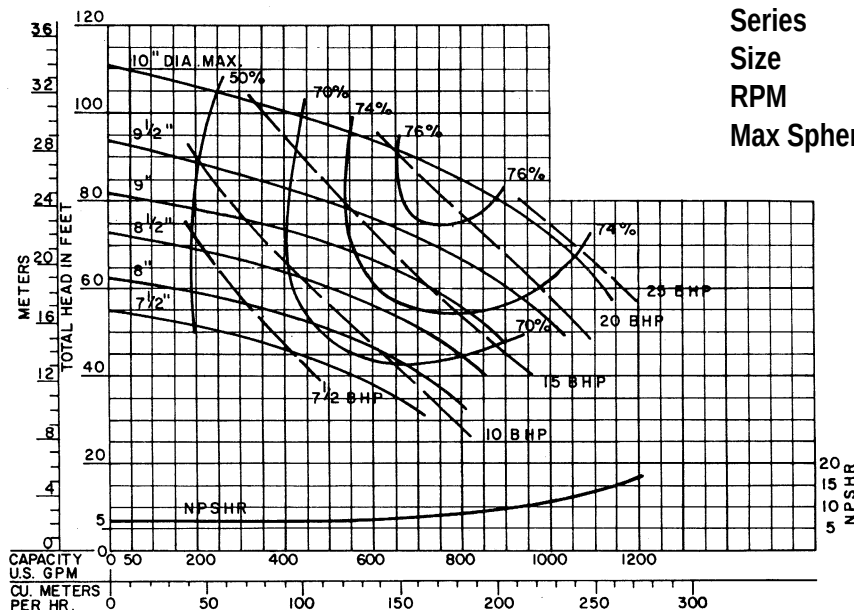
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

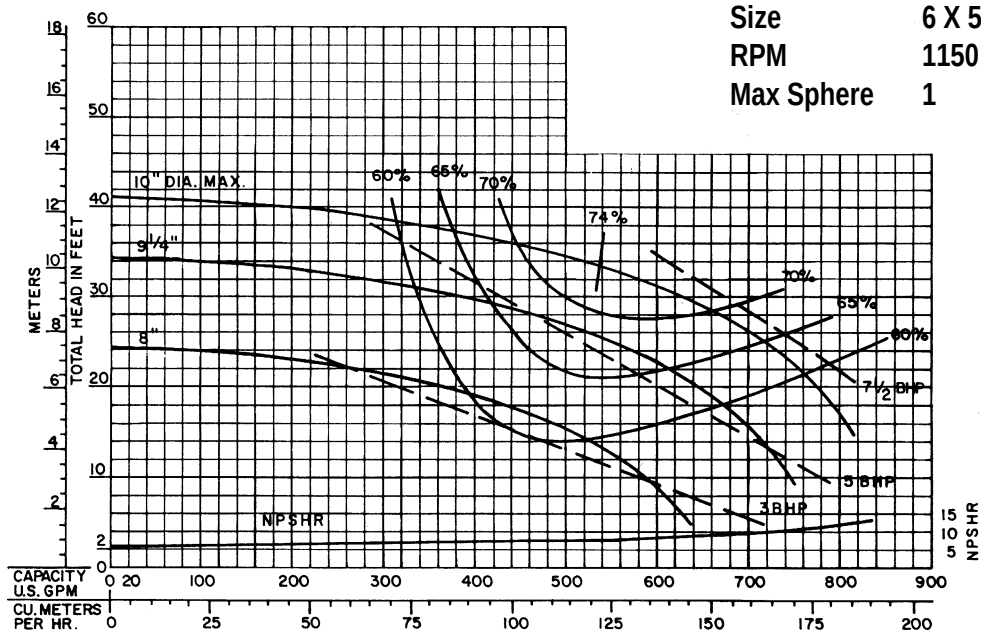
VERTIFLO PUMP COMPANY Performance Curves

Curve UM-1750



Series 800
Size 6 X 5 X 10
RPM 1750
Max Sphere 1

Curve VM-1750



Series 800
Size 6 X 5 X 10
RPM 1150
Max Sphere 1

800

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

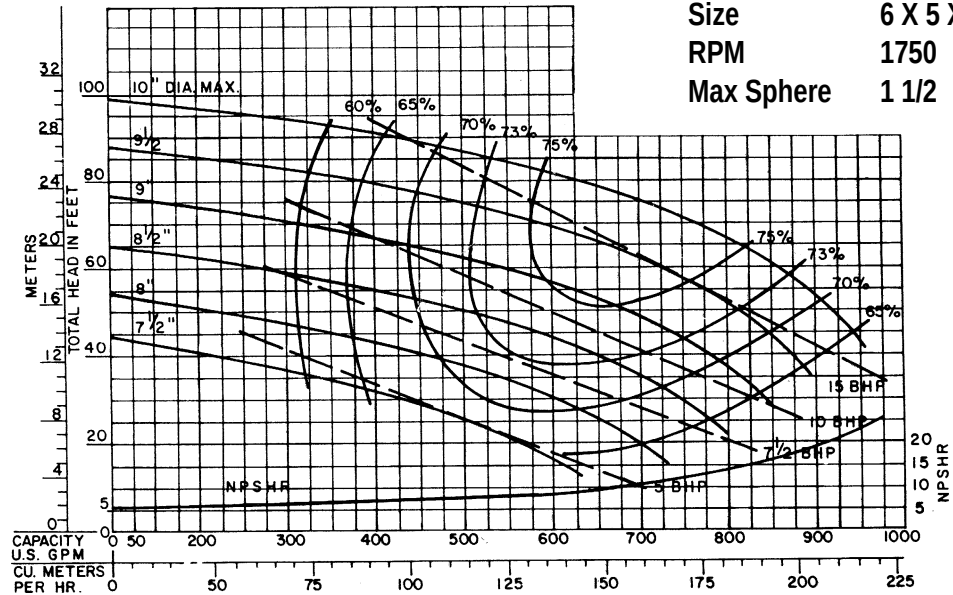
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

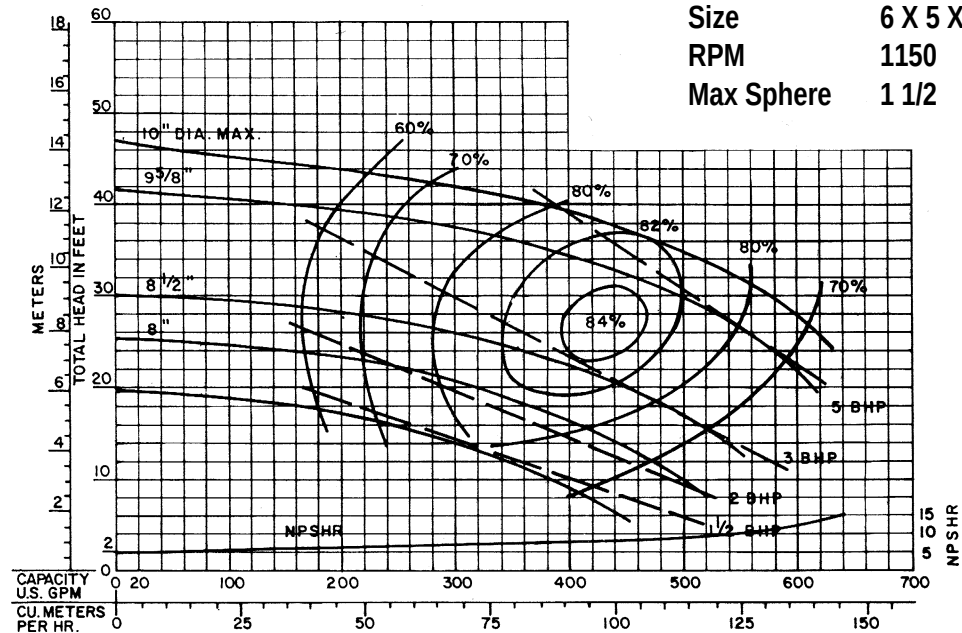
Curve SM-1750

Series 800
 Size 6 X 5 X 10A
 RPM 1750
 Max Sphere 1 1/2



Curve SM-1850

Series 800
 Size 6 X 5 X 10A
 RPM 1150
 Max Sphere 1 1/2



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

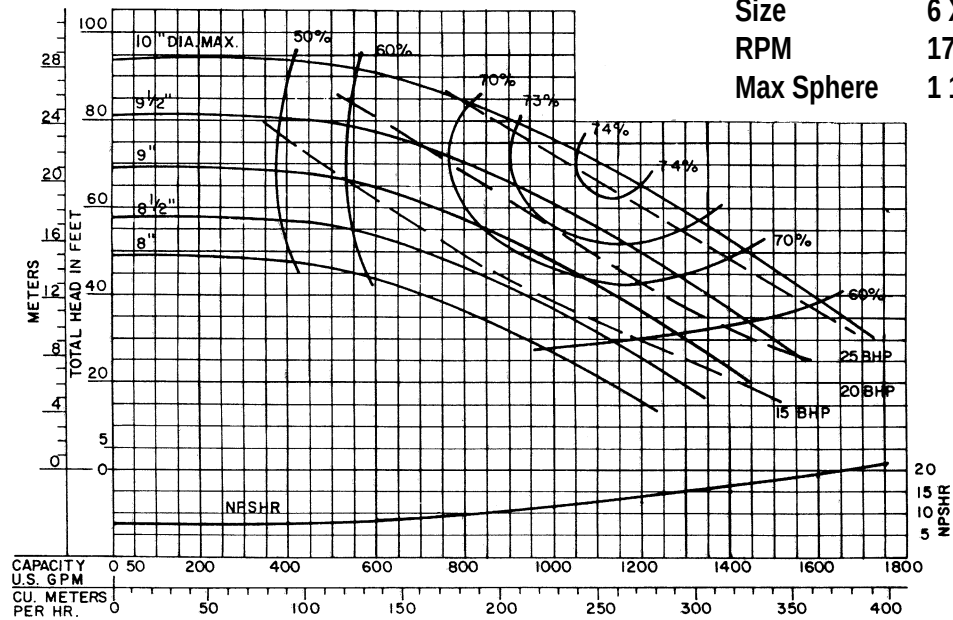
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

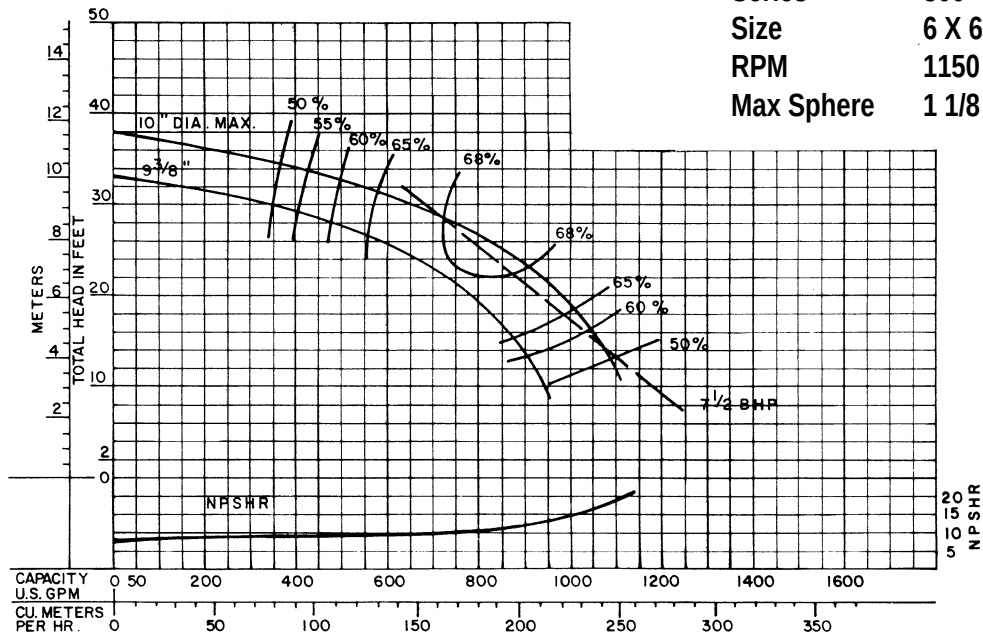
VERTIFLO PUMP COMPANY Performance Curves

Curve TM-1760



Series 800
Size 6 X 6 X 10
RPM 1750
Max Sphere 1 1/8

Curve UM-1760



Series 800
Size 6 X 6 X 10
RPM 1150
Max Sphere 1 1/8

800

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

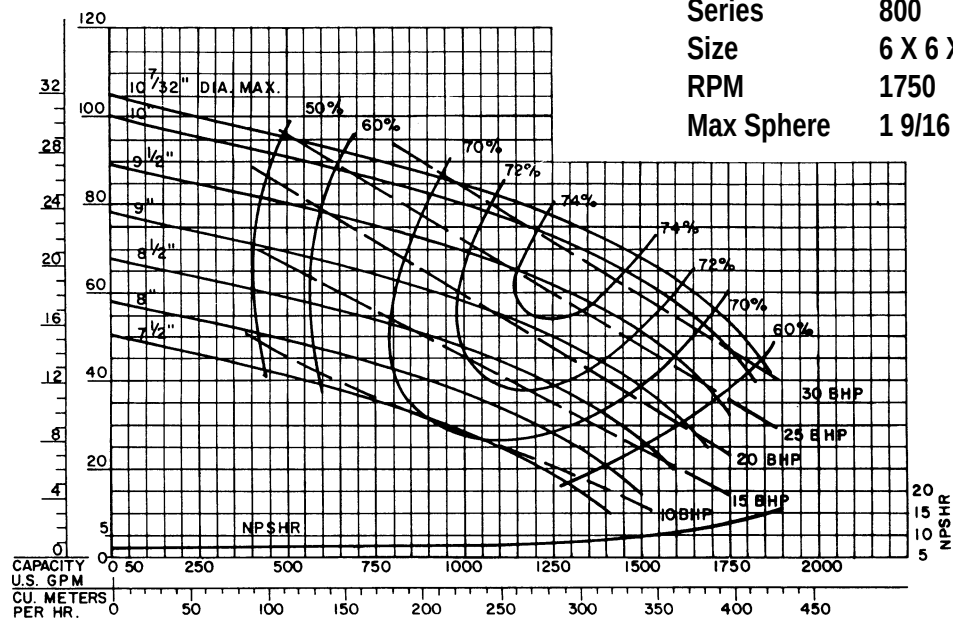
ENGINEER _____

CONTRACTOR _____

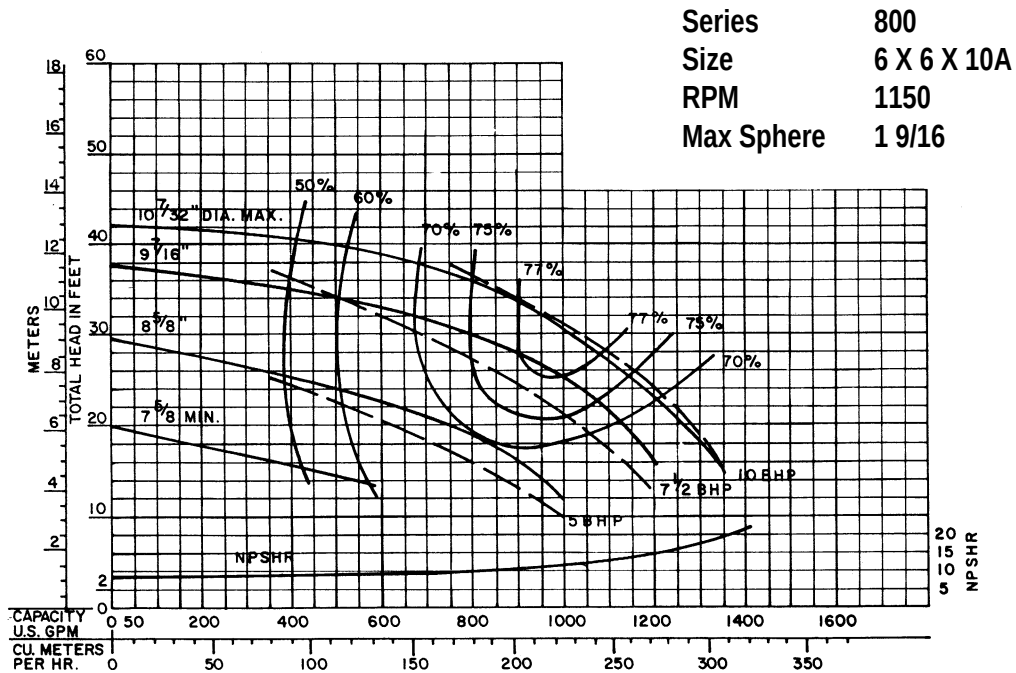
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve LM-1760



Curve LM-1860



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

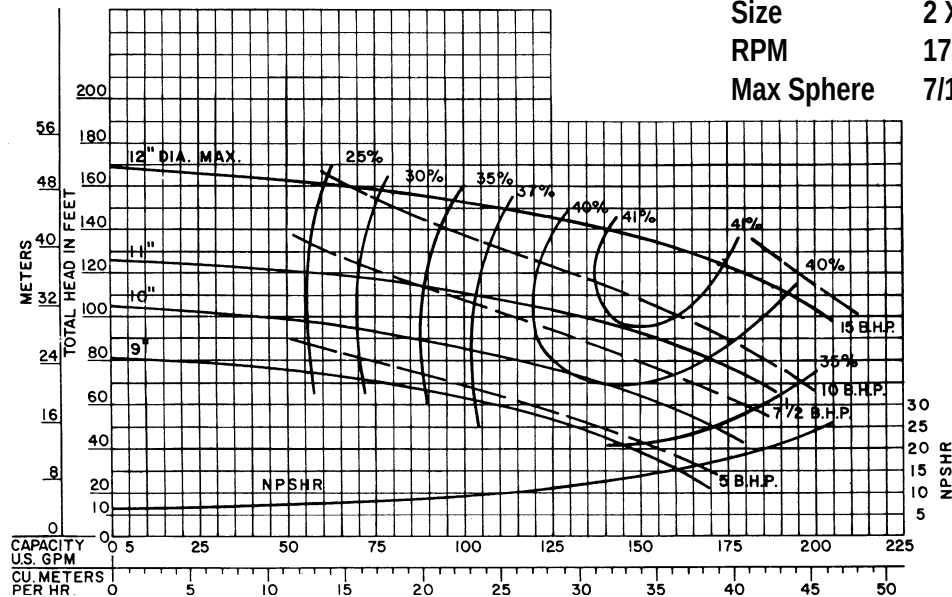
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

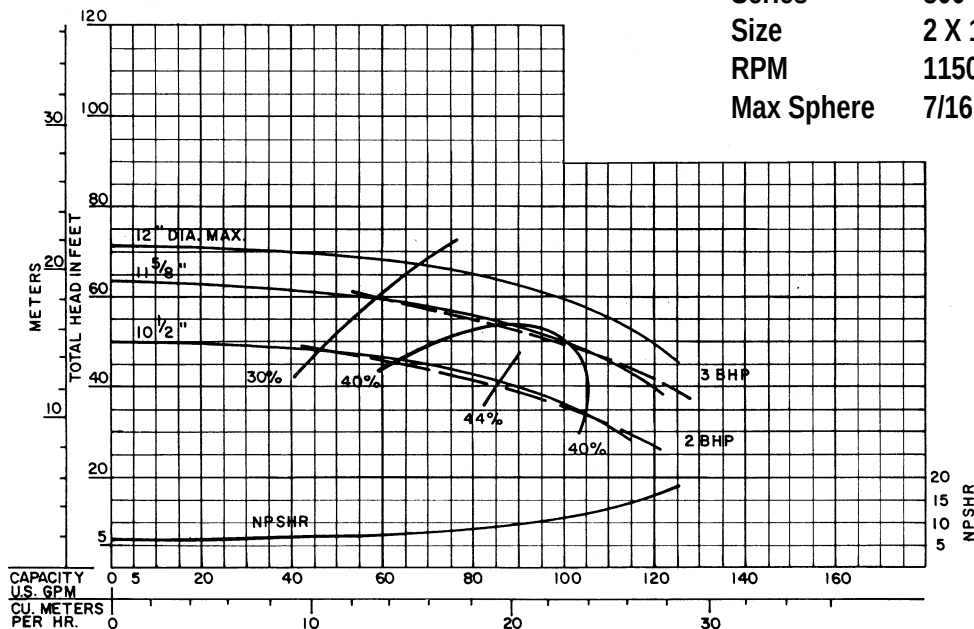
Curve KL-1915

Series 800
Size 2 X 1 1/2 X 12
RPM 1750
Max Sphere 7/16



Curve LL-1915

Series 800
Size 2 X 1 1/2 X 12
RPM 1150
Max Sphere 7/16



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

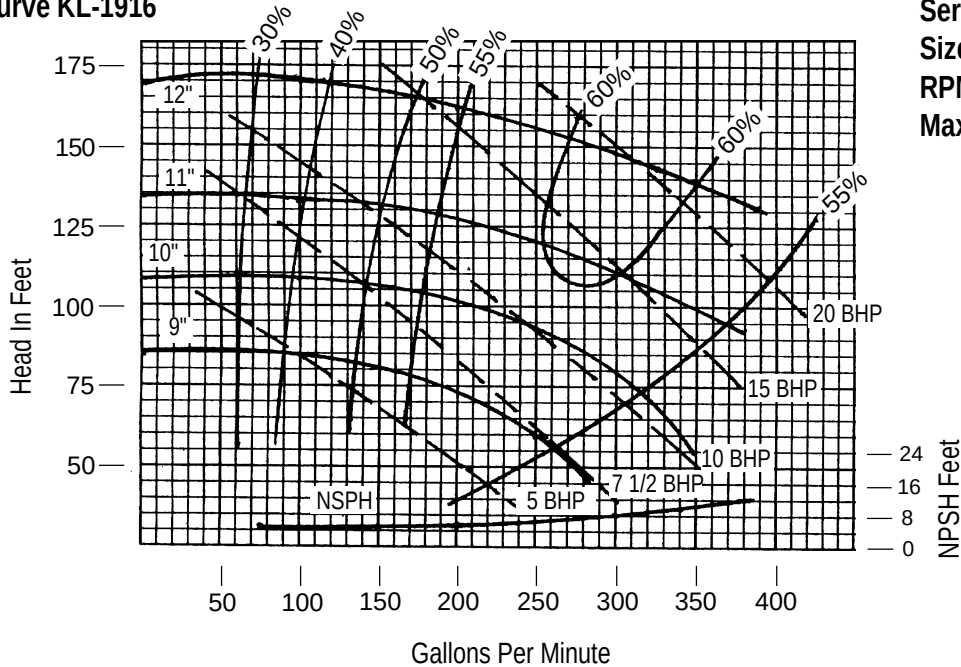
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

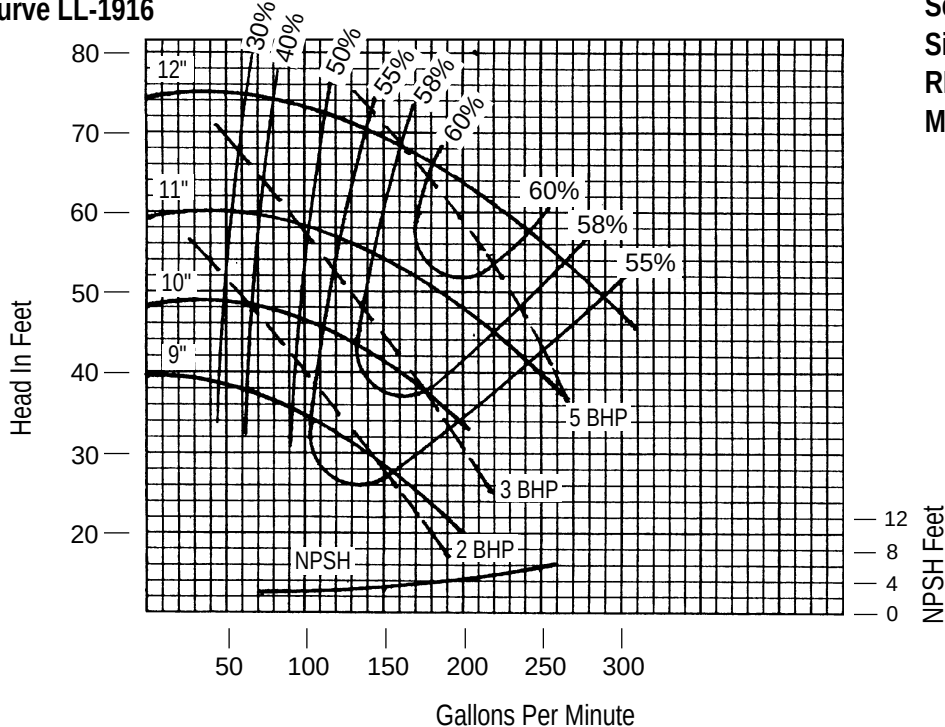
VERTIFLO PUMP COMPANY Performance Curves

Curve KL-1916



Series 800
Size 3 X 2 X 12
RPM 1750
Max Sphere 3/4

Curve LL-1916



Series 800
Size 3 X 2 X 12
RPM 1150
Max Sphere 3/4

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

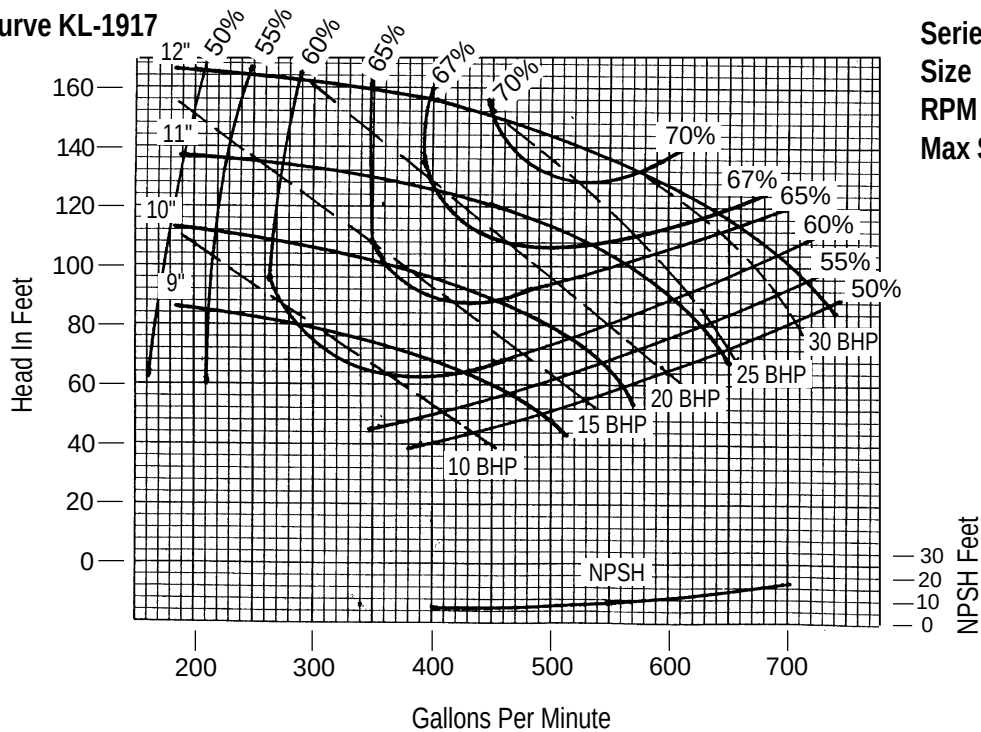
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

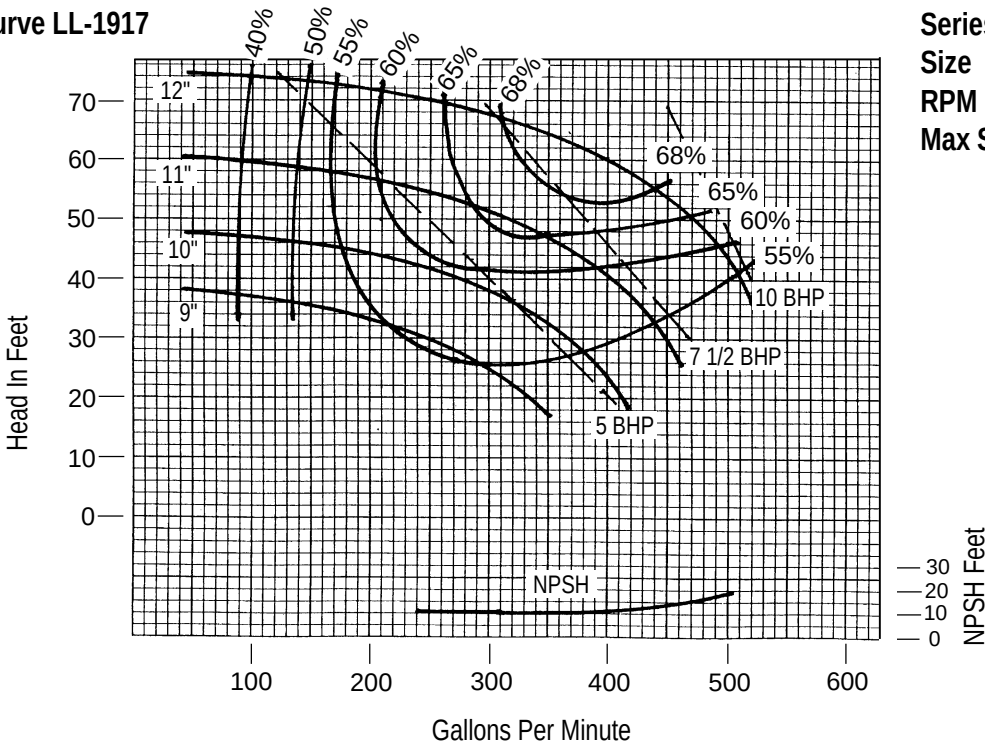
VERTIFLO PUMP COMPANY Performance Curves

Curve KL-1917



Series 800
Size 4 X 3 X 12
RPM 1750
Max Sphere 1 1/4

Curve LL-1917



Series 800
Size 4 X 3 X 12
RPM 1150
Max Sphere 1 1/4

800

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

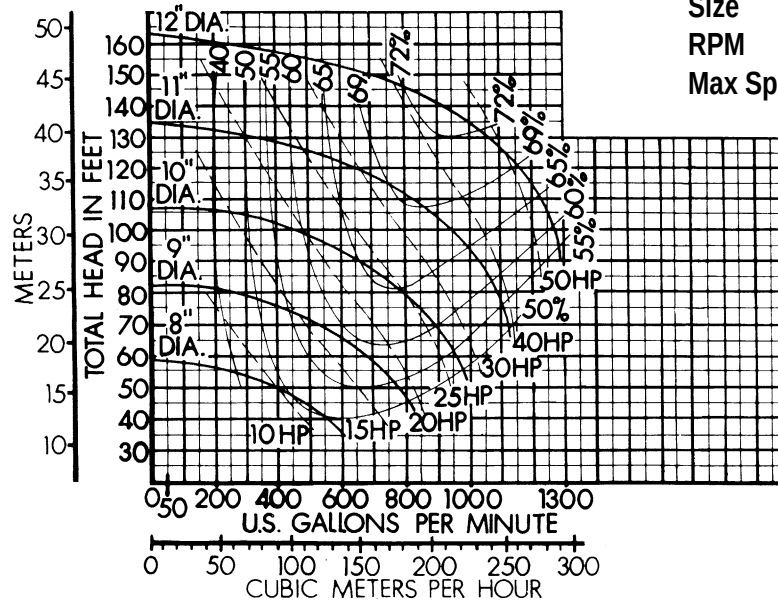
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

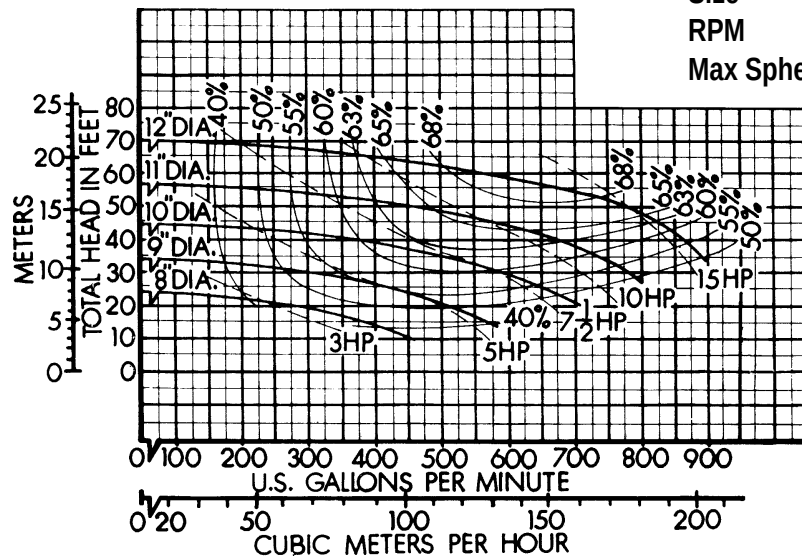
VERTIFLO PUMP COMPANY Performance Curves

Curve 64124



Series 800
Size 6 X 4 X 12
RPM 1750
Max Sphere 1 1/2

Curve 64126



Series 800
Size 6 X 4 X 12
RPM 1150
Max Sphere 1 1/2

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

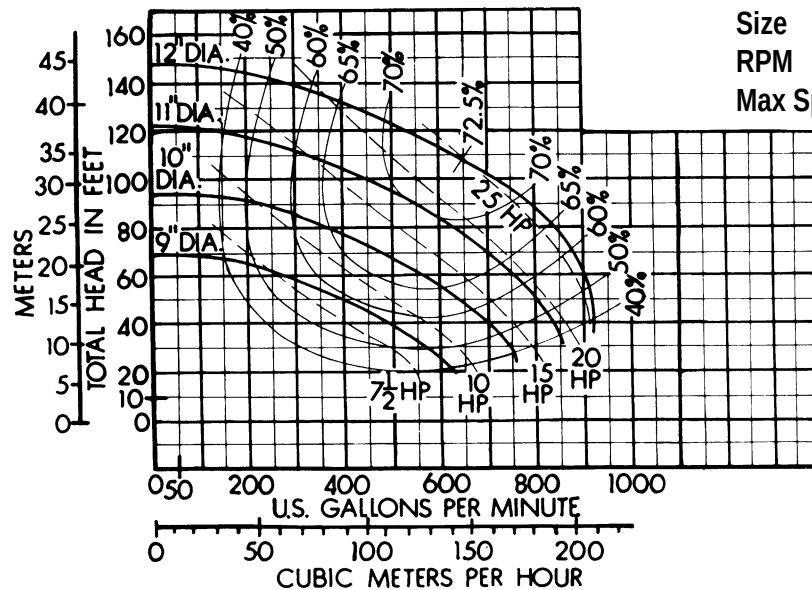
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

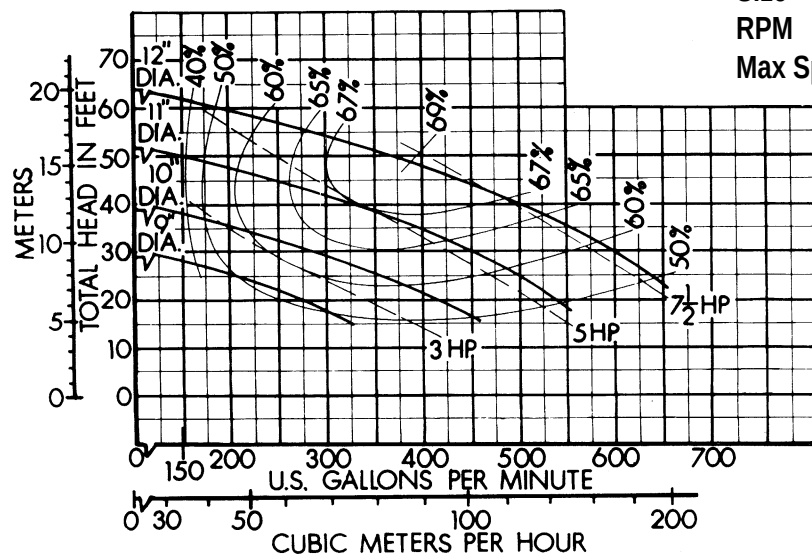
VERTIFLO PUMP COMPANY Performance Curves

Curve 6412A4



Series 800
Size 6 X 4 X 12A
RPM 1750
Max Sphere 1 1/8

Curve 6412A6



Series 800
Size 6 X 4 X 12A
RPM 1150
Max Sphere 1 1/8

800

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

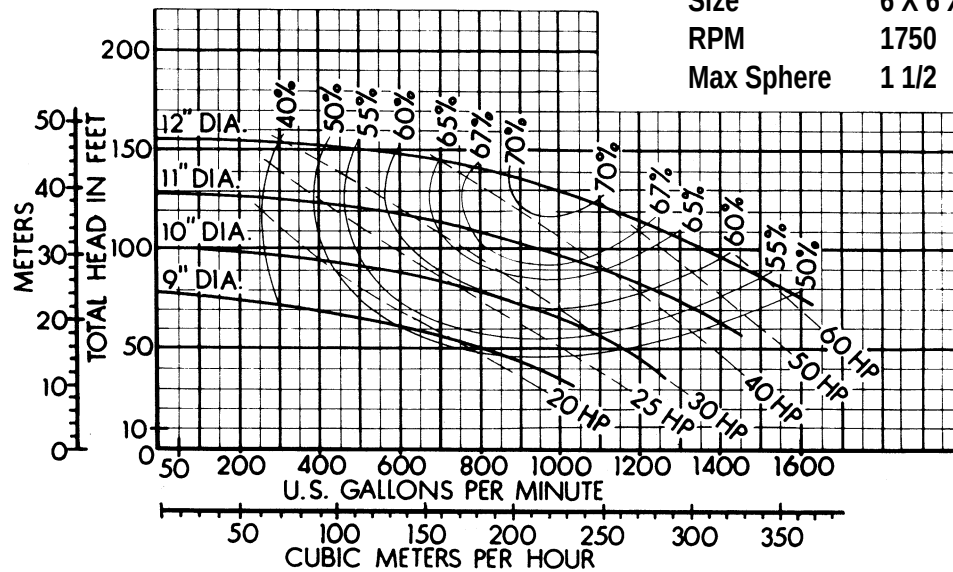
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

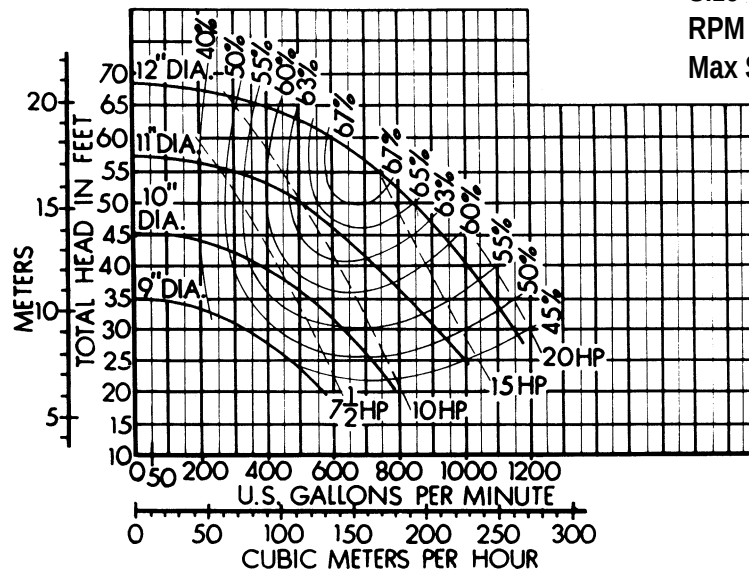
Curve 66124

Series 800
Size 6 X 6 X 12
RPM 1750
Max Sphere 1 1/2



Curve 66126

Series 800
Size 6 X 6 X 12
RPM 1150
Max Sphere 1 1/2



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

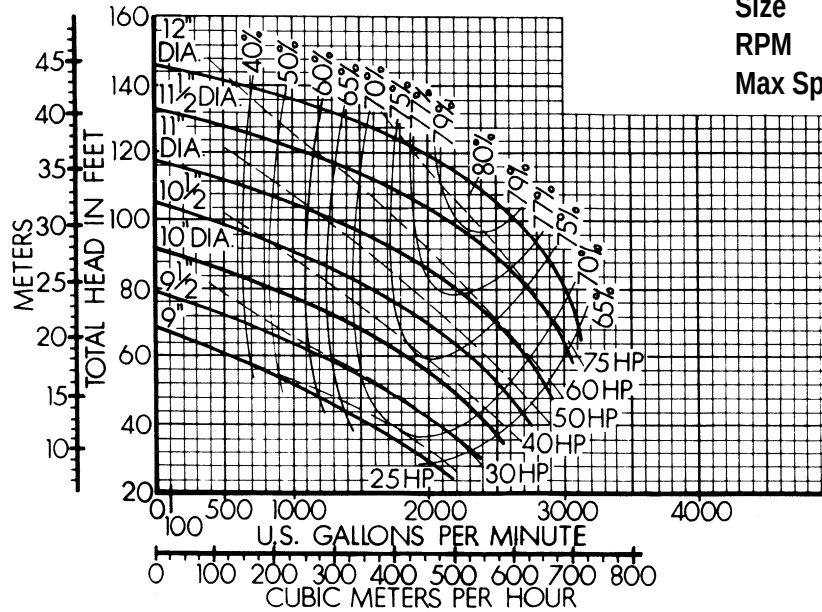
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

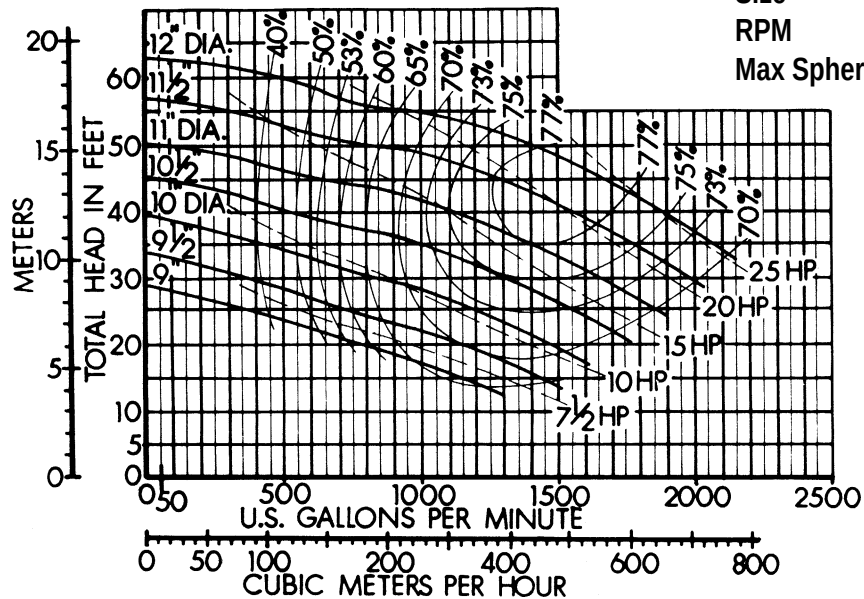
Curve 88124

Series 800
Size 8 X 8 X 12
RPM 1750
Max Sphere 1 1/2



Curve 88126

Series 800
Size 8 X 8 X 12
RPM 1150
Max Sphere 1 1/2



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

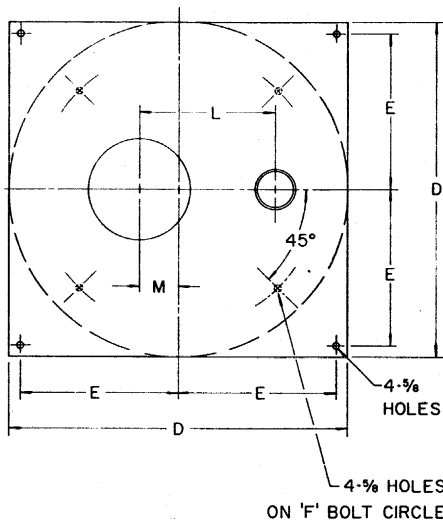
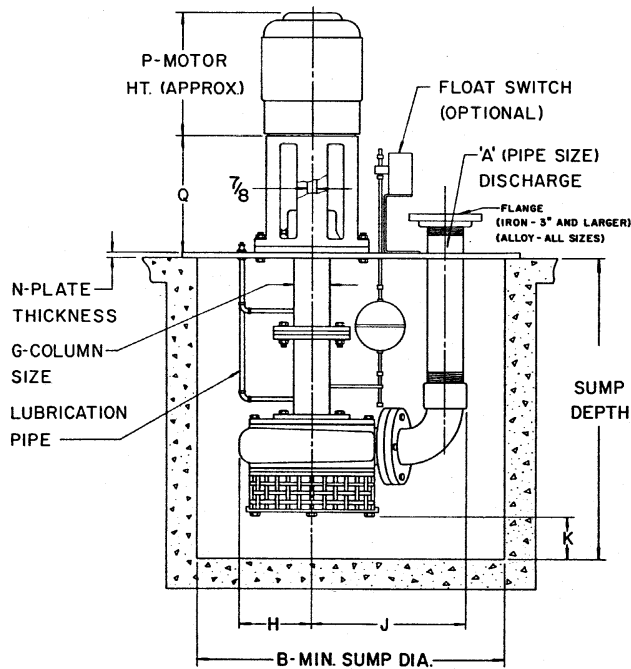
PROJECT _____

ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

800-S Simplex Sump Pump



PUMP DATA

SIZE	MODEL	A	B	C	D	E	F	G	H	J	K ⁽²⁾	L	M	N
3x2 1/2x7	820-S	2 1/2 3	24	2' TO 26' IN 1' INCREMENTS	28	13	26	4	5 1/2	13 1/2 14 1/4	2 7/8 12	11 1/8 12	4 1/4	3/8
1 1/2x1x8	820-S	1 1 1/2	24		28	13	26	4	5 3/8	10 5/8 11 1/8	4 1/8 9 7/8	9 5/8 10	4 1/4	3/8
1 1/2x1 1/4x8	820-S	1 1/2 2	24		28	13	26	4	5 3/8	11 1/8 12	3 1/8 10 3/8	10 1/8 10 3/8	4 1/4	3/8
2x1 1/2x8	820-S	1 1/2 2	24		28	13	26	4	5 3/8	11 1/8 12	3 3/8 10 3/8	10 1/8 10 3/8	4 1/4	3/8
3x2x8	820-S	2 1/2 3	24		28	13	26	4	5 3/8	12 5/8 13 3/8	3 3/8 11 1/8	11 1/8 11 1/8	4 1/4	3/8
4x3x8	820-S	3 4	24		28	13	26	4	6	15 5/8 16 1/8	1 1/2 1 1/2	13 3/8 13 3/8	5 1/4	3/8
5x4x8	820-S	4 5	30		34	16	32	4	7	17 1/8 17 3/8	1 1/8 1 1/8	15 1/8 15 1/8	6 3/8	3/8
2x1 1/2x10	820-S	1 1/2 2	34		28	13	26	4	6 1/2	12 1/2 13 3/4	5 5	11 1/8 12 1/8	4 1/4	3/8
3x2x10	820-S	2 1/2 3	24		28	13	26	4	6 3/8	14 1/2 17 1/8	5 5	12 1/8 14 1/8	4 1/4	3/8
4x3x10	820-S	3 4	30		34	16	32	4	7	17 1/8 18	2 3/8 2 3/8	15 1/8 15 1/8	6 3/8	3/8
5x4x10	824-S	4 5	30		34	16	32	4	7 3/8	19 1/8 20 3/8	1 1/8 1 1/8	16 1/8 17 1/8	6 3/8	3/8
6x5x10	824-S	5 6	36		40	19	38	4	8	20 3/8 21 7/8	1 1/8 1 1/8	17 1/8 18 1/8	6 3/8	1/2
6x5x10A	824-S	6 6	36		40	19	38	4	8 1/2	22 1/2 25	7/8 7/8	18 1/8 19 1/8	7 1/4	1/2
6x6x10	824-S	6 8	36		40	19	38	4	9 1/2	22 1/2 25	7/8 7/8	18 1/8 19 1/8	7 1/4	1/2
6x6x10A	824-S	8 1 1/2	36		40	19	38	4	9 1/2	25 25 3/4	7/8 2 1/8	19 1/8 20 1/8	7 1/4	1/2
2x1 1/2x12	824-S	2 2	24		28	13	26	4	7 3/8	13 1/2 15 3/4	2 1/8 2 1/8	12 1/8 14 1/4	4 1/4	3/8
3x2x12	824-S	3 3	36		40	19	38	4	8	17 1/4 18	2 2	15 1/8 15 3/4	6	1/2
4x3x12	824-S	3 4	36		40	19	38	4	8	18 19	1 3/8 1 3/8	15 3/4 16 1/4	6	1/2

FRAME	P	Q
56 C	10 7/16	12
143 TC	10	12
145 TC	10 7/16	12
182 - 184 TC	13 1/2	12
213 TC	15 1/2	12
215 TC	17	12
254 TC	20 1/8	12
256 TC	21 7/8	12
284 TC	22 3/8	13
286 TC	23 7/8	13
324 TC	24 3/4	13 1/2
326 TC	26 1/8	13 1/2
364 TC	26 1/2	16 5/8
365 TC	27 1/2	16 5/8

MOTOR DATA

"K" dimension shown is for a pump built for a 2' through 6' pit depth. For each additional column section, subtract 3/8" from "K."

Not for construction unless certified, some dimensions may vary $\pm 1/2"$. Pump Construction:

CUSTOMER _____	CUSTOMER NO. _____
PROJECT _____	SERIAL NO. _____
ENGINEER _____	LOCATION _____
CONTRACTOR _____	
PUMP Model _____ Size _____	Curve No. _____ GPM _____ Head _____ SP. GR.@Temp. _____ Pump Length _____ Plate DATA _____
MOTOR Mfrgr. _____ HP _____	RPM _____ Volt-Phase-Cycle _____ Frame ENC. _____ Furnished by _____ Mounted by _____
Shop Order _____	Certified by _____ Date _____

800-S Duplex Sump Pump

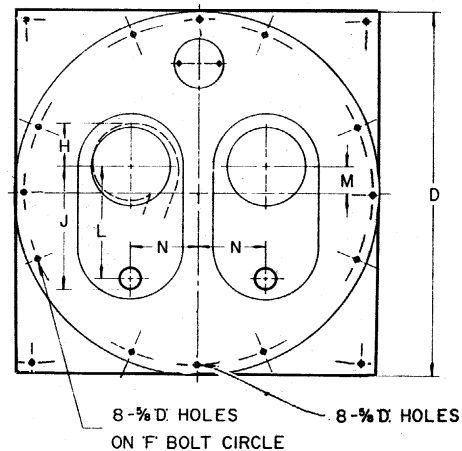
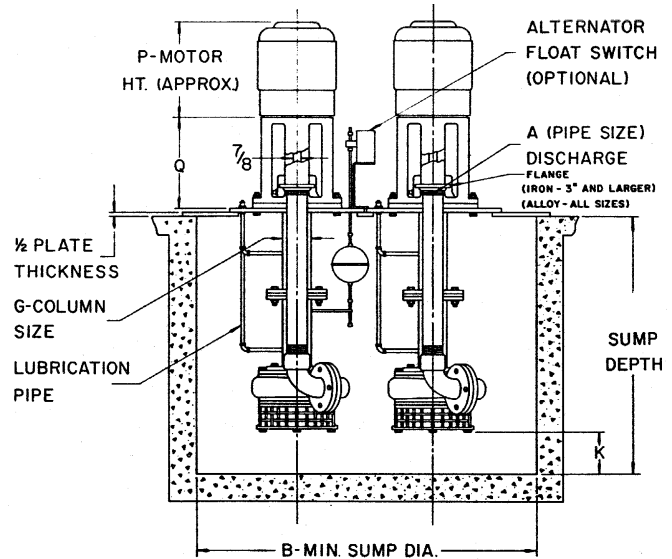
PUMP DATA

SIZE	MODEL	A	B	C	D	F	G	H	J	K	⁽²⁾ L	M	N
3x2½x7	820-S	2½ 3	48	2' TO 20' IN 1' INCREMENTS	54	51	4	5½	13½ 14½	27½	11½ 12	8¾	10½
1½x1x8	820-S	1 1½	48		54	51	4	5¾	10½ 11½	4½	9½ 9¾	8¾	10½
1½x1¼x8	820-S	1½ 2	48		54	51	4	5¾	11½ 12	3½	10¾ 10¾	8¾	10½
2x1½x8	820-S	1½ 2	48		54	51	4	5¾	11½ 12	3¾	10¾ 10¾	8¾	10½
3x2x8	820-S	2 2½	48		54	51	4	5¾	12½ 13½	3¾	11½ 11½	8¾	10½
4x3x8	820-S	3 4	48		54	51	4	6	15½ 16½	1½	13¾ 13¾	8¾	10½
5x4x8	820-S	4 5	54		60	57	4	7	17½ 18½	1½	14½ 15	8½	11
2x1½x10	820-S	1½ 2	48		54	51	4	6½	12½ 13	5	11½ 11½	8¾	10½
3x2x10	820-S	2 2½	48		54	51	4	6¾	13½ 14½	5	12¾ 12¾	8¾	10½
4x3x10	820-S	3 4	54		60	57	4	6¾	17 18	2¾	14¾ 15¼	11½	11
5x4x10	824-S	4 5	54		60	57	4	7¾	19¼ 20¾	1½	16½ 17	13	11
6x5x10	824-S	5	60		66	63	4	8	20¾	1¾	17½	13	12½
6x5x10A		6			66	63	4	8	21¾	1¾	18		
6x6x10	824-S	6	60		66	63	4	9½	22½	7½	18½	12½	12½
6x6x10A		8			66	63	4	9½	25		19½		
2x1½x12	824-S	1½ 2	48		54	51	4	7¾	12½ 13½	2½	11½ 12	8¾	10½
3x2x12	824-S	2 3	54		60	57	4	8	15¾ 17¼	2½	14¼ 15	12	11
4x3x12	824-S	3 4	54		60	57	4	8	18 19	2½	15¾ 16¼	12	11

MOTOR DATA

FRAME	P	Q
56 C	107/16	12
143 TC	10	12
145 TC	107/16	12
182 - 184 TC	13½	12
213 TC	15½	12
215 TC	17	12
254 TC	20½	12

FRAME	P	Q
256 TC	21¾	12
284 TC	22¾	13
286 TC	23¾	13
324 TC	24¾	13½
326 TC	26½	13½
364 TC	26½	16¾
365 TC	27½	16¾



"K" dimension shown is for a pump built for a 2' through 6' pit depth. For each additional column section, subtract 3/8" from "K."

Not for construction unless certified, some dimensions may vary $\pm 1/2$ ". Pump Construction: _____

CUSTOMER _____	CUSTOMER NO. _____
PROJECT _____	SERIAL NO. _____
ENGINEER _____	LOCATION _____
CONTRACTOR _____	
PUMP Model _____	Size _____
Curve No. _____	GPM _____
Head _____	SP. GR.@Temp. _____
Pump Length _____	Plate _____
DATA _____	
MOTOR Mfgr. _____	HP _____
RPM _____	Volt-Phase-Cycle _____
Frame _____	ENC. _____
Furnished by _____	Mounted by _____
DATA _____	
Shop Order _____	Certified by _____
Date _____	

800-S Basic Sump Pump

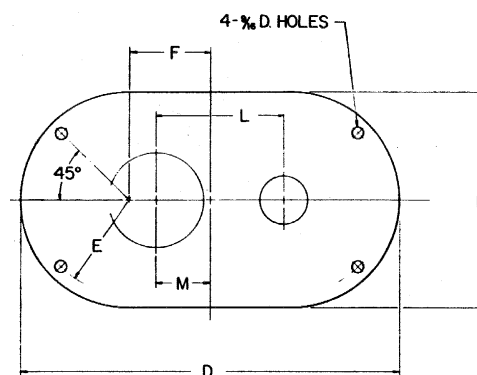
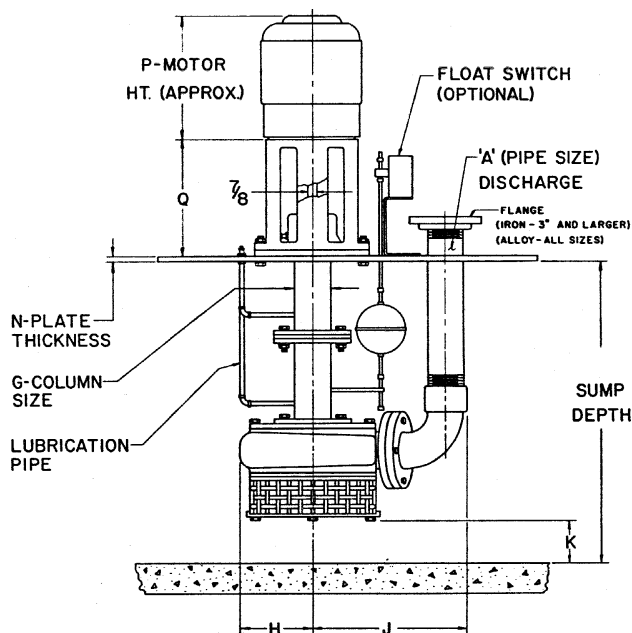
PUMP DATA

SIZE	MODEL	A	B	C	D	E	F	G	H	J	K ⁽²⁾	L	M	N
3x2 1/2x7	820-S	2 1/2 3	18	2' TO 20' IN 1' INCREMENTS	26	8	4	4	5 1/2	13 1/2 14 1/2	2 7/8	11 1/2 12	4 3/4	3 1/2
1 1/2x1x8	820-S	1 1 1/2	18		26	8	4	4	5 3/4	10 5/8 11 1/8	4 1/8	9 5/8 9 7/8	4 3/4	3 1/2
1 1/2x1 1/4x8	820-S	1 1/2 2	18		26	8	4	4	5 3/4	11 3/8 12	3 1/2	10 10 5/8	4 3/4	3 1/2
2x1 1/2x8	820-S	1 1/2 2	18		26	8	4	4	5 3/4	11 3/8 12	3 3/4	10 10 5/8	4 3/4	3 1/2
3x2x8	820-S	2 2 1/2	18		26	8	4	4	5 3/4	12 5/8 13 3/8	3 3/4	11 1/8 11 1/2	4 3/4	3 1/2
4x3x8	820-S	3 4	18		26	8	4	4	6	15 5/8 16 5/8	1 1/2	13 3/8 13 7/8	5 3/4	3 1/2
5x4x8	820-S	4 5	21		30	9 1/2	4 1/2	4	7	17 1/8 17 3/8	1 1/8	14 1/2 15	6 1/2	3 1/2
2x1 1/2x10	820-S	1 1/2 2	18		26	8	4	4	6 1/2	12 1/2 13	5	11 1/4 11 1/2	4 3/4	3 1/2
3x2x10	820-S	2 2 1/2	18		26	8	4	4	6 5/8	13 3/4 14 1/2	5	12 1/2 12 5/8	4 3/4	3 1/2
4x3x10	820-S	3 4	21		30	9 1/2	4 1/2	4	7	17 1/8 18	2 3/4	14 7/8 15 1/4	6 1/2	3 1/2
5x4x10	824-S	4 5	24		34	9 1/2	6 1/2	4	7 3/8	19 1/4 20 3/8	1 1/8	16 1/2 17	7	1 1/2
6x5x10	824-S	5 6	21		34	9 1/2	6 1/2	4	8	20 7/8 21 7/8	1 1/8	17 1/2 18	7	1 1/2
6x6x10	824-S	6 8	24		39	11	7 1/2	4	9 1/2	22 1/2 25	7/8	18 1/2 19 3/8	8	1 1/2
2x1 1/2x12	824-S	1 1/2 2	20		26	9	3	4	7 3/8	12 7/8 13 1/2	2 1/8	11 5/8 12	4 1/4	3 1/2
3x2x12	824-S	2 3	21		34	9 1/2	6 1/2	4	8	15 3/4 17 1/4	2	14 1/4 15	6	1 1/2
4x3x12	824-S	3 4	21		34	9 1/2	6 1/2	4	8	18 19	1 1/8	15 3/4 16 1/4	6	1 1/2

MOTOR DATA

FRAME	P	Q
56 C	10 7/16	12
143 TC	10	12
145 TC	10 7/16	12
182 - 184 TC	13 1/2	12
213 TC	15 1/2	12
215 TC	17	12
254 TC	20 1/8	12

FRAME	P	Q
256 TC	21 1/8	12
284 TC	22 3/8	13
286 TC	23 7/8	13
324 TC	24 3/4	13 1/2
326 TC	26 1/8	13 1/2
364 TC	26 1/2	16 5/8
365 TC	27 1/2	16 5/8



"K" dimension shown is for a pump built for a 2' through 6' pit depth. For each additional column section, subtract 3/8" from "K."

Not for construction unless certified, some dimensions may vary $\pm 1/2"$. Pump Construction: _____

CUSTOMER _____	CUSTOMER NO. _____
PROJECT _____	SERIAL NO. _____
ENGINEER _____	LOCATION _____
CONTRACTOR _____	
PUMP Model _____	Size _____
Curve No. _____	GPM _____
Head _____	SP. GR.@Temp. _____
Pump Length _____	Plate _____
MOTOR Mfrgr. _____	HP _____
RPM _____	Volt-Phase-Cycle _____
Frame _____	ENC. _____
Furnished by _____	Mounted by _____
Shop Order _____	Certified by _____
Date _____	

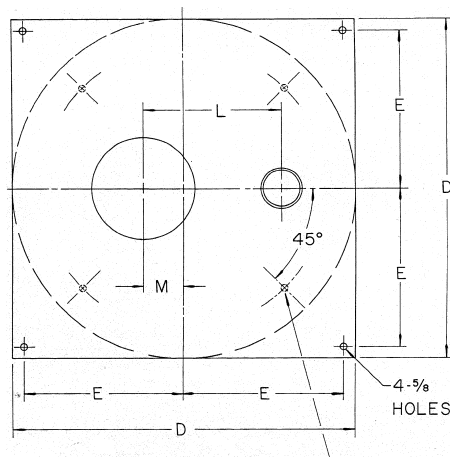
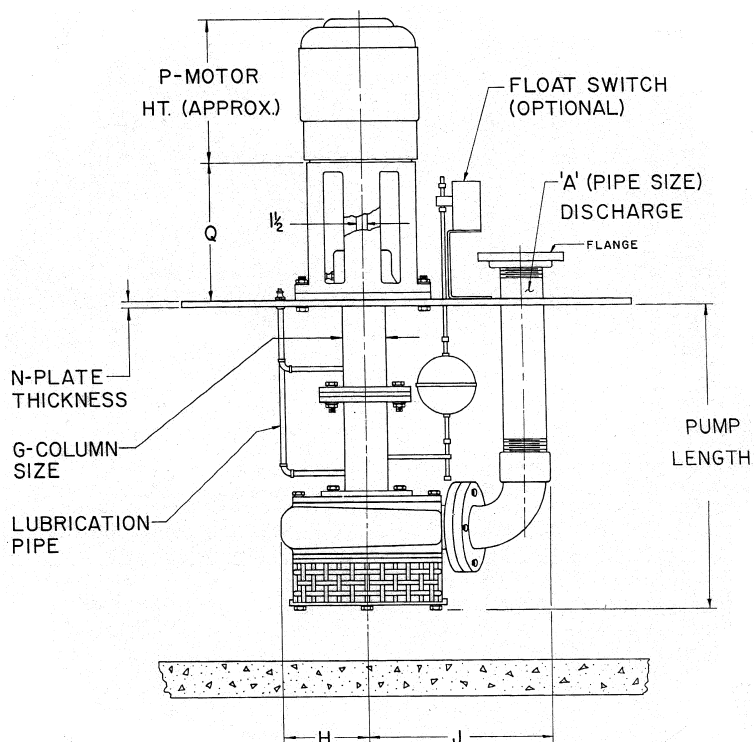
832 Simplex Sump Pump

PUMP DATA

SIZE	MDL	A	B	D	E	F	G	H	J	L	M	N
6x4x12	832	4							19 $\frac{3}{4}$	17		
		5	36	40	19	38	6	9	20 $\frac{3}{4}$	17 $\frac{1}{2}$	6 $\frac{1}{8}$	$\frac{1}{2}$
		6							22	18		
6x6x12	832	6	36	40	19	38	6	9 $\frac{1}{2}$	22 $\frac{3}{4}$	18 $\frac{3}{4}$	7 $\frac{1}{8}$	$\frac{1}{2}$
		8	40	54	26	52			25 $\frac{1}{4}$	19 $\frac{7}{8}$		
		10							28 $\frac{3}{8}$	23		
8x8x12	832	8	40	54	26	52	6	12 $\frac{1}{2}$	30 $\frac{3}{8}$	24 $\frac{1}{8}$	8 $\frac{1}{2}$	$\frac{1}{2}$

MOTOR DATA

FRAME	P	Q
56 C	12 $\frac{1}{8}$	12
143 - 145 TC	12 $\frac{1}{4}$	12
182 - 184 TC	15 $\frac{7}{16}$	12
213 - 215 TC	16 $\frac{11}{16}$	14 $\frac{1}{4}$
254 - 256 TC	20	14 $\frac{1}{4}$
284 - 286 TC	20 $\frac{1}{8}$	14 $\frac{5}{8}$
324 - 326 TSC	25	16 $\frac{3}{8}$
364 - 365 TSC	25 $\frac{1}{4}$	16 $\frac{3}{8}$
404 - 405 TSC	28	18 $\frac{3}{8}$



Not for construction unless certified, some dimensions may vary $\pm 1/2$ ". Pump Construction: _____

CUSTOMER _____	CUSTOMER NO. _____
PROJECT _____	SERIAL NO. _____
ENGINEER _____	LOCATION _____
CONTRACTOR _____	
PUMP Model _____	Size _____
Curve No. _____	GPM _____
Head _____	SP. GR.@Temp. _____
Pump Length _____	Plate _____
DATA _____	
MOTOR Mfgr. _____	HP _____
RPM _____	Volt-Phase-Cycle _____
Frame _____	ENC. _____
Furnished by _____	Mounted by _____
DATA _____	
Shop Order _____	Certified by _____
Date _____	

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VERTIFLO

The Vertical Pump Specialists

PUMPS FOR INDUSTRY

CONTENTS:

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 900

Quality Design Features Assure Long, Trouble-Free Service



WIDE RANGE OF APPLICATIONS:

- Chemical Slurries
- Fragile Food Processing Solids
- Paper & Pulpy Solids
- Petroleum
- Oils
- Sewage & Waste Treatment
- Textiles

CAPABILITIES:

- Capacities to 1600 GPM
- Heads to 170 Feet
- Temperature to 350° F
- Pit Depths to 26 Feet
- Construction: Cast Iron, 316 Stainless Steel Fitted, All 316 Stainless Steel, Alloy 20, CD4MC_u
- Solid Handling up to 4" Diameter Spheres

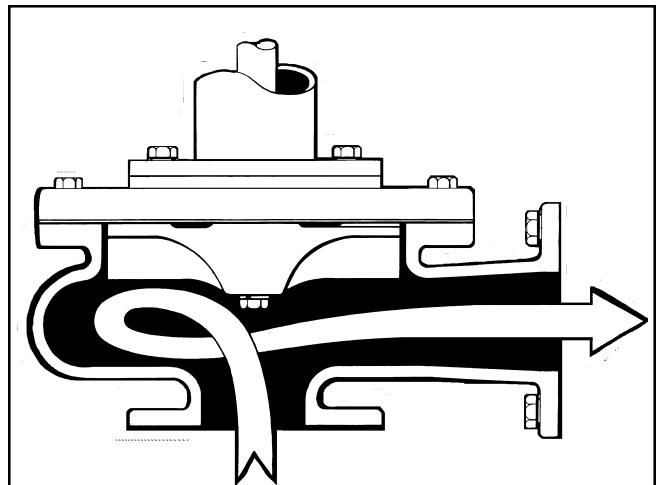
CONSTRUCTION:

Standard

- All iron construction
- Carbon bottom line shaft bearings
- Carbon intermediate bearings (Pump built for pit depth over 6'-0")
- Fully recessed impeller with wiping vanes
- High thrust, angular contact ball bearing
- 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 suction and discharge on all casings
- Standard C face motors

Options

- Stainless steel fitted, all stainless steel or Alloy 20 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"



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

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 Bearings

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

5. Gas Tight Column Closure

Optional double lip seals available

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

Furnished as standard for pit depths in excess of 6'-0". Optional designs for special applications

10. Shafting

Accurately machined 416 stainless steel, 1 1/4", 1 1/2" and 1 5/8" 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

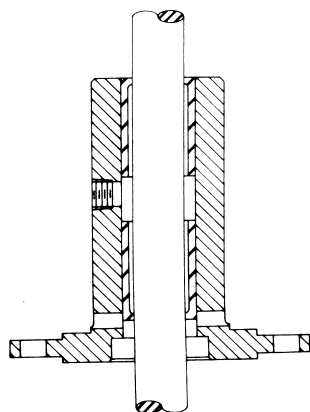
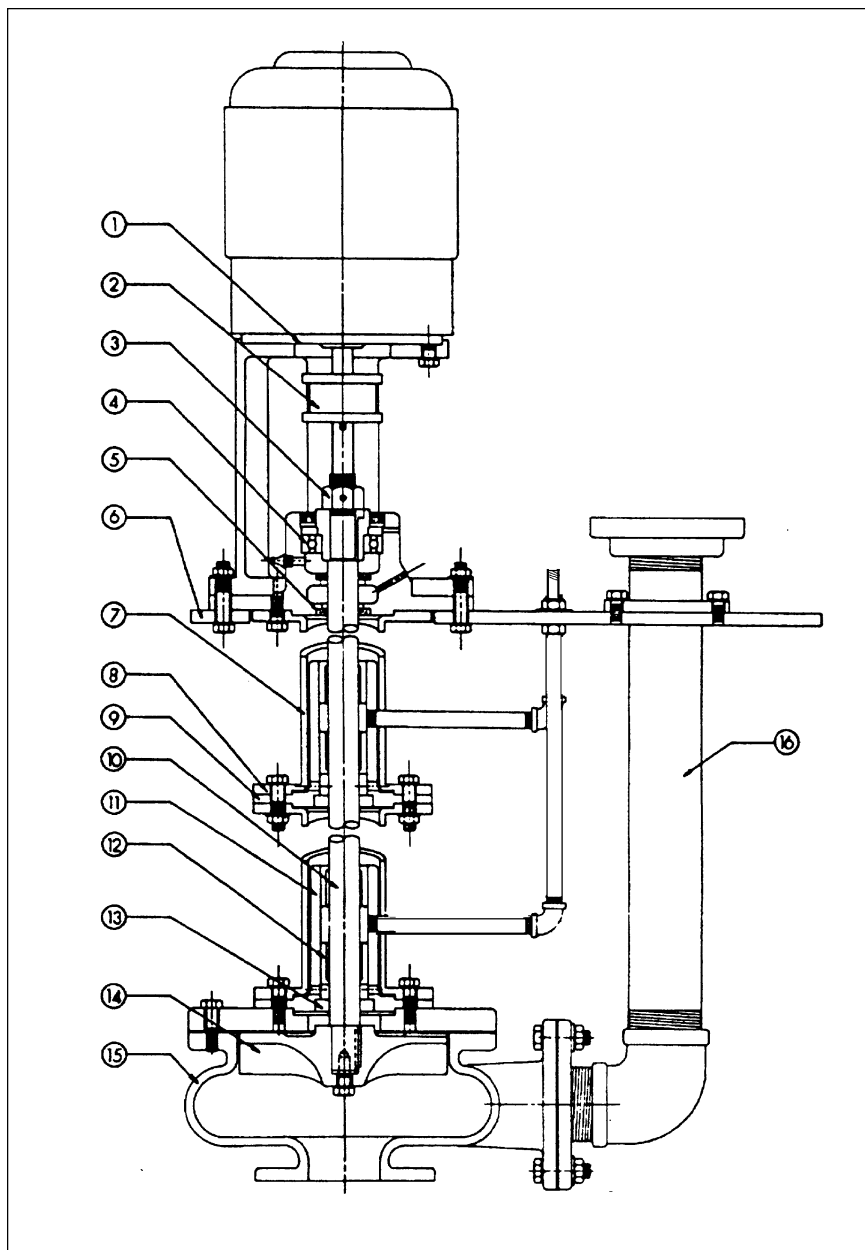
Fully recessed out of flow path. Full length eductor vanes reduce pressure and solid particle buildup behind the impeller

15. Casing

Vortex-type concentric design. Extra heavy wall thickness design for corrosion allowance

16. Discharge Pipe

Schedule 40 flanged pipe and fittings. 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 carbon graphite bearings furnished. Optional: bronze, Teflon* or viton.

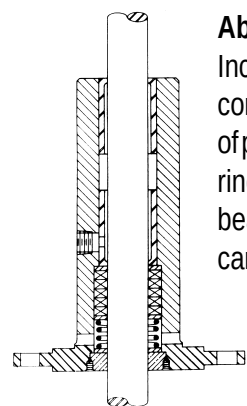
Intermediate Bearing Assembly

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

*E.I. DuPont registered TM

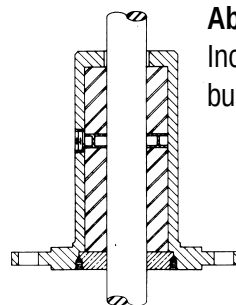
Part Description	Standard Fitted	316 Stainless Fitted	All 316 Stainless	Alloy 20
Motor Support, Thrust Bearing Housing	Cast Iron Class 30	Cast Iron Class 30	Cast Iron Class 30	Cast Iron Class 30
Shaft	Stainless Steel AISI-416	Stainless Steel AISI-316	Stainless Steel AISI-316	Alloy 20
Column	Steel ASTM-A53	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	Graphite	Graphite	Graphite	Graphite
Casing Adaptor	Steel ASTM-53	Steel ASTM-53	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
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 for water flush connection.

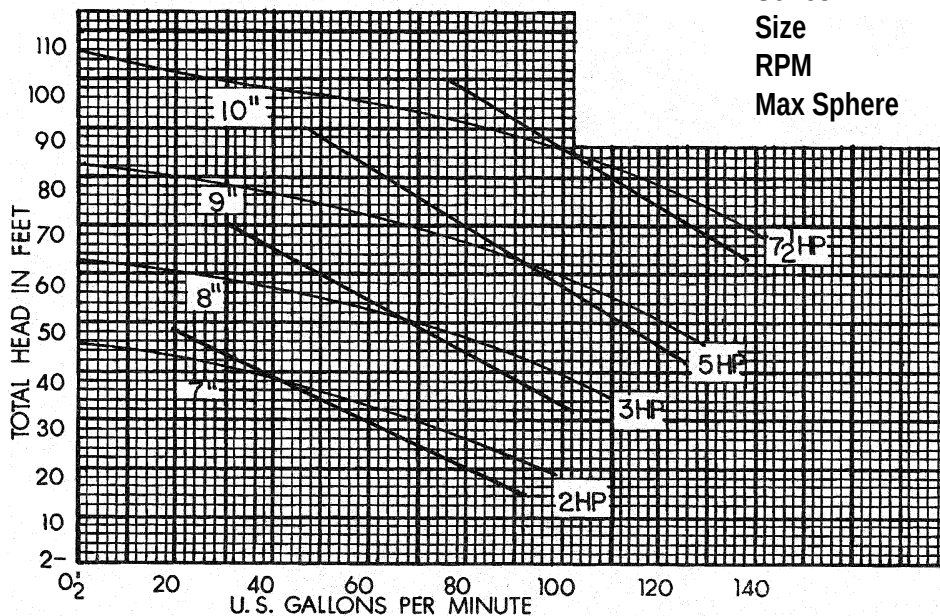
NOTE: Bearing assemblies shown are typical for most pumping services. Unusual or severe services may necessitate changes in assembly design.

Model Number	Shaft Size	Column Pipe Size	Quantity of Bushings
920	1.250	4.00	2
924	1.500	4.00	2
932	1.9375	6.00	2

VERIFLO PUMP COMPANY Performance Curves

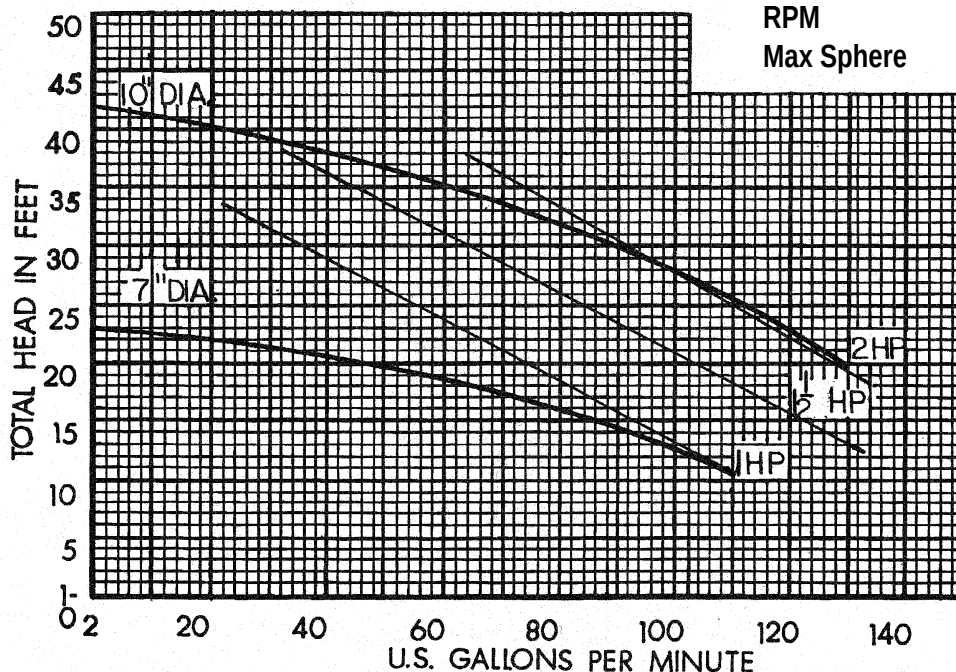
Curve 11104

Series 900
 Size 1 1/2 X 1 1/2 X 10
 RPM 1750
 Max Sphere 1.5



Curve 11106

Series 900
 Size 1 1/2 X 1 1/2 X 10
 RPM 1150
 Max Sphere 1.5



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

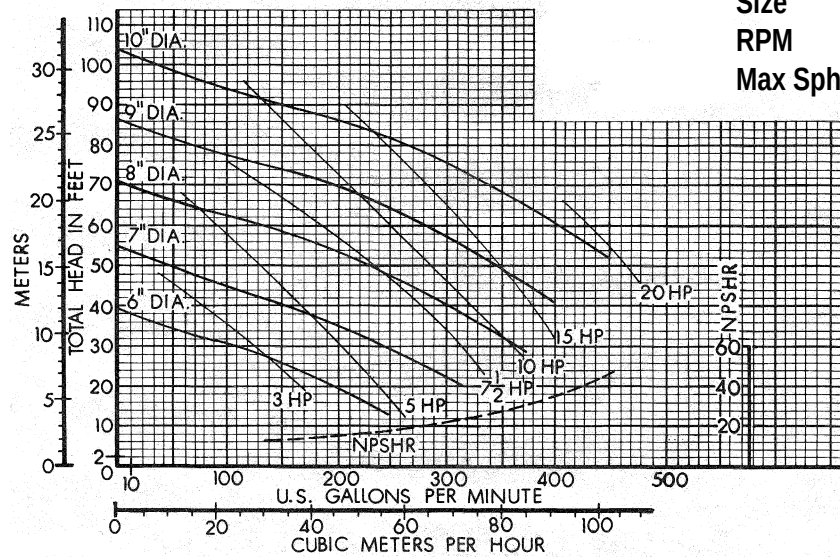
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

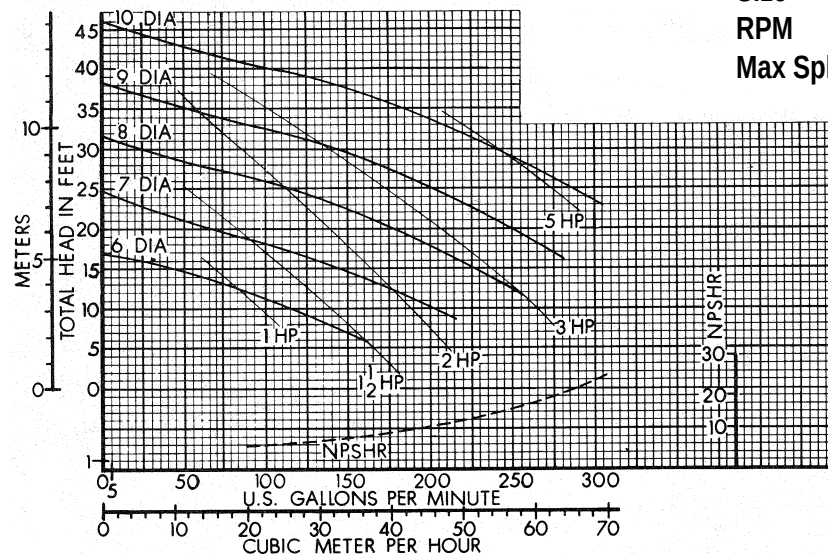
Curve 22104

Series 900
Size 2 X 2 X 10
RPM 1780
Max Sphere 2



Curve 22106

Series 900
Size 2 X 2 X 10
RPM 1180
Max Sphere 2



900

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

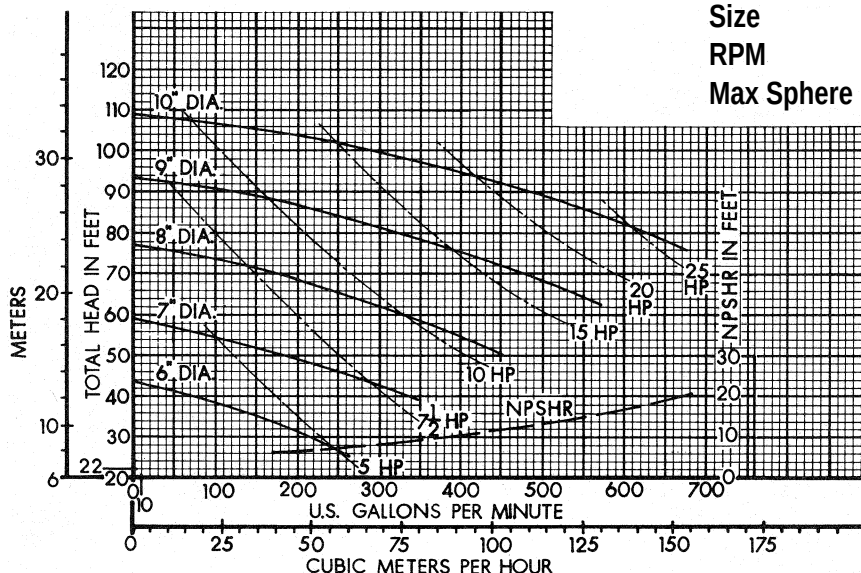
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

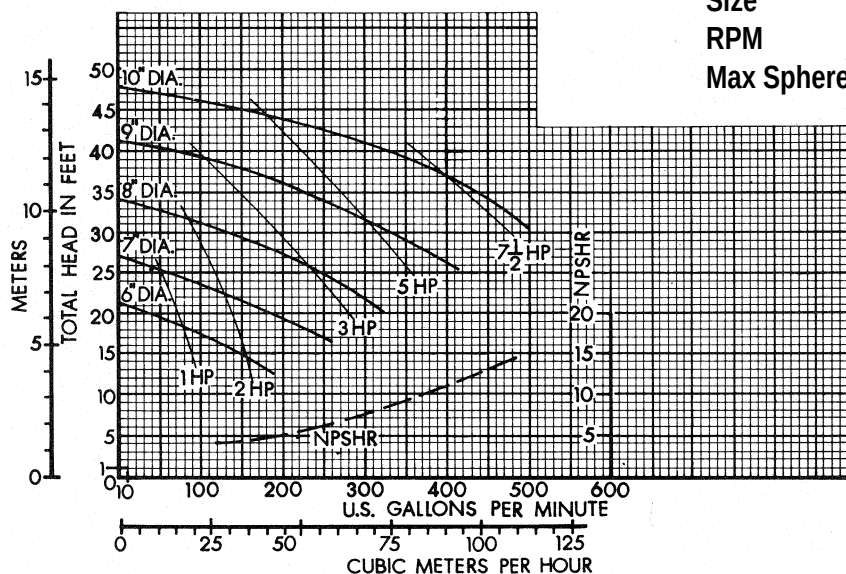
Curve 33104

Series 900
 Size 3 X 3 X 10
 RPM 1780
 Max Sphere 3



Curve 33106

Series 900
 Size 3 X 3 X 10
 RPM 1180
 Max Sphere 3



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

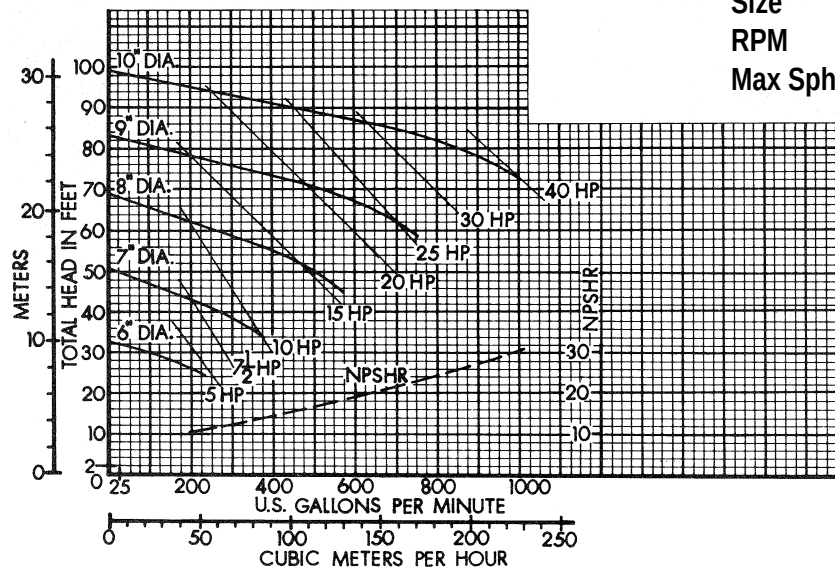
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

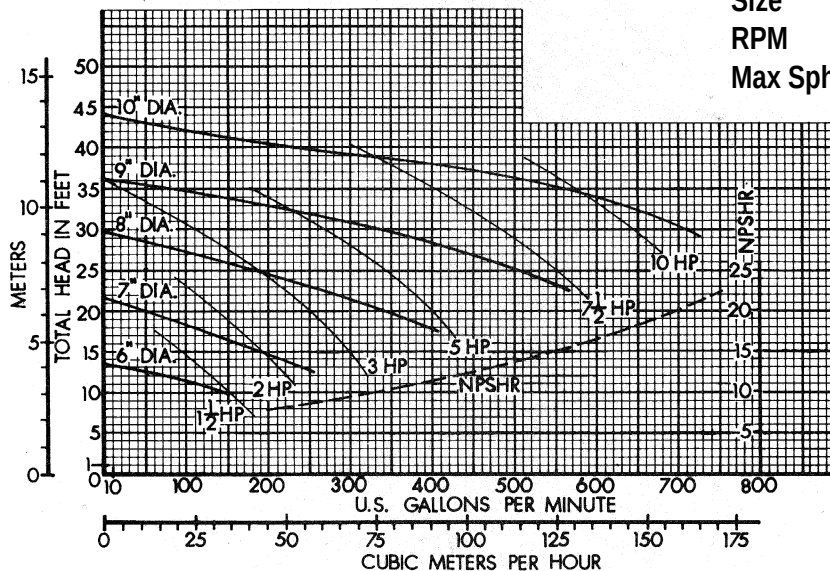
Curve 44104

Series 900
Size 4 X 4 X 10
RPM 1780
Max Sphere 4



Curve 44106

Series 900
Size 4 X 4 X 10
RPM 1180
Max Sphere 4



900

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

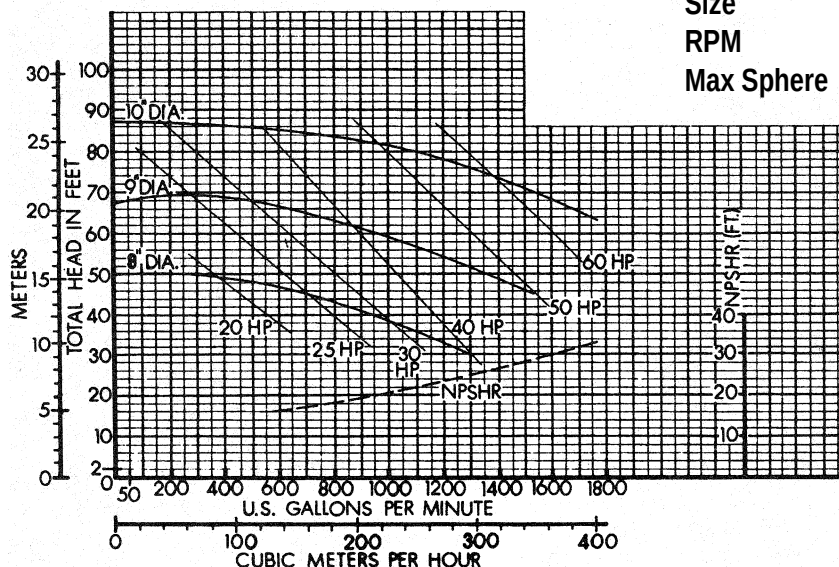
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

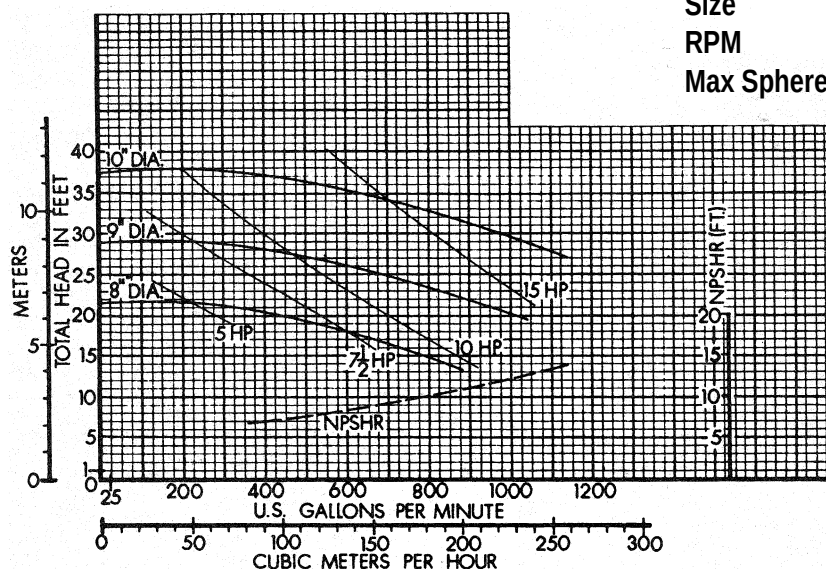
Curve 86104

Series 900
 Size 8 X 6 X 10
 RPM 1780
 Max Sphere 6



Curve 86106

Series 900
 Size 8 X 6 X 10
 RPM 1180
 Max Sphere 6



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

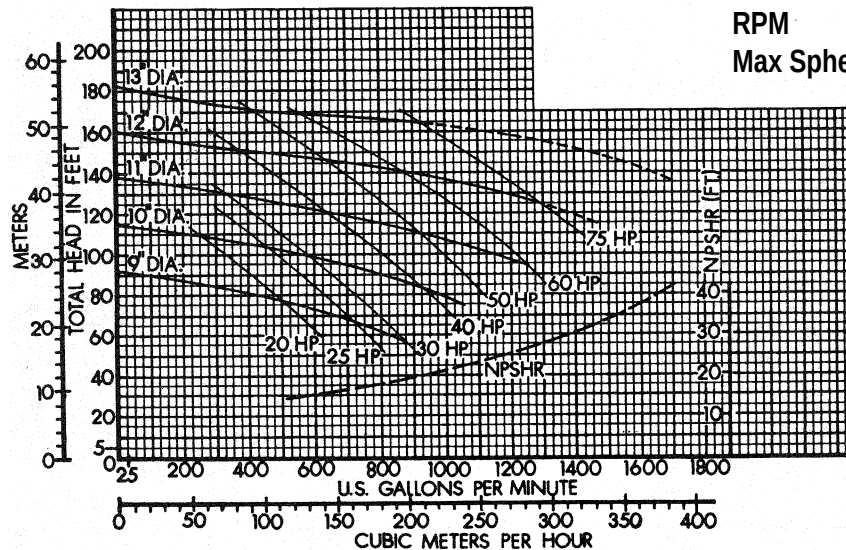
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

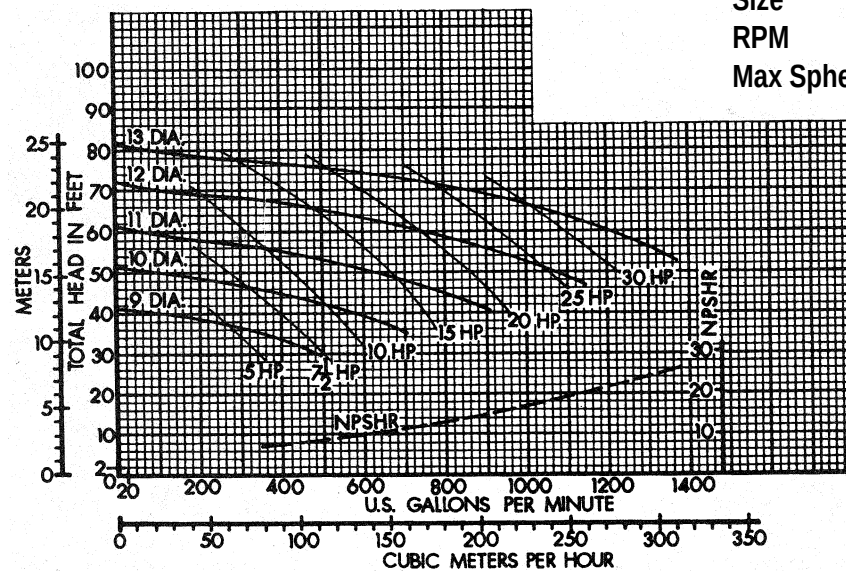
Curve 44134

Series 900
Size 4 X 4 X 13
RPM 1780
Max Sphere 4



Curve 44136

Series 900
Size 4 X 4 X 13
RPM 1180
Max Sphere 4



900

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

CONTRACTOR _____

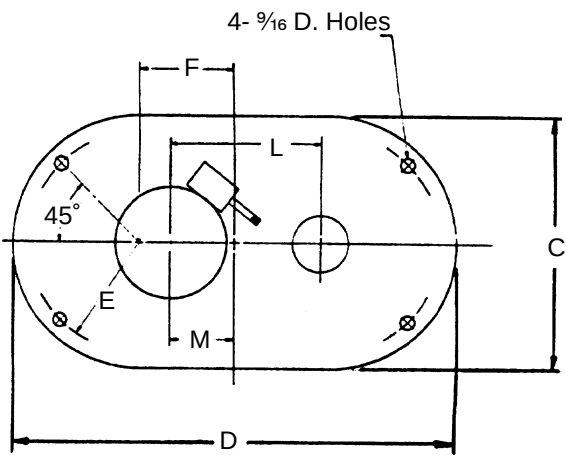
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERIFLO PUMP COMPANY Dimensions

900 Series Basic Oval

PUMP DATA

SIZE	MODEL	A	B	C	D	E	F	H	J	K	L	M	N
1½x1½x10	920	1½	2' TO 20' IN 1' INCREMENTS	18	26	8	4	7½	13¾	5¾	13¾	6½	¾
		2							14		13¾		
2x2x10	920	2		21	30	9½	4½	7½	16½	3¾	14½	6½	¾
	924	3							17¾		15¾		
3x3x10	924	3		21	34	9	4½	7½	19	13¾	16¾	7	½
		4							20¾		17¾		
4x4x10	924	4		21	34	9½	4½	7¾	21½	11¾	18¾	7	½
	924	6							23½		19½		
8x6x10	924	6		24	39	11	7	8¾	23¾	8¾	20	8	½
	932	8							26¾		21¼		
4x4x13	924	4		24	39	11	7½	9¾	21½	10¾	18¾	8	½
	932	6							24		20		

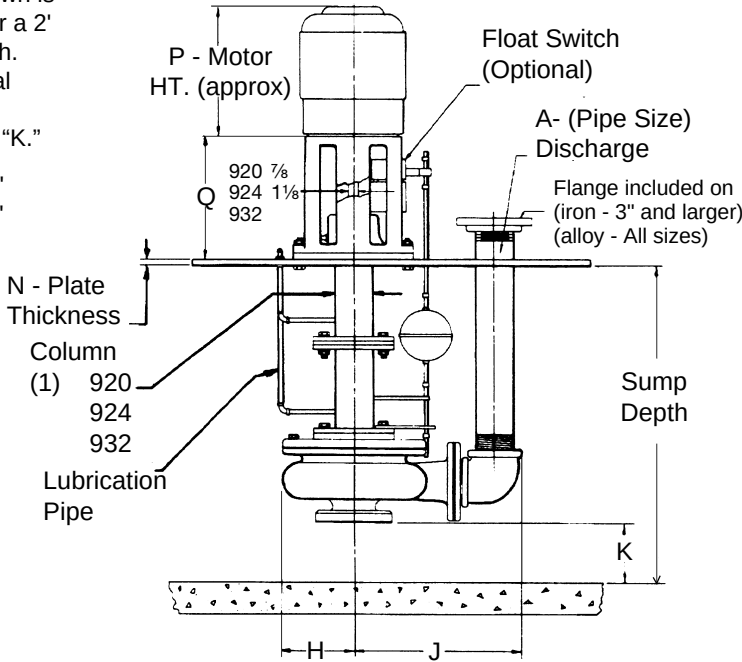


MOTOR DATA

FRAME	P	Q
56 C	10⅞	12
143 TC	10	12
145 TC	10⅞	12
182 - 184 TC	13½	12
213 TC	15½	12
215 TC	17	12
254 TC	20⅞	12
256 TC	21⅞	12
284 TC	22¾	13
286 TC	23¾	13
324 TC	24¾	13½
326 TC	26⅞	13½
364 TC	26½	16¾
365 TC	27½	16¾

"K" dimension shown is for a pump built for a 2' through 6' pit depth. For each additional column section, subtract 3/8" from "K."

(1) 920 + 924 = 4"
932 = 6"



Not for construction unless certified, some dimensions may vary ± 1/2". Pump Construction: _____

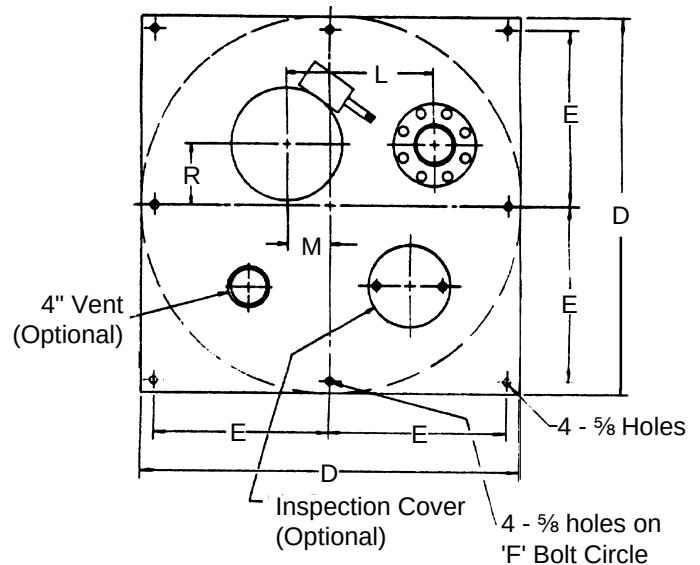
CUSTOMER _____ CUSTOMER NO. _____
PROJECT _____ SERIAL NO. _____
ENGINEER _____ LOCATION _____
CONTRACTOR _____
PUMP Model _____ Size _____ Curve No. _____ GPM _____ Head _____ SP. GR.@Temp. _____ Pump Length _____ Plate DATA _____
MOTOR Mfgr. _____ HP _____ RPM _____ Volt-Phase-Cycle _____ Frame ENC. _____ Furnished by _____ Mounted by DATA _____
Shop Order _____ Certified by _____ Date _____

VERTIFLO PUMP COMPANY Dimensions

900 Series Simplex

PUMP DATA

SIZE	MODEL	A	B	C	D	E	F	H	J	K	L	M	N
1½×1½×10	920	1½	2 TO 20" IN 1" INCREMENTS	24	28	13	26	7½	13¾	5¾	13¼	6½	¾
		2							14		13¾		
2×2×10	920	2		30	34	16	32	7½	16½	3¼	14½	6¾	¾
		3							17¾		15¾		
3×3×10	924	3		30	34	16	32	7½	19	13¾	16¾	6¾	¾
		4							20½		17¾		
4×4×10	924	4		36	40	19	38	7¾	21½	11¾	18¾	7¼	½
		6							23½		19¾		
8×6×10	924	6		36	40	19	38	8¾	23¾	8¾	20	7¼	¾
		8		42	48	23	46		26¾		21¼	9	
3×3×13	932	3		36	40	19	38	9¾	20¼	12¾	18	7¼	¾
		4							21¾		18¾		
4×4×13	932	4		36	40	19	38	9¾	21¾	10¾	18¾	7¼	¾
		6							24		20		

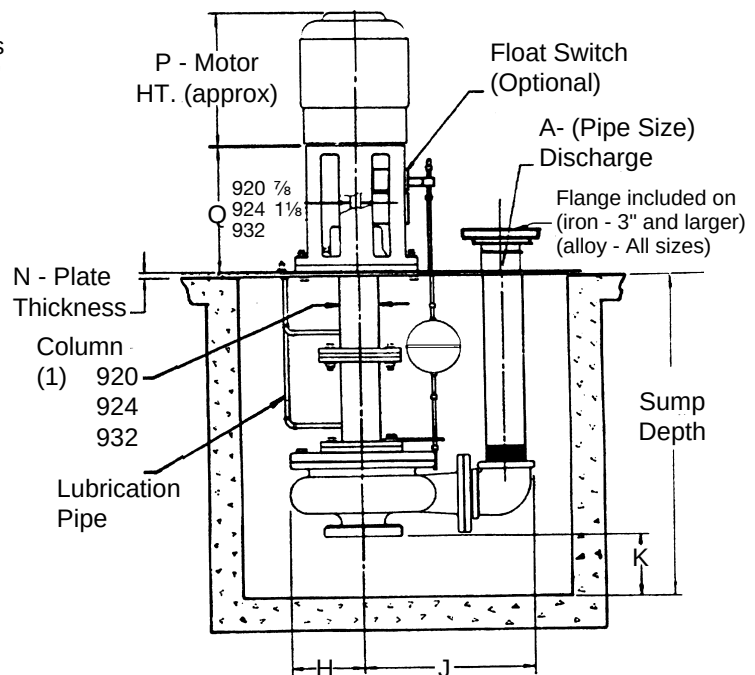


MOTOR DATA

FRAME	P	Q
56 C	107/16	20½
143 TC	10	20½
145 TC	107/16	20½
182 - 184 TC	13½	20½
213 TC	15½	20½
215 TC	17	20½
254 TC	20½	20½
256 TC	21¾	20½
284 TC	22¾	21¼
286 TC	23¾	21¼
324 TC	24¾	21¼
326 TC	26½	21¼
364 TC	26½	22¾
365 TC	27½	22¾

"K" dimension shown is for a pump built for a 2' through 6' pit depth. For each additional column section, subtract 3/8" from "K."

$$(1) 920 + 924 = 4" \\ 932 = 6"$$



Not for construction unless certified, some dimensions may vary $\pm 1/2"$. Pump Construction: _____

900

CUSTOMER _____	CUSTOMER NO. _____
PROJECT _____	SERIAL NO. _____
ENGINEER _____	LOCATION _____
CONTRACTOR _____	
PUMP Model _____	Size _____
DATA _____	Curve No. _____
MOTOR Mfgr. _____	HP _____
DATA _____	RPM _____
Shop Order _____	Certified by _____
	Date _____

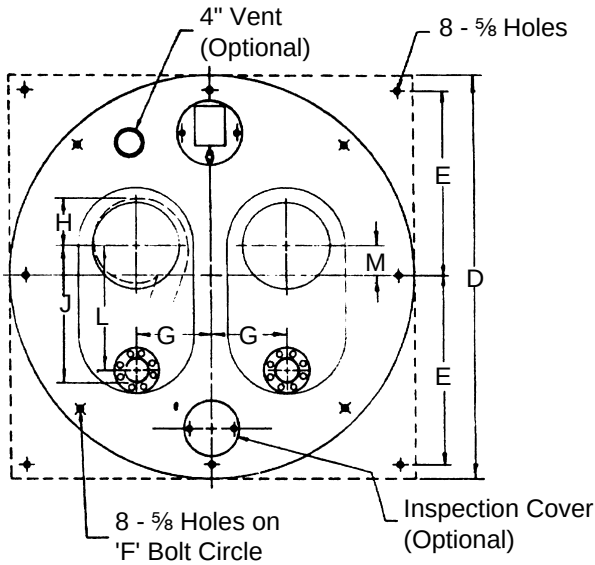
GPM _____	Head _____	SP. GR.@Temp. _____	Pump Length _____	Plate _____
Volt-Phase-Cycle _____	Frame ENC. _____	Furnished by _____	Mounted by _____	

VERIFLO PUMP COMPANY Dimensions

900 Series Duplex

PUMP DATA

SIZE	MODEL	A	B	C	D	E	F	H	J	K	L	M	N	G
1½x1½x10	920	1½ 2	2' TO 20' IN 1' INCREMENTS	48	54	25½	51	7½	13¾ 14	5¾	13¼ 13¾	6½	½	11
2x2x10	920 924	2 3		54	60	28½	57	7½	16½ 17¾	3¼	14½ 15¾	6½	½	11
3x3x10	924	3 4		60	66	31½	63	7½	19 20½	13¾	16¾ 17¾	7	½	11
4x4x10	924 924	4 6		60	66	31½	63	7¾	21½ 23½	11¾	18¾ 19½	8	½	12½
8x6x10	924 932	6 8		60	66	31½	63	8¾	23¾ 26¾	8¾	20 21¼	8	¾	12½
4x4x13	924 932	4 6		60	66	31½	63	9¾	21½ 24	10¾	18¾ 20	8	¾	12½

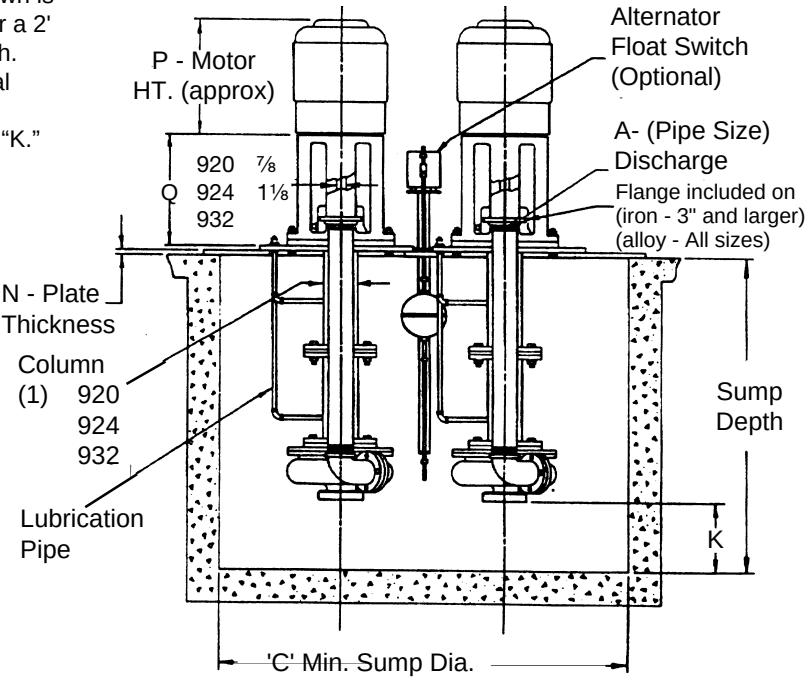


MOTOR DATA

FRAME	P	Q
56 C	107/16	12
143 TC	10	12
145 TC	107/16	12
182 - 184 TC	13½	12
213 TC	15½	12
215 TC	17	12
254 TC	20¾	12
256 TC	21¾	12
284 TC	22¾	13
286 TC	23¾	13
324 TC	24¾	13½
326 TC	26¾	13½
364 TC	26½	16¾
365 TC	27½	16¾

"K" dimension shown is for a pump built for a 2' through 6' pit depth. For each additional column section, subtract 3/8" from "K."

(1) 920 + 924 = 4"
932 = 6"



Not for construction unless certified, some dimensions may vary ± 1/2". Pump Construction: _____

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____ SERIAL NO. _____

ENGINEER _____ LOCATION _____

CONTRACTOR _____

PUMP Model Size Curve No. GPM Head SP. GR.@Temp. Pump Length Plate

DATA _____

MOTOR Mfgr. HP RPM Volt-Phase-Cycle Frame ENC. Furnished by Mounted by

DATA _____

Shop Order _____ Certified by _____ Date _____

VERTIFLO

The Vertical Pump Specialists

PUMPS FOR INDUSTRY

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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:

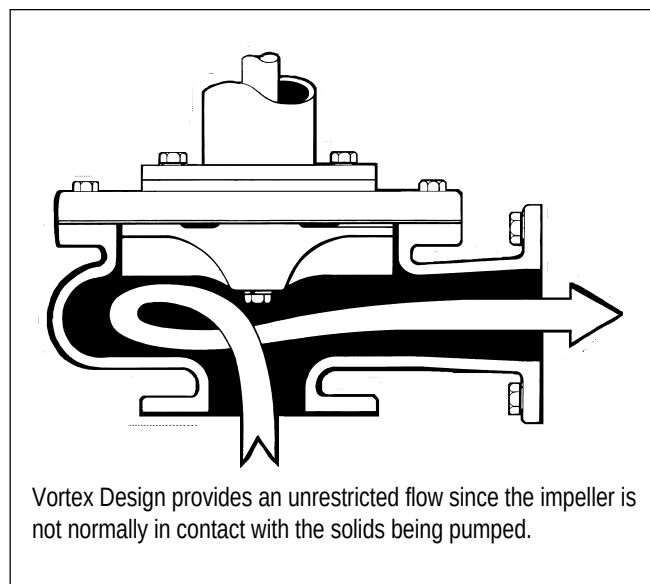
- Capacities to 1600 GPM
- Heads to 170 Feet
- Temperature to 400°F
- Pump Length to 6 Feet
- Shaft Diameter to 5"
- Construction: Cast Iron, 316 Stainless Steel, Alloy 20, CD4MC_u
- Solids up to 4" Diameter Spheres

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



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.

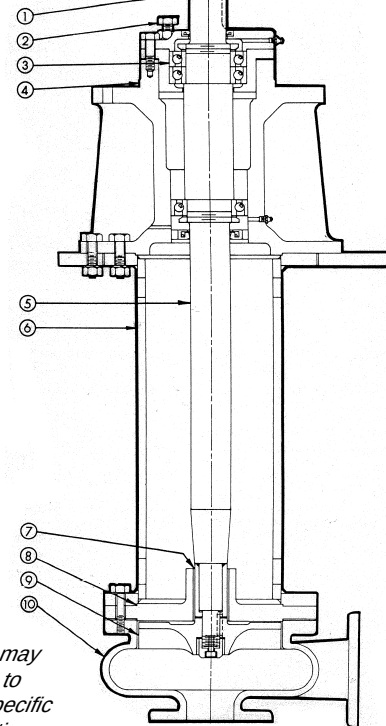
9. Impeller

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



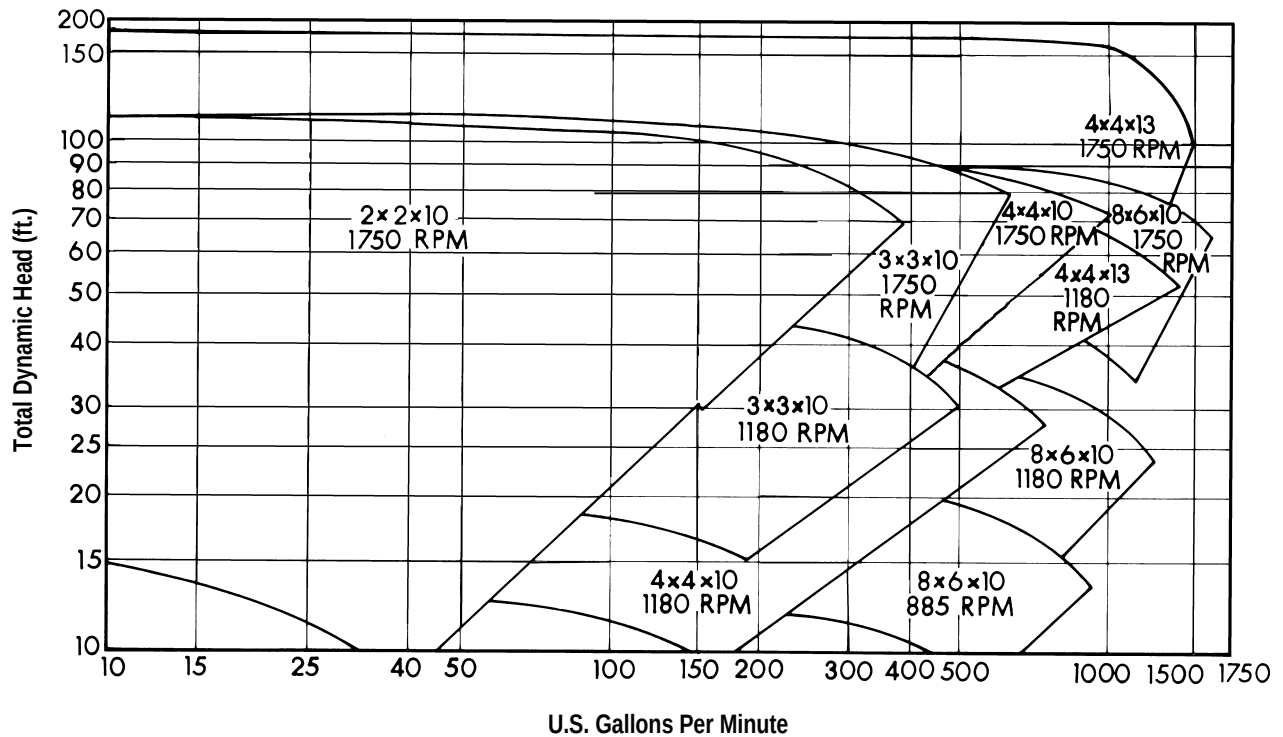
Design may change to meet specific application.

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 _____

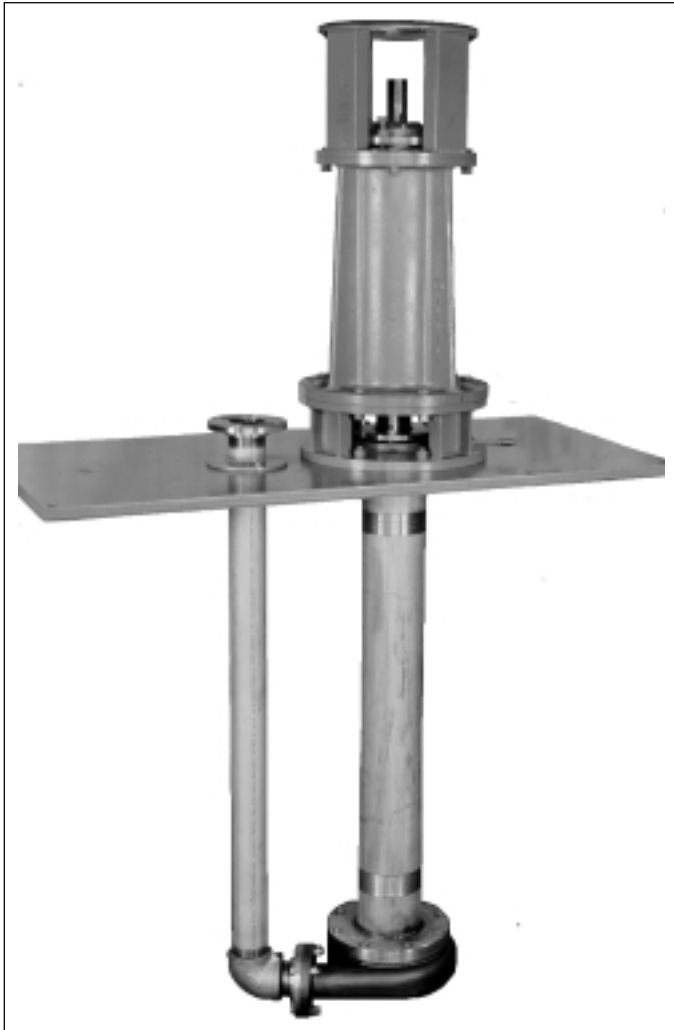
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

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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_u

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
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

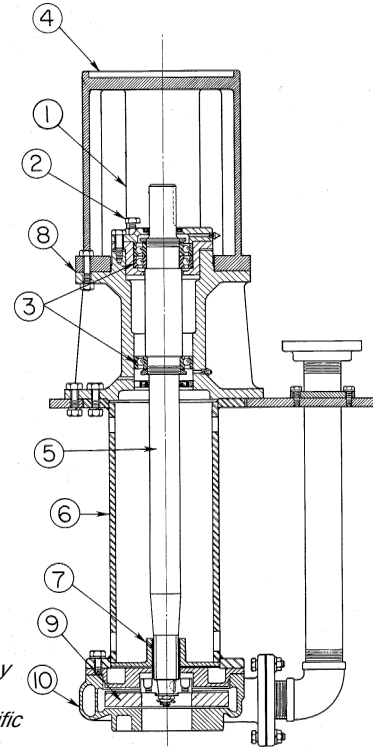
9. Impeller

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



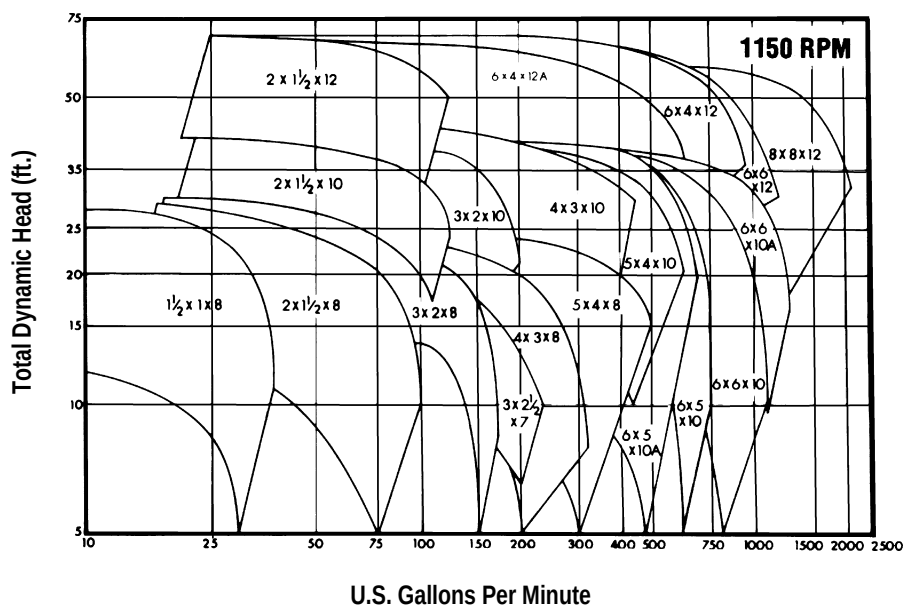
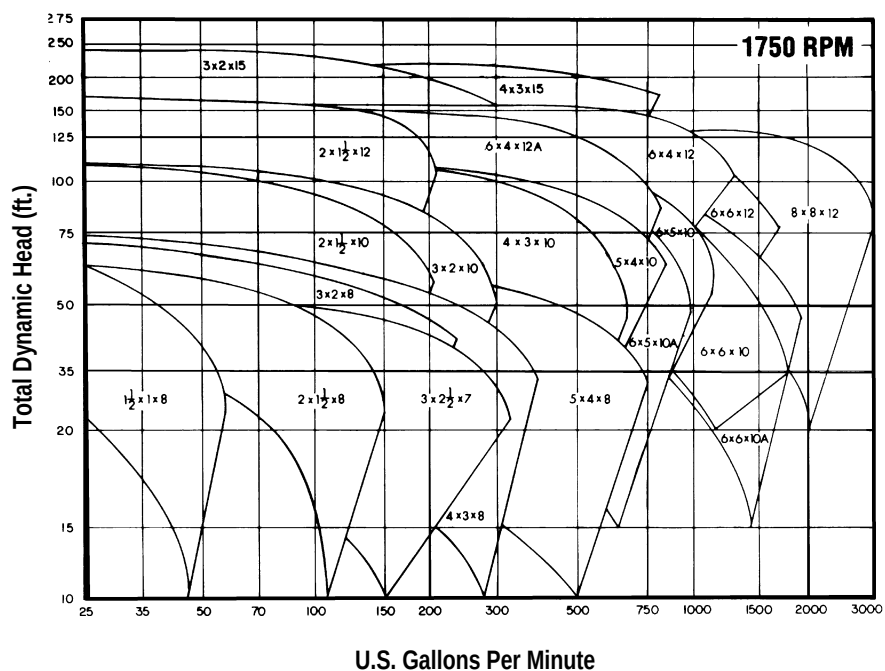
Design may change to meet specific application.

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 1200 Composite Performance Charts



Refer to Series 800 for Specific Performance Curves

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 _____

1200

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VERTIFLO

The Vertical Pump Specialists

PUMPS FOR INDUSTRY

CONTENTS:

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

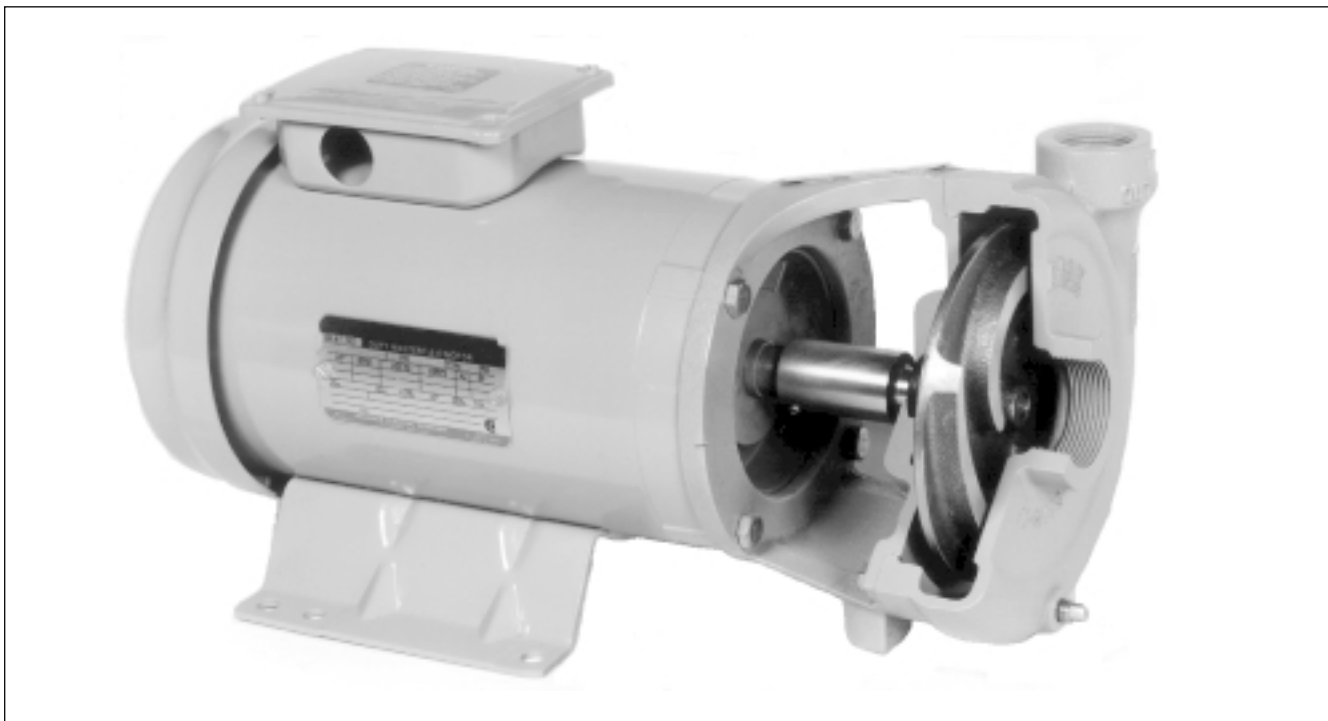
Vertical Cantilever Pumps Series 1100 and 1200

**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 1300, MODEL 1312**Quality Design Features Assure Long, Trouble-Free Service****WIDE RANGE OF APPLICATIONS:**

- General Pumping
- Process
- Chemicals
- Deionized Water
- Wash Systems
- OEM

CAPABILITIES:

- Capacities to 240 GPM
- Heads To 160 Feet TDH
- 1750 and 3500 RPM

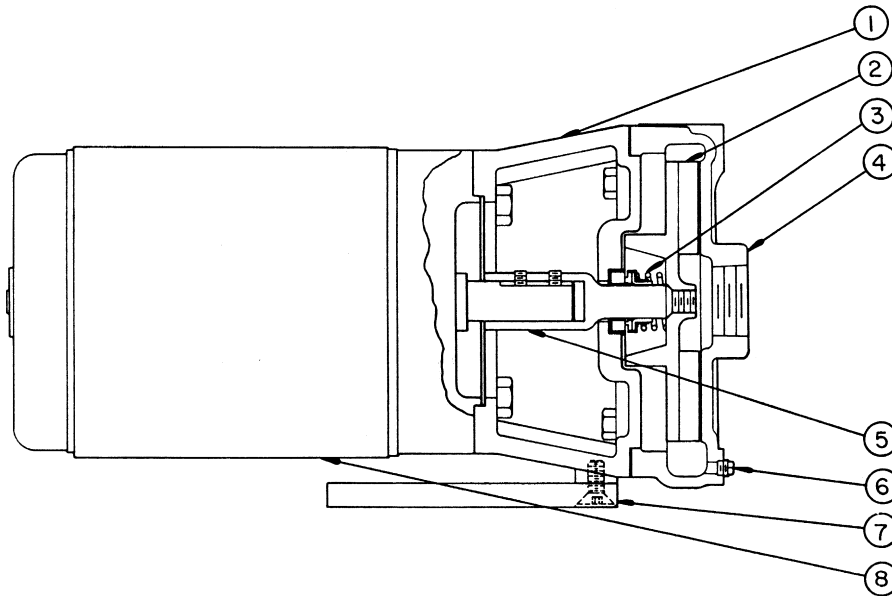
CONSTRUCTION:

- All Iron
- Bronze Fitted
- 316 Stainless Steel Fitted
- All 316 Stainless Steel

FEATURES:

- Close-Coupled Design Saves Installation Space
- Back Pull-Out Design
- Standard NEMA C-Face Motor
- Standard Size Mechanical Seal
- Pump Volute, Impeller and Mounting Bracket are Heavy Cast Metal
- Semi-Open Impeller
- Threaded NPT Suction and Discharge Connections

Model 1312 horizontal motor-mounted end suction pumps are designed for use with NEMA standard C-face electric motors. This rugged and dependable pump will provide many years of dependable service.



CUSTOMER Benefits

1. Motor Support and Seal Housing

one-piece casting

- Assures positive alignment of motor and pump with registered fits

2. Impeller

semi-open design with balance hub. Secured to shaft by taper and threads.

- High quality - smooth performance
- Easily removed

3. Mechanical Seal

Self-aligning design

- No adjustment required

4. Casing

Back pull-out design. Discharge orientation options.

- Rotating element easily removed - casing remains in piping
- Casing may be rotated in 90° increments to accommodate various piping requirements

5. Shaft

316 stainless steel material. Standard with taper and threads.

- Long lasting and replacable

6. Support Foot Adaptor (optional)

- Bolt-on type design for versatility

7. C-Face Motor

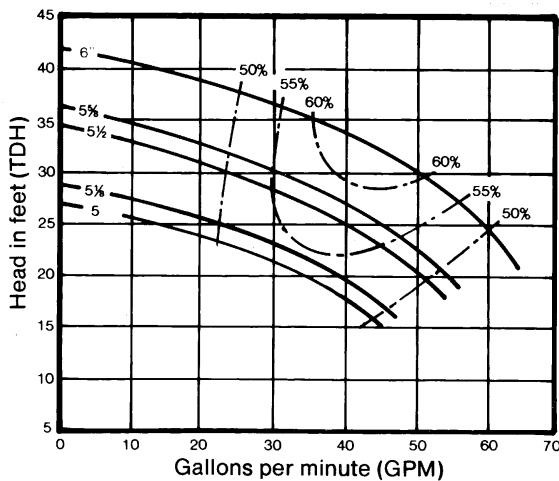
Standard

- Readily available

VERTIFLO PUMP COMPANY Performance Curves

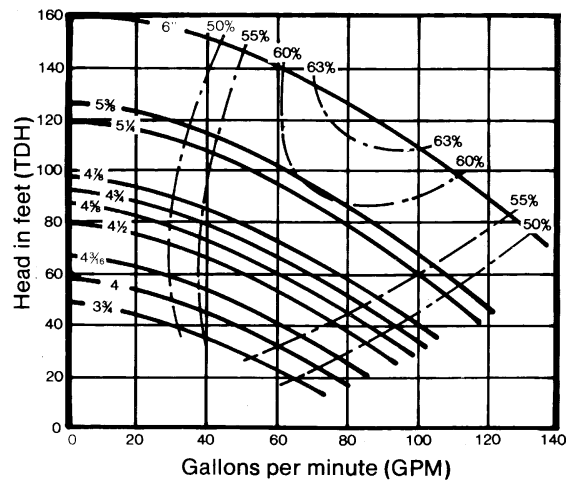
Series 1300 / Model 1312 Size 1 1/2 X 1 X 6

1750 RPM



HP	SF	DIA
3/4	1.15	6
	1.00	6
1/2	1.15	5 1/2
	1.00	5 1/2
1/3	1.15	5 1/8
	1.00	5

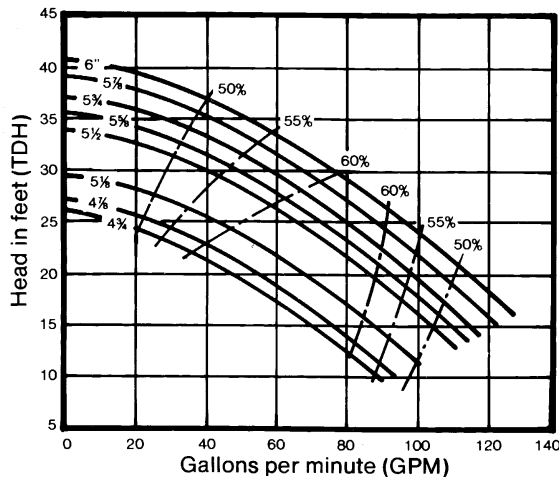
3500 RPM



HP	SF	DIA	HP	SF	DIA
5	1.15	6	1 1/2	1.15	4 5/8
	1.00	6		1.00	4 1/2
3	1.15	5 3/8	1	1.15	4 3/16
	1.00	5 1/4		1.00	4
2	1.15	4 7/8			
	1.00	4 3/4			

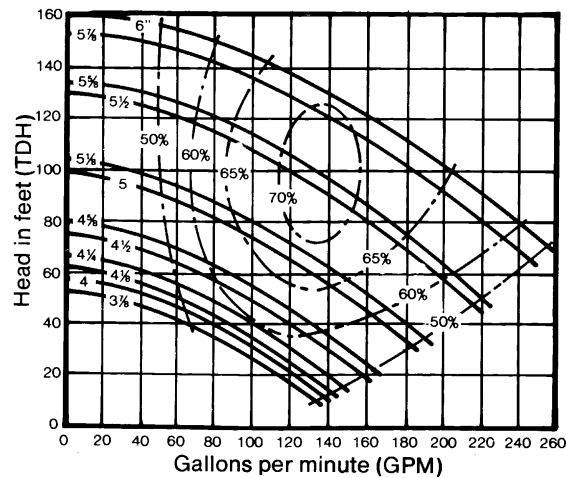
Series 1300 / Model 1312 Size 2 X 1 1/2 X 6

1750 RPM



HP	SF	DIA	HP	SF	DIA
1 1/2	1.15	6	3/4	1.15	5 5/8
	1.00	6		1.00	5 1/2
1	1.15	5 7/8	1/2	1.15	5 1/8
	1.00	4 7/8		1.00	4 7/8

3500 RPM



HP	SF	DIA	HP	SF	DIA
7 1/2	1.15	6	2	1.15	4 5/8
	1.00	5 7/8		1.00	4 1/2
5	1.15	5 5/8	1 1/2	1.15	4 1/4
	1.00	5 1/2		1.00	4 1/8
3	1.15	5 1/8	1	1.15	4
	1.00	5		1.00	3 7/8

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

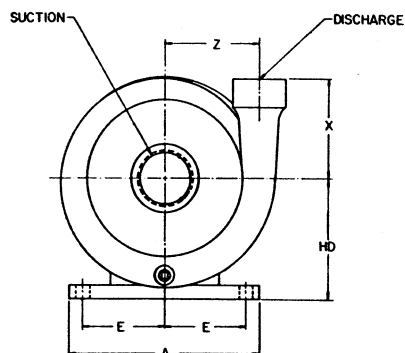
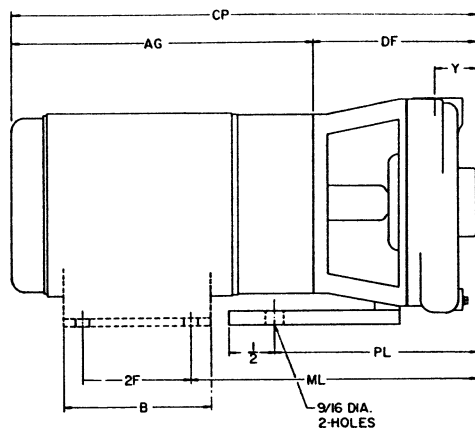
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

1300

1300 Series / Model 1312



Size 1½ x 1 x 6

RPM	HP	PUMP FOOT	SUC	DIS	A	AG	B	CP	E	2F	DF	H*	HD	ML	PL	X	Y	Z
1750	⅓	NOT REQ'D	1½" NPT	1" NPT	6.50	9.29	4.25	15.17	2.44	3.00	5.88	NA	4.38	8.75	5.50	3.75	1.25	3.50
	½																	
	¾																	
1						9.94	15.82											
1						9.29	15.19											
1½						10.29	16.17											
2						11.06	16.94	5.94	2.75	5.00		.44	4.50					
3						12.07	17.82											
	5				13.68	6.50	19.56	3.75	5.50									

Dimensions are for TEFC motors only
*Optional pump foot shown for motors less feet

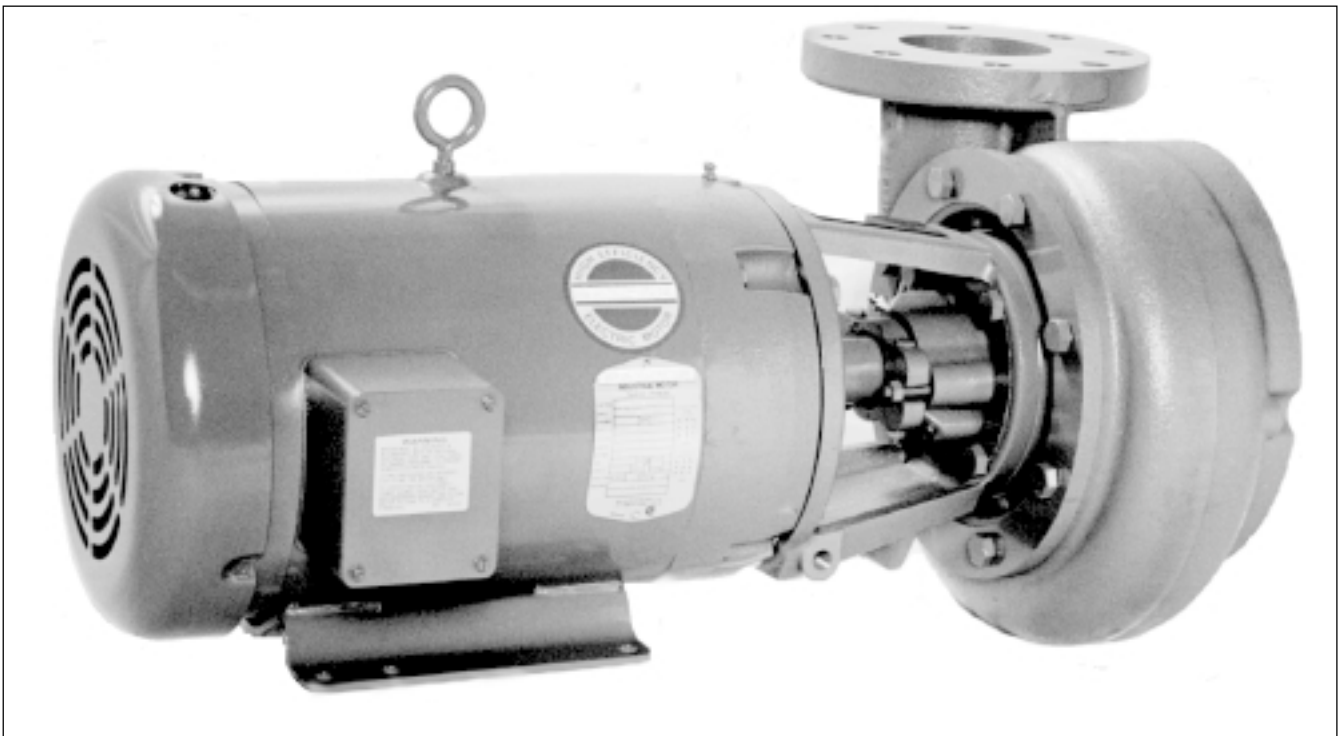
Size 2 x 1½ x 6

RPM	HP	PUMP FOOT	SUC	DIS	A	AG	B	CP	E	2F	DF	H*	HD	ML	PL	X	Y	Z			
1750	½	NOT REQ'D	2" NPT	1½" NPT	6.50	9.29	4.25	15.67	2.44	3.00	6.38	NA	4.38	9.25	6.00	3.88	1.63	3.63			
	¾					9.94		16.32													
	1					10.19		16.57													
	1½					10.29		16.67													
3500	1½					2	3	5	7½	11.06		5.94	17.44						2.75	5.00	.44
	2				12.07					18.32											
	3				13.68					20.06											
	5				15.18					21.56											
	7½																				

Dimensions are for TEFC motors only. NA= not applicable
*Optional pump foot shown for motors less feet

Not for construction unless certified, some dimensions may vary $\pm 1/2"$. Pump Construction:

CUSTOMER _____ CUSTOMER NO. _____
 PROJECT _____ SERIAL NO. _____
 ENGINEER _____ LOCATION _____
 CONTRACTOR _____
 PUMP Model Size Curve No. GPM Head SP. GR.@Temp.
 DATA _____
 MOTOR Mfr. HP RPM Volt-Phase-Cycle Frame ENC. Furnished by Mounted by
 DATA _____
 Shop Order _____ Certified by _____ Date _____

VERTIFLO SERIES 1300**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

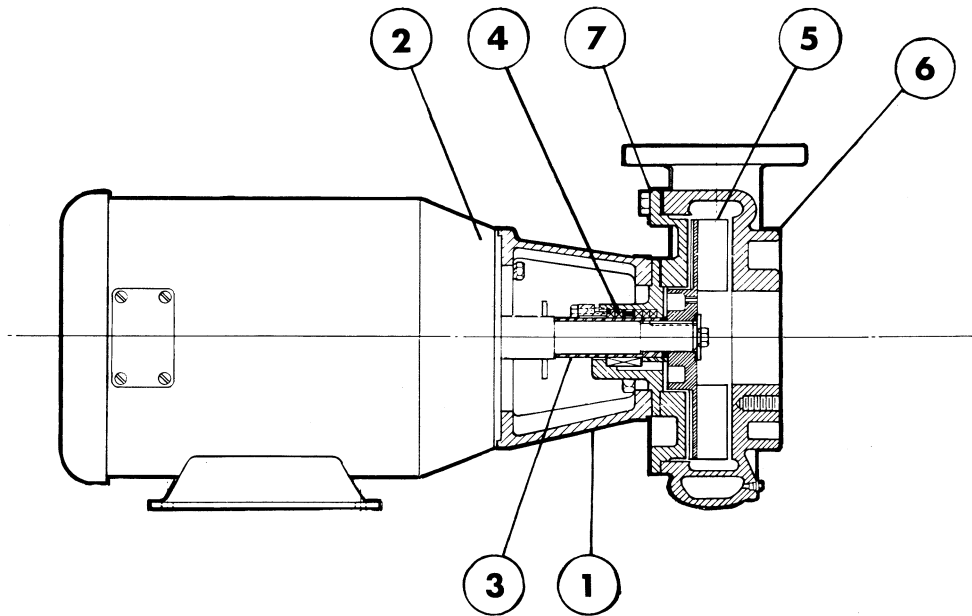
CAPABILITIES

- Capacities to 3600 GPM
- Heads To 275 Feet TDH
- Temperature to 250° F
- Back Pull-Out Construction
- Semi-Open Impeller
- Packing or Mechanical Seal

CONSTRUCTION:

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

Series 1300 horizontal close-coupled end suction pumps are designed for use with any NEMA Standard JP Shaft Motor. VERTIFLO's close-coupled 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. Mounting Bracket**

Rugged cast iron design which assures a solid, dependable pump installation and operation. Three brackets fit all pump sizes.

2. Motor

NEMA standard JP shaft extension allows for easy interchangeability to packing, standard mechanical seal or optional single or double mechanical seals of various designs and materials of construction.

3. 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.

4. Shaft Sleeve

316 stainless steel is standard. Positively driven and gasketed, protecting motor shaft from liquid being pumped.

E.I DuPont registered®

5. Impeller

Semi-open design which accommodates passage of solids or fines. All impellers have 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, and an impeller locking screw assures positive attachment.

6. 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.

7. 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 2 X 1 1/2 X 12

Standard

- All iron construction
- 316 stainless steel shaft sleeve
- Semi-open impeller
- Back pull-out design
- Packed stuffing box or mechanical seal
- Flanged suction and discharge on all pump sizes
- NEMA standard JP shaft motor

Options

- 316 stainless steel impeller
- All 316 stainless steel, Alloy 20, CD4MC_u
- Single or double mechanical seal (various materials)
- Product or fresh water flush to packing or mechanical seal
- Teflon® packing (standard in s.s. and alloy units)
- ODP, TEFC

Design Details
Model 1320
Model 1326
Model 1334

Rotation from driver end

CW

CW

CW

Outside diameter of shaft sleeve

1.250

1.625

2.125

Shaft diameter at impeller

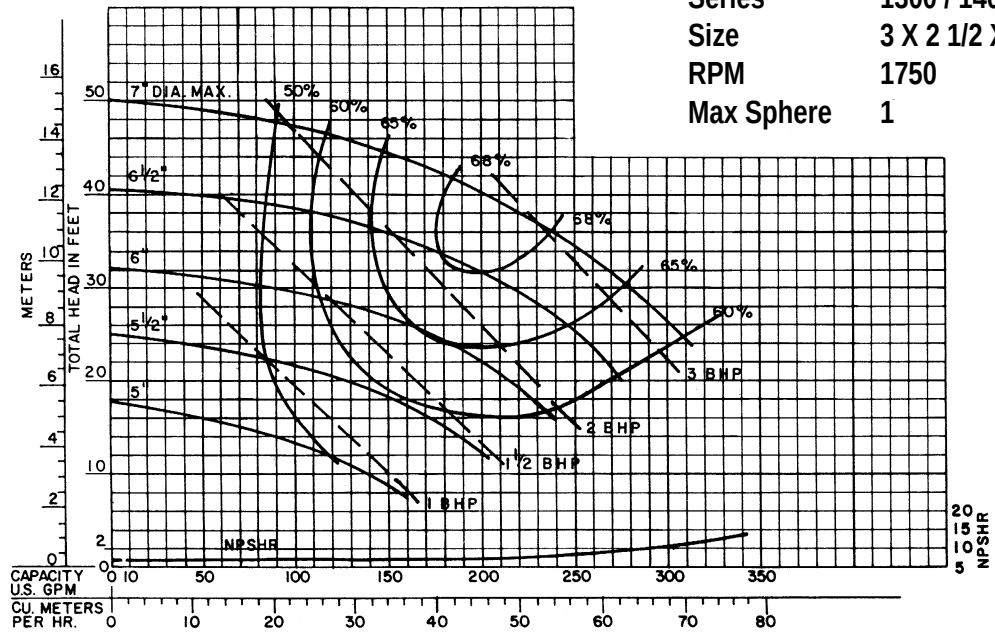
0.875

1.250

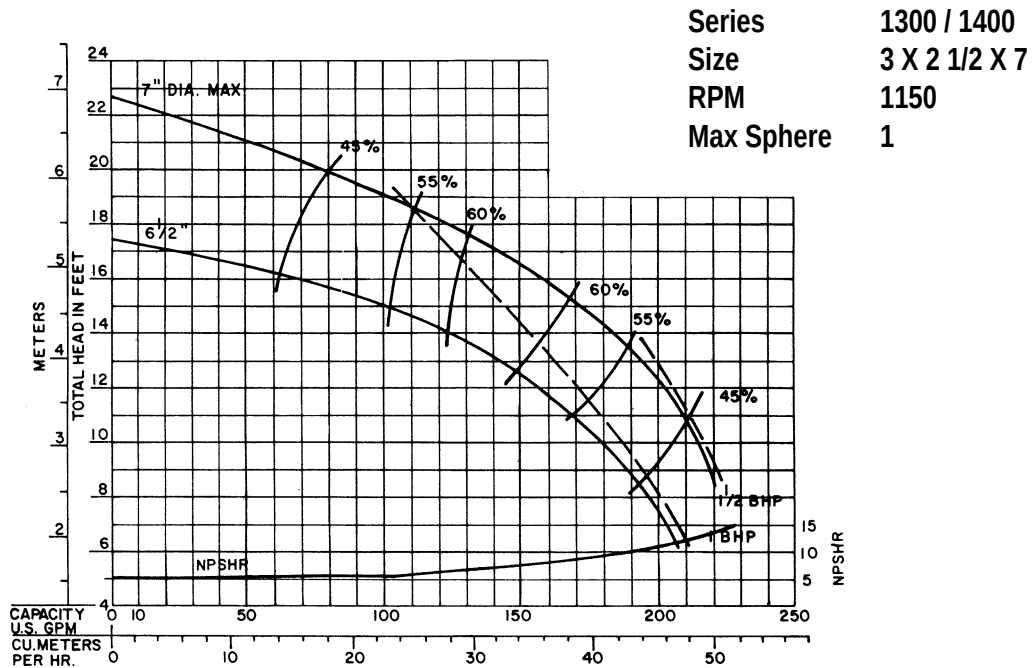
1.750

VERTIFLO PUMP COMPANY Performance Curves

Curve PV-1525



Curve RV-1525



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

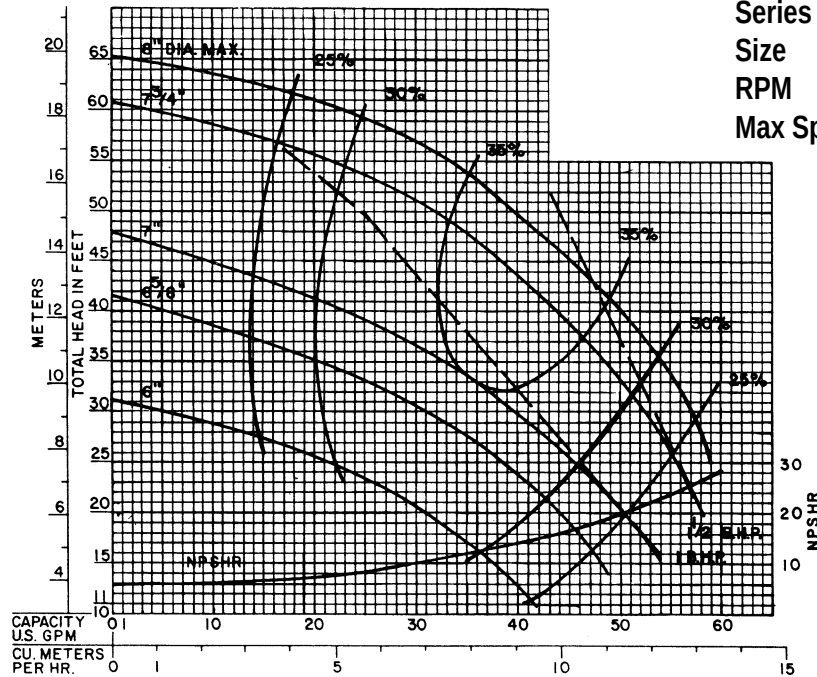
ENGINEER _____

CONTRACTOR _____

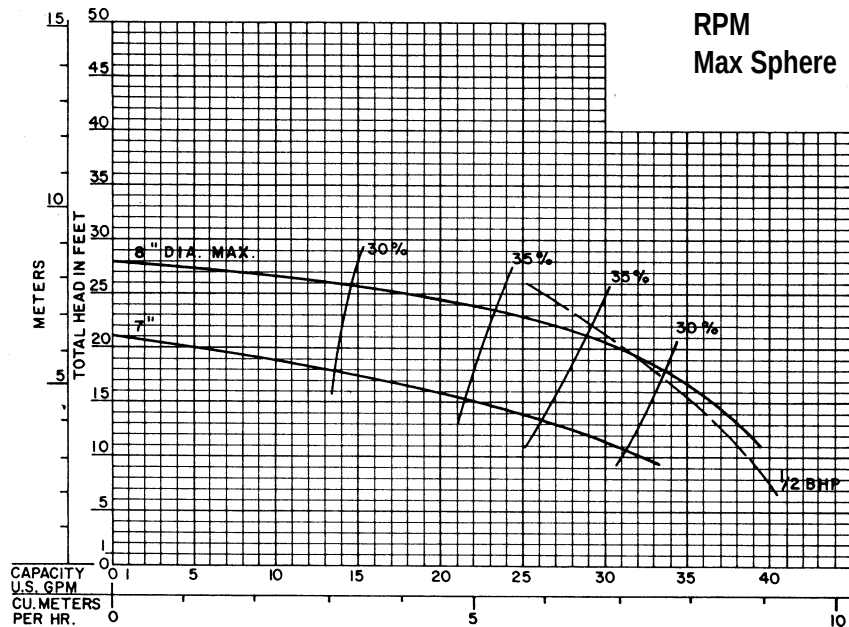
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve AS-1610



Curve BS-1610



1300

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

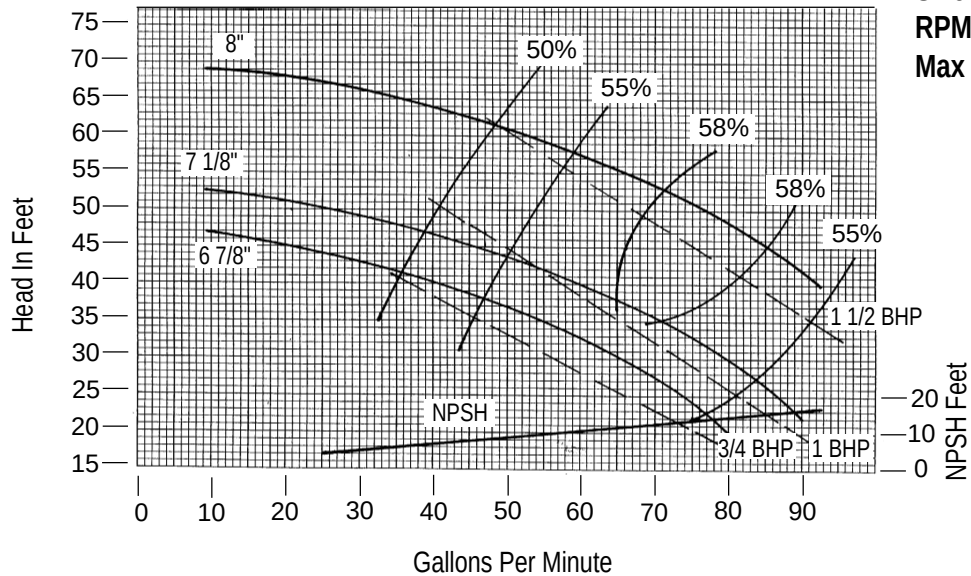
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

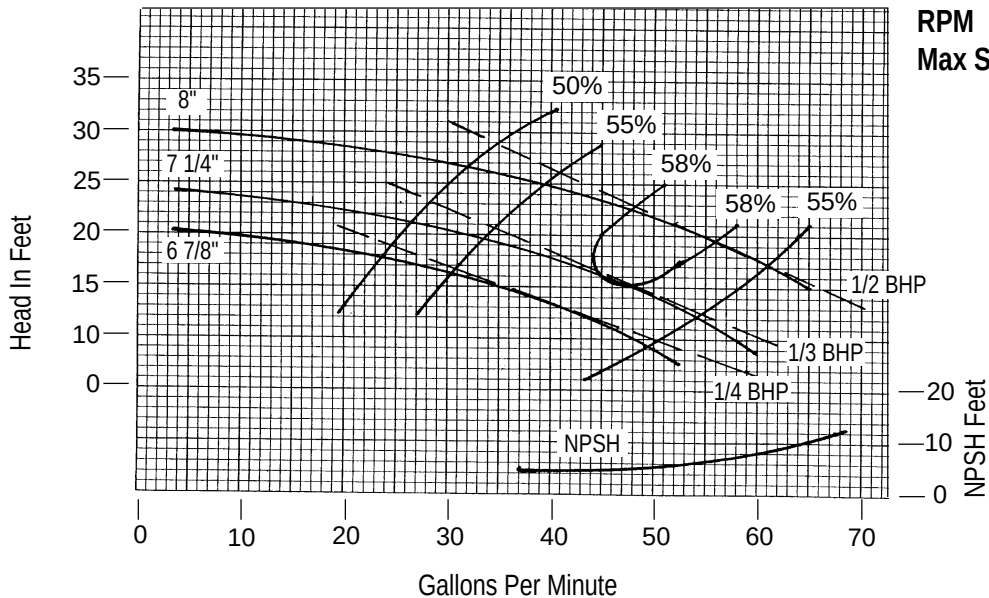
Curve AS-1612

Series 1300 / 1400
Size 1 1/2 X 1 1/4 X 8
RPM 1750
Max Sphere 5/16



Curve BS-1612

Series 1300 / 1400
Size 1 1/2 X 1 1/4 X 8
RPM 1150
Max Sphere 5/16



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

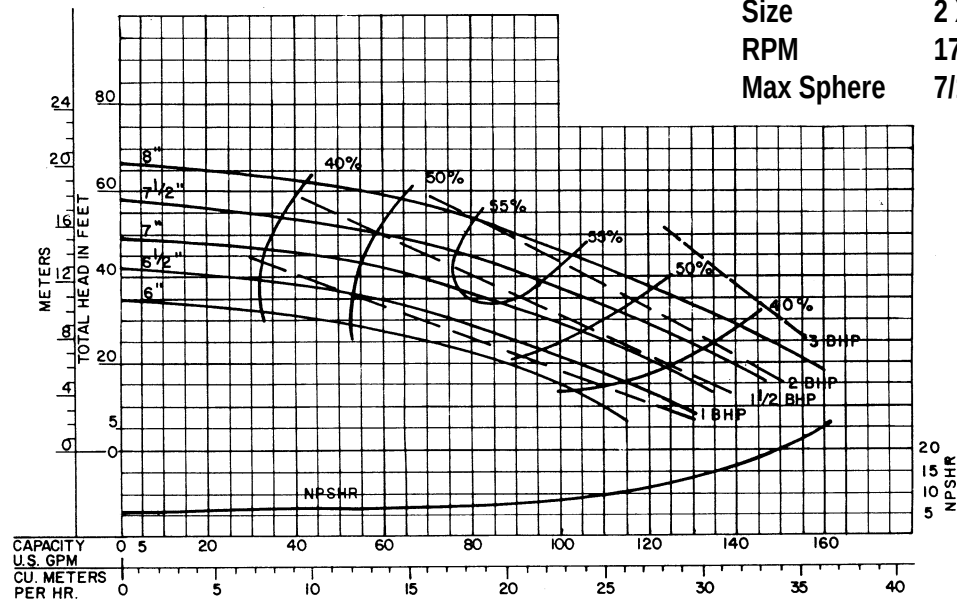
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

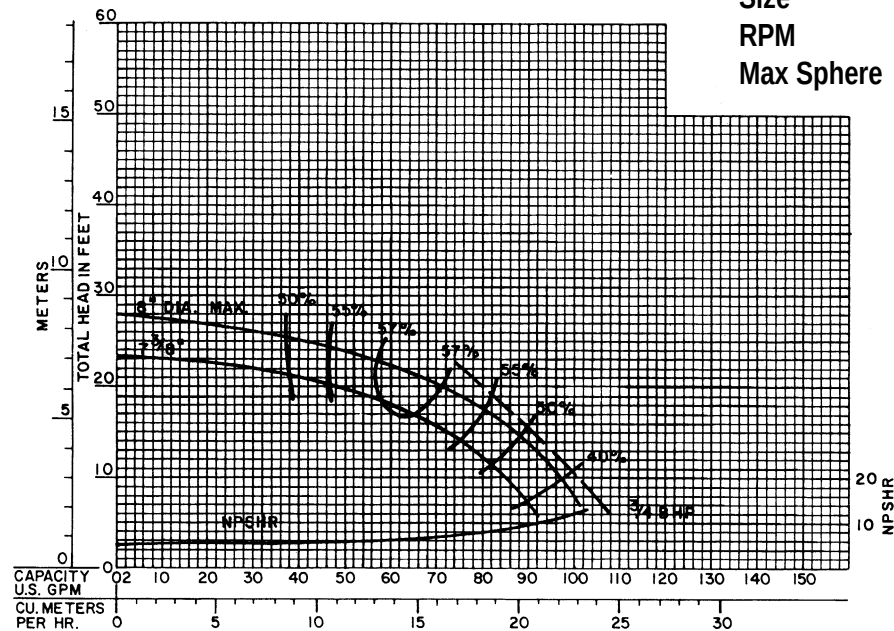
Curve BS-1615

Series 1300 / 1400
Size 2 X 1 1/2 X 8
RPM 1750
Max Sphere 7/16



Curve CS-1615

Series 1300 / 1400
Size 2 X 1 1/2 X 8
RPM 1150
Max Sphere 7/16



1300

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

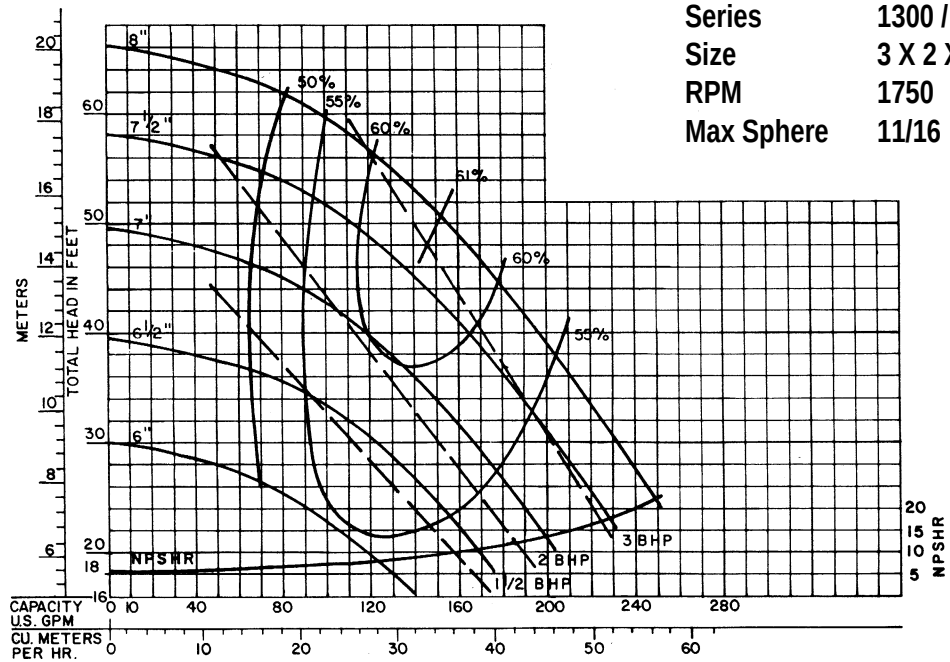
ENGINEER _____

CONTRACTOR _____

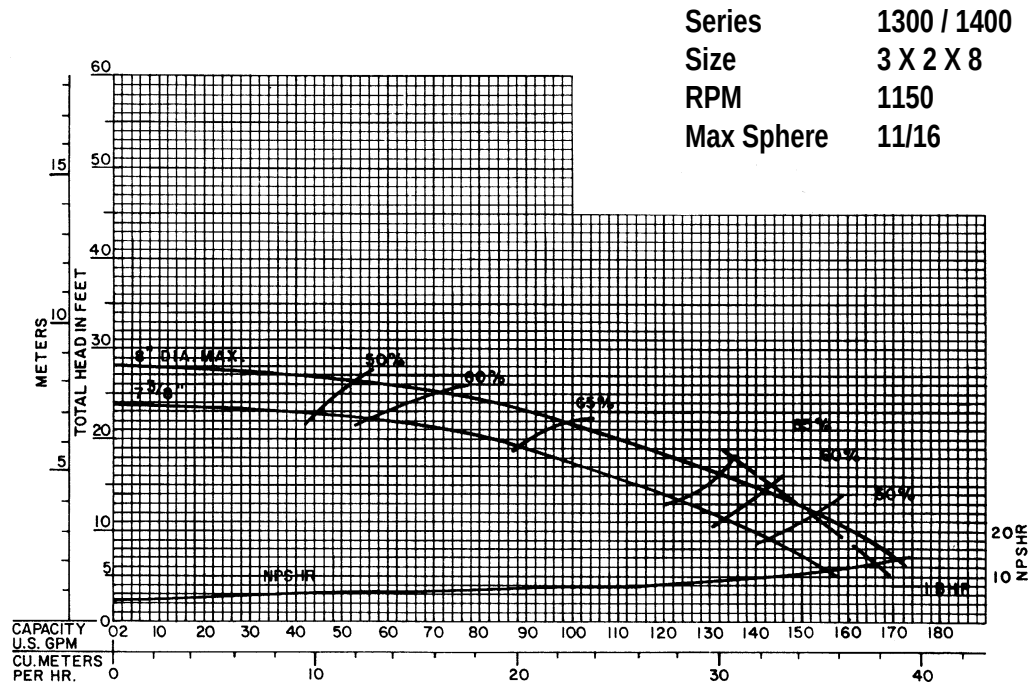
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve CS-1620



Curve DS-1620



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

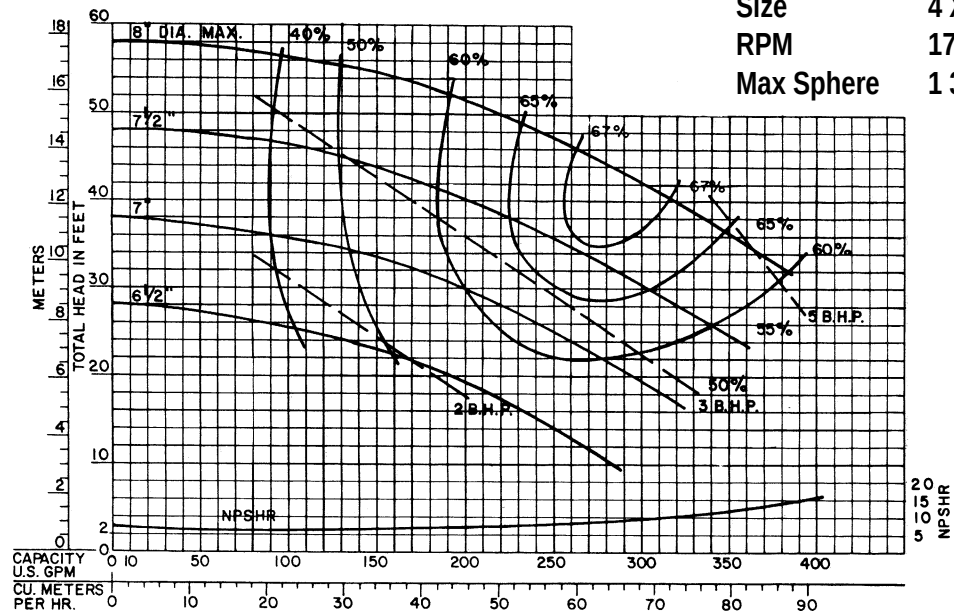
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

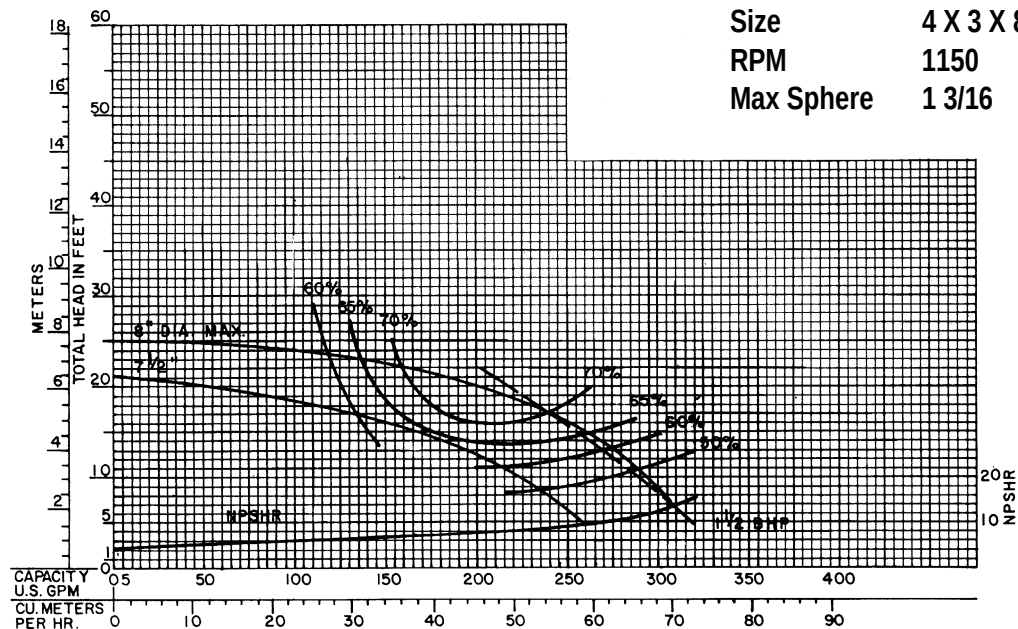
VERTIFLO PUMP COMPANY Performance Curves

Curve CS-1630



Series 1300 / 1400
Size 4 X 3 X 8
RPM 1750
Max Sphere 1 3/16

Curve DS-1630



Series 1300 / 1400
Size 4 X 3 X 8
RPM 1150
Max Sphere 1 3/16

1300

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

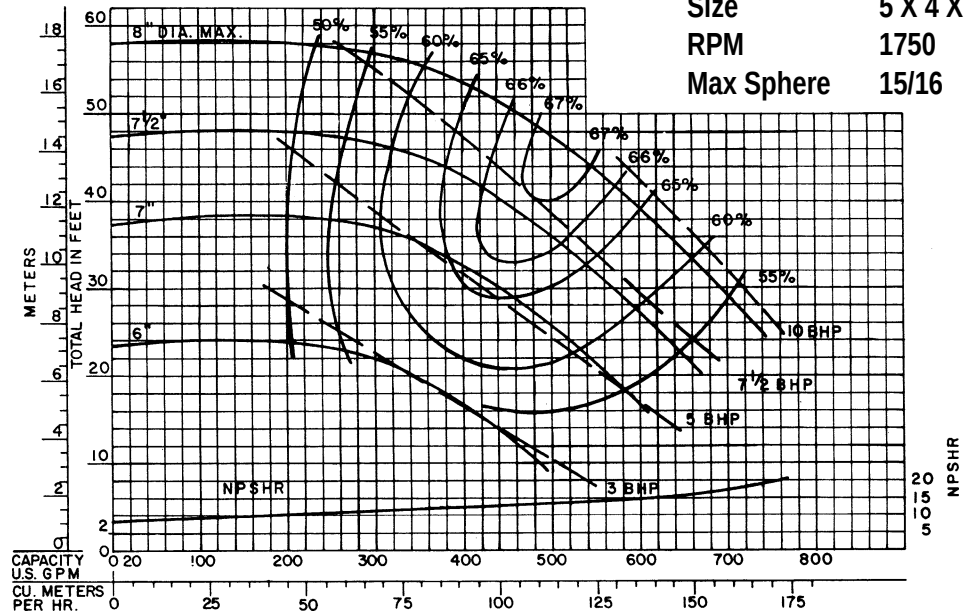
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

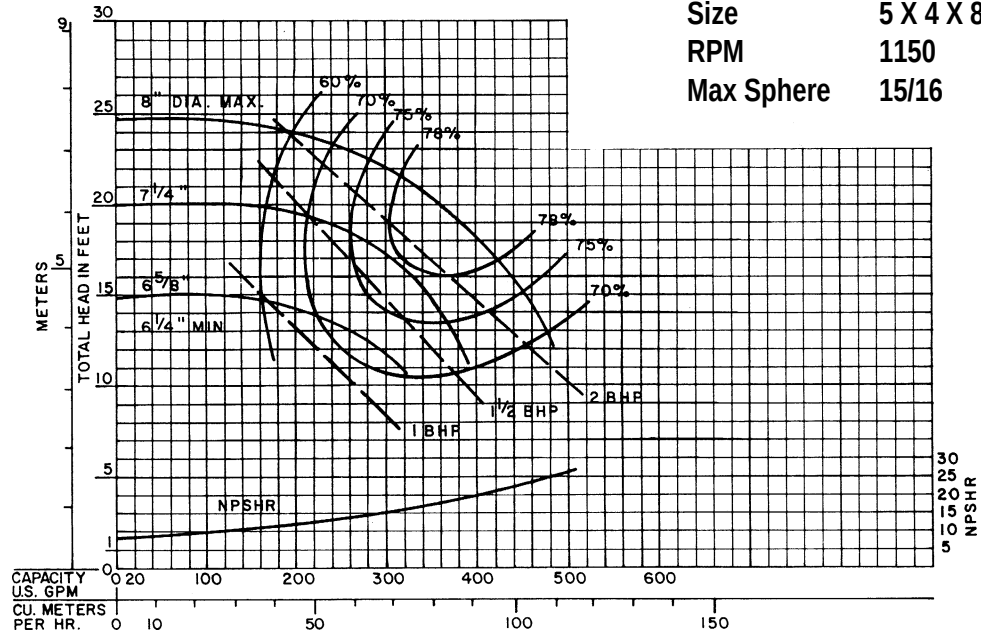
VERTIFLO PUMP COMPANY Performance Curves

Curve ES-1640



Series 1300 / 1400
 Size 5 X 4 X 8
 RPM 1750
 Max Sphere 15/16

Curve DS-1640



Series 1300 / 1400
 Size 5 X 4 X 8
 RPM 1150
 Max Sphere 15/16

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

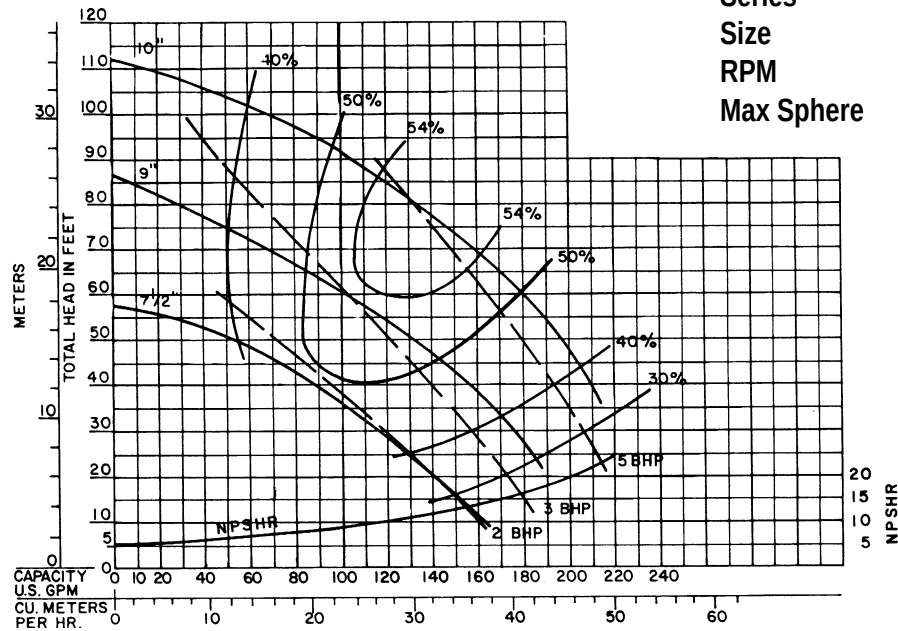
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

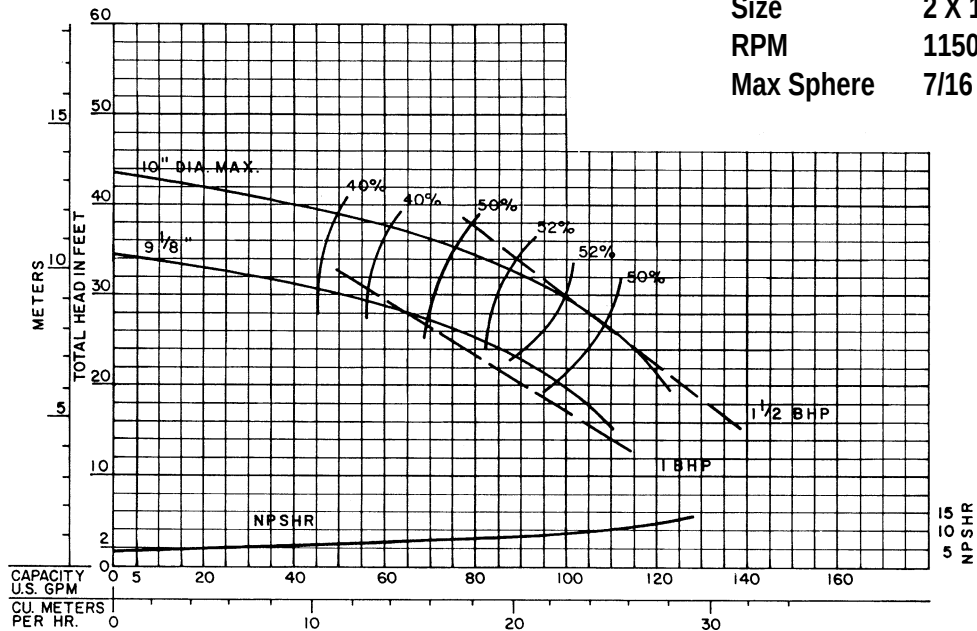
VERTIFLO PUMP COMPANY Performance Curves

Curve SM-1915



Series 1300 / 1400
Size 2 X 1 1/2 X 10
RPM 1750
Max Sphere 7/16

Curve TM-1915



Series 1300 / 1400
Size 2 X 1 1/2 X 10
RPM 1150
Max Sphere 7/16

1300

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

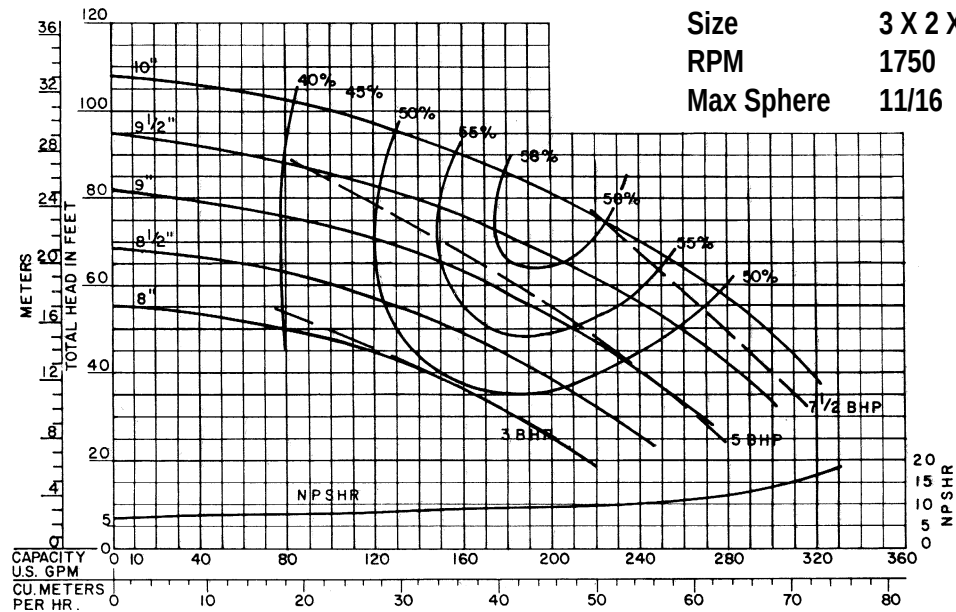
ENGINEER _____

CONTRACTOR _____

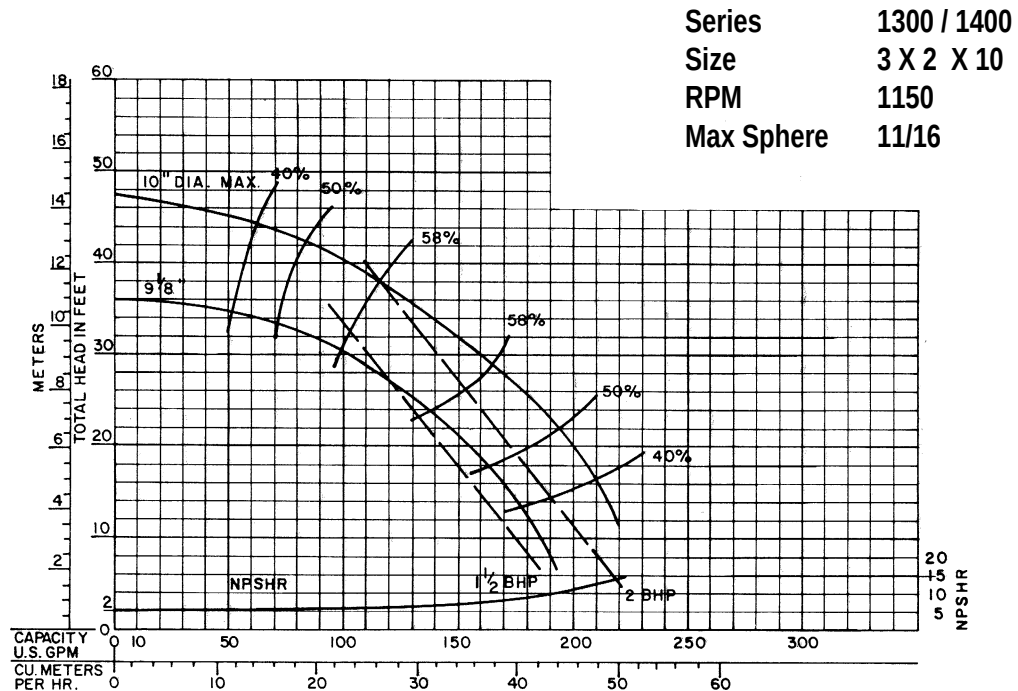
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve JM-1720



Curve KM-1720



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

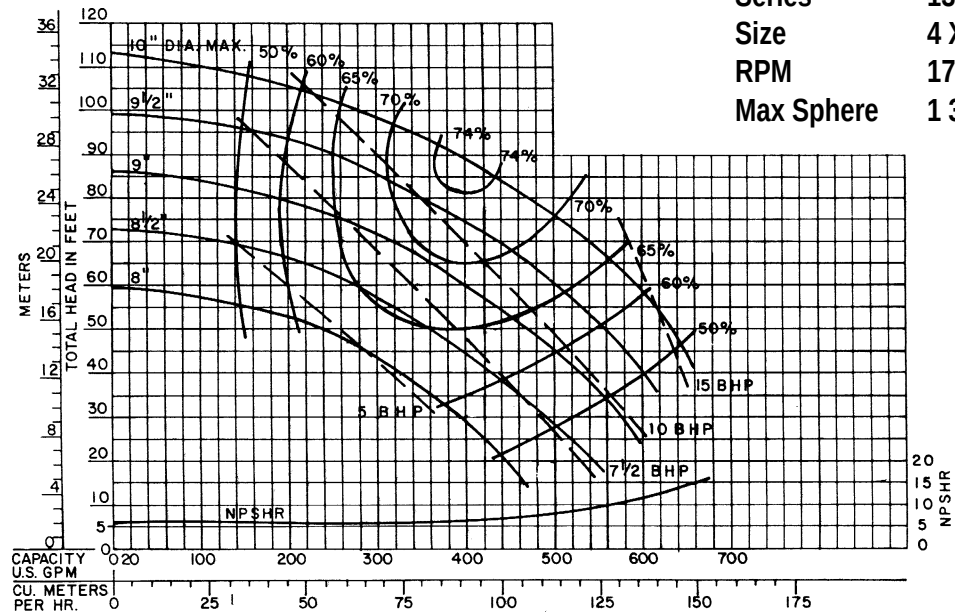
ENGINEER _____

CONTRACTOR _____

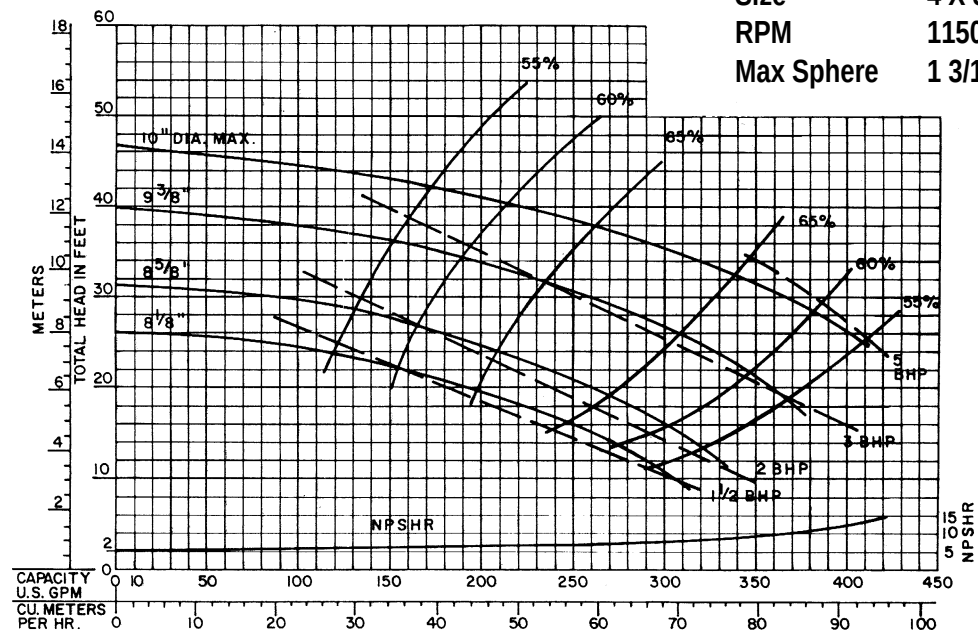
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve RM-1730



Curve SM-1730



1300

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

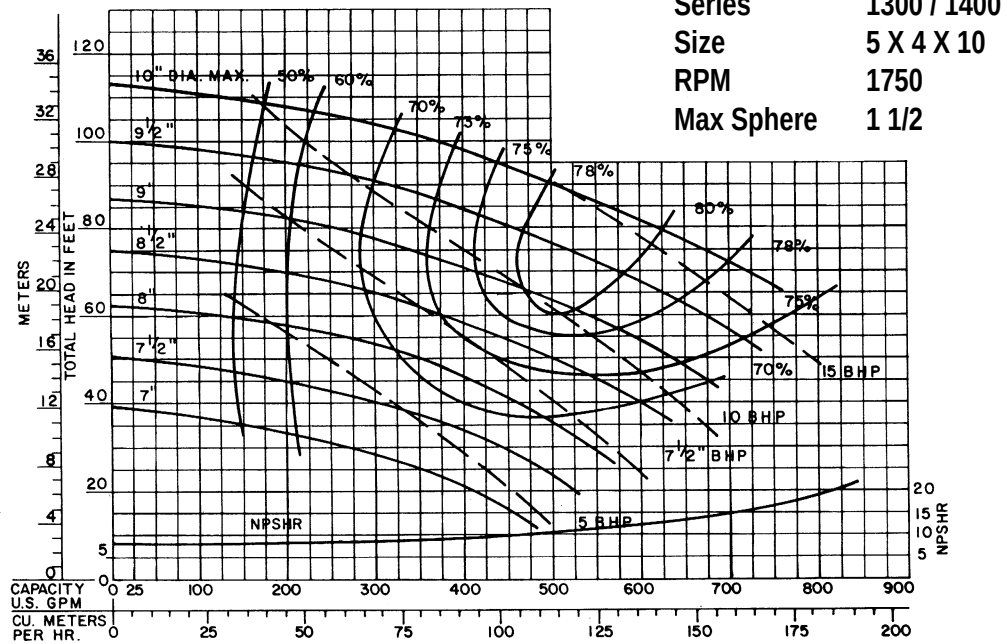
ENGINEER _____

CONTRACTOR _____

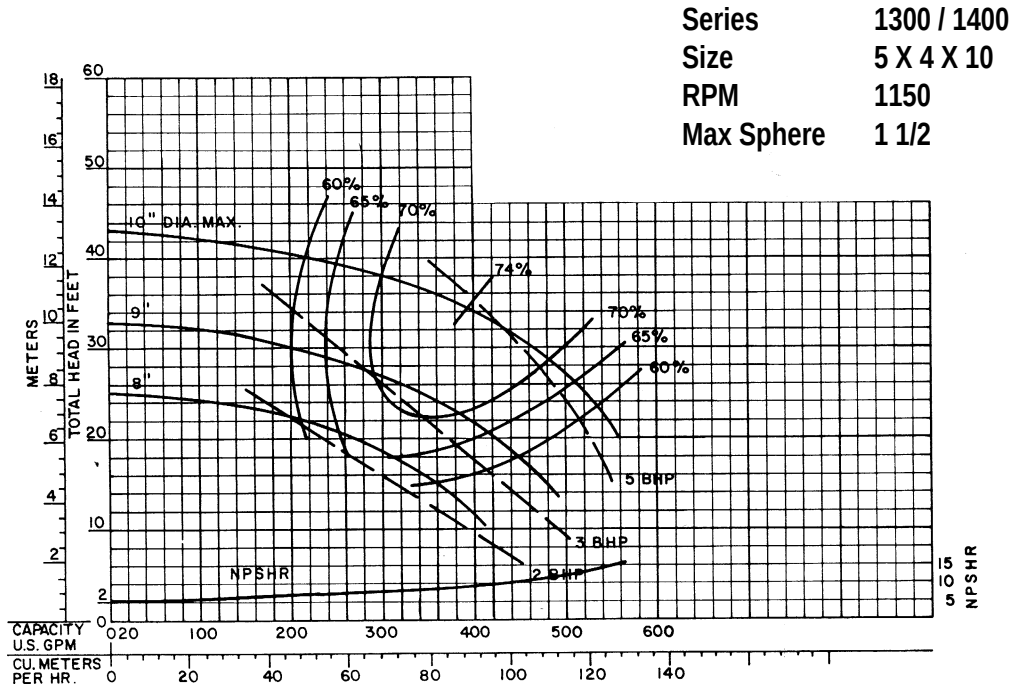
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve TM-1740



Curve UM-1740



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

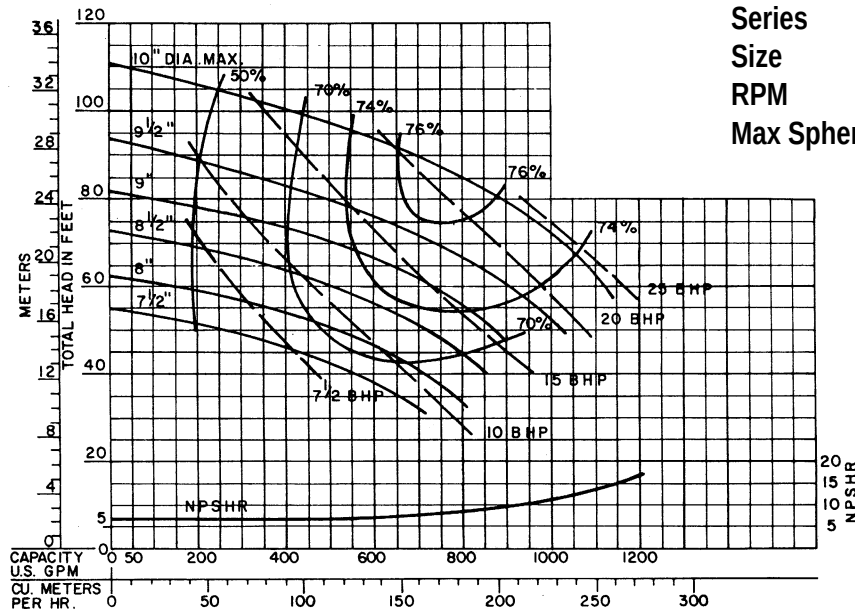
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

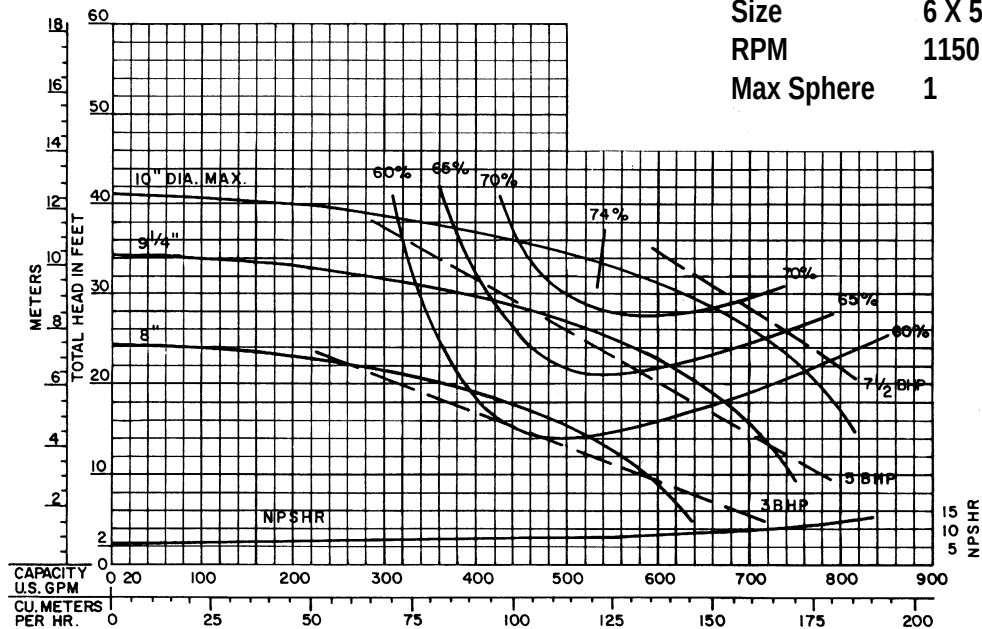
VERTIFLO PUMP COMPANY Performance Curves

Curve UM-1750



Series 1300 / 1400
Size 6 X 5 X 10
RPM 1750
Max Sphere 1

Curve VM-1750



Series 1300 / 1400
Size 6 X 5 X 10
RPM 1150
Max Sphere 1

1300

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

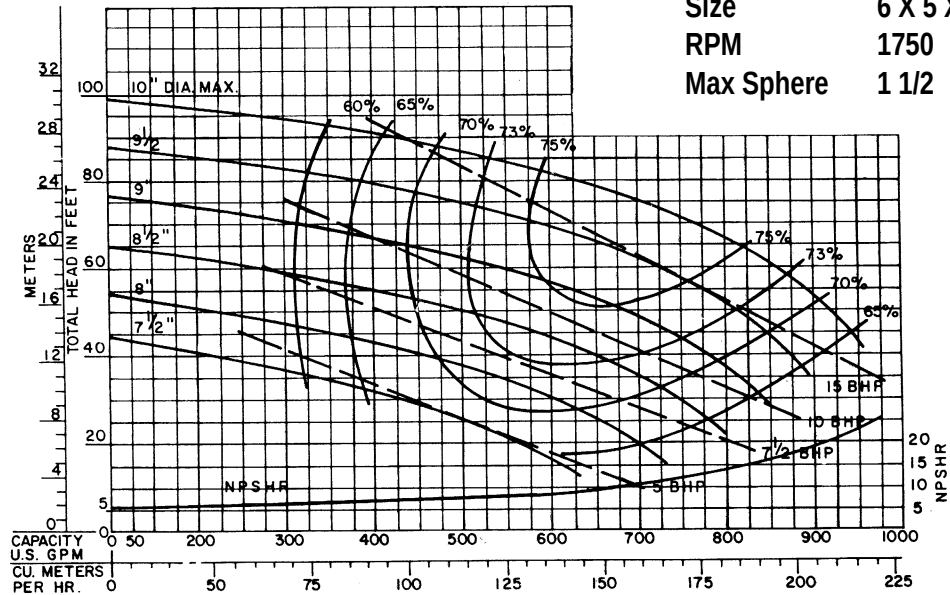
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

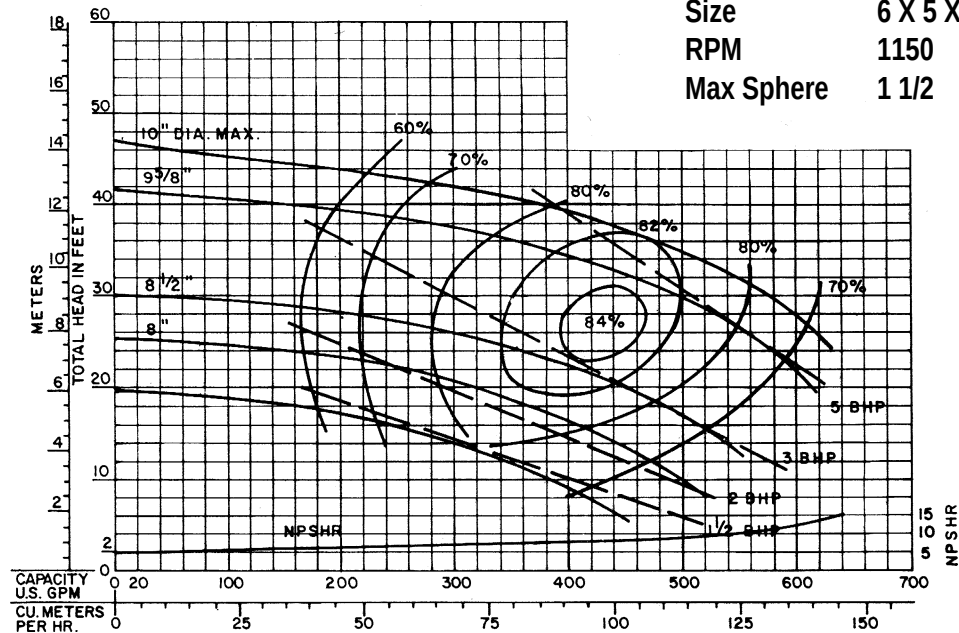
Curve SM-1750

Series 1300 / 1400
 Size 6 X 5 X 10A
 RPM 1750
 Max Sphere 1 1/2



Curve SM-1850

Series 1300 / 1400
 Size 6 X 5 X 10A
 RPM 1150
 Max Sphere 1 1/2



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

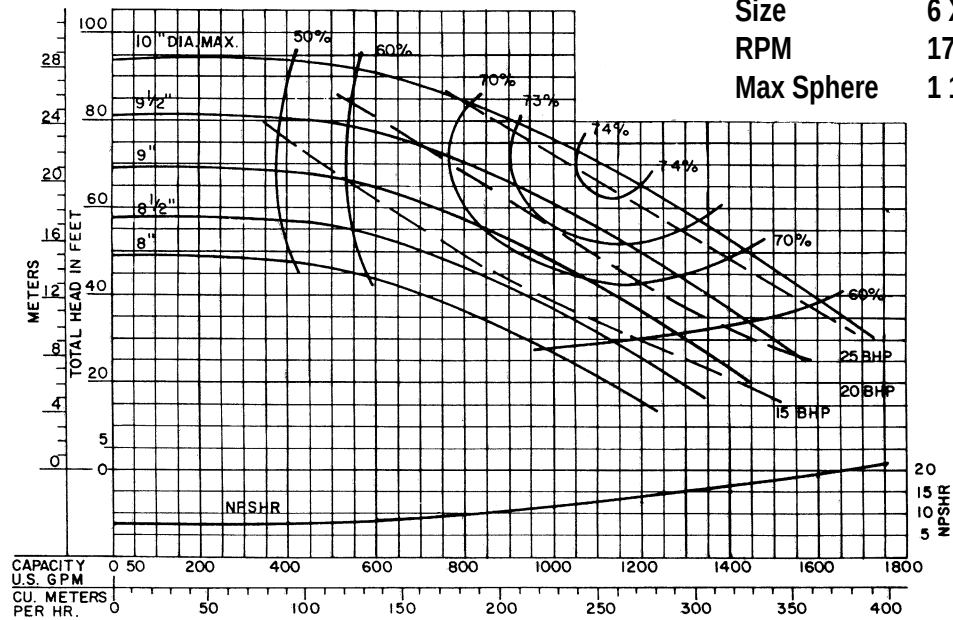
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

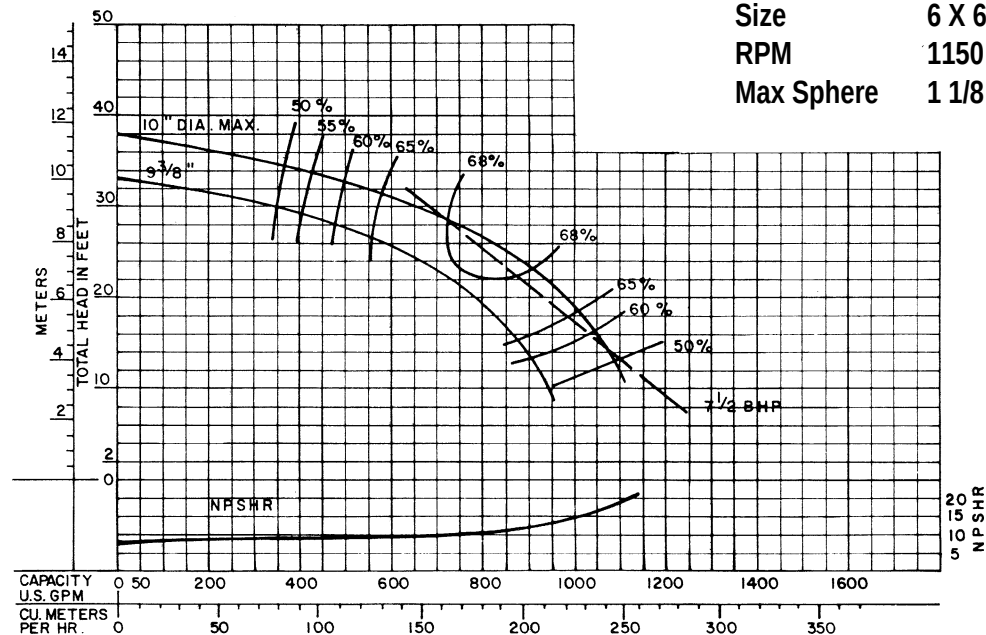
VERTIFLO PUMP COMPANY Performance Curves

Curve TM-1760



Series 1300 / 1400
Size 6 X 6 X 10
RPM 1750
Max Sphere 1 1/8

Curve UM-1760



Series 1300 / 1400
Size 6 X 6 X 10
RPM 1150
Max Sphere 1 1/8

1300

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

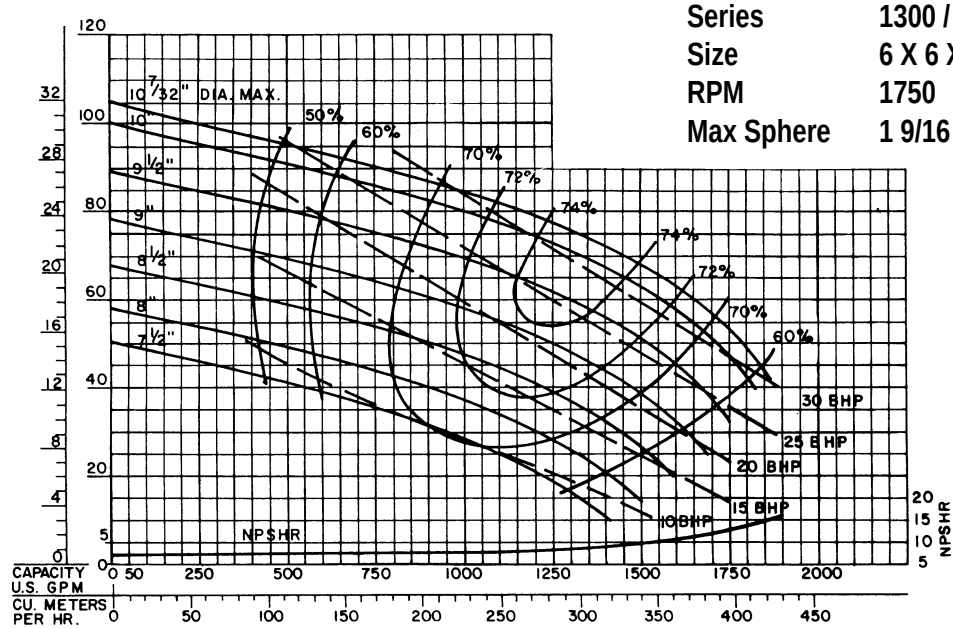
ENGINEER _____

CONTRACTOR _____

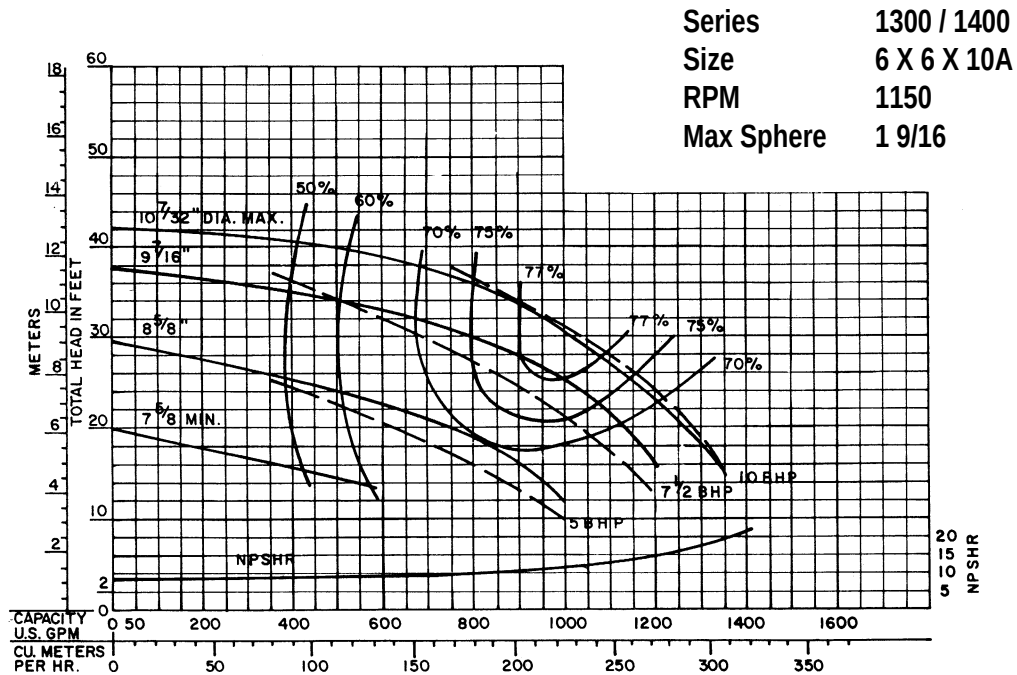
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve LM-1760



Curve LM-1860



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

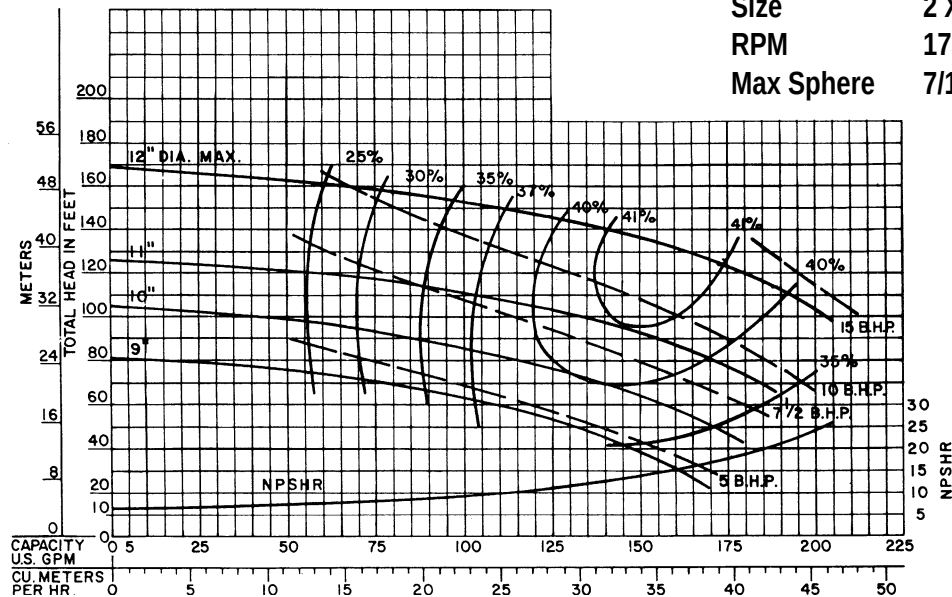
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

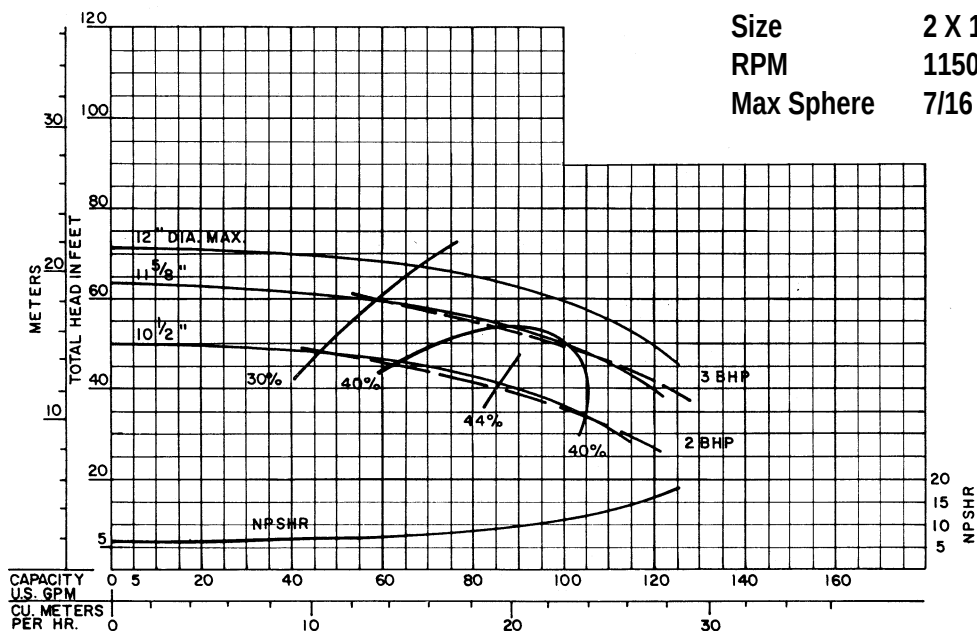
Curve KL-1915

Series 1300 / 1400
 Size 2 X 1 1/2 X 12
 RPM 1750
 Max Sphere 7/16



Curve LL-1915

Series 1300 / 1400
 Size 2 X 1 1/2 X 12
 RPM 1150
 Max Sphere 7/16



1300

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

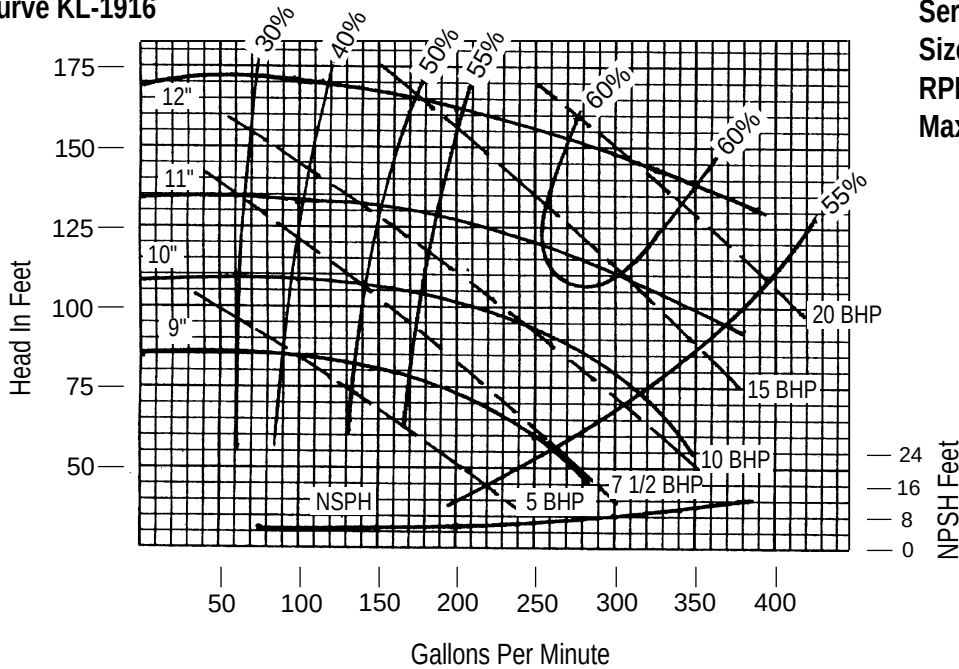
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

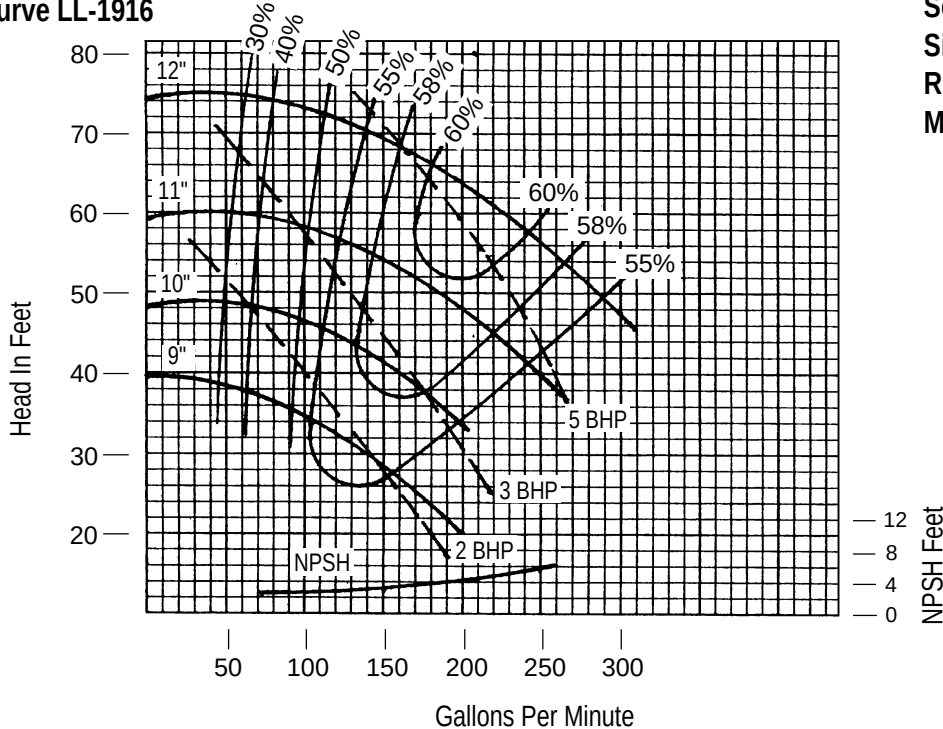
VERTIFLO PUMP COMPANY Performance Curves

Curve KL-1916



Series 1300/1400
Size 3 X 2 X 12
RPM 1750
Max Sphere 3/4

Curve LL-1916



Series 1300/1400
Size 3 X 2 X 12
RPM 1150
Max Sphere 3/4

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

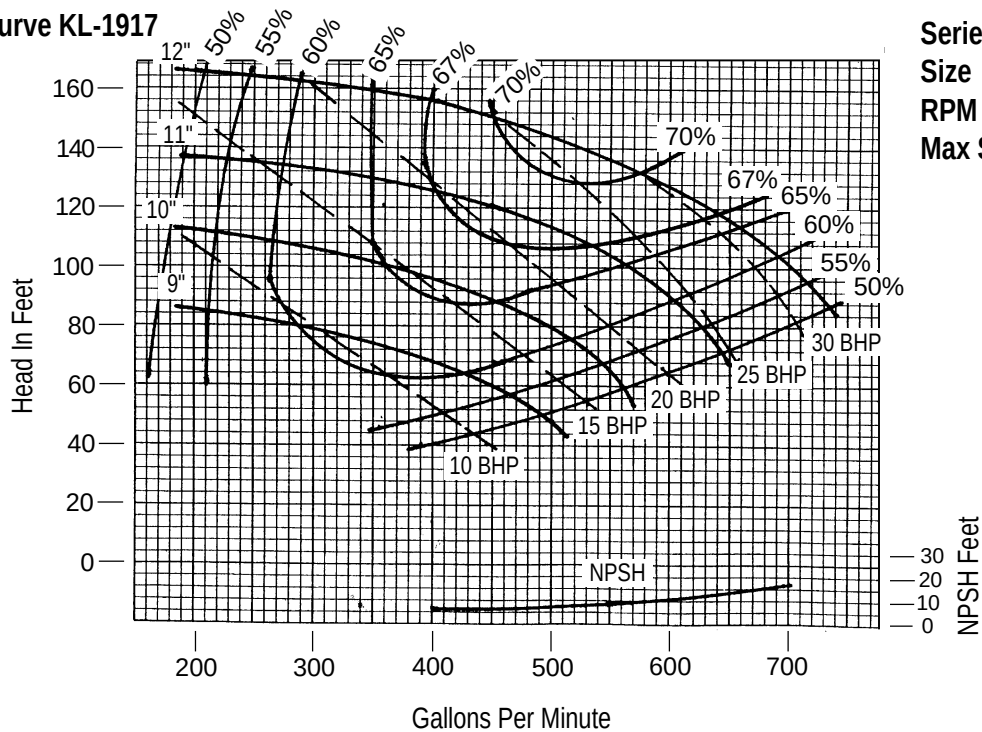
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

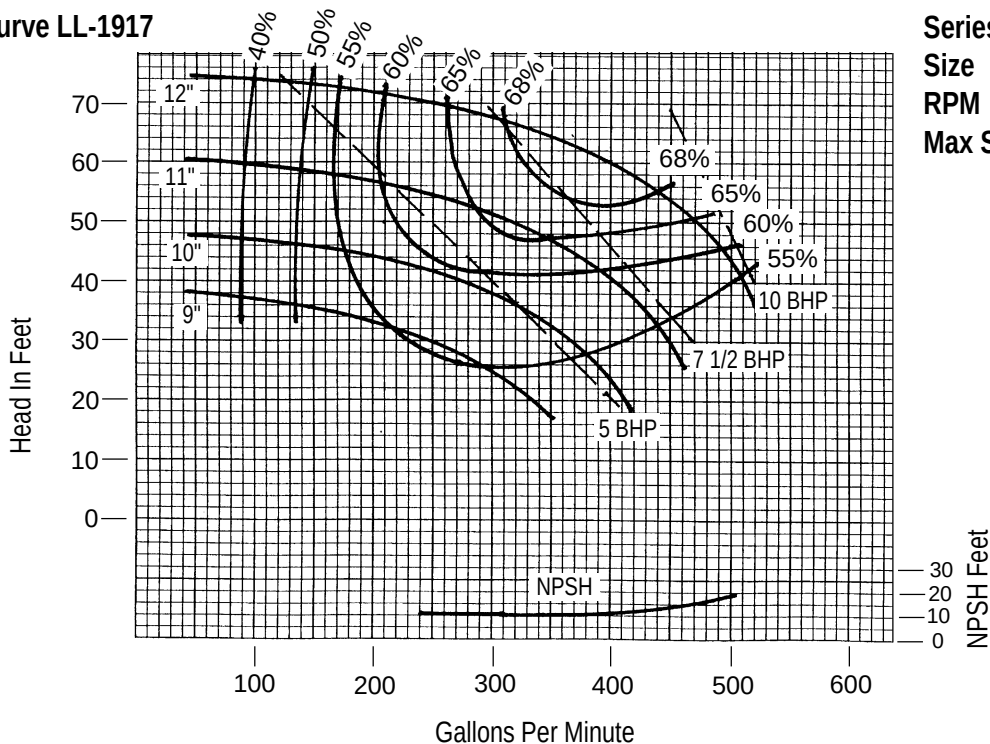
VERTIFLO PUMP COMPANY Performance Curves

Curve KL-1917



Series 1300 / 1400
Size 4 X 3 X 12
RPM 1750
Max Sphere 1 1/4

Curve LL-1917



Series 1300 / 1400
Size 4 X 3 X 12
RPM 1150
Max Sphere 1 1/4

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

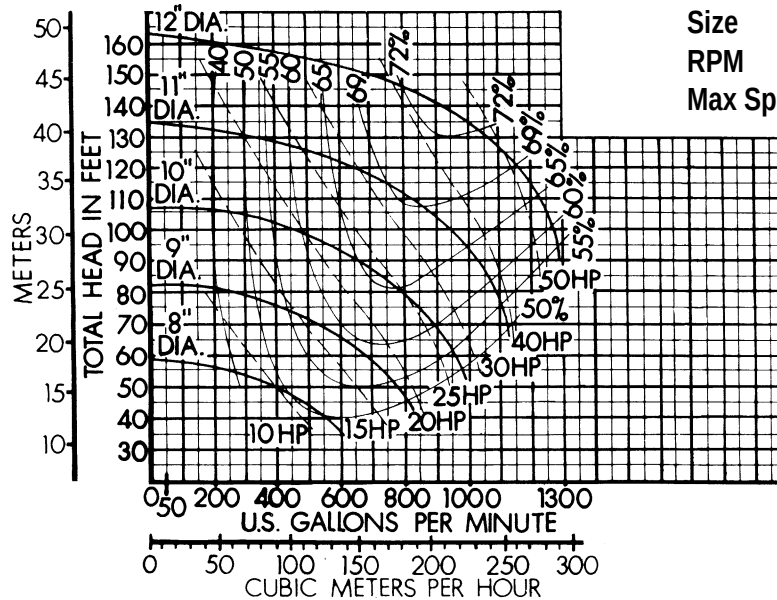
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

1300

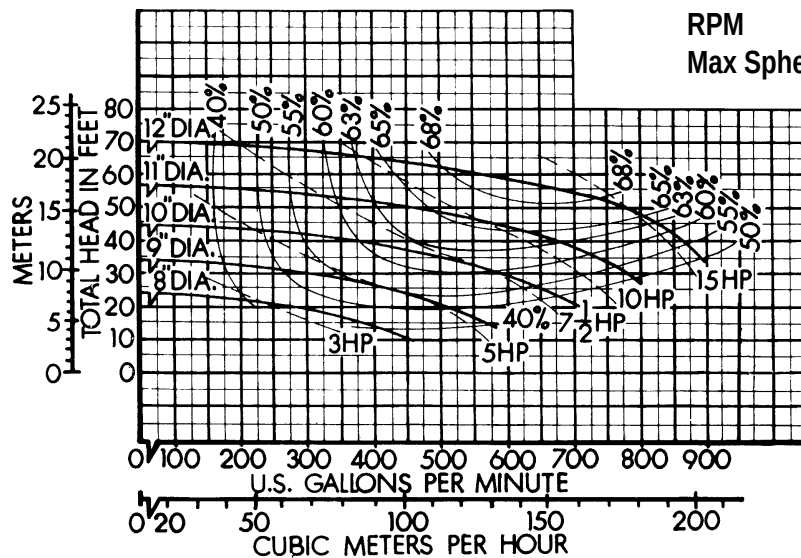
VERTIFLO PUMP COMPANY Performance Curves

Curve 64124



Series 1300 / 1400
Size 6 X 4 X 12
RPM 1750
Max Sphere 1 1/2

Curve 64126



Series 1300 / 1400
Size 6 X 4 X 12
RPM 1150
Max Sphere 1 1/2

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

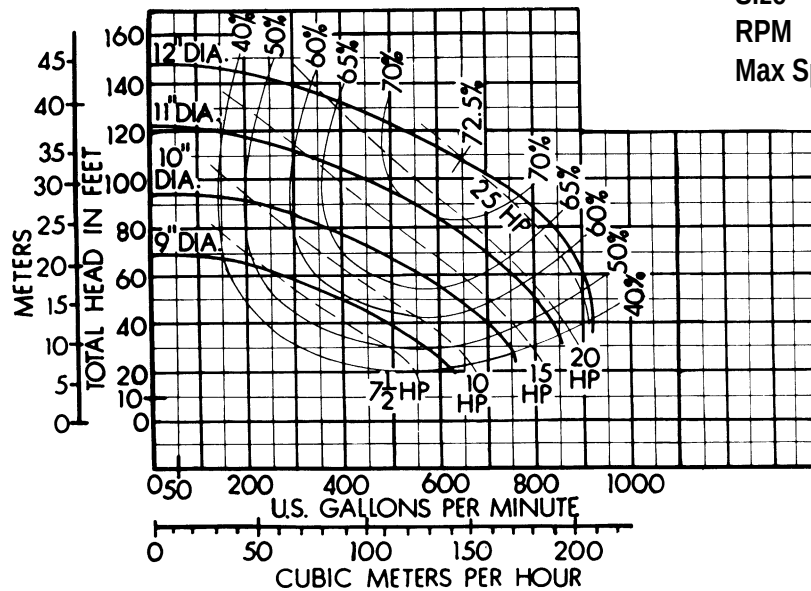
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

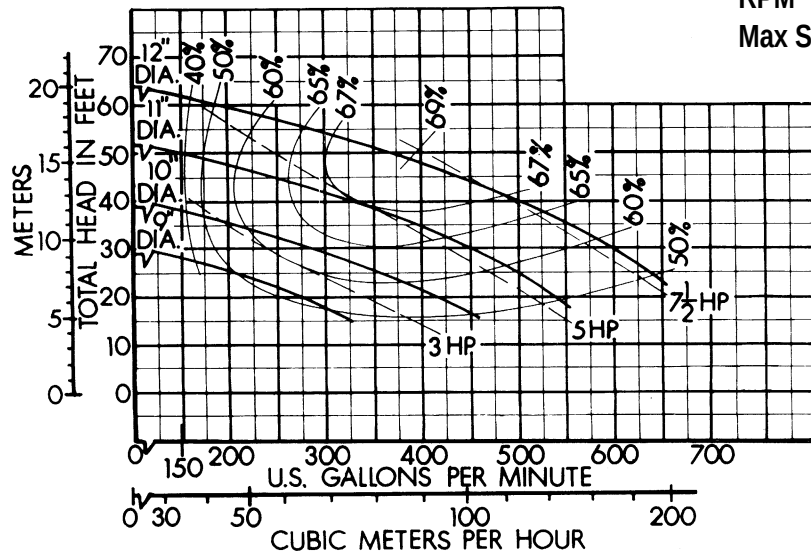
Curve 6412A4

Series 1300 / 1400
Size 6 X 4 X 12A
RPM 1750
Max Sphere 1 1/8



Curve 6412A6

Series 1300 / 1400
Size 6 X 4 X 12A
RPM 1150
Max Sphere 1 1/8



1300

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

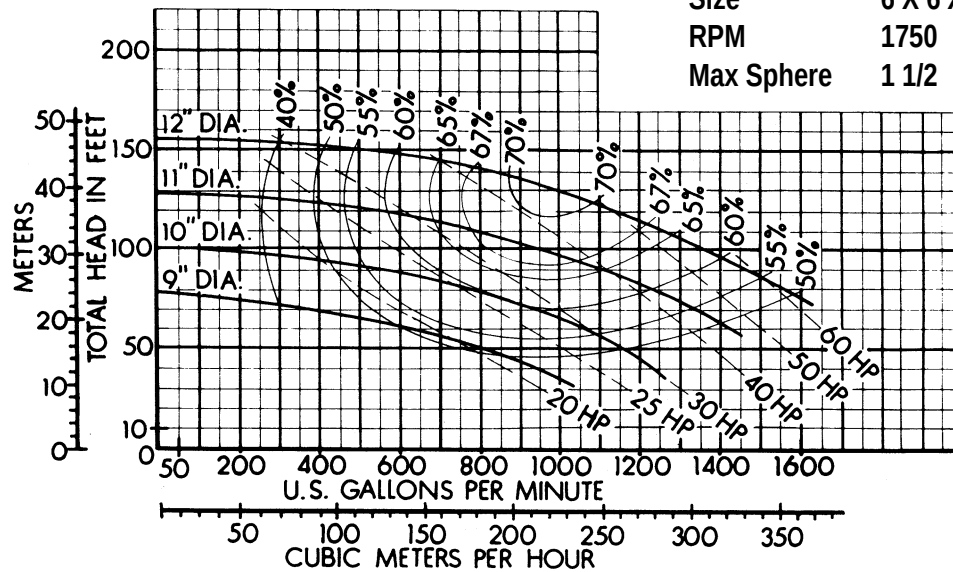
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

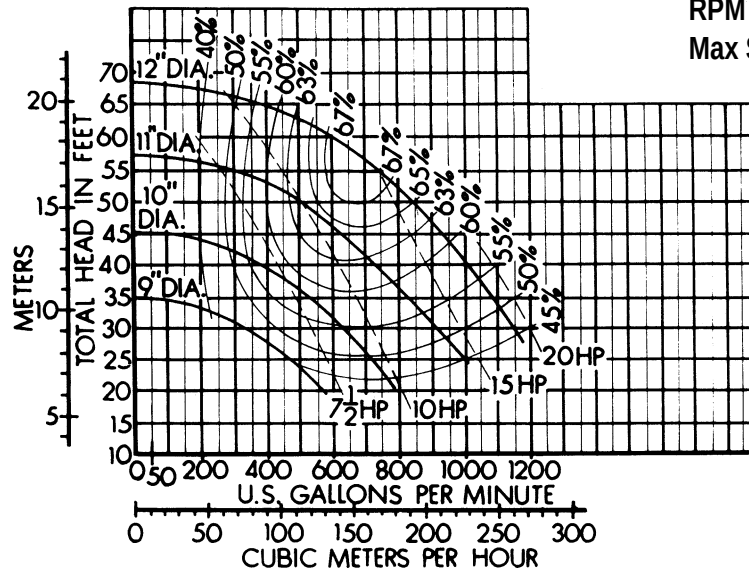
Curve 66124

Series 1300 / 1400
Size 6 X 6 X 12
RPM 1750
Max Sphere 1 1/2



Curve 66126

Series 1300 / 1400
Size 6 X 6 X 12
RPM 1150
Max Sphere 1 1/2



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

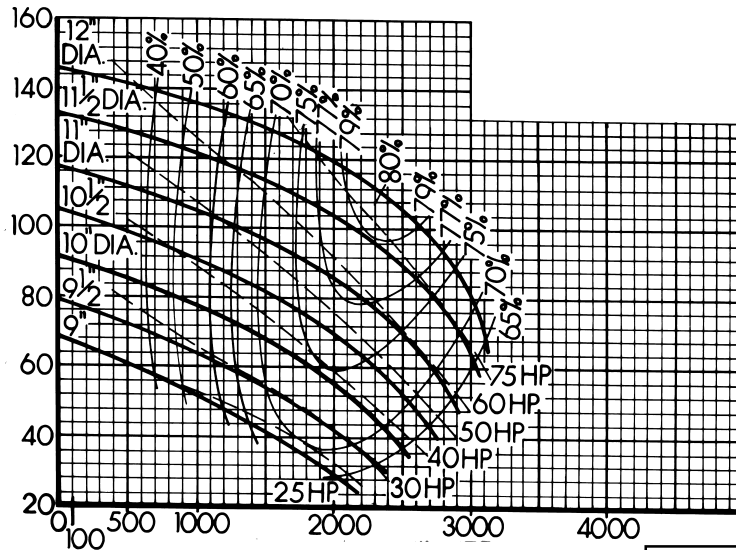
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY

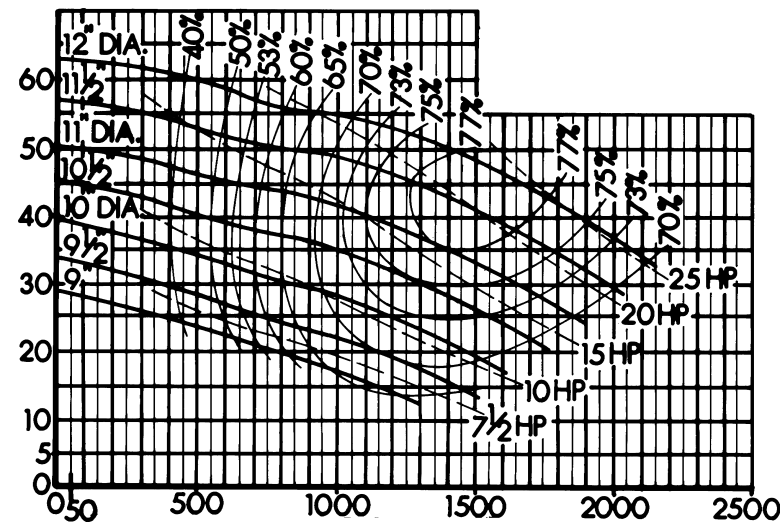
Curve 88124



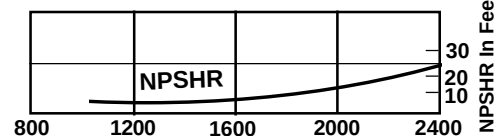
Series 1300 / 1400
Size 8 X 8 X 12
RPM 1750
Max Sphere 1 1/2



Curve 88126



Series 1300 / 1400
Size 8 X 8 X 12
RPM 1150
Max Sphere 1 1/2



1300

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

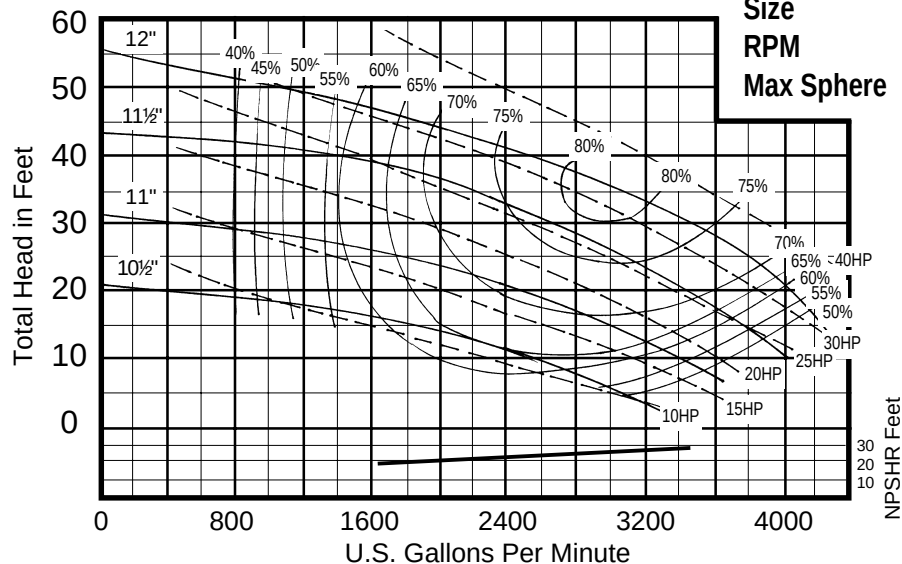
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY

Curve 101012

Series 1300 / 1400
Size 10 X 10 X 12
RPM 1750
Max Sphere 1 1/2



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

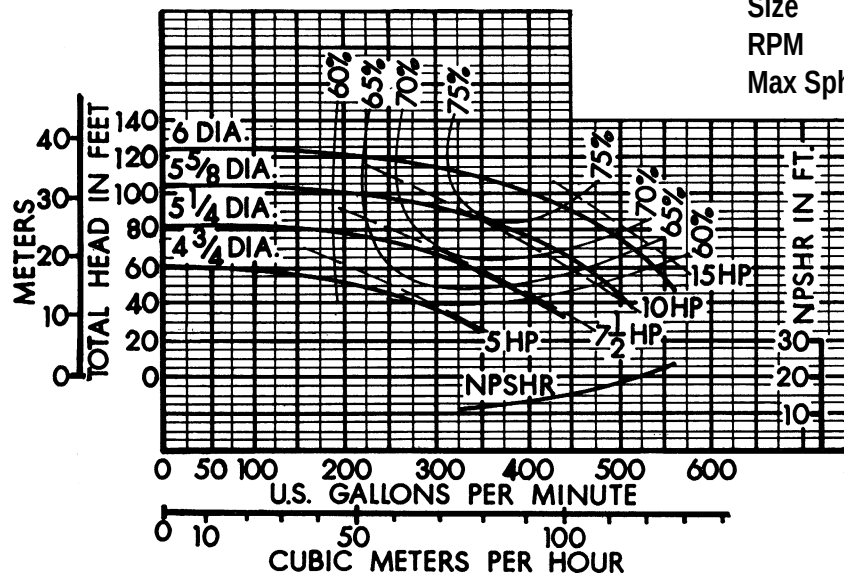
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

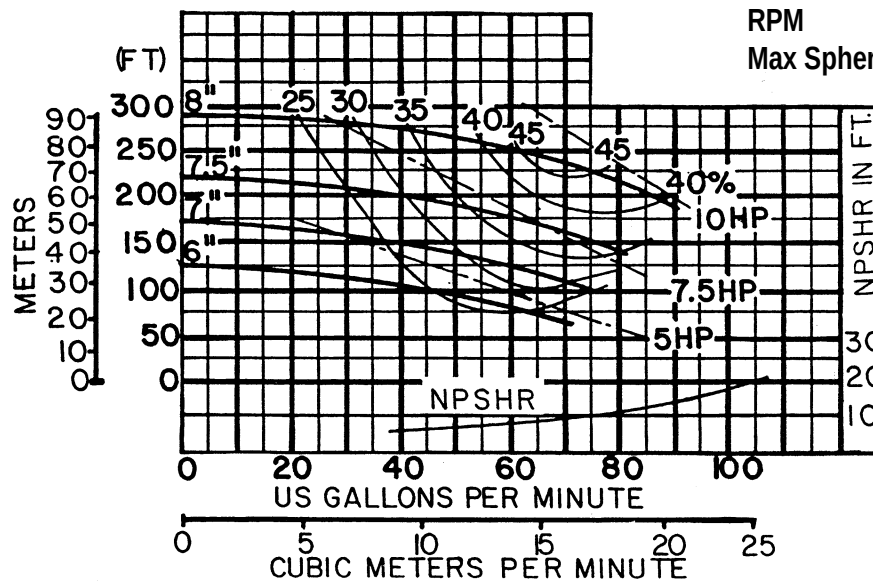
Curve 3272

Series 1300 / 1400
Size 3 X 2 1/2 X 7
RPM 3500
Max Sphere 1



Curve 11082

Series 1300 / 1400
Size 1 1/2 X 1 X 8
RPM 3500
Max Sphere 1/4



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

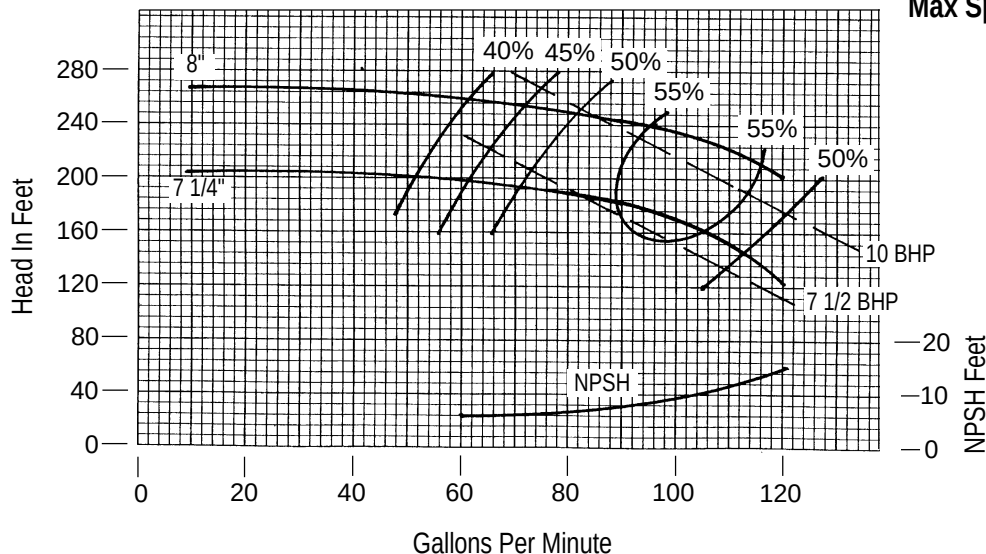
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Curve 11092

Series 1300 / 1400
 Size 1 1/2 X 1 1/4 X 8
 RPM 3500
 Max Sphere 5/16



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

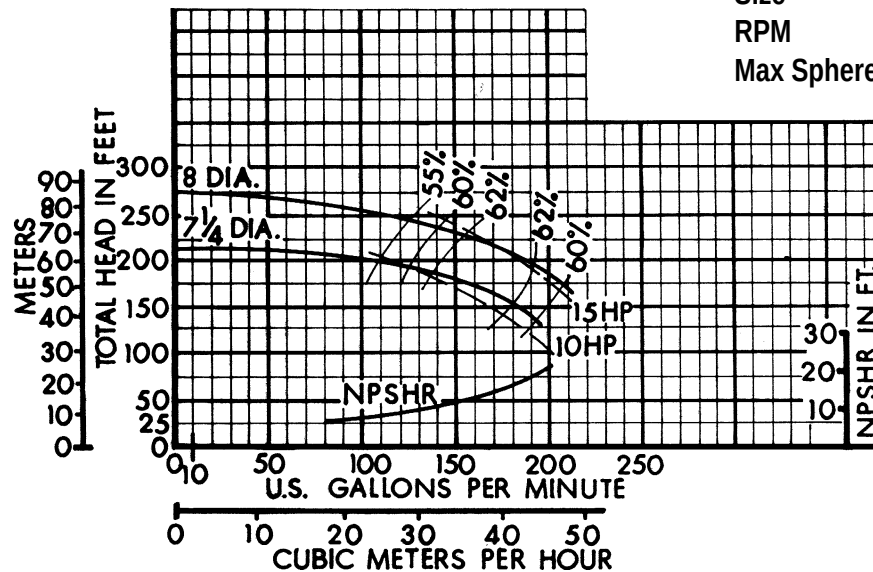
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

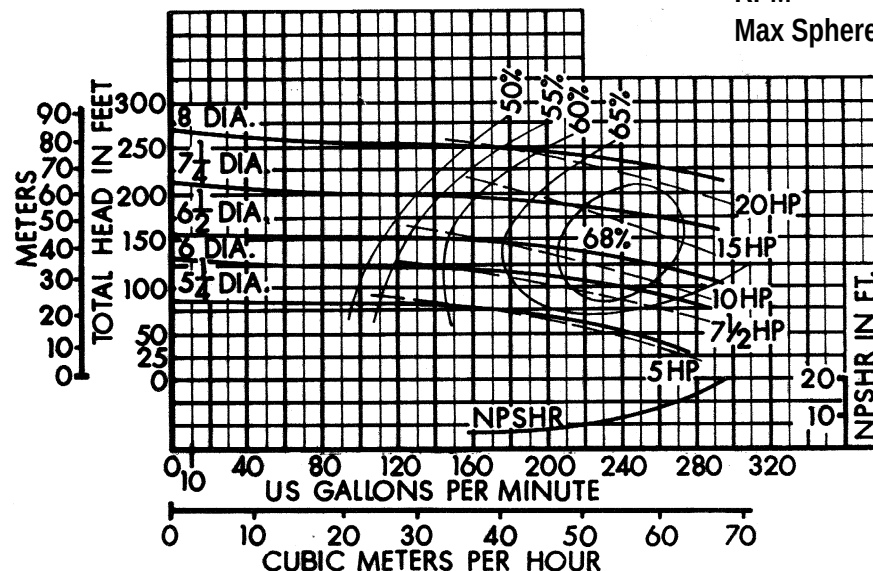
Curve 2182

Series 1300 / 1400
Size 2 X 1 1/2 X 8
RPM 3500
Max Sphere 7/16



Curve 3282

Series 1300 / 1400
Size 3 X 2 X 8
RPM 3500
Max Sphere 11/16



1300

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

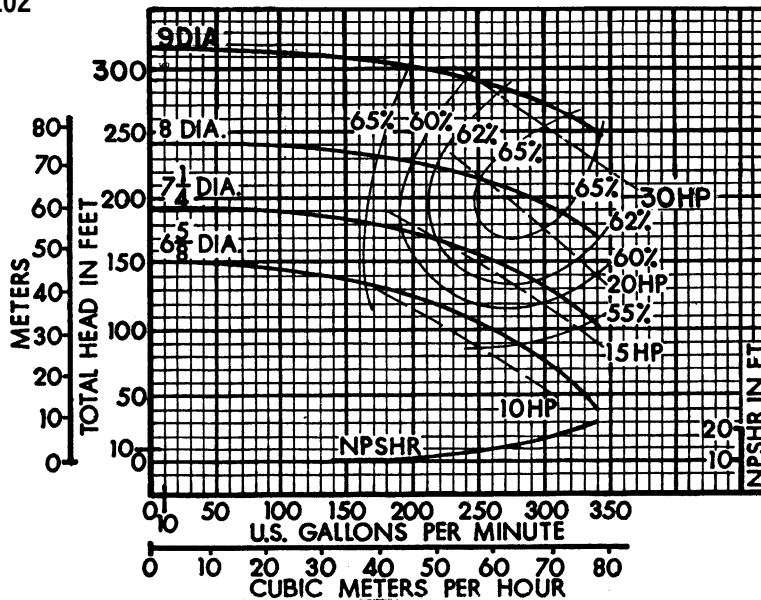
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

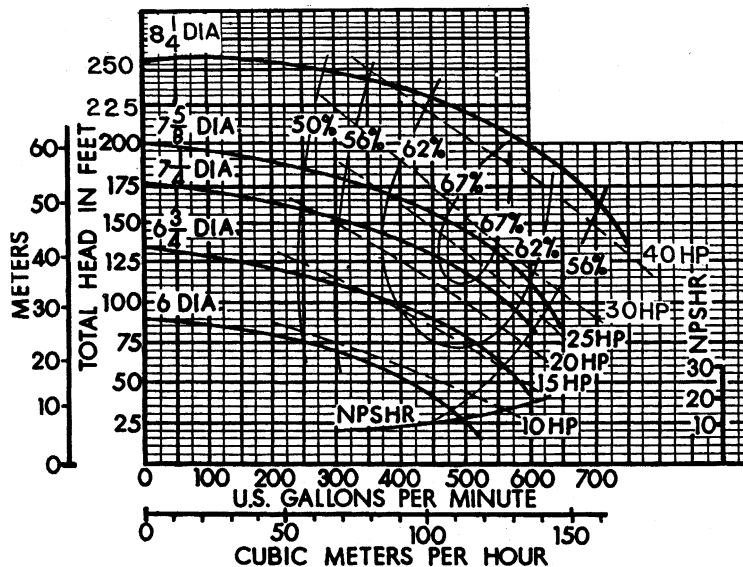
VERTIFLO PUMP COMPANY Performance Curves

Curve 32102



Series 1300 / 1400
Size 3 X 2 X 10
RPM 3500
Max Sphere 11/16

Curve 11082



Series 1300 / 1400
Size 4 X 3 X 10
RPM 3500
Max Sphere 1 3/16

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

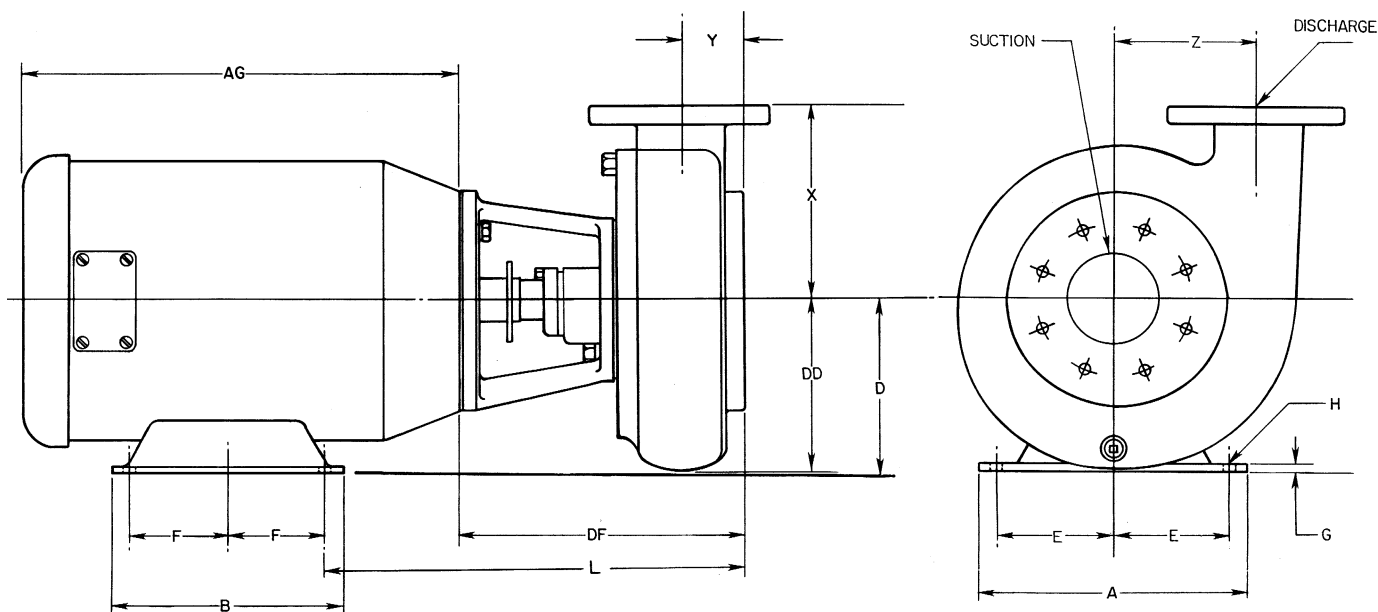
PROJECT _____

ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

1300 Series - 8" Line



MOTOR DATA

FRAME	A	B	D	E	F	G	H	AG
143 JP	6½	6	3½	2¾	2	1/8	11/32	97/16
145 JP	6½	6	3½	2¾	2½	1/8	11/32	97/16
182 JP	8¾	6¾	4½	3¾	2¼	3/8	13/32	13½
184 JP	8¾	6¾	4½	3¾	2¾	3/8	13/32	13½
213 JP	9½	7¾	5¼	4¼	2¾	5/8	13/32	15½
215 JP	9½	8¾	5¼	4¼	3½	5/8	13/32	17
254 JP	11¾	1011/16	6¼	5	4½	11/16	17/32	20½
256 JP	11¾	127/16	6¼	5	5	11/16	17/32	217/8
284 JP	127/8	12¼	7	5½	4¾	¾	17/32	22¾

Dimensions Based on TEFC, JP Frame Motors.

Not for construction unless certified, some dimensions may vary $\pm 1/2"$. Pump Construction: _____

1300

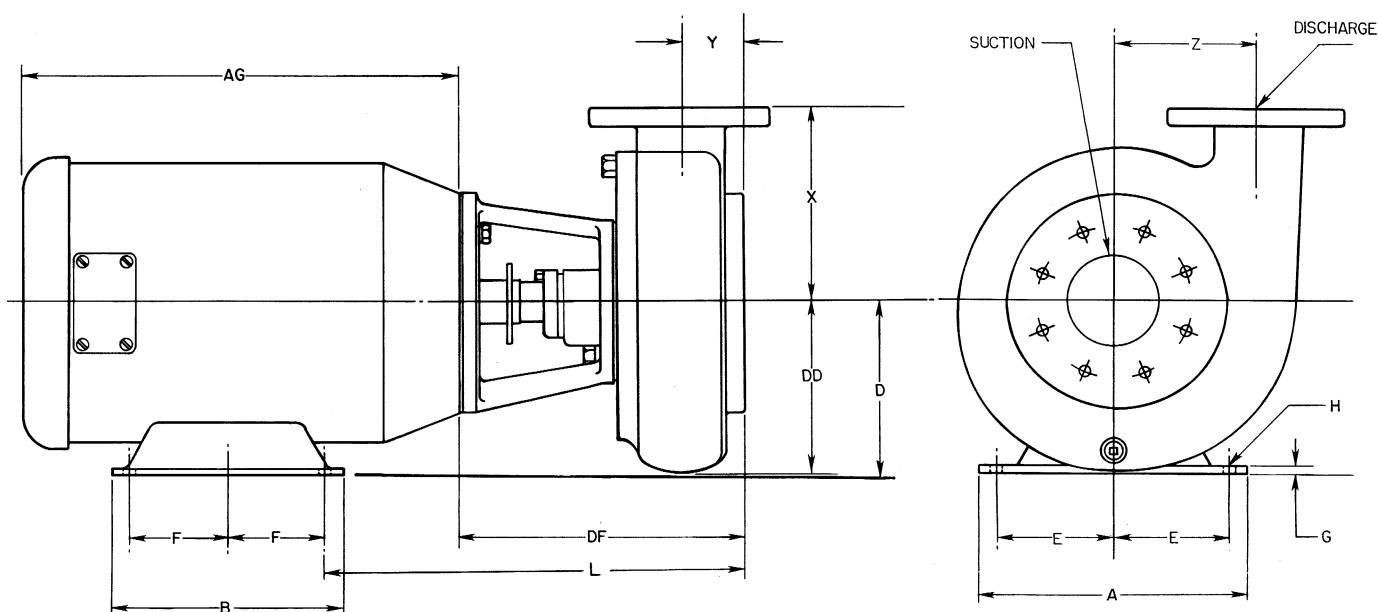
CUSTOMER _____ CUSTOMER NO. _____
 PROJECT _____ SERIAL NO. _____
 ENGINEER _____ LOCATION _____
 CONTRACTOR _____
 PUMP Model _____ Size _____ Curve No. _____ GPM _____ Head _____ SP. GR.@Temp. _____
 DATA _____
 MOTOR Mfgr. _____ HP _____ RPM _____ Volt-Phase-Cycle _____ Frame ENC. _____
 DATA _____
 Shop Order _____ Certified by _____ Date _____

VERTIFLO PUMP COMPANY Dimensions

1300 Series - 8" Line

300 Series - 8" Line			SUCTION FLANGE						DISCHARGE FLANGE															
LIQUID END	PUMP MODEL	MOTOR FRAME	FLG. SIZE	DIA. FLG.	# OF HOLES	HOLE DIA.	TAP	B.C.	FLG. SIZE	DIA. FLG.	# OF HOLES	HOLE DIA.	B.C.	DF	L	X	Y	Z	DD	R ₁	R ₂			
3 x 2½ x 7	1320	143 JP	3	7½	4	—	⅝ 11	6	2½	7	4	¾	5½	10⅞	13⅞	6¼	2⅞	4¾	5½					
		145 JP													13⅞									
		182 JP													14¼									
		184 JP																						
	1326	213 JP												11⅞	15⅞									
		215 JP													16⅞									
		254 JP																						
1½ x 1 x 8	1320	143 JP	1½	5	4	—	½ 13	3⅞	1	4¼	4	⅝	3⅞	9⅞	12⅞	6	1⅞	4½	5¼					
		145 JP													11⅞									
		182 JP																						
		184 JP													12¾									
	1326	213 JP												9⅞	14½									
		215 JP																						
1½ x 1¼ x 8	1320	143 JP	1½	5	4	—	½ 13	3⅞	1¼	4⅝	4	⅝	3½	9⅞	13⅞	5¾	1⅞	4¾	5⅞	5½	5¾			
		145 JP													13⅞									
		182 JP													14									
		184 JP																						
	1326	213 JP												9¾	15⅞									
		215 JP													15⅞									
		254 JP																						
		256 JP																						
2 x 1½ x 8	1320	143 JP	2	6	4	—	⅝ 11	4¾	1½	5	4	⅞	3⅞	9⅞	12¾	5¾	2	4¾	5⅞					
		145 JP													12½									
		182 JP													13⅞									
		184 JP																						
	1326	213 JP												10⅞	14⅞									
		215 JP																						
3 x 2 x 8	1320	143 JP	2½	7	4	—	⅝ 11	5½	2	6	4	¾	4¾	10⅞	13	6¼	2⅞	4¾	5¾					
		145 JP													12¾									
		182 JP													13⅞									
		184 JP																						
	1326	213 JP												10⅞	15⅞									
		215 JP													15⅞									
		254 JP																						
		256 JP																						
4 x 3 x 8	1320	145 JP	4	9	8	—	⅝ 11	7½	3	7½	4	¾	6	11	13¾	7	2¾	5¼	6					
		182 JP													14⅞									
		184 JP																						
5 x 4 x 8	1320	145 JP	5	10	8	—	¾ 10	8½	4	9	8	¾	7½	11⅞	14¼	7	2⅞	6	7⅞					
		182 JP													15⅞									
		184 JP																						
	1326	213 JP												11⅞	16½									
		215 JP																						

1300 Series - 10/12" Line



MOTOR DATA

FRAME	A	B	D	E	F	G	H	AG
143 JP	6½	6	3½	2¾	2	⅛	1⅜	9⅞
145 JP	6½	6	3½	2¾	2½	⅛	1⅜	9⅞
182 JP	8¾	6¾	4½	3¾	2¼	⅜	1⅜	13½
184 JP	8¾	6¾	4½	3¾	2¾	⅜	1⅜	13½
213 JP	9½	7¾	5¼	4¼	2¾	⅝	1⅜	15½
215 JP	9½	8¾	5¼	4¼	3½	⅝	1⅜	17
254 JP	11¾	10⅞	6¼	5	4⅞	1⅞	1⅜	20⅞
256 JP	11¾	12⅞	6¼	5	5	1⅞	1⅜	21⅞
284 JP	12⅞	12¼	7	5½	4¾	¾	1⅜	22¾
286 JP	12⅞	13¾	7	5½	4¾	¾	1⅜	23⅞
324 JP	15¾	13½	8	6¼	5¼	1⅞	2⅜	24⅞
326 JP	15¾	16	8	6¼	6	1⅞	2⅜	26⅞
364 JP	17¾	14¼	9	7	5¾	1¼	2⅜	26⅞

Dimensions Based on TEFC, JP Frame Motors.

Not for construction unless certified, some dimensions may vary $\pm 1/2"$. Pump Construction: _____

CUSTOMER _____ CUSTOMER NO. _____
 PROJECT _____ SERIAL NO. _____
 ENGINEER _____ LOCATION _____
 CONTRACTOR _____
 PUMP Model _____ Size _____ Curve No. _____ GPM _____ Head _____ SP. GR.@Temp. _____
 DATA _____
 MOTOR Mfgr. _____ HP _____ RPM _____ Volt-Phase-Cycle _____ Frame ENC. _____
 DATA _____
 Shop Order _____ Certified by _____ Date _____

VERTIFLO PUMP COMPANY Dimensions

1300 Series 10/12" Line

			SUCTION FLANGE						DISCHARGE FLANGE											
LIQUID END	PUMP MODEL	MOTOR FRAME	FLG. SIZE	DIA. FLG.	# OF HOLES	HOLE DIA.	TAP	B.C.	FLG. SIZE	DIA. FLG.	# OF HOLES	HOLE DIA.	B.C.	DF	L	X	Y	Z	DD	
2X1½X10	1320	145 JP	2	6	4	—	⅝ 11	4¾	1½	5	4	⅝	3⅞	9⅛	127⁄₁₆	6½	2	5¾	6⅝	
		182 JP													13⅜					
		184 JP																		
	1326	213 JP												10¼	1413⁄₁₆					
		215 JP																		
		254 JP													155⁄₁₆					
		256 JP																		
3X2X10	1320	145 JP	3	7½	4	—	⅝ 11	6	2	6	4	¾	4¾	10⅞	12¾	7	2⅞	5¾	6½	
		182 JP													1311⁄₁₆					
		184 JP																		
	1326	213 JP												10⅝	153⁄₁₆					
		215 JP																		
		254 JP													1511⁄₁₆					
		256 JP																		
4X3X10	1320	145 JP	4	9	8	—	⅝ 11	7½	3	7½	4	¾	6	10⅝	135⁄₁₆	8⅝	27⁄₁₆	6¼	7	
		182 JP													14¼					
	1326	213 JP												11¼	15¾					
		215 JP																		
		254 JP													16¼					
		256 JP																		
	5X4X10	1320												184 JP	5					10
213 JP																				
1326		215 JP	11¾	16⅜																
		254 JP																		
		256 JP		167⁄₁₆																
6X5X10 6X5X10A	1320	145 JP	6	11	8	—	¾ 10	9½	5	10	8	7⁄₈	8½	115⁄₁₆	137⁄₈	9	213⁄₁₆	7⅞	8⅝	
		182 JP													1413⁄₁₆					
	1326	213 JP												117⁄₈	167⁄₁₆					
		215 JP																		
		254 JP																		
		256 JP													1615⁄₁₆					
	6X6X10 6X6X10A	1326												215 JP	6					11
254 JP																				
256 JP			17¼																	
284 JP																				
2X1½X12	1320	184 JP	2	6	4	¾	—	4¾	1½	5	4	⅝	3⅞	11½	15	7½	3¾	6¾	3⅞	
		213 JP																		
	1326	215 JP												121⁄₁₆	16½					
		254 JP													17					

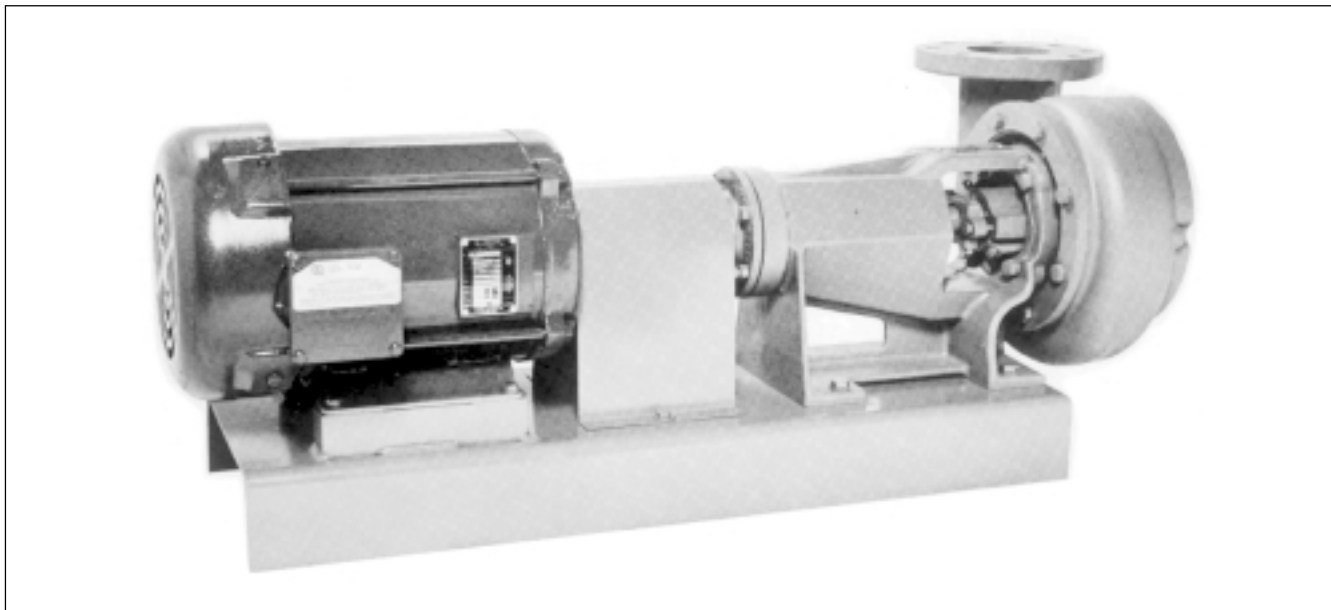
VERTIFLO PUMP COMPANY Dimensions

			SUCTION FLANGE						DISCHARGE FLANGE											
LIQUID END	PUMP MODEL	MOTOR FRAME	FLG. SIZE	DIA. FLG.	# OF HOLES	HOLE DIA.	TAP	B.C.	FLG. SIZE	DIA. FLG.	# OF HOLES	HOLE DIA.	B.C.	DF	L	X	Y	Z	DD	
3X2X12	1326	213 JP	3	7½	4	—	⅝ 11	6	2	6	4	¾	4¾	12⅞	16⅝	9½	2⅝ ₁₆	5	7⅞	
		215 JP																		
		254 JP																		
		256 JP													17⅞					
		284 JP																		
4X3X12	1326	215 JP	4	9	8	—	⅝ 11	7½	3	7½	4	¾	6	11¾	16¼	8½	2½	7⅞	8½	
		254 JP																		
		256 JP													16¾					
		284 JP																		
		286 JP																		
6X4X12	1326	254 JP	6	11	8	—	¾ 10	9½	4	9	8	7⅞	7½	12¼	17¼	9	2¾	7¾	9	
		256 JP																		
		284 JP																		
		286 JP																		
		324 JP													17¾					
		326 JP																		
	1334	364 JP													18⅝					
6X6X12	1326	256 JP	6	11	8	—	¾ 10	9½	6	11	8	¾	9½	13	18	9	3¼	8⅝	9⅞	
		284 JP																		
		286 JP																		
		324 JP													18½					
		326 JP																		
	1334	364 JP													19⅞					
8X8X12	1326	256 JP	8	13½	8	—	¾ 10	11¾	8	13½	8	¾	11¾	14½	19½	11	4½	10½	13⅝	
		284 JP																		
		286 JP																		
		324 JP													20					
		326 JP																		
	1334	364 JP													20⅝					
10X10X12	1326	256 JP	10	16	12	—	7⁄8	14¼	10	16	12	7⁄8	14¼	16½	21½	11	5½	10⅝	13¾	
		284 JP																		
		286 JP																		
		324 JP																		
		326 JP													22					
	1334	364 JP													22⅝					

Dimension DF will be larger on frame 364 and larger.

1300

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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

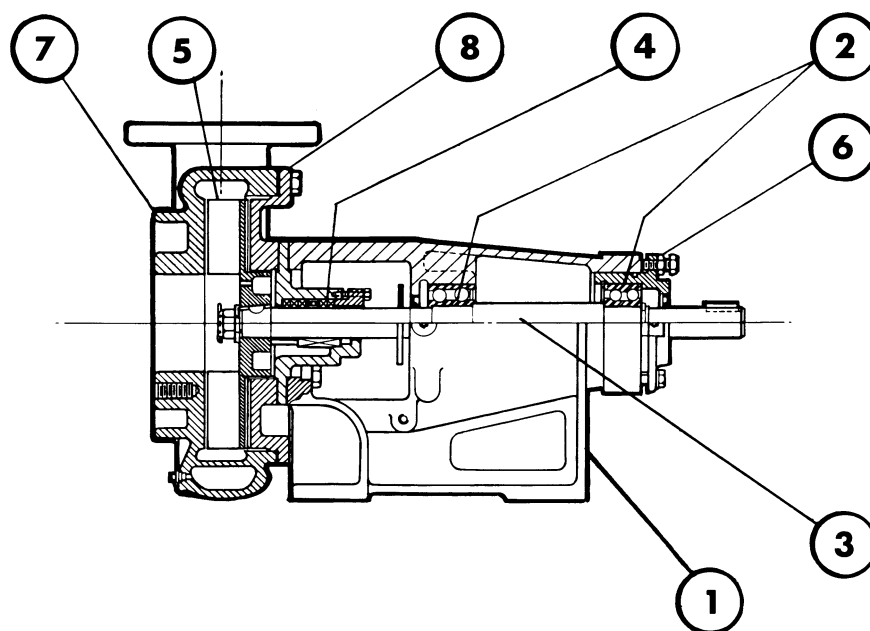
- Capacities to 1800 GPM
- Heads To 275 Feet TDH
- Temperature to 250° F
- Back Pull-Out Construction
- Semi-Open Impeller
- External Impeller Adjustment
- Packing or Mechanical Seal

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.

E.I DuPont registered®

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

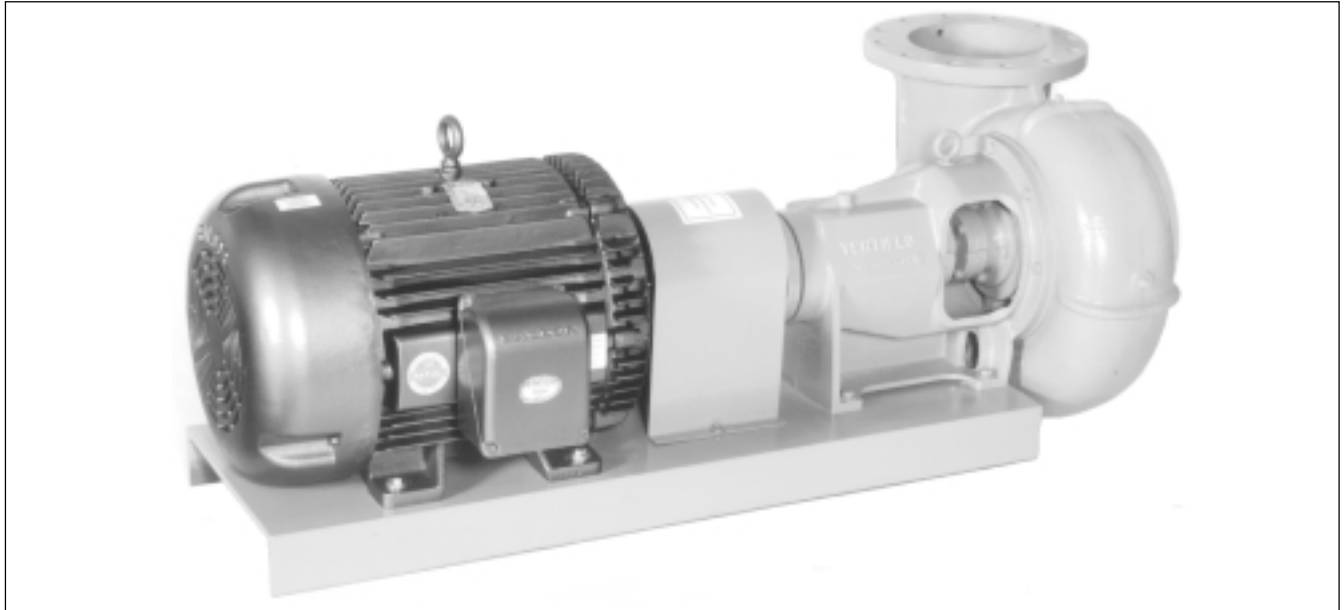
- 316 stainless steel shaft
- 316 stainless steel impeller
- All 316 stainless steel, alloy 20 or hastelloy construction (all wetted parts)
- Teflon® packing (standard in s.s. and alloy units)
- Single or double mechanical seal (various materials)
- Product or fresh water flush to packing or mechanical 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

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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

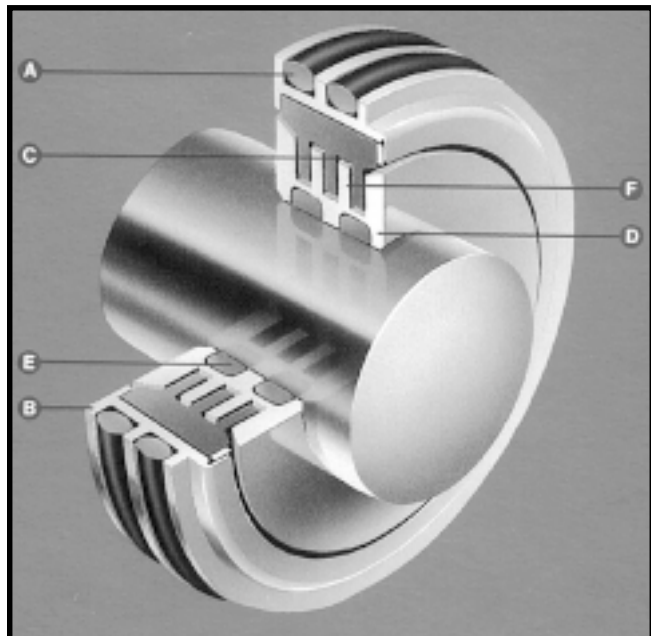
CONSTRUCTION:

- 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

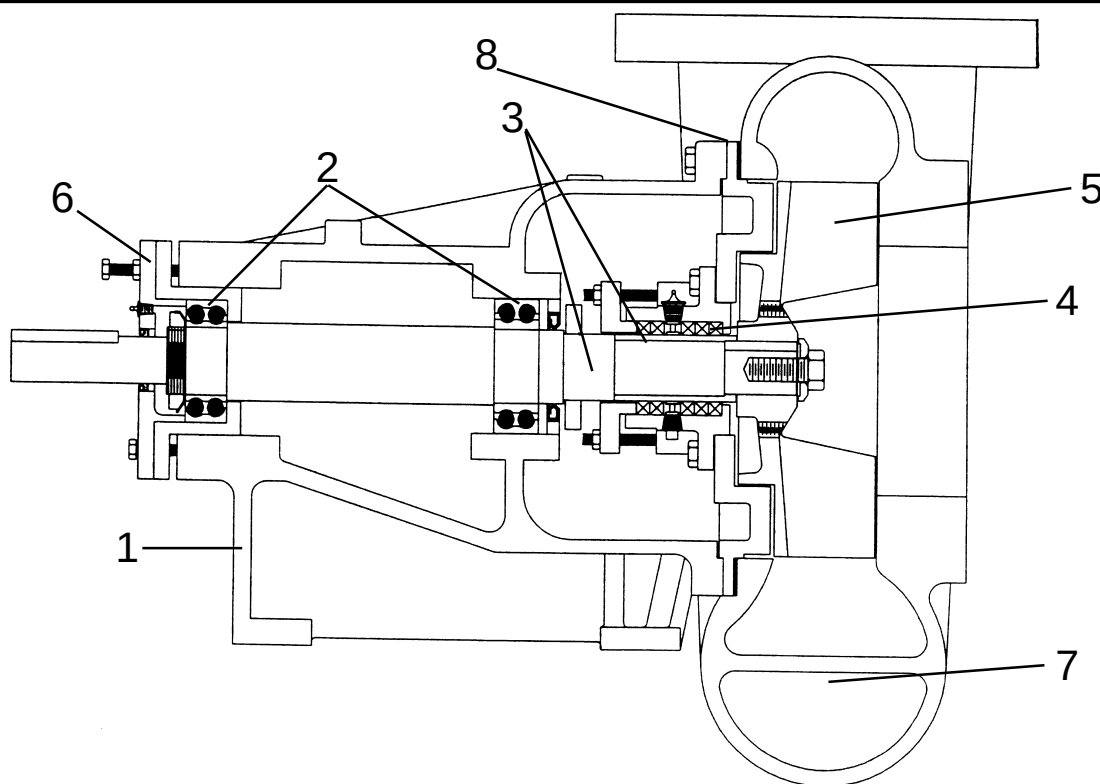
E.I DuPont registered®

Design Details

Pump Shaft

Rotation from driver end	CW
Diameter over shaft sleeve	2.125
Diameter between bearings	2.500
Diameter at coupling end	1.500
Coupling key - square	0.375
Bearing centers	9.750

Model 1434



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.

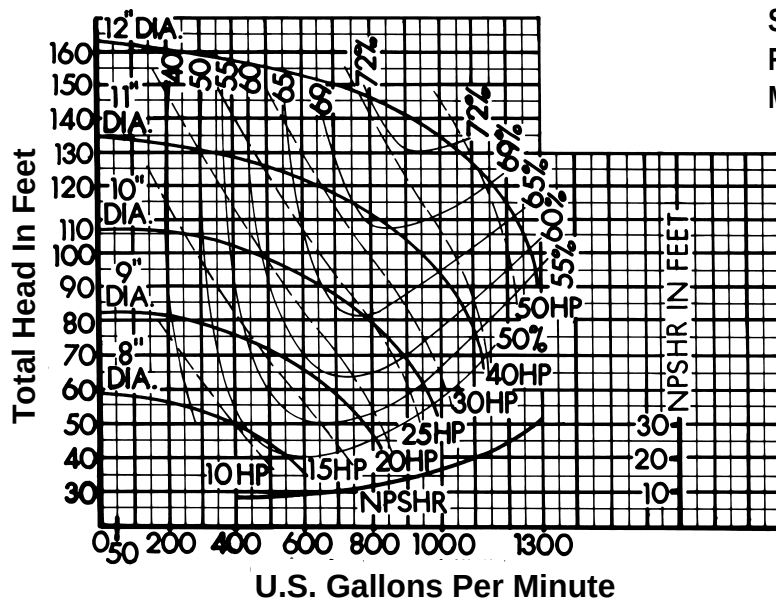
8. Back Pull-Out

All pumps are designed with back pull-out feature which allows for removal of all pump rotating components without disturbing the piping connections.

VERIFLO PUMP COMPANY Performance Curves

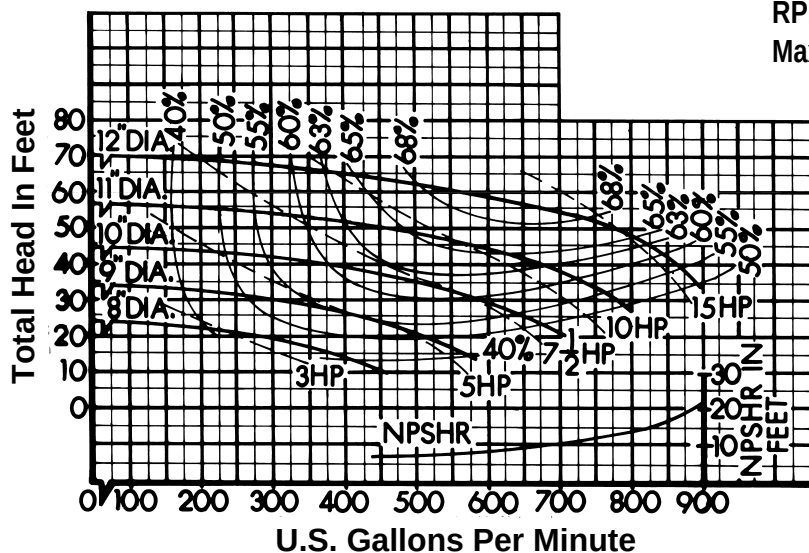
Curve 64124

Model 1434
Size 6 X 4 X 12
RPM 1750
Max Sphere 1 1/2



Curve 64126

Model 1434
Size 6 X 4 X 12
RPM 1150
Max Sphere 1 1/2



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

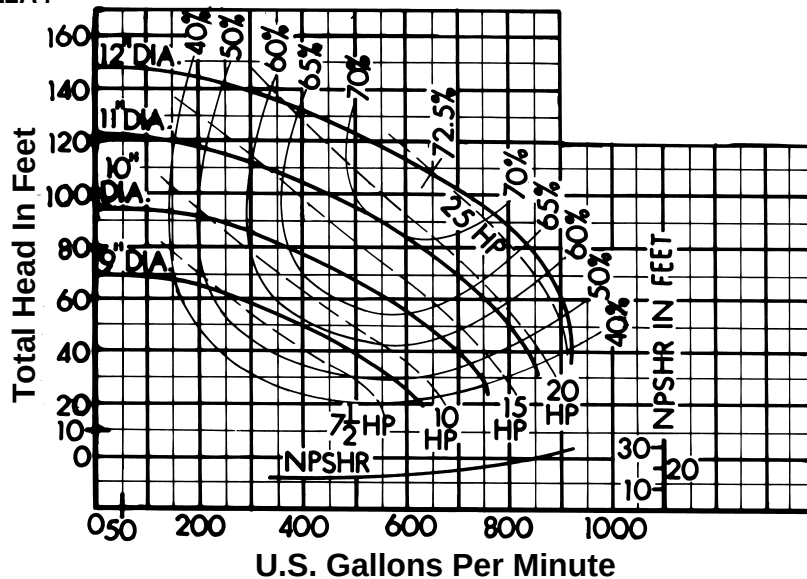
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

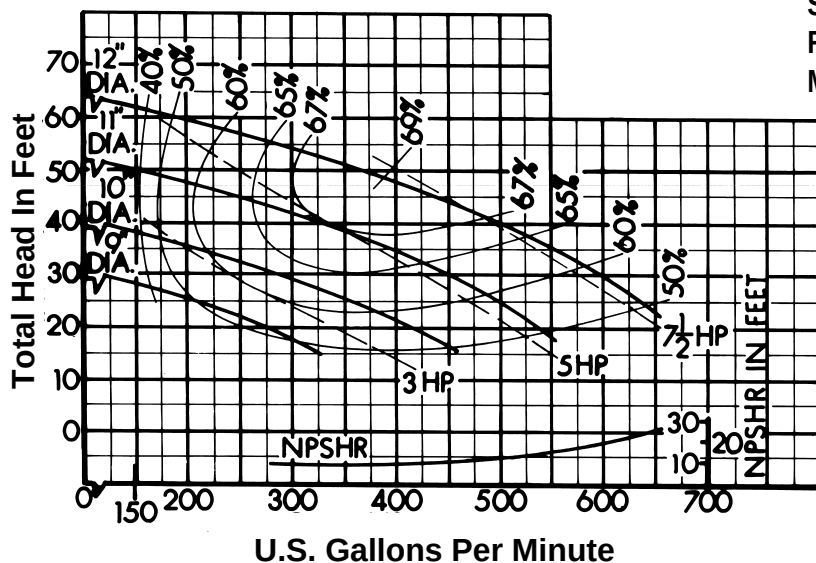
VERTIFLO PUMP COMPANY Performance Curves

Curve 6412A4



Model 1434
Size 6 X 4 X 12A
RPM 1750
Max Sphere 1 1/8

Curve 6412A6



Model 1434
Size 6 X 4 X 12A
RPM 1150
Max Sphere 1 1/8

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

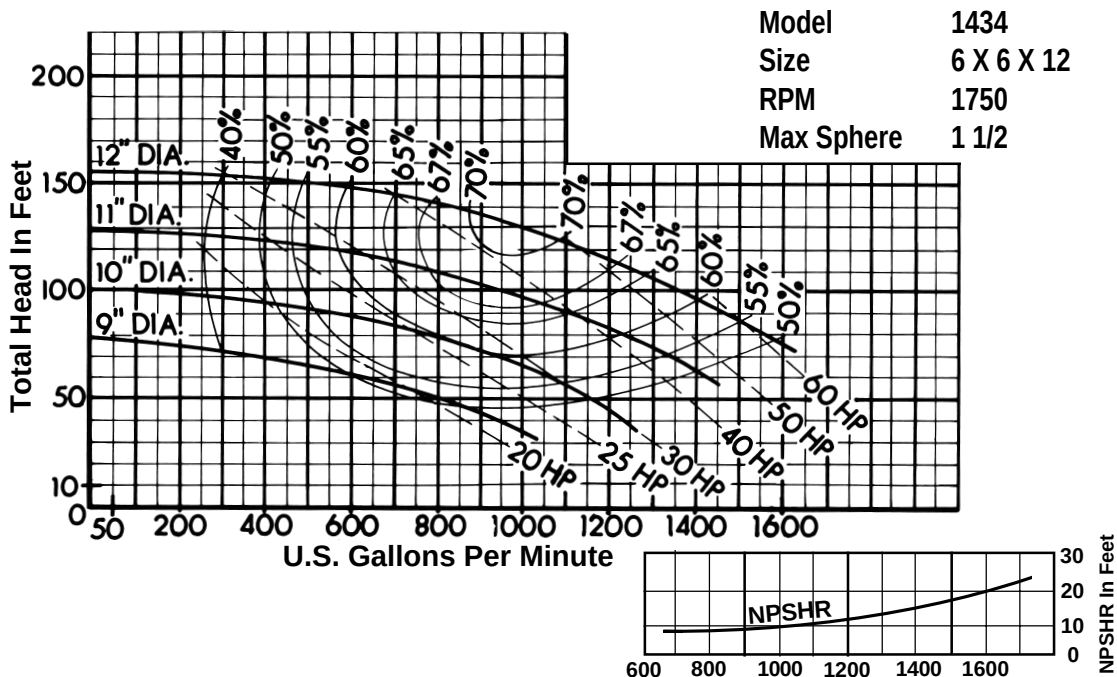
ENGINEER _____

CONTRACTOR _____

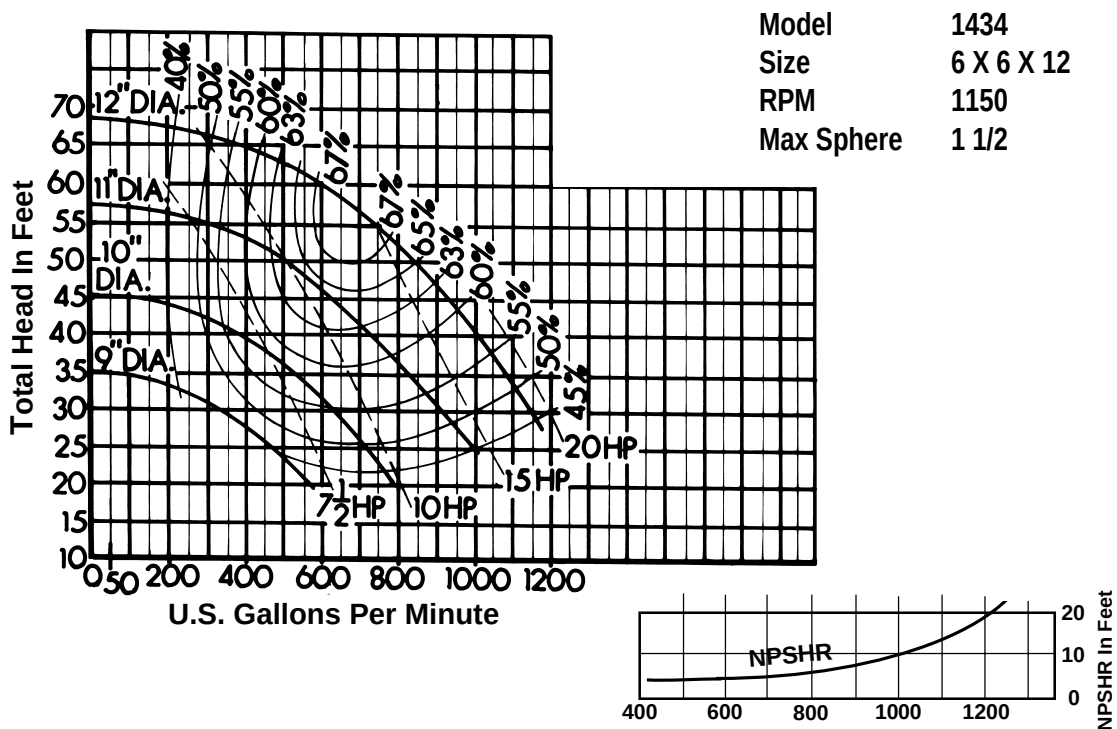
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERIFLO PUMP COMPANY Performance Curves

Curve 66124



Curve 66126



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

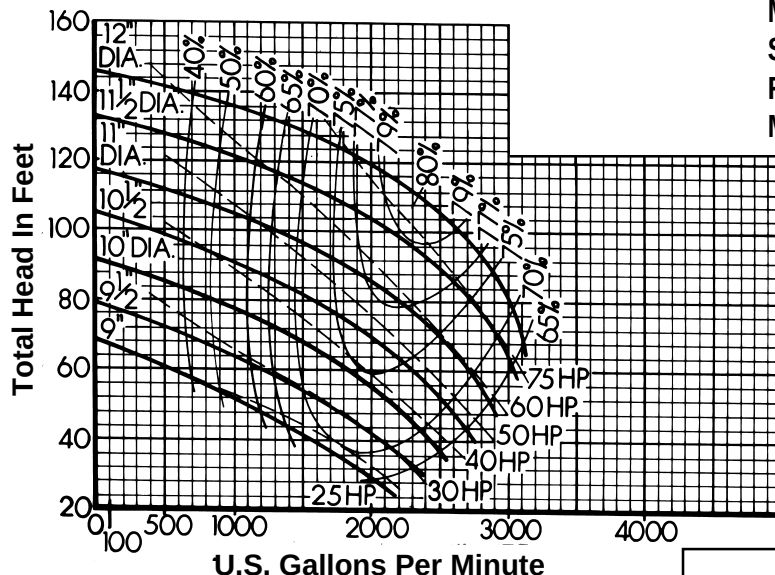
ENGINEER _____

CONTRACTOR _____

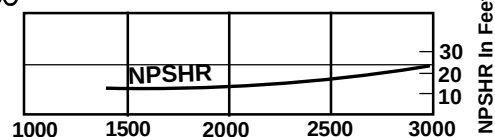
CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

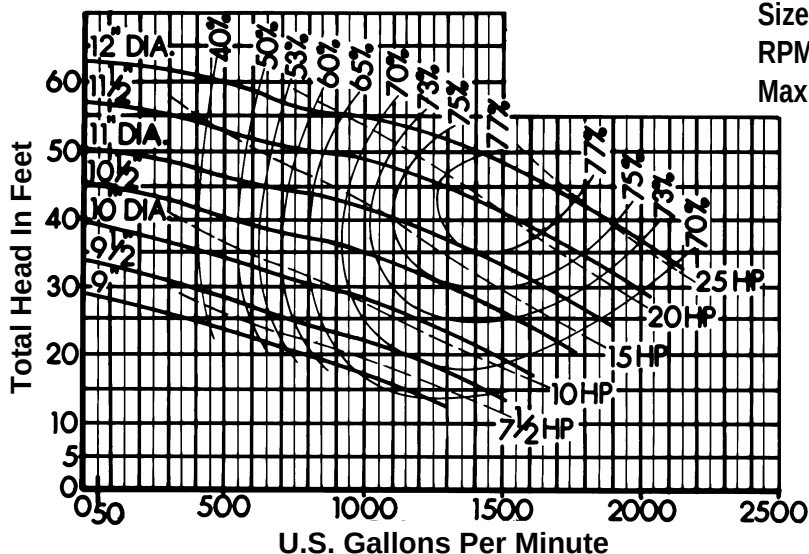
Curve 88124



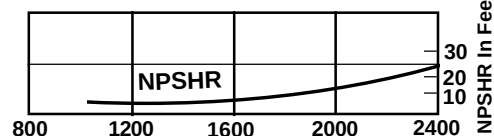
Model 1434
Size 8 X 8 X 12
RPM 1750
Max Sphere 1 1/2



Curve 88126



Model 1434
Size 8 X 8 X 12
RPM 1150
Max Sphere 1 1/2



1400

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

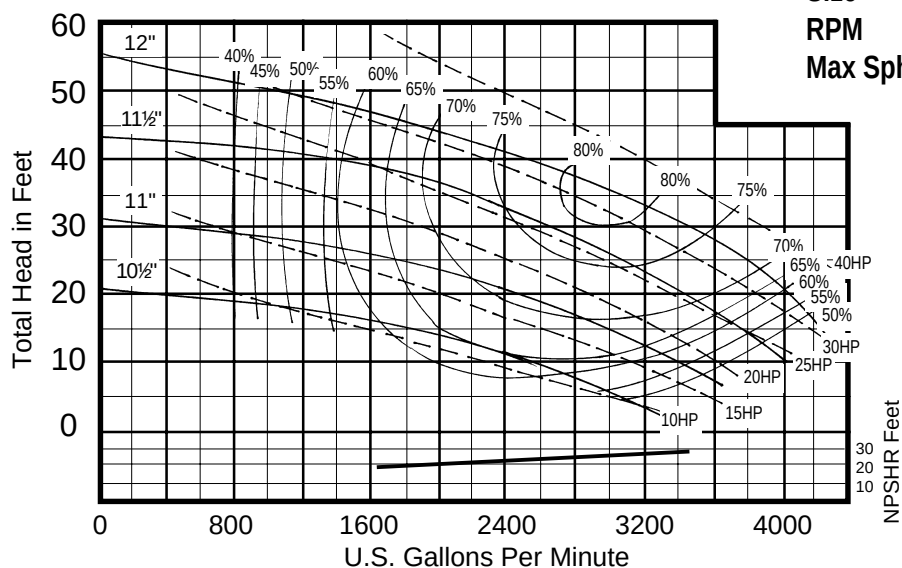
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERUFLO PUMP COMPANY Performance Curves

Curve 101012

Model 1434
 Size 10 X 10 X 12
 RPM 1150
 Max Sphere 1 5/8



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

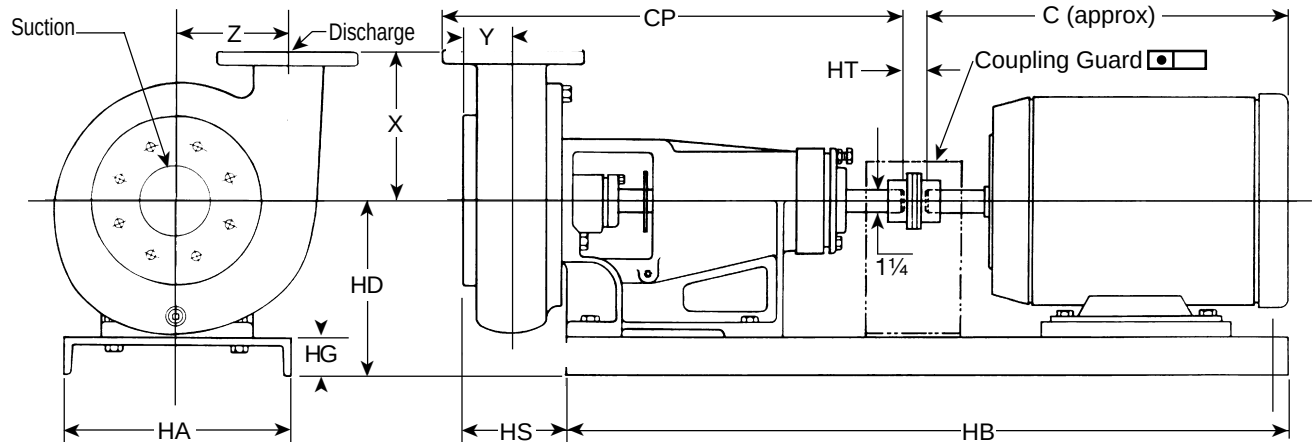
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Dimensions

1400 Series - Base-Mounted Models 1420/1424



1400

Not for construction unless certified, some dimensions may vary $\pm 1/2"$. Pump Construction: _____

CUSTOMER _____	CUSTOMER NO. _____
PROJECT _____	SERIAL NO. _____
ENGINEER _____	LOCATION _____
CONTRACTOR _____	
PUMP Model _____	Size _____
Curve No. _____	GPM _____
Head _____	SP. GR.@Temp. _____
DATA _____	
MOTOR Mfgr. _____	HP _____
RPM _____	Volt-Phase-Cycle _____
Frame _____	ENC. _____
Furnished by _____	Mounted by _____
DATA _____	
Shop Order _____	Certified by _____
Date _____	

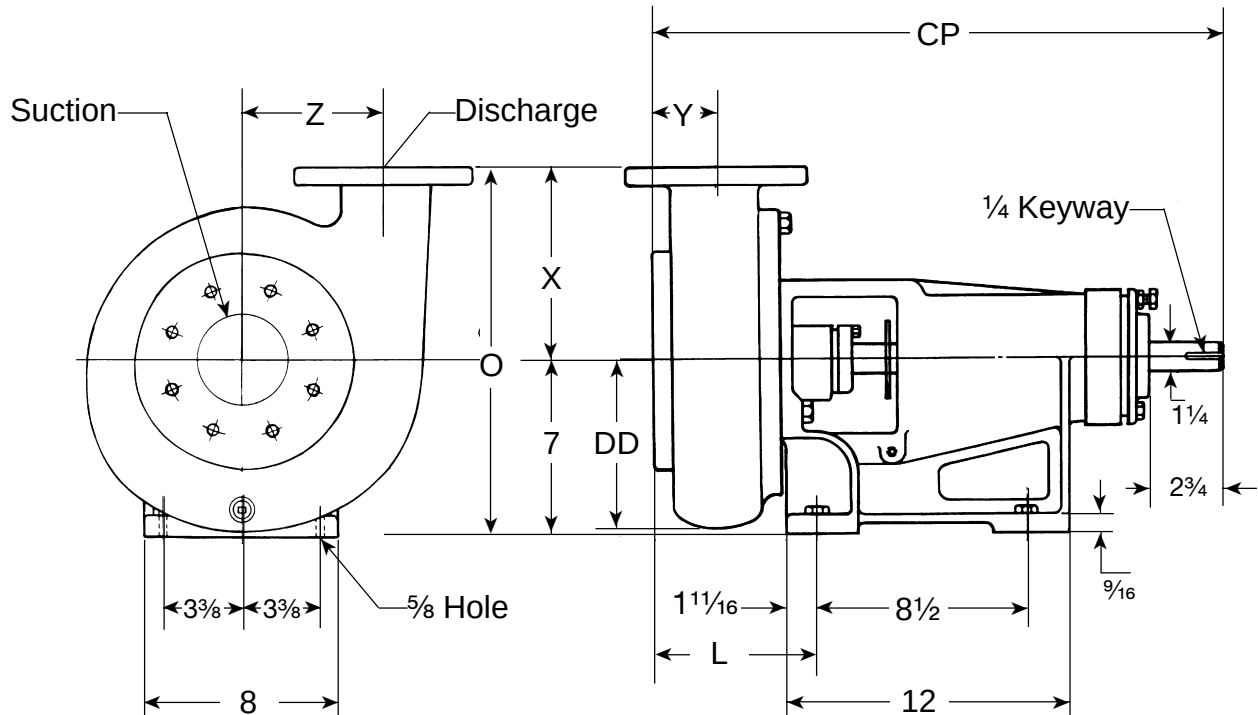
VERIFLO PUMP COMPANY Models 1420 / 1424

Liquid End	SUCTION FLANGE						DISCHARGE FLANGE					X	Y	Z	CP	HS	DD	L	O
	FLG. Size	DIA. FLG.	# of Holes	Tap	Hole DIA.	Bolt Circle DIA.	FLG. Size	DIA FLG.	# of Holes	Hole DIA.	Bolt Circle DIA.								
3x2½x7	3	7½	4	⅝-11		6	2½	7	4	¾	5½	6¼	2⅝	4¾	22¾	5¼	5½	6⅝	13¼
1½x1x8	1½	5	4	½-13		3⅞	1	4¼	4	⅝	3⅞	6	1⅝	4½	21½	4	5¼	5⅞	13
1½x1¼x8	1½	5	4	½-13		3⅞	1¼	4⅝	4	¾	4¾	5¾	1⅞	4¾	20⅞	4¼	5¼	4¼	12¾
2x1½x8	2	6	4	⅝-11		4¾	1½	5	4	⅞	3⅞	5¾	2	4¾	22	4½	5⅝	6¾	12¾
3x2x8	2½	7	4	⅝-11		5½	2	6	4	¾	4¾	6¼	2⅞	4¾	22¼	4¾	5¾	6⅞	13¼
4x3x8	4	9	8	⅝-11		7½	3	7½	4	¾	6	7	2¾	5¼	23⅞	5⅝	6	7⅝	14
5x4x8	5	10	8	¾-10		8½	4	9	8	¾	7½	7	2⅞	6	23½	6	7⅞	7⅞	14
2x1½x10	2	6	4	⅝-11		4¾	1½	5	4	⅝	3⅞	6½	2	5¾	21⅞	4⅝	6⅝	6⅞	13½
3x2x10	3	7½	4	⅝-11		6	2	6	4	¾	4¾	7	2¾	5¾	22¼	4¾	6½	6⅞	14
4x3x10	4	9	8	⅝-11		7½	3	7½	4	¾	6	8⅞	2⅝	6¼	22¾	5¼	7	6⅝	15
5x4x10	5	10	8	¾-10		8½	4	9	8	¾	7½	9	2¾	6½	23⅞	5⅝	7½	7⅞	16
6x5x10	6	11	8	¾-10		9½	5	10	8	⅞	8½	9	2⅞	7⅞	23½	6	8⅞	7⅞	16
6x5x10A	6	11	8	¾-10		9½	5	10	8	⅞	8½	9	2⅞	7⅞	23½	6	8⅞	7⅞	16
6x6x10	6	11	8	¾-10		9½	6	11	8	⅞	9½	9	2⅞	8	23¾	6¼	10	7⅝	16
6x6x10A	6	11	8	¾-10		9½	6	11	8	⅞	9½	9	2⅞	8	23¾	6¼	10	7⅝	16
2X1½x12	2	6	4		¾	4⅝	1½	5	4	⅝	3⅞	7½	3¾	6¾	23½	6	7⅞	7⅞	14½
3x2x12	3	7½	4	⅝-11		6	2	6	4	¾	4¾	9½	2⅞	5	22⅞	5⅝	7¾	6¼	16½
4x3x12	4	9	8	⅝-11		7½	3	7½	4	¾	6	8½	2½	7⅞	21⅞	5½	8⅞	5⅞	15½
6x4x12	6	11	8	¾-10		9½	4	9	8	¾	7½	9	2¾	7¾	22⅞	6	9	6⅞	16
6x6x12	6	11	8	¾-10		9½	6	11	8	⅞	9½	9	3¼	8⅞	22⅞	6¾	9⅞	7⅞	16

Frame No.	143T	145T	182T	184T	213T	215T	254T	256T	284TS	284T	286TS	286T	324TS	324T	326T	326TS	364TS	364T	365TS	365T
HA	12	12	12	12	12	12	15	15	15	15	15	15	18	18	18	18	18	18	18	18
HB	36	36	36	36	36	36	44	44	44	44	44	44	48	48	48	48	48	48	48	48
C	13⅝	13⅝	14⅝	15⅝	17¾	19¼	22⅞	24⅝	24½	25⅞	26	27⅞	27¼	28¾	28¾	30¼	31	33⅞	32	34⅞
HD	10	10	10	10	10	10	10⅞	10⅞	10⅞	10⅞	10⅞	10⅞	12	12	12	12	13	13	13	13
HG	3	3	3	3	3	3	3⅞	3⅞	3⅞	3⅞	3⅞	3⅞	4	4	4	4	4	4	4	4
HT	¾	¾	¾	¾	¾	¾	1	1	1	1	1	1	1	1	1	1	1	1	1	1

VERTIFLO PUMP COMPANY Dimensions

1400 Series - Pump Only Models 1420/1424



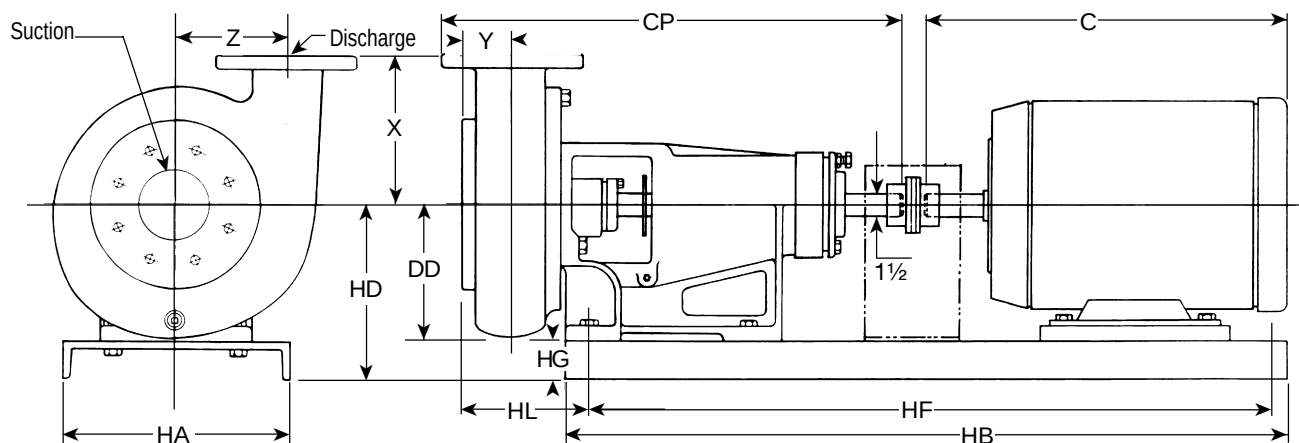
1400

Not for construction unless certified, some dimensions may vary $\pm 1/2"$. Pump Construction: _____

CUSTOMER _____				CUSTOMER NO. _____			
PROJECT _____				SERIAL NO. _____			
ENGINEER _____				LOCATION _____			
CONTRACTOR _____							
PUMP	Model	Size	Curve No.	GPM	Head	SP. GR.	@Temp.
DATA _____							
MOTOR	Mfgr.	HP	RPM	Volt-Phase-Cycle	Frame	ENC.	Furnished by
DATA _____		_____	_____	_____	_____	_____	Mounted by
Shop Order _____		Certified by _____		Date _____			

VERIFLO PUMP COMPANY Dimensions

1400 Series - Base-Mounted Model 1434



SUCTION					DISCHARGE									
Pump Size	Size	DIA. FLG.	Bolts	BC	Size	DIA. FLG.	Bolts	BC.	X	Y	Z	CP	DD	HS
6x4x12	6	11	8-3/4	9 1/2	4	9	8-5/8	7 1/2	9	2 3/4	7 3/4	28 1/8	9	7 1/8
6x4x12A	6	11	8-3/4	9 1/2	4	9	8-5/8	7 1/2	9	2 3/4	7 3/4	28 1/8	9	7 1/8
6x6x12	6	11	8-3/4	9 1/2	6	11	8-3/4	9 1/2	9	3 1/4	8 3/8	28 7/8	10 1/4	7 7/8
8x8x12	8	13 1/2	8-3/4	11 3/4	8	13 1/2	8-3/4	11 3/4	11	4 1/2	10 1/2	30 3/8	13 3/8	9 3/8
10x10x12	10	16	12-7/8	14 1/4	10	16	12-7/8	14 1/4	11	5 1/2	10 5/8	32 3/8	13 3/4	11 3/8

Frame Size	213T	215T	254T	256T	284TS	284T	286TS	286T	324TS	324T	326TS	326T	364TS	364T	365TS	365T	404TS	404T	405TS	405T
C	17 3/4	19 1/4	22 7/8	24 5/8	24 1/2	25 7/8	26	27 3/8	27 1/4	28 3/4	28 3/4	30 1/4	31	33 3/8	32	34 1/8	34 1/4	37 1/4	36	38 7/8
HA	15	15	15	15	15	15	15	15	18	18	18	18	18	18	18	18	25	25	25	25
HB	40	40	43	47	47	47	47	47	51	51	51	51	51	51	51	51	50	57	50	57
HD	12 3/8	12 3/8	12 3/8	12 3/8	12 3/8	12 3/8	12 3/8	12 3/8	13	13	13	13	13	13	13	13	15 1/2	15 1/2	15 1/2	15 1/2
HD 8x8x12	14 3/8	14 3/8	14 3/8	14 3/8	14 3/8	14 3/8	14 3/8	14 3/8	15	15	15	15	15	15	15	15	15 1/2	15 1/2	15 1/2	15 1/2
HD 10x10x12	14 3/8	14 3/8	14 3/8	14 3/8	14 3/8	14 3/8	14 3/8	14 3/8	15	15	15	15	15	15	15	15	15 1/2	15 1/2	15 1/2	15 1/2
HF	37 1/2	37 1/2	40 1/2	44 1/2	44 1/2	44 1/2	44 1/2	44 1/2	48 1/2	48 1/2	48 1/2	48 1/2	48 1/2	48 1/2	48 1/2	48 1/2	47	54	47	54
HG	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8	4	4	4	4	4	4	4	4	4 1/2	4 1/2	4 1/2	4 1/2

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

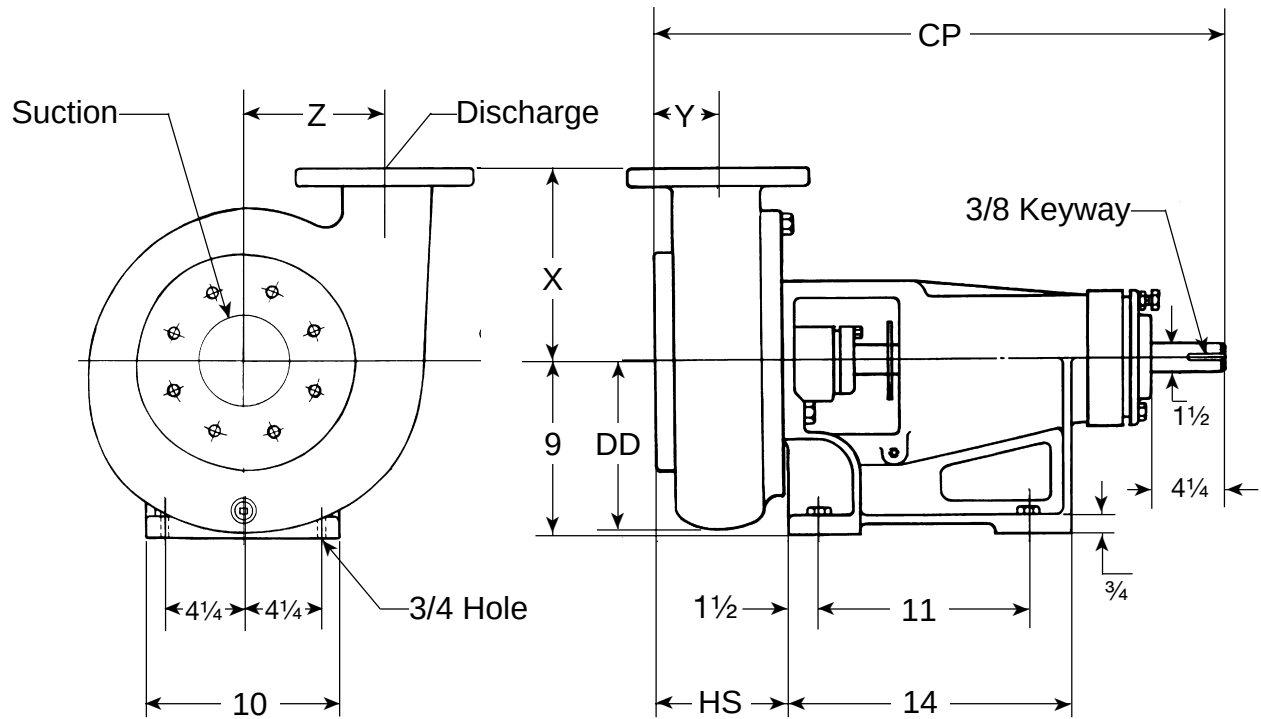
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Dimensions

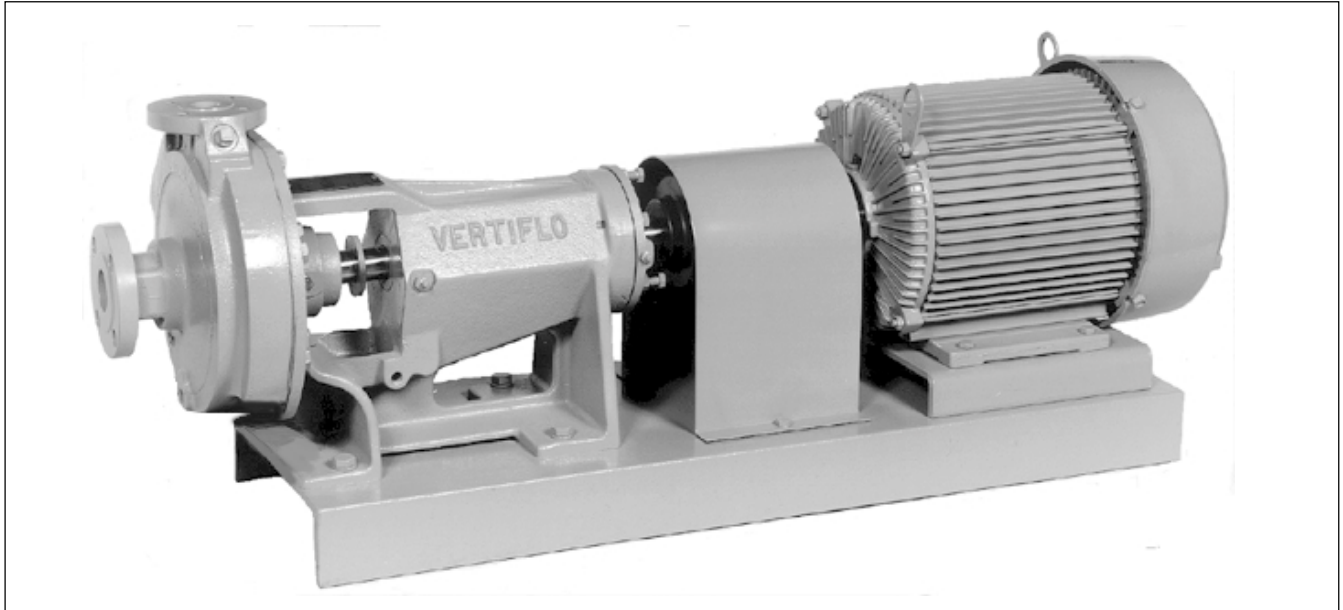
Model 1434 - Pump Only



1400

Not for construction unless certified, some dimensions may vary $\pm 1/2$ ". Pump Construction: _____

CUSTOMER _____					CUSTOMER NO. _____				
PROJECT _____					SERIAL NO. _____				
ENGINEER _____					LOCATION _____				
CONTRACTOR _____									
PUMP	Model	Size	Curve No.	GPM	Head	SP. GR. @Temp.	Pump Length	Plate	
DATA _____									
MOTOR	Mfgr.	HP	RPM	Volt-Phase-Cycle	Frame	ENC.	Furnished by	Mounted by	
DATA _____									
Shop Order _____			Certified by _____			Date _____			

VERTIFLO Model 1400LF**Quality Design Features Assure Long, Trouble-Free Service****WIDE RANGE OF APPLICATIONS:**

- Boiler Feed
- Condensate
- Chemical Process
- Washdown
- Spray Washers

CAPABILITIES

- Capacities to 50 GPM
- Heads To 345 Feet TDH
- Temperature to 250° F
- Back Pull-Out Construction
- Radial Vane Impeller
- External Impeller Adjustment
- Packing or Mechanical Seal

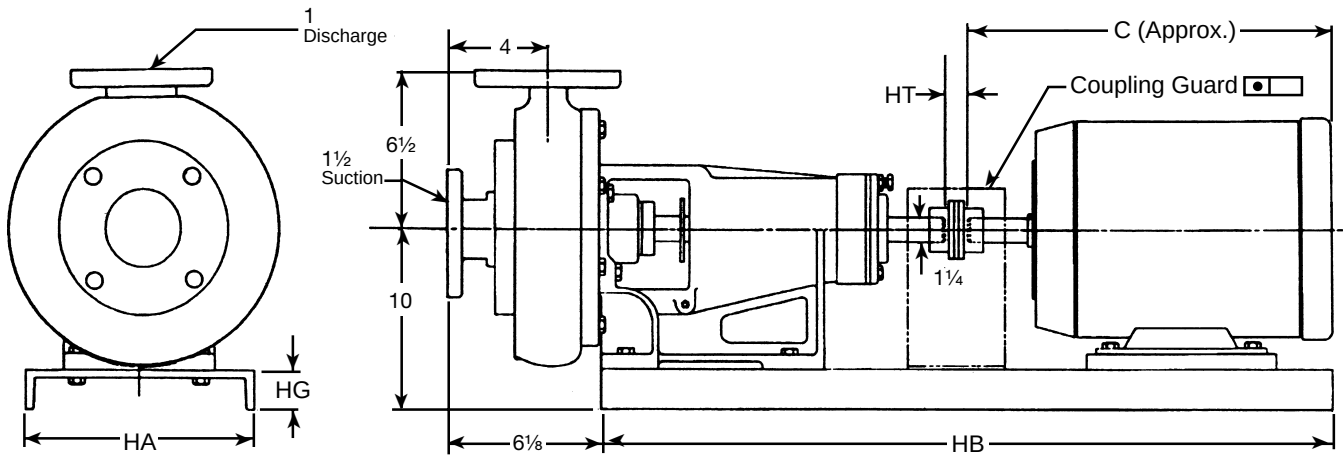
CONSTRUCTION:

- Ductile Iron
- Bronze Fitted
- 316 Stainless Steel Fitted
- All 316 Stainless Steel

*Also available as
vertical wet pit pump*

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.

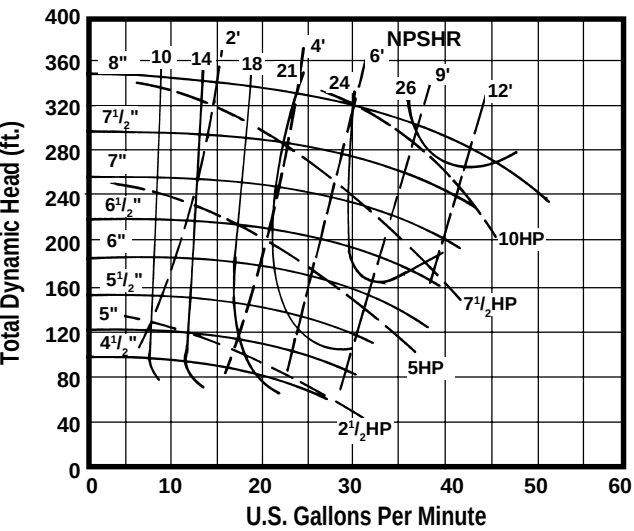
Packing or various mechanical seal arrangements are available as standard options of this rugged, dependable product.



1400LF Dimensions

Frame No.	143T	145T	182T	184T	213T	215T	254T	256T	284TS	284T
HA	12	12	12	12	12	12	15	15	15	15
HB	36	36	36	36	36	36	44	44	44	44
C	13 1/8	13 1/8	14 5/8	15 5/8	17 3/4	19 1/4	22 7/8	24 5/8	24 1/2	25 7/8
HG	3	3	3	3	3	3	3 3/8	3 3/8	3 3/8	3 3/8
HT	3/4	3/4	3/4	3/4	3/4	3/4	1	1	1	1

1400LF Performance Curve



VERTIFLO

The Vertical Pump Specialists

PUMPS FOR INDUSTRY

CONTENTS:

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

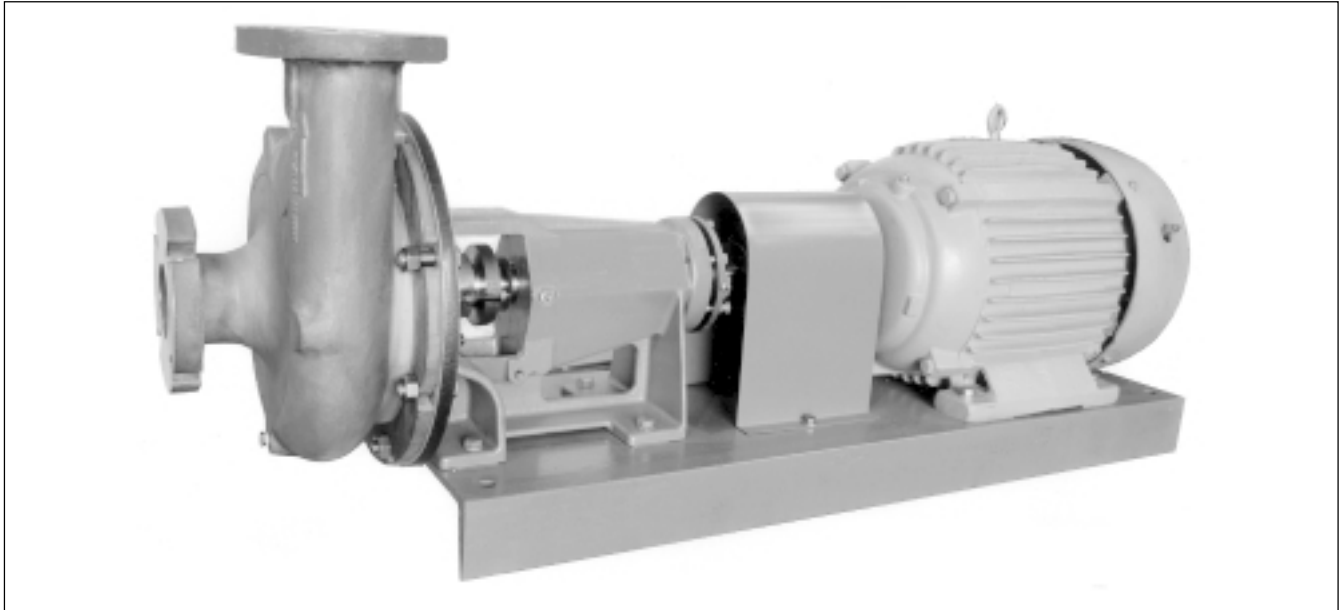
Vertical Cantilever Pumps Series 1100 and 1200

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 1500**Quality Design Features Assure Long, Trouble-Free Service****WIDE RANGE OF APPLICATIONS:**

- Food Processing Solids
- Waste Water Treatment
- Pollution Control
- Slurries
- Industrial Process
- Solids

CAPABILITIES:

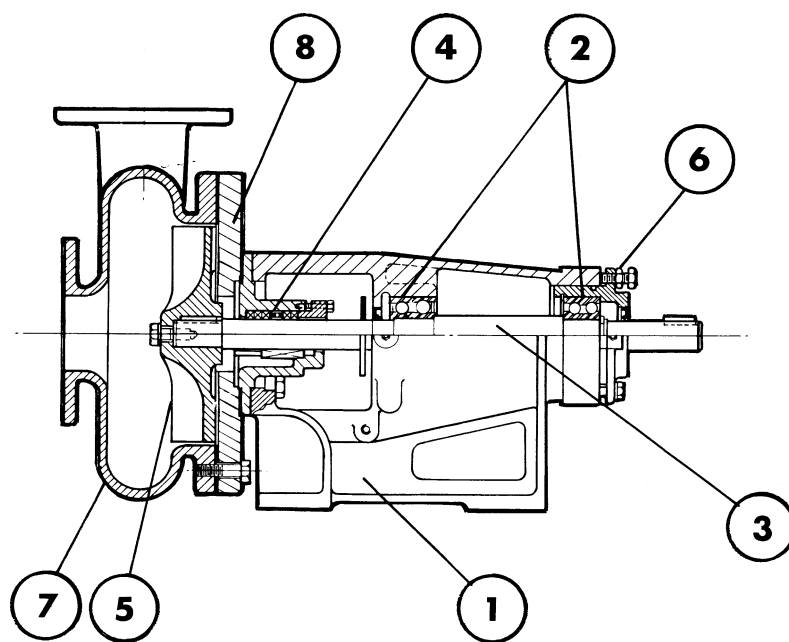
- Capacities to 1600 GPM
- Heads To 170 Feet TDH
- Temperature to 250°F
- Back Pull-Out Construction
- Fully Recessed Vortex Impeller
- External Impeller Adjustment
- Packing or Mechanical Seal

CONSTRUCTION:

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

Series 1500 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 1500 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.

E.I DuPont registered®

5. Impeller

Fully recessed design which accommodates passage of solids. All impellers have wiping vanes which 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 of the impeller. This adjustment feature compensates for internal wear. Expensive casing and impeller wearing rings are eliminated.

7. Casing

Vortex-type concentric design. Extra heavy wall thickness for corrosive allowance. All suction and discharge openings are flanged for installation ease and integrity.

8. Back Pull-Out

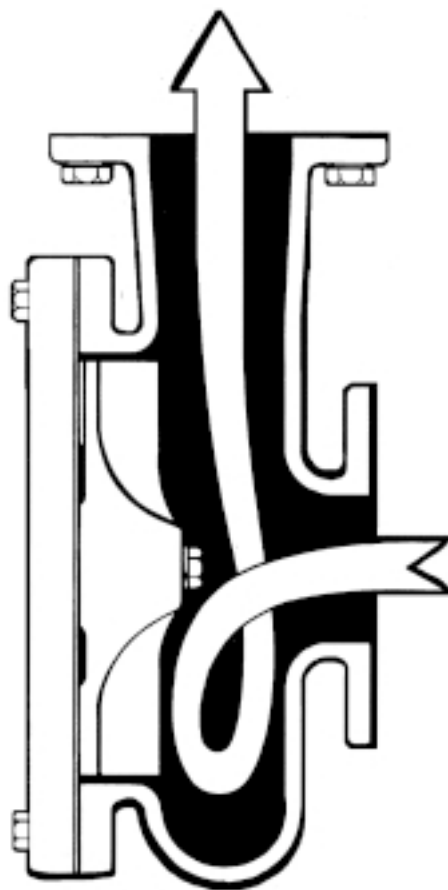
All pumps are designed with back pull-out feature which allows for removal of all pump rotating components without disturbing the piping connections.

Standard

- All iron construction
- 416 stainless steel shaft
- Fully recessed 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
- 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



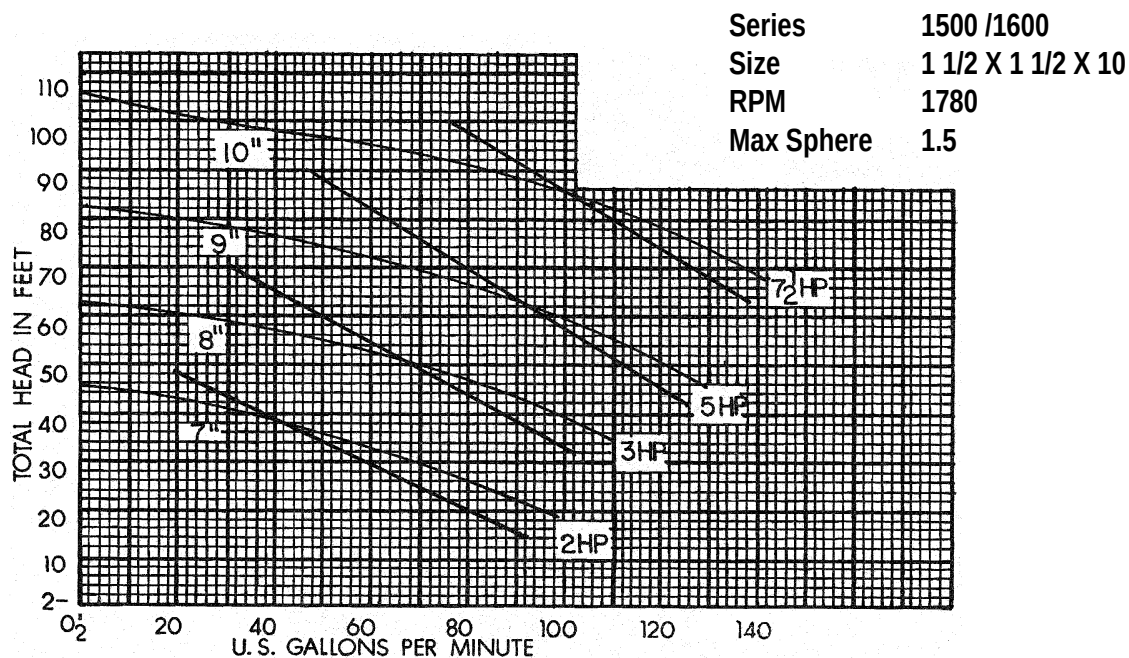
Vortex Design provides an unrestricted flow since the impeller is not normally in contact with the solids being pumped

E.I DuPont registered®

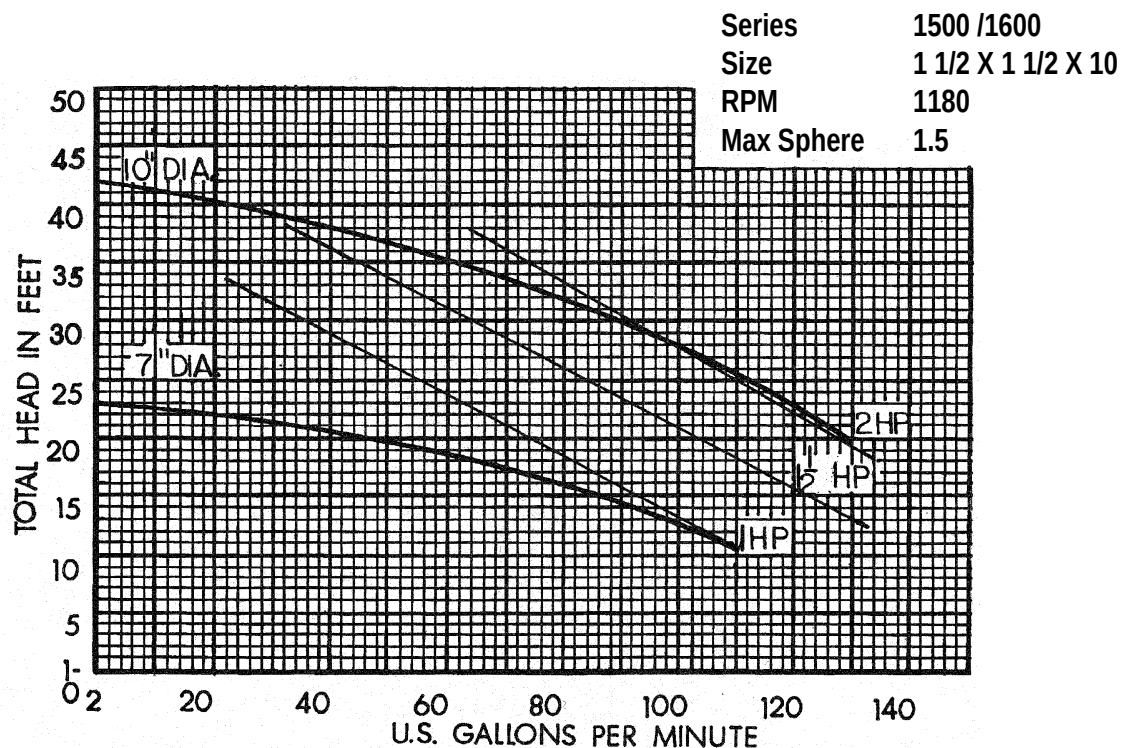
Design Details		Model 1520	Model 1524
Pump Shaft	Rotation from driver end	CW	CW
	Diameter through stuffing box	1.250	1.500
	Diameter between bearings	1.750	1.750
	Diameter at coupling end	1.250	1.250
	Coupling key - square	0.250	0.250
	Bearing centers	6.692	6.692

VERTIFLO PUMP COMPANY Performance Curves

Curve 11104



Curve 11106



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

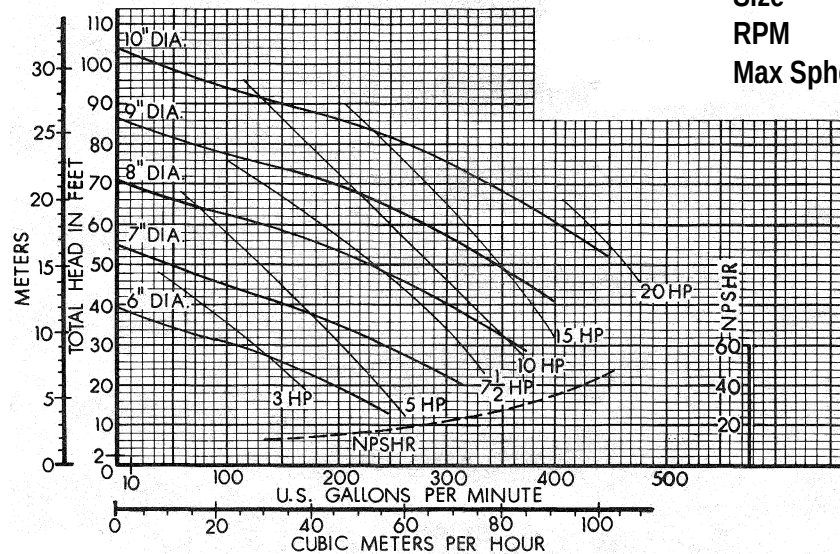
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

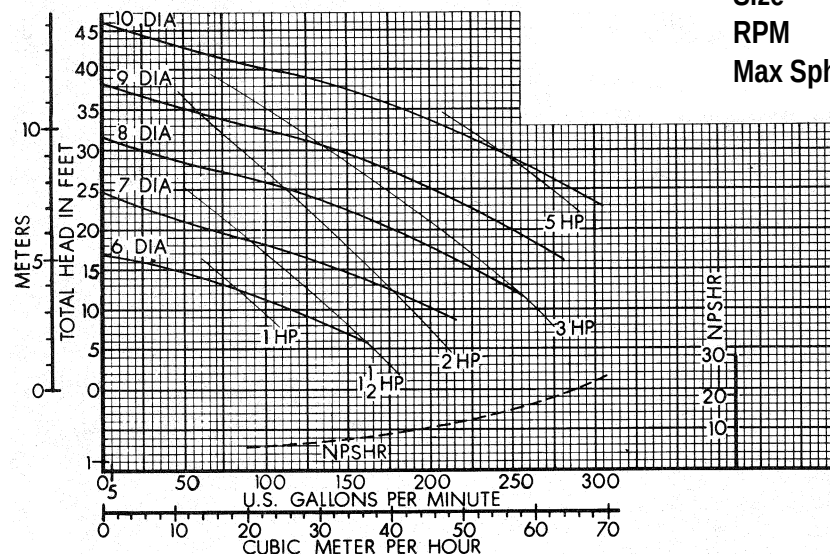
Curve 22104

Series 1500 / 1600
Size 2 X 2 X 10
RPM 1780
Max Sphere 2



Curve 22106

Series 1500 / 1600
Size 2 X 2 X 10
RPM 1180
Max Sphere 2



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

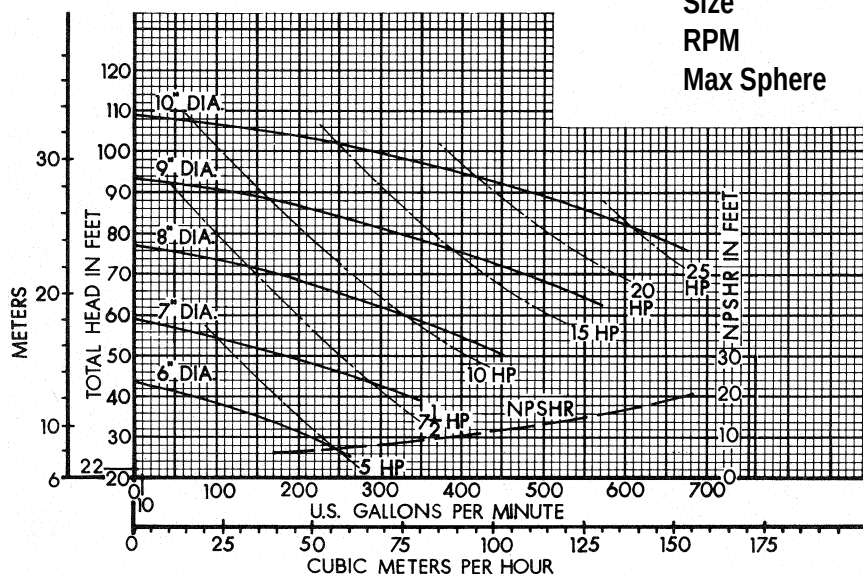
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

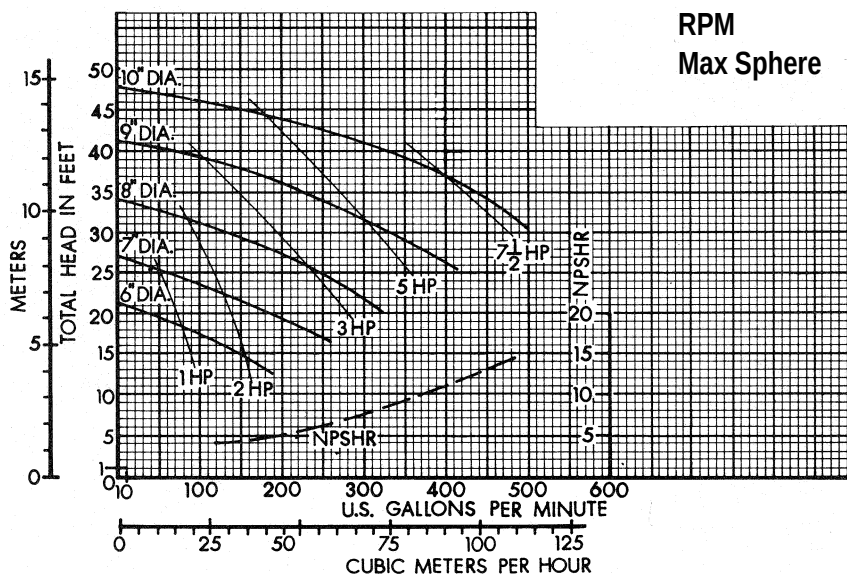
Curve 33104

Series 1500 /1600
 Size 3 X 3 X 10
 RPM 1780
 Max Sphere 3



Curve 33106

Series 1500 /1600
 Size 3 X 3 X 10
 RPM 1180
 Max Sphere 3



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

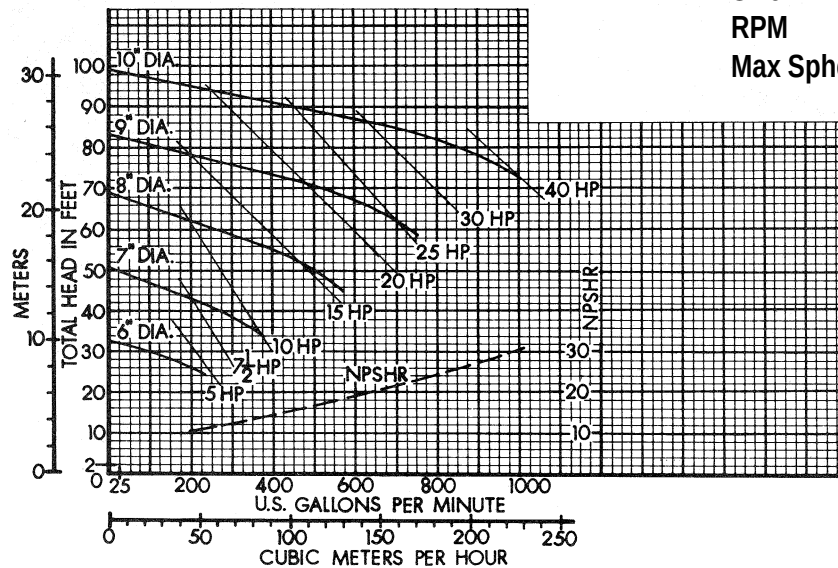
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

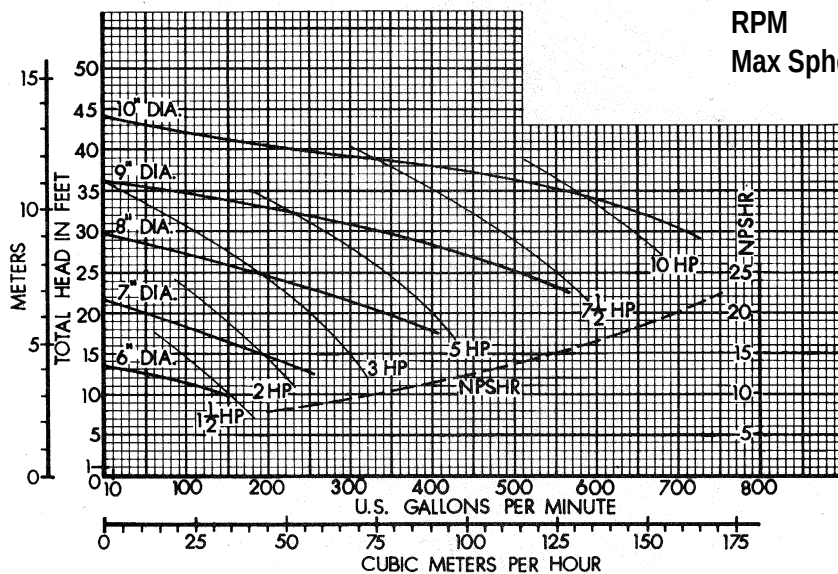
Curve 44104

Series 1500 /1600
Size 4 X 4 X 10
RPM 1780
Max Sphere 4



Curve 44106

Series 1500 /1600
Size 4 X 4 X 10
RPM 1180
Max Sphere 4



1500

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

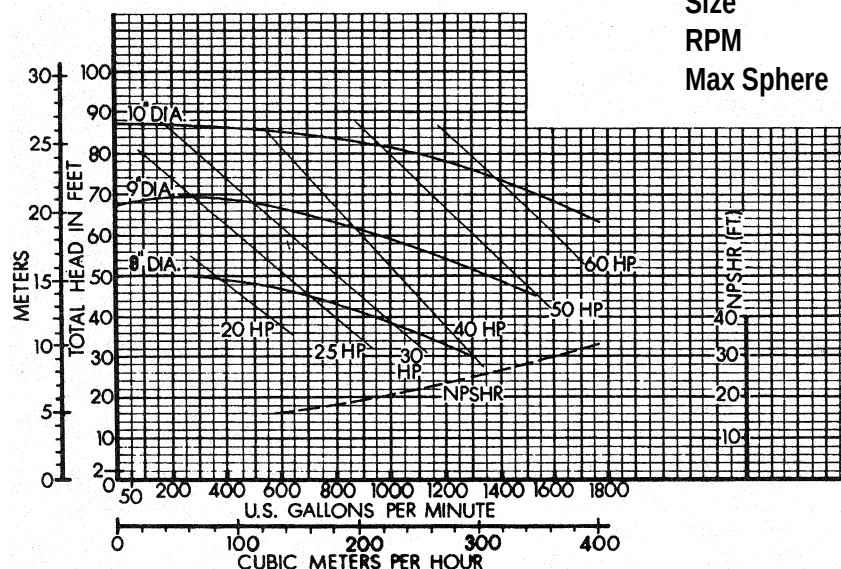
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

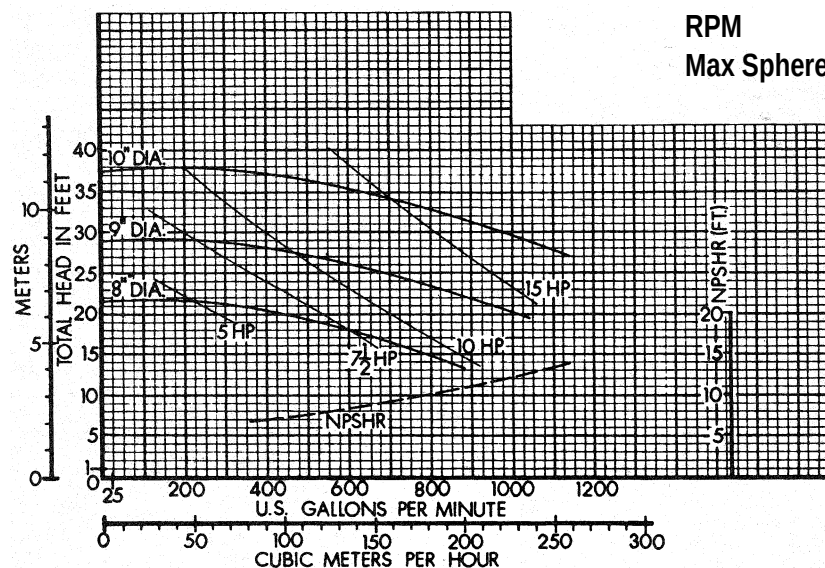
Curve 86104

Series 1500 /1600
 Size 8 X 6 X 10
 RPM 1780
 Max Sphere 6



Curve 86106

Series 1500 /1600
 Size 8 X 6 X 10
 RPM 1180
 Max Sphere 6



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

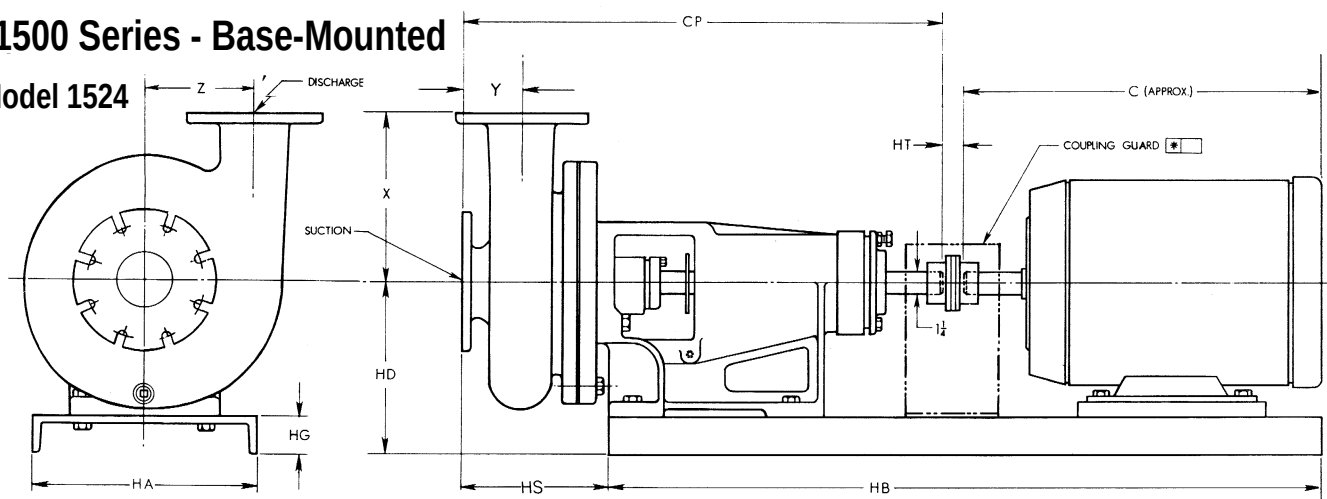
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

1500 Series - Base-Mounted

Model 1524



Flanges

Liquid End	FLG. Size	DIA. FLG.	# of Holes	Slot Width	DIA. Circle	X	Y	Z	CP	HS
1½x1½x10	1½	5	4	⅝	3⅞	9	4⅜	5¼	24⅛	7⅜
2x2x10	2	6	4	¾	4¾	9⅛	5⅞	5⅜	26⅛	8⅞
3x3x10	3	7½	4	¾	6	11	5⅞	5⅜	27⅛	10⅜
4x4x10	4	9	8	¾	7½	11⅜	7⅞	5⅜	30⅛	12⅜
8x6x10	8	13½	8	7/8	11¾	11¾	7⅞	5¼	30⅝	13⅞
	6	11	8	7/8	9½	11¾	7⅞	5¼	30⅝	13⅞

Frame No.	143T	145T	182T	184T	213T	215T	254T	256T	284TS	284T	286TS	286T	324TS	324T	326T	326TS	364TS	364T	365TS	365T
HA	12	12	12	12	12	12	15	15	15	15	15	15	18	18	18	18	18	18	18	18
HB	36	36	36	36	36	36	44	44	44	44	44	44	48	48	48	48	48	48	48	48
C	13⅜	13⅜	14⅝	15⅝	17¾	19¼	22⅞	24⅝	24½	25⅞	26	27⅞	27¼	28¾	28¾	30¼	31	33⅜	32	34⅜
HD	10	10	10	10	10	10	10⅝	10⅝	10⅝	10⅝	10⅝	10⅝	12	12	12	12	13	13	13	13
HG	3	3	3	3	3	3	3⅝	3⅝	3⅝	3⅝	3⅝	3⅝	4	4	4	4	4	4	4	4
HT	¾	¾	¾	¾	¾	¾	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Not for construction unless certified, some dimensions may vary $\pm 1/2"$. Pump Construction: _____

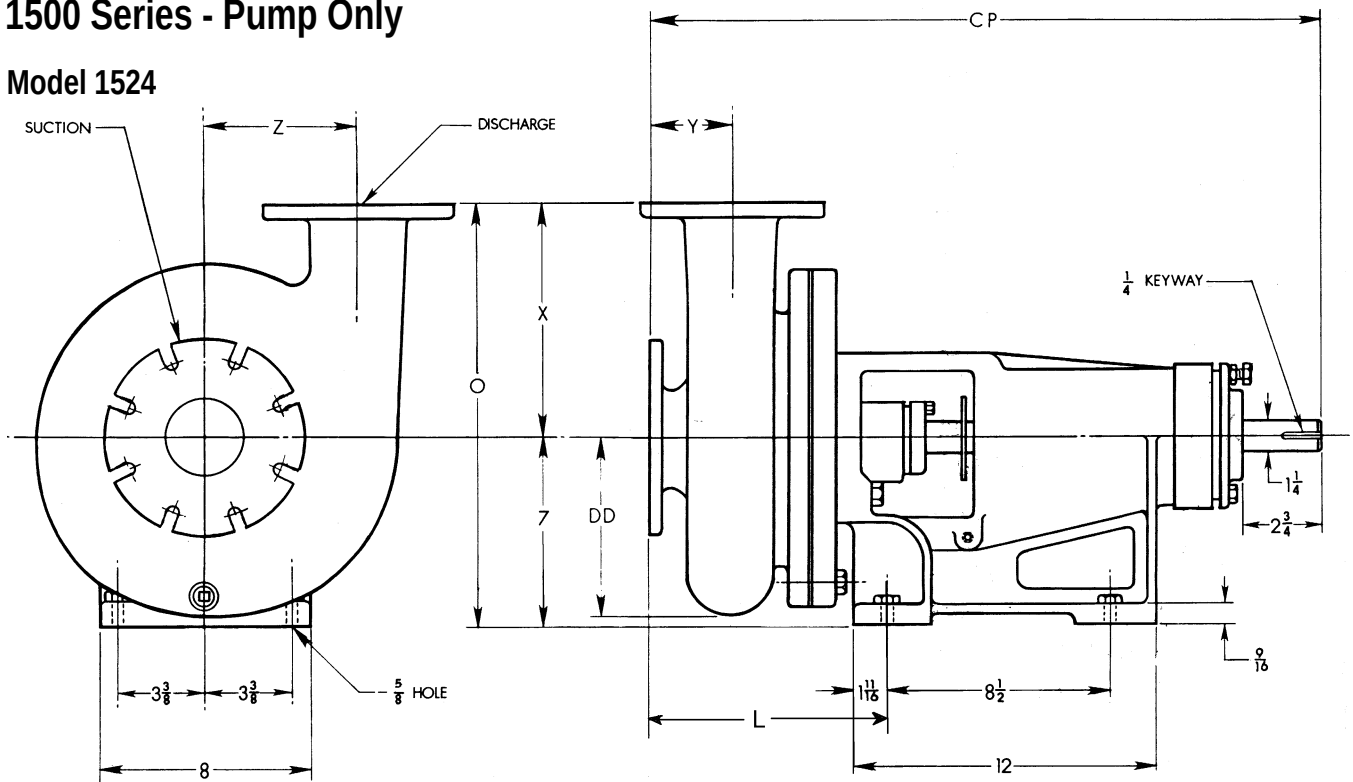
1500

CUSTOMER _____ CUSTOMER NO. _____
 PROJECT _____ SERIAL NO. _____
 ENGINEER _____ LOCATION _____
 CONTRACTOR _____
 PUMP Model _____ Size _____ Curve No. _____ GPM _____ Head _____ SP. GR.@Temp. _____
 DATA _____
 MOTOR Mfgr. _____ HP _____ RPM _____ Volt-Phase-Cycle _____ Frame ENC. _____ Furnished by _____ Mounted by _____
 DATA _____
 Shop Order _____ Certified by _____ Date _____

VERIFLO PUMP COMPANY Dimensions

1500 Series - Pump Only

Model 1524



Flanges													
Liquid End	FLG. Size	DIA. FLG.	# of Holes	Slot Width	DIA. Circle	X	Y	Z	CP	DD	L	O	
1½x1½x10	1½	5	4	5/8	3 7/8	9	4 9/16	5 1/4	24 11/16	7 1/2	7 1/4	16	
2x2x10	2	6	4	3/4	4 3/4	9 11/16	5 1/8	5 3/16	26 1/16	7 1/2	8 5/8	16 11/16	
3x3x10	3	7 1/2	4	3/4	6	11	5 7/8	5 3/16	27 11/16	7 1/2	10 1/4	18	
4x4x10	4	9	8	3/4	7 1/2	11 13/16	7 3/16	5 3/16	30 1/16	7 1/2	12 1/8	18 13/16	
8x6x10	8	13 1/2	8	7/8	11 3/4	11 3/4	7 7/8	5 1/4	30 15/16	8 5/8	13 7/16	20 3/8	
	6	11	8	7/8	9 1/2	11 1/4	7 7/8	5 1/4	30 15/16	8 5/8	13 7/16	20 3/8	

Not for construction unless certified, some dimensions may vary ± 1/2". Pump Construction: _____

CUSTOMER _____ CUSTOMER NO. _____
PROJECT _____ SERIAL NO. _____
ENGINEER _____ LOCATION _____
CONTRACTOR _____
PUMP Model Size Curve No. GPM Head SP. GR.@Temp.
DATA _____
MOTOR Mfr. HP RPM Volt-Phase-Cycle Frame ENC. Furnished by Mounted by
DATA _____
Shop Order _____ Certified by _____ Date _____

VERTIFLO SERIES 1600**Quality Design Features Assure Long, Trouble-Free Service****WIDE RANGE OF APPLICATIONS:**

- Food Processing Solids
- Waste Water Treatment
- Pollution Control
- Slurries
- Industrial Process
- Solids

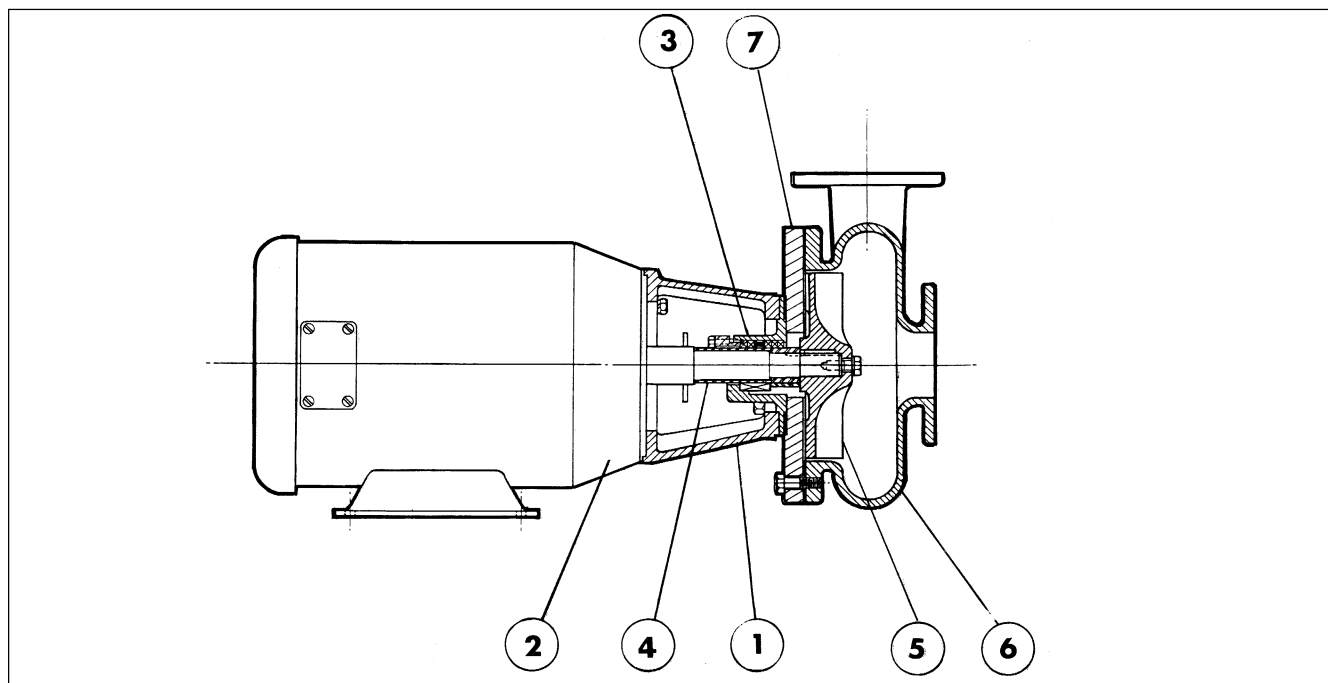
CAPABILITIES:

- Capacities to 1600 GPM
- Heads To 170 Feet TDH
- Temperature to 250°F
- Back Pull-Out Construction
- Fully Recessed Vortex Impeller
- Packing or Mechanical Seal

CONSTRUCTION:

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

Series 1600 horizontal close-coupled end suction pumps are designed for use with any NEMA Standard JP Shaft Motor. VERTIFLO's close-coupled 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. Mounting Bracket**

Rugged cast iron design which assures a solid, dependable pump installation and operation. Three brackets fit all pump sizes.

2. Motor

NEMA standard JP shaft extension allows for easy interchangeability to packing, standard mechanical seal or optional single or double mechanical seals of various designs and materials of construction.

3. 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.

4. Shaft Sleeve

316 stainless steel is standard. Positively driven and gasketed, protecting motor shaft from liquid being pumped.

5. Impeller

Fully recessed design which accommodates passage of solids. All impellers have wiping vanes which reduce axial loading and prevent dirt from entering the sealing area. Impeller is keyed to shaft, and an impeller locking screw assures positive attachment.

6. Casing

Vortex-type concentric design. Extra heavy wall thickness for corrosion allowance. All suction and discharge openings are flanged for installation ease and integrity.

7. Back Pull-Out

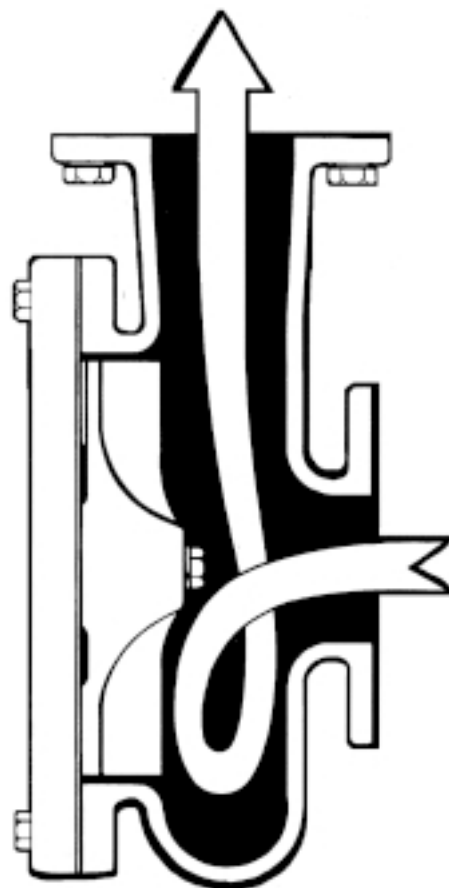
All pumps are designed with back pull-out feature which allows for removal of all pump rotating components without disturbing the piping connections.

Standard

- All iron construction
- 316 stainless steel shaft sleeve
- Fully recessed impeller
- Back pull-out design
- Packed stuffing box or mechanical seal
- Flanged suction and discharge on all pump sizes
- NEMA standard JP shaft motor

Options

- 316 stainless steel impeller
- All 316 stainless steel or Alloy 20 construction
- Single or double mechanical seal (various materials)
- Product or fresh water flush to packing or mechanical seal
- Teflon® packing (standard in s.s. and alloy units)
- ODP, TEFC



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

Design Details
Model 1620
Model 1626

Rotation from driver end
Outside diameter of shaft sleeve
Shaft diameter at impeller

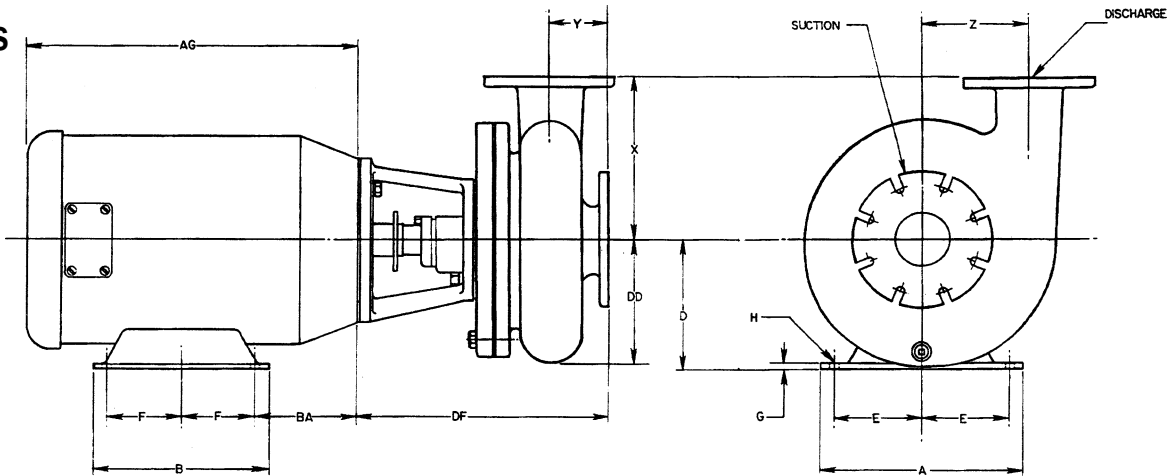
CW
1.250
0.875

CW
1.625
1.250

VERIFLO PUMP COMPANY Dimensions

1600 Series

Models
1620, 1626



Flanges

Liquid End	FLG. Size	DIA. FLG.	# of Holes	Slot Width	DIA. Circle	X	Y	Z	DD
1½x1½x10	1½	5	4	5⁄8	3⁄8	9	4³⁄₁₆	5¼	7½
2x2x10	2	6	4	¾	4¾	9¹¹⁄₁₆	5½	5³⁄₁₆	7½
3x3x10	3	7½	4	¾	6	11	5⁷⁄₈	5³⁄₁₆	7½
4x4x10	4	9	8	¾	7½	11¹³⁄₁₆	7³⁄₁₆	5³⁄₁₆	7½
8x6x10	8	13½	8	⁷⁄₈	11¾	11¾	7⁷⁄₈	5¼	8⁵⁄₈
	6	11	8	⁷⁄₈	9½	11¾	7⁷⁄₈	5¼	8⁵⁄₈

Motor Details

	A	B	D	E	F	G	H	AG	BA
143JP	6½	6	3½	2¾	2	1⁄₈	1¹³⁄₃₂	9⁷⁄₁₆	4½
145JP	6½	6	3½	2¾	2½	1⁄₈	1¹³⁄₃₂	9⁷⁄₁₆	4½
182JP	8¾	6¾	4½	3¾	2¼	¾	1³⁄₃₂	13½	5½
184JP	8¾	6¾	4½	3¾	2¾	¾	1³⁄₃₂	13½	5½
213JP	9½	7¾	5¼	4¼	2¾	⁵⁄₈	1³⁄₃₂	15½	6¾
215JP	9½	8¾	5¼	4¼	3½	⁵⁄₈	1³⁄₃₂	17	6¾
254JP	11¾	10¹¹⁄₁₆	6¼	5	4½	1¹⁄₁₆	1⁷⁄₃₂	20⅞	7¾
256JP	11¾	12⁷⁄₁₆	6¼	5	5	1¹⁄₁₆	1⁷⁄₃₂	21⁷⁄₈	7¾
284JP	12⁷⁄₈	12¼	7	5½	4¾	¾	1⁷⁄₃₂	22¾	7¾

Pump Size	DF	
	56-184 JP	213-326 JP
1½x1½x10	12¾	13⅞
2x2x10	14	14½
3x3x10	15¾	16⅞
4x4x10	18	18½
8x6x10	22½	23

Not for construction unless certified, some dimensions may vary ± 1/2". Pump Construction: _____

CUSTOMER _____ CUSTOMER NO. _____
PROJECT _____ SERIAL NO. _____
ENGINEER _____ LOCATION _____
CONTRACTOR _____
PUMP Model Size Curve No. GPM Head SP. GR.@Temp.
DATA _____
MOTOR Mfgr. HP RPM Volt-Phase-Cycle Frame ENC. Furnished by Mounted by
DATA _____
Shop Order _____ Certified by _____ Date _____

VERTIFLO

The Vertical Pump Specialists

PUMPS FOR INDUSTRY

CONTENTS:

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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 2100

Quality Design Features Assure Long, Trouble-Free Service



WIDE RANGE OF APPLICATIONS:

- Liquids Entrained with Solids
- General Industrial, Pulp & Paper, Mining, Meat Packing
- Raw Sewage, Sludge
- Slurries
- Trash
- Wastewater

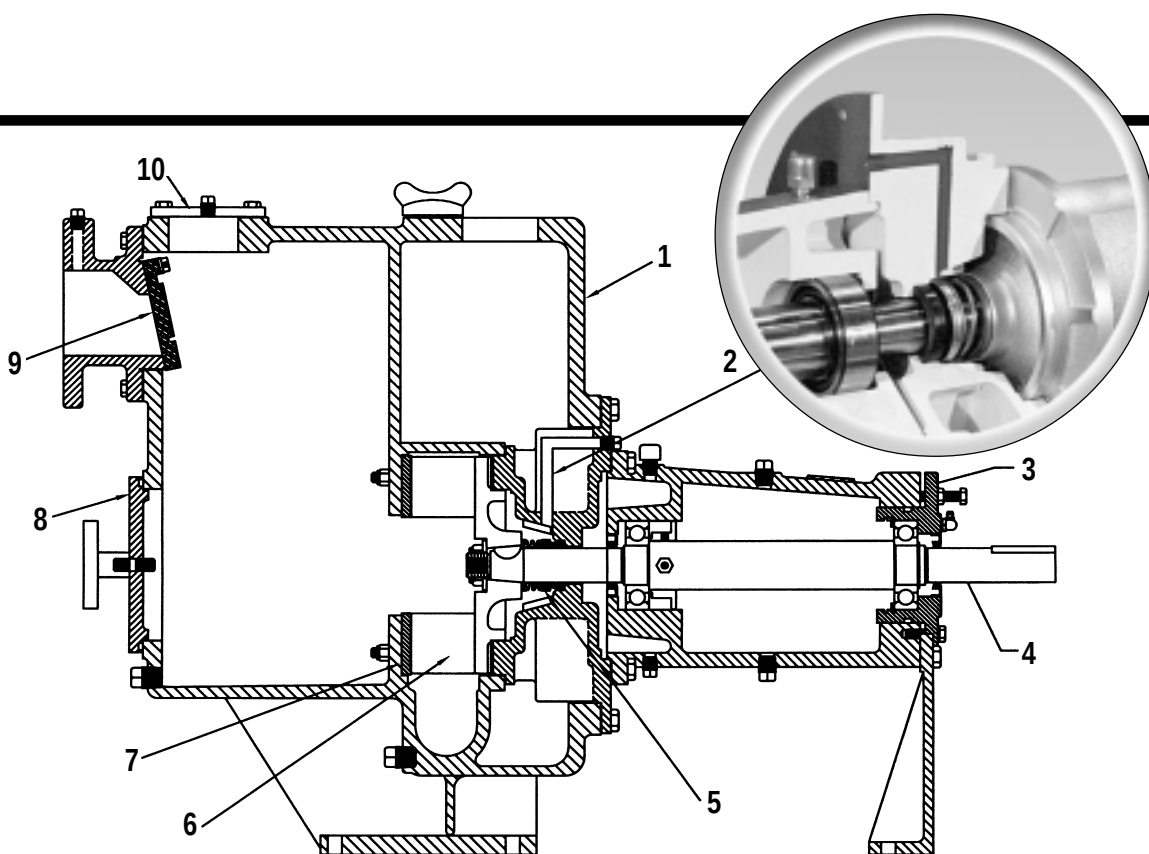
CAPABILITIES:

- Capacities to 1300 GPM
- Heads to 112 Feet TDH
- Sizes: 3", 4", and 6"
- Solids Handling: Up to 3" Diameter Sphere
- Suction Lifts to 25 Feet

CONSTRUCTION:

- Cast Iron
- CD4MCu Fitted
- All CD4MCu
- 316 S.S. Fitted
- All 316 S.S.

*Vertiflo's Trash- and Solids-Handling Self-Primer is designed for service simplicity and quick and easy access to the impeller and case to remove debris. Its oversized, tapered bore, self-flushing seal chamber, with **an industry first** optional external flush, results in greatly extended seal life. Back pullout design with external impeller adjustment, plus a replaceable case wearplate allows for continuous high efficiency performance.*

**1. Priming Chamber**

Heavy-duty cast construction with large capacity volute allows continual re-priming.

2. Seal Chamber

Oversized tapered bore chamber with flow bars to eject sand and abrasives otherwise trapped in the chamber. An industry first, external fresh water flush is optionally available for the most difficult pumping applications.

3. External Impeller Adjustment

Heavy-duty cast iron power frame with replaceable and adjustable thrust bearing housing utilizing jackscrews, maintains impeller adjustment.

4. Shaft

High-strength 17-4ph stainless steel with self-locking taper, along with Woodruff key and locknut assures perfect impeller attachment.

5. Mechanical Seal

Single, self-aligning solid silicon carbide vs silicon carbide faced seal for abrasive industrial wastewater service.

6. Impeller

Semi-open, solid-handling design with rear wiping vanes and balancing hub that reduce seal chamber pressure and axial loading.

7. Wear Plate

Replaceable heavy-duty wear plate protects priming chamber from wear of erosion.

8. Inspection-Cleanout Cover

6" diameter cover weighing only 5½ lbs. provides quick, direct access into priming chamber and impeller.

9. Check Valve

Replaceable, molded in one piece with integral rupture disc valve allows re-priming and protects the priming chamber from high pressure or vaporization.

10. Check Valve Cover Plate

Check valve inspection and service is possible by removing this plate. Draining of pump or removal of piping is not necessary.

Revised 10-15-02

Parts Description	Standard Fitted	316 S. S. Fitted	CD4MCu Fitted	All 316 S.S.	All CD4MCu
Case	Cast Iron	Cast Iron	Cast Iron	316 S.S.	CD4MCu
Seal Cover	Cast Iron	Cast Iron	Cast Iron	316 S.S.	CD4MCu
Mechanical Seal	Silicon Carbide vs Silicon Carbide				
Power Frame	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Shaft	17-4ph	17-4ph	17-4ph	17-4ph	17-4ph
Suction Inlet	Cast Iron	Cast Iron	Cast Iron	316 S.S.	CD4MCu
Check Valve	Buna N	Buna N	Buna N	Viton	Viton
Clean Out Plate	Cast Iron	Cast Iron	Carbon Steel	316 S.S.	CD4MCu
Case Gasket	Synthetic Fiber with EPDM Binder				
Wear Plate	Steel	316 S.S.	CD4MCu	316 S.S.	CD4MCu
Impeller	Cast Iron	316 S.S.	CD4MCu	316 S.S.	CD4MCu
Bearing Cartridge	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Impeller Trim	Carbon Steel/ 316SS	316 S.S.	316S.S. / CD4MCu	316 S.S.	CD4MCu / Alloy 20

OPTIONAL:

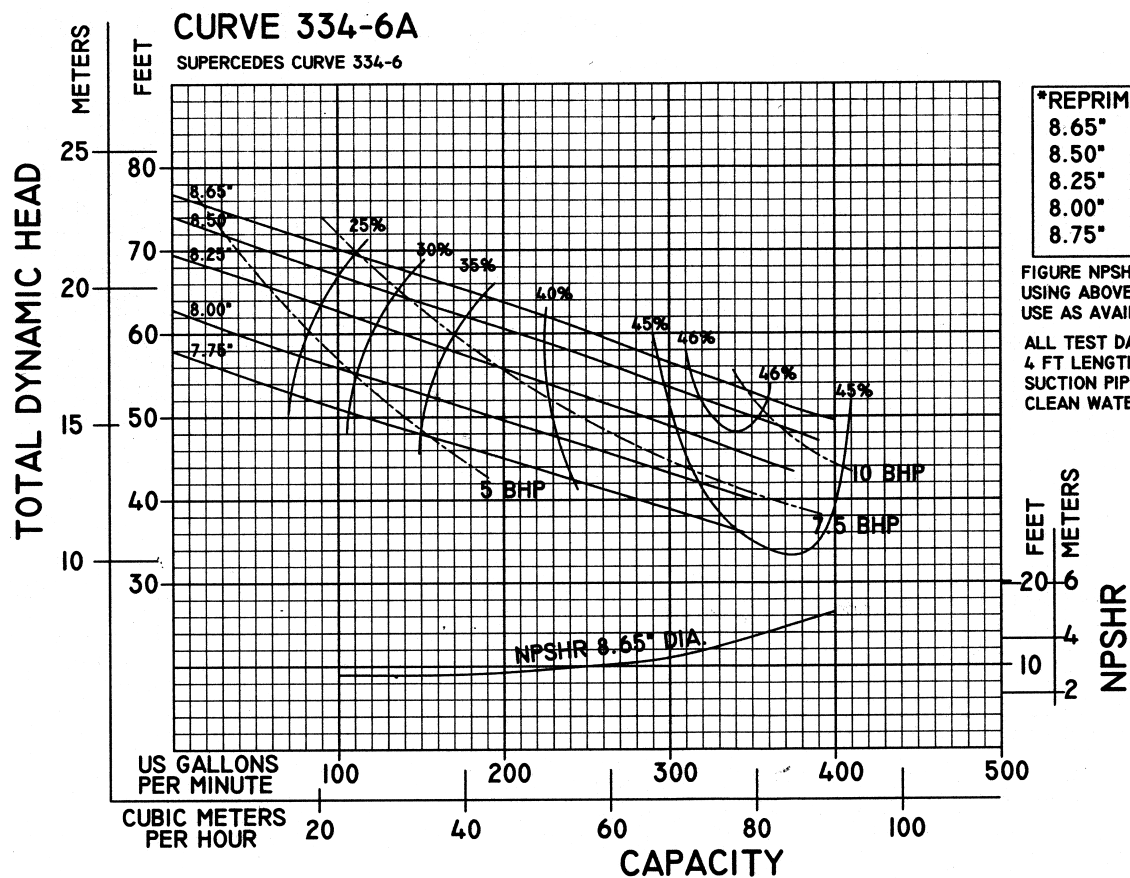
316 stainless steel fitted and CD4MCu fitted pumps are available with optional 316 stainless steel or CD4MCu seal cover in lieu of cast iron.

Construction Details

		3x3	4x4	6x6
Priming Chamber	Suction/Discharge Flange	3"/125 lb.	4"/125 lb.	6"/125 lb.
	Maximum Pressure	85 PSIG	85 PSIG	85 PSIG
	Minimum Thickness	0.44	0.44	0.44
	Capacity of Chamber	19 gal.	24 gal.	32 gal.
	Rotation from Driver End	cw	cw	cw
Shaft	Diameter at Impeller	1.38"	1.75"	1.75"
	Diameter through Seal Cover	1.38"	1.75"	1.75"
	Diameter Between Bearings	2.0"	2.25"	3.0"
	Diameter at Coupling End	1.38"	1.63"	2.0"
Bearings	Bearing Span Centers	9.66"	9.75"	10.94"
	Average L'10 Bearing Life	Excess of 100,000 Hours		
Maximum Solids		2.75"	3.0"	3.0"

VERIFLO PUMP COMPANY Performance Curves

Model 2122-3x3
Size 3x3
RPM 1780
Max Sphere 2 3/4"



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

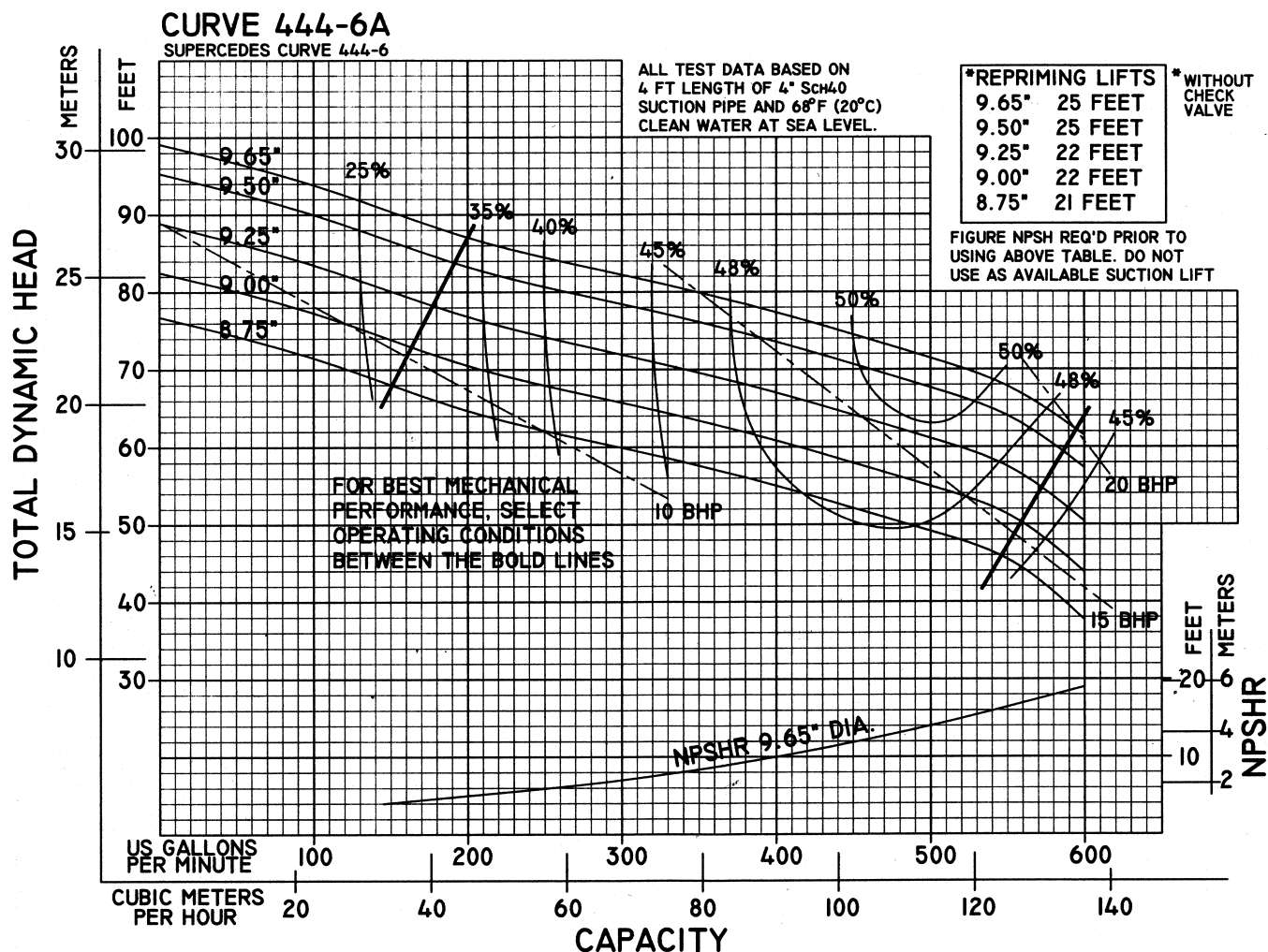
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERTIFLO PUMP COMPANY Performance Curves

Model 2128-4x4
Size 4x4
RPM 1780
Max Sphere 2 3/4"



2100

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

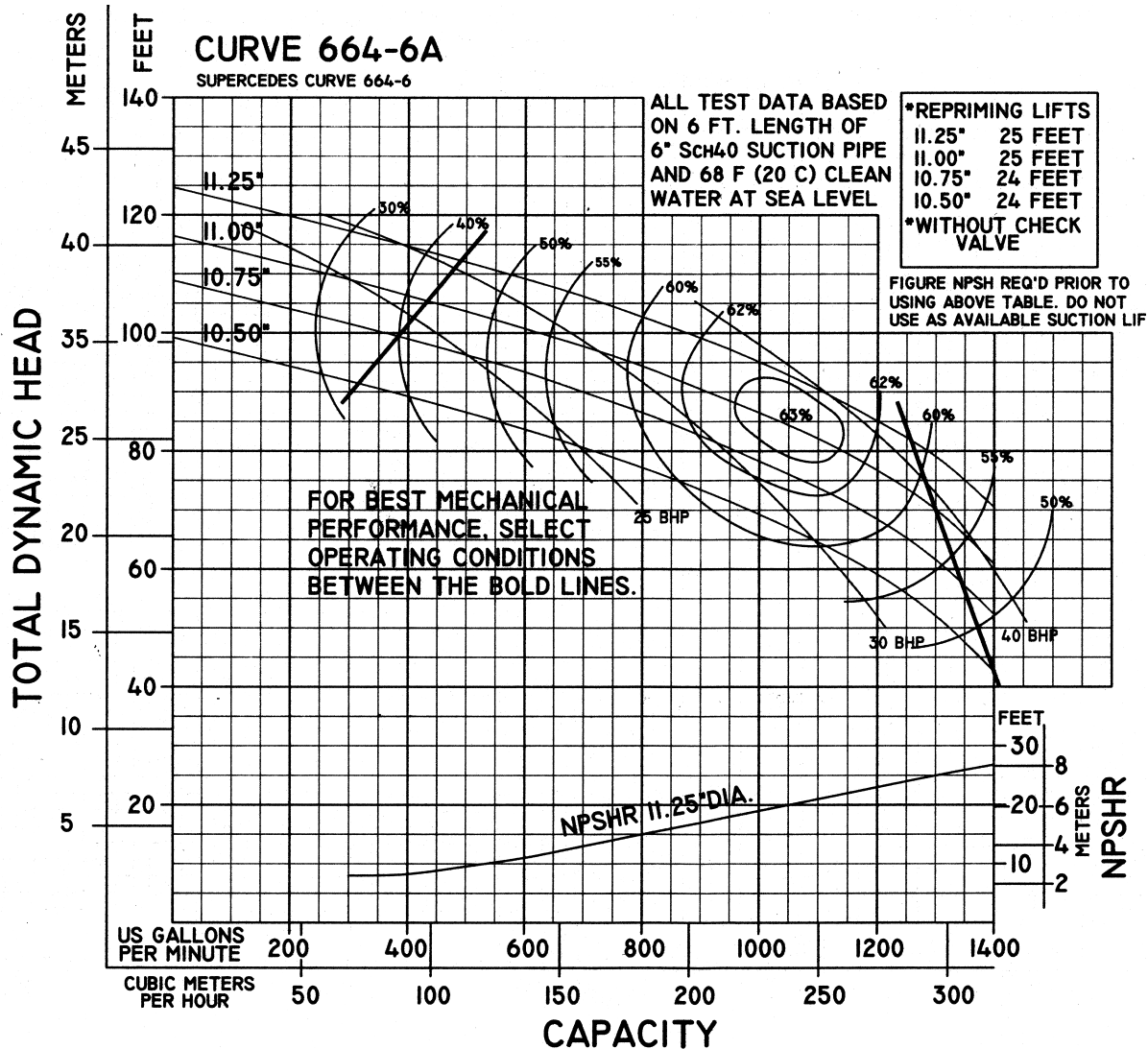
ENGINEER _____

CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____

VERIFLO PUMP COMPANY Performance Curves

Model 2128L-6x6
Size 6x6
RPM 1780
Max Sphere 2 3/4"



Performance at Casing Discharge Flange

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

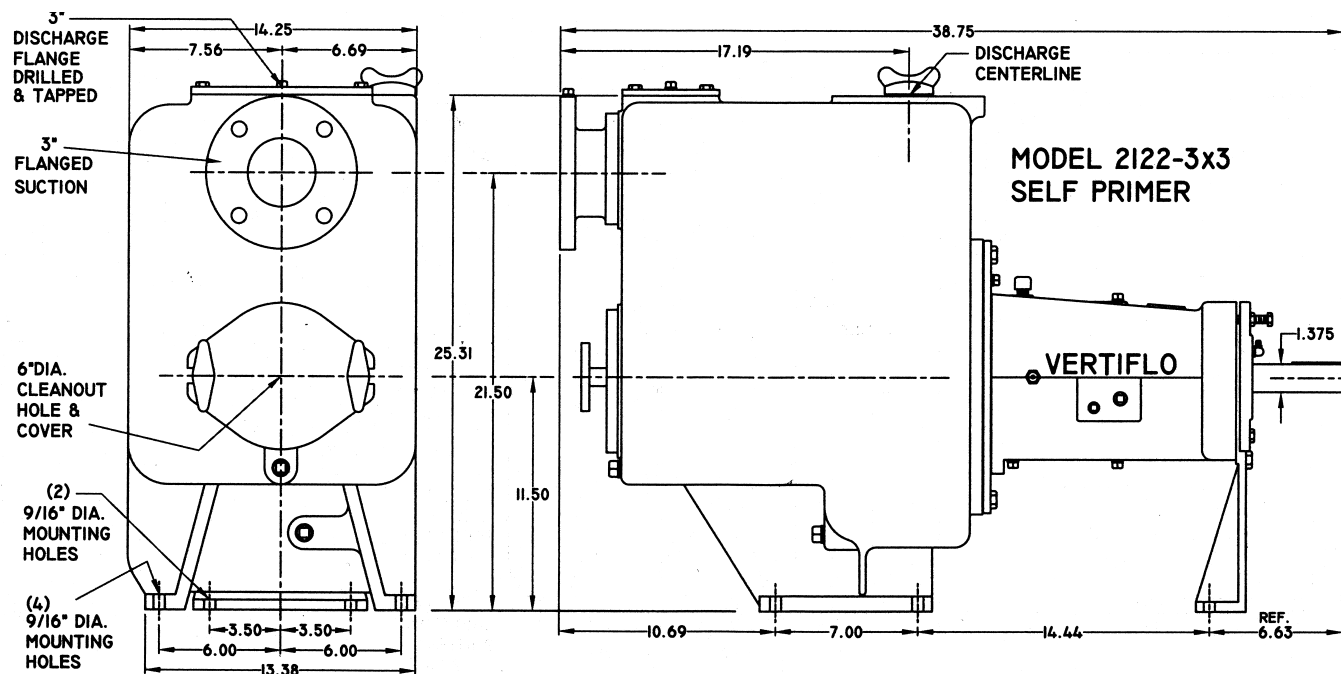
CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

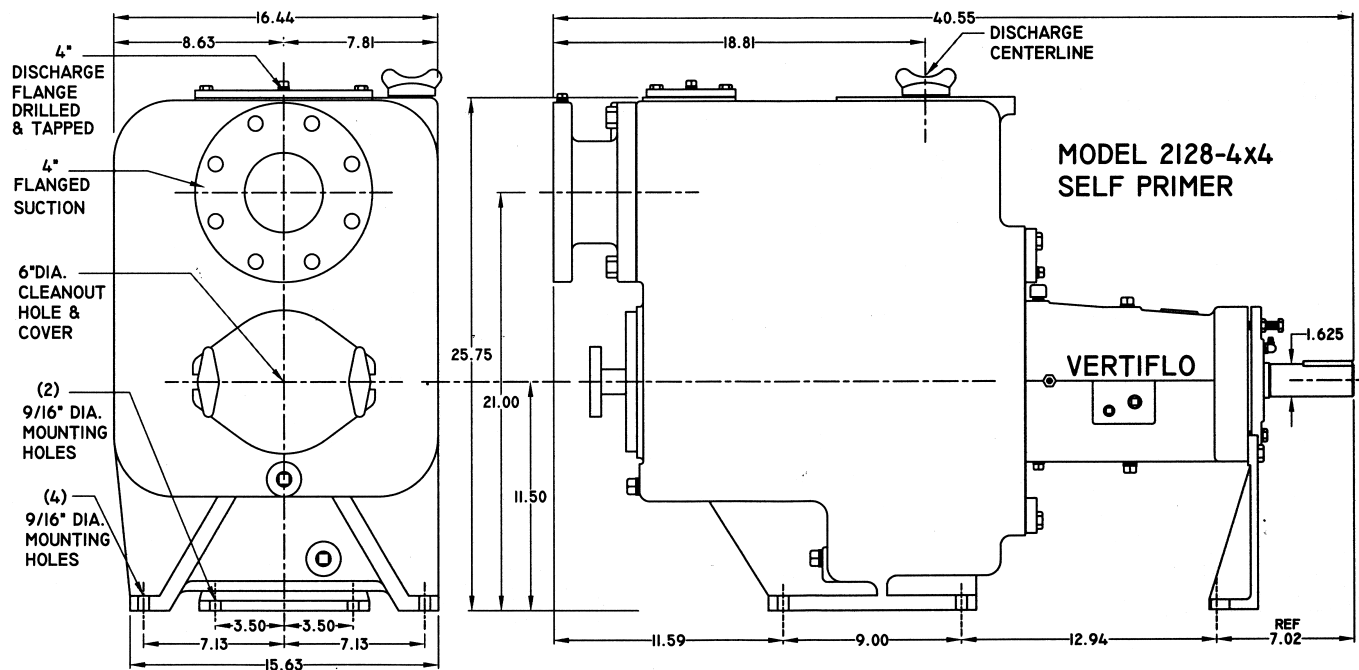
CONTRACTOR _____

CONDITIONS: _____ GPM _____ TDH _____ HP _____ EFF% _____ IMP. DIA _____



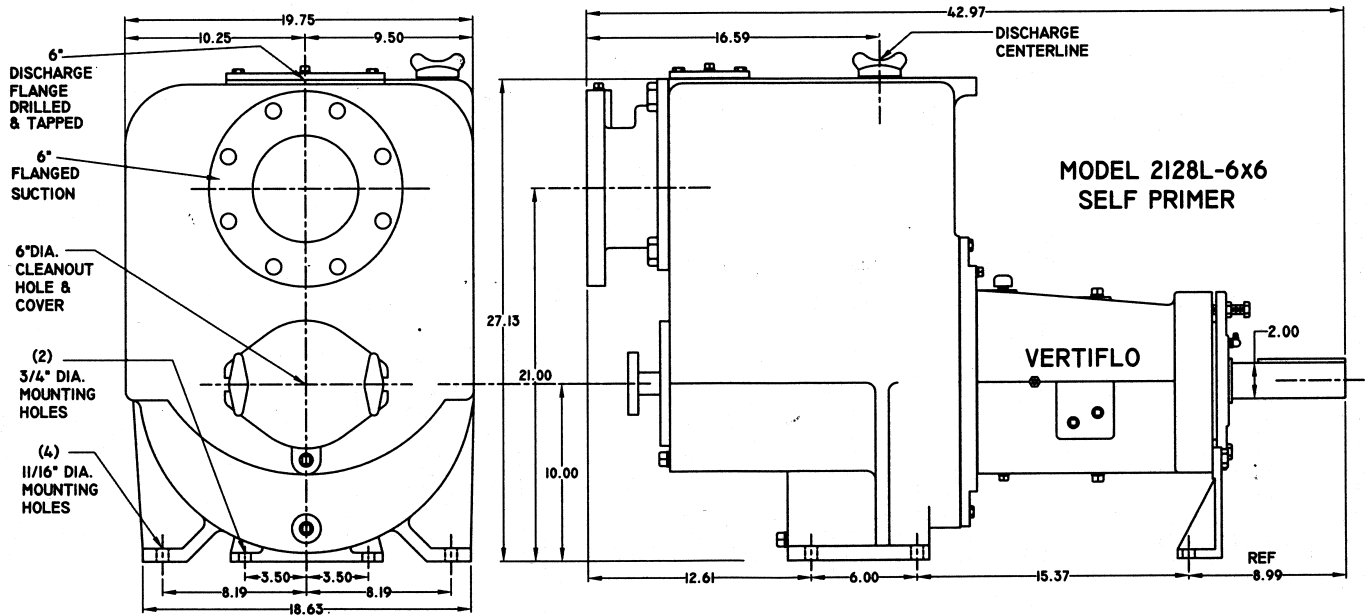
CUSTOMER _____ CUSTOMER NO. _____
 PROJECT _____ SERIAL NO. _____
 ENGINEER _____ LOCATION _____
 CONTRACTOR _____
 PUMP Model Size Curve No. GPM Head SP. GR.@Temp.
 DATA _____
 MOTOR Mfr. HP RPM Volt-Phase-Cycle Frame ENC. Furnished by Mounted by
 DATA _____
 Shop Order _____ Certified by _____ Date _____

Revised 10-15-02



CUSTOMER _____ CUSTOMER NO. _____
 PROJECT _____ SERIAL NO. _____
 ENGINEER _____ LOCATION _____
 CONTRACTOR _____
 PUMP Model Size Curve No. GPM Head SP. GR.@Temp.
 DATA _____
 MOTOR Mfr. HP RPM Volt-Phase-Cycle Frame ENC. Furnished by Mounted by
 DATA _____
 Shop Order _____ Certified by _____ Date _____

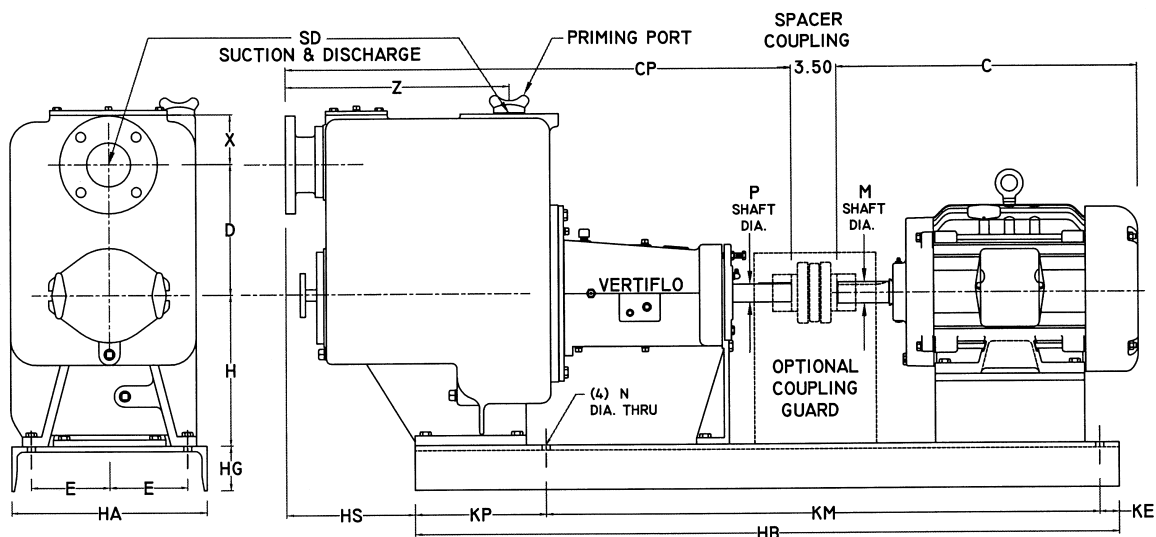
Revised 10-15-02



CUSTOMER _____ CUSTOMER NO. _____
 PROJECT _____ SERIAL NO. _____
 ENGINEER _____ LOCATION _____
 CONTRACTOR _____
 PUMP Model Size Curve No. GPM Head SP. GR.@Temp.
 DATA _____
 MOTOR Mfgr. HP RPM Volt-Phase-Cycle Frame ENC. Furnished by Mounted by
 DATA _____
 Shop Order _____ Certified by _____ Date _____

Revised 10-15-02

VERTIFLO PUMP COMPANY



Model	Motor Frame	M	C	CP	D	E	H	HA	HB	HG	HS	KE	KM	KP	N	P	SD	X	Z
2122-3X3	182-84T	1.125	14.3						48				36.5						
	213-15T	1.375	17.9	38.75	10	6	11.5	15	54	3.4	9.88	1.5	42.5	10	.63	1.375	3	3.81	17.19
	254-56T	1.625	21.1																
2128-4X4	182-84T	1.125	14.3						48				35						
	213-15T	1.375	17.9						54	4	10.84	1.0	41	12	.63	1.625	4	4.75	18.81
	254-56T	1.625	21.1	40.55	9.5	7.5	11.5	18	60				46.5						
	284-86T	1.875	27.8																
2128L-6X6	254-56T	1.625	21.1																
	284-86T	1.875	27.8	42.97	11	9	10	22	60	3.5	11.28	1.5	46.5	12	.75	2	6	6.13	16.59
	324-26T	2.125	30.3																

Motor dimensions are based on the larger of the paired frame sizes since most motor manufacturers provide dual drilling for mounting of either frame size. Motor dimensions are for Baldor TEFC motors at 1750RPM. Motor overall length, (C), will vary based upon specific motor type, enclosure, and manufacturer. Dimension between shafts will vary with coupling type.

CUSTOMER _____ CUSTOMER NO. _____
 PROJECT _____ SERIAL NO. _____
 ENGINEER _____ LOCATION _____
 CONTRACTOR _____
 PUMP Model _____ Size _____ Curve No. _____ GPM _____ Head _____ SP. GR.@Temp. _____
 DATA _____
 MOTOR Mfr. _____ HP _____ RPM _____ Volt-Phase-Cycle _____ Frame ENC. _____ Furnished by _____ Mounted by _____
 DATA _____
 Shop Order _____ Certified by _____ Date _____

Revised 7-15-04

VERTIFLO

The Vertical Pump Specialists

PUMPS FOR INDUSTRY

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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

Furnish and install (as shown on the plans) **VERTIFLO Series 700** vertical immersion non-clog sewage ejector, pump size x x of all iron construction. Each pump shall be capable of pumping GPM when operating against a total dynamic head of feet, at specific gravity, temperature and viscosity indicated. Each pump shall operate at RPM and shall be percent efficient at the design condition point. Pump shall be designed for installation in a deep sump and furnished with inch discharge pipe and inch (round) (square) (oval) cover plate.

The pump casing shall have an integrally-cast long radius discharge elbow and shall be flanged. The impeller shall be of the non-clog 2-vane centrifugal design. The pump shaft shall have a minimum diameter of (1.250 inches) (1.500 inches). Column pipe shall be minimum 4.00 inch diameter, with welded flanges machined for registered fits. A separate bottom bearing housing of the same material as the liquid end shall be located directly behind the impeller and shall include replaceable bearings of material.

A replaceable intermediate bearing housing of the same material as the pump liquid end shall be provided on pumps built for pit depths over 6'-0". One intermediate bearing shall be provided for each 5'-0" pump length increment. Bottom and intermediate bearings shall be (grease) (water) lubricated through separate lubrication lines.

Pump shall be furnished with a separate thrust bearing housing with a grease lubricated angular contact thrust bearing in a splash-proof enclosure with grease seals. External impeller and shaft axial adjustment shall be provided. Separate motor support with registered fits shall be bolted to the thrust bearing housing. Pump shall be driven through a factory choice flexible coupling.

Pump(s) operation shall be controlled by a (float switch) (alternator) in a NEMA enclosure. Float shall be (304) (316) stainless steel with a (fiberglass) (316 stainless steel) rod and stops. All duplex pump sets shall be equipped with a factory manufactured independent switch bracket and control assembly, which shall be located independently of either pump, and provide for operation of either pump when one (1) is removed from the sump.

Pump shall be driven by a standard "C" face, HP, RPM, Phase, Cycle, Volt, enclosure, electric motor.

Pump and motor unit shall be installed according to the manufacturer's recommendations. In accordance with the Standards of the Hydraulic Institute, there shall be no strain transmitted to the pump.

Furnish and install (as shown on the plans) **VERTIFLO Series 800** vertical immersion sump pump size x of (standard fitted) (stainless steel fitted) (316 stainless steel) (alloy 20) construction. Each pump shall be capable of pumping GPM when operating against a total dynamic head of feet, at specific gravity, temperature and viscosity indicated. Each pump shall operate at RPM and shall be percent efficient at the design point. Shut-off head shall be not less than feet. Pump shall be designed for installation in a deep sump and furnished with inch discharge pipe and inch (round) (square) (oval) cover plate.

The pump casing shall have an integrally cast discharge flange. The impeller shall be of the semi-open design. The impeller shall be affixed to the shaft with Woodruff key, washer, castellated nut and cotter pin. The pump shaft shall have a minimum diameter of (1.250 inches) (1.500 inches) (2.000 inches) and shall be of the tapered design, (416) (316) stainless steel. Column pipe shall be minimum (4.00) (6.00) inch diameter, with welded flanges machined for registered fits. A separate replaceable bottom bearing housing of the same material as the liquid shall be located directly behind the impeller and shall include replaceable bearing(s) of material.

A replaceable intermediate bearing housing of the same material as the liquid end shall be provided on pumps built for pit depths over 6'-0". One intermediate bearing shall be provided for each 5'-0" pump length increment. Bottom and intermediate bearing(s) shall be (grease) (water) (product) lubricated through separate lubrication lines.

Pump shall be furnished with a separate thrust bearing housing with a grease lubricated angular contact thrust bearing in a splash-proof enclosure with grease seals. External impeller and shaft axial-adjustment shall be provided. Separate motor support with registered fits shall be bolted to the thrust bearing housing. Pump shall be driven through a factory choice flexible coupling.

Pump(s) operation shall be controlled by a (float switch) (alternator) in a NEMA enclosure. Float shall be (304) (316) stainless steel. All duplex pump sets shall be equipped with a factory manufactured independent switch bracket and control assembly, which shall be located independently of either pump, and provide for operation of either pump when one (1) pump is removed.

Pumps shall be driven by a standard "C" face HP, RPM, Phase, Cycle, Volt, enclosure, electric motor.

Pump and motor unit shall be installed according to the manufacturer's recommendations. In accordance with the Standards of the Hydraulic Institute, there shall be no strain transmitted to the pump.

Furnish and install (as shown on the plans) **VERTIFLO Model 814** vertical immersion sump pump size x x of (standard fitted) (stainless steel fitted) (316 stainless steel) construction. Each pump shall be capable of pumping GPM when operating against a total dynamic head of feet, at specific gravity, temperature and viscosity indicated. Each pump shall operate at RPM and shall be percent efficient at the design point. Shut-off head shall be not less than feet. Pump shall be designed for installation in a deep sump and furnished with inch discharge pipe and inch (round) (square)) cover plate.

A replaceable intermediate bearing housing of the same material as the liquid end shall be provided on pumps built for pit depths over 5'-0". One intermediate bearing shall be provided for each 4'-0" pump length increment. Bottom and intermediate bearing(s) shall be carbon graphite and (fresh water) (product) lubricated through separate lubrication lines.

External impeller and shaft axial adjustment shall be provided. Separate motor support with registered fits shall be bolted to the thrust bearing housing. Pump shall be driven through a factory choice flexible coupling.

Pump(s) operation shall be controlled by a (float switch) (alternator) in a NEMA enclosure. Float shall be (316 stainless steel) with a (fiberglass) (316 stainless steel) rod and stops. All duplex pump sets shall be equipped with a factory manufactured independent switch bracket and control assembly, which shall be located independently of either pump, and provide for operation of either pump when one (1) is removed.

Pump shall be driven by a standard "C" face HP, RPM, Phase, Cycle, Volt, enclosure, electric motor.

Pump and motor unit shall be installed according to the manufacturer's recommendations. In accordance with the Standards of the Hydraulic Institute, there shall be no strain transmitted to the pump.

Furnish and install (as shown on the plans) **VERTIFLO Series 900** vertical recessed impeller vortex pump, size x x of (All Iron) (316 S.S. Fitted) (All 316 S.S.) construction. Each pump shall be capable of pumping GPM against a total dynamic head of feet. Each pump shall operate at RPM. Pump shall be designed for installation in a deep sump and furnished with a discharge pipe assembly terminating above the mounting plate with flange. A " (round) (square) mounting plate shall be furnished as part of the pump assembly. The pump casing shall have an integrally-cast discharge flange. The impeller shall be of the fully recessed vortex type with educator vanes and have the capacity of passing " diameter solids.

The pump shaft shall have a minimum diameter of (1.250 inches) (1.500 inches) (2.000 inches) and shall be of the tapered design, (416) (316) stainless steel. Column pipe shall be minimum (4.00) (6.00) inch diameter, with welded flanges machined for registered fits. The bottom lineshaft bearing housing shall be located directly behind the impeller and shall include replaceable bearings of carbon graphite material.

An intermediate bearing housing assembly shall be provided on pumps built for pit depths over 6'-0". One intermediate bearing assembly with two carbon graphite bearings shall be provided for each 5'-0" pump length increment. Bottom and intermediate bearings shall be fresh water lubricated through separate lubrication lines.

Pump shall be furnished with a separate thrust bearing housing with a grease lubricated angular contact thrust bearing in a splash-proof enclosure with grease seals. External impeller and shaft axial adjustment shall be provided. Separate motor support with registered fits shall be bolted to the thrust bearing housing. Pump shall be driven through a factory choice flexible coupling.

Pump shall be driven by a standard "C" face HP, RPM, phase, cycle ,
voltage, enclosure electric motor.

Pump and motor unit shall be installed according to the manufacturer's recommendations. In accordance with the Standards of the Hydraulic Institute, there shall be no strain transmitted to the pump.

Furnish and install (as shown on the plans) **VERTIFLO Series 1100**, Model (1101), 1102, 1103) vertical immersion cantilever vortex pump size x x of (All Iron) (316 Stainless Steel Fitted) (All 316 Stainless Steel) construction. Pump shall be capable of pumping GPM when operating against a total dynamic head of feet, at specific gravity, temperature and viscosity indicated. Pump shall operate at RPM. Pump shall be designed for installation in a deep sump.

The pump casing shall have an integrally cast suction and discharge flange. The impeller shall be of the fully recessed vortex design. The impeller shall be affixed to the shaft with a key, nut and/or impeller locking screw. The shaft shall have a minimum diameter of " and shall be of the tapered design. A protective shaft sleeve (shall, shall not) be required. Column pipe shall be " diameter, with welded flange machined for registered fit.

Pump shall be constructed with a separate thrust bearing housing with a grease lubricated duplex angular contact thrust bearing in a splash-proof enclosure with grease seals. External impeller and shaft axial adjustment shall be provided. Pump shall be driven through a factory choice flexible coupling.

Pump shall be driven by a standard "C" face HP, RPM, Phase, Cycle, Volt, enclosure, electric motor.

Pump and motor unit shall be installed according to the manufacturer's recommendations. In accordance with the Standards of the Hydraulic Institute, there shall be no strain transmitted to the pump.

VERTIFLO PUMP COMPANY Vertical Wet Pit Cantilever Centrifugal Pumps

Furnish and install (as shown on the plans) **VERTIFLO Series 1200**, Model (1201, 1202, 1203) vertical immersion cantilever centrifugal pump size x x of (all Iron) (316 Stainless Steel Fitted) (All 316 Stainless Steel) construction. Each pump shall be capable of pumping GPM when operating against a total dynamic head of feet, at specific gravity, temperature and viscosity indicated. Pump shall operate at RPM. Pump shall be designed for installation in a deep sump.

The pump casing shall have an integrally cast suction and discharge flange, and shall be double volute when size 4 X 3 X 10 or larger is required. The impeller shall be of the semi-open centrifugal design. The impeller shall be affixed to the shaft with a key, nut and/or impeller locking screw. The shaft shall have a minimum diameter of " and shall be of the tapered design. A protective shaft sleeve (shall, shall not) be required. Column pipe shall be " diameter, with welded flange machined for registered fit.

Pump shall be constructed with a separate thrust bearing housing with a grease lubricated duplex angular contact thrust bearing in a splash-proof enclosure with grease seals. External impeller and shaft axial adjustment shall be provided. Pump shall be driven through a factory choice flexible coupling.

Pump shall be driven by a standard "C" face HP, RPM, Phase, Cycle, Volt, enclosure, electric motor.

Pump and motor unit shall be installed according to the manufacturer's recommendations. In accordance with the Standards of the Hydraulic Institute, there shall be no strain transmitted to the pump.

Horizontal End Suction Centrifugal Pumps

VERTIFLO PUMP COMPANY

Close Coupled

The contractor shall furnish and install (as shown on the plans) **VERTIFLO Series 1300**, Model (1320, 1326) horizontal close-coupled back pull-out centrifugal pump(s) size x x of (all iron) (316 stainless steel fitted) (all 316 stainless steel) construction. Each pump shall have a capacity of GPM at FT total head, with a temperature of °F., specific gravity. Each pump is to be furnished with (packing) (mechanical seal). A Teflon® lantern ring and split packing gland shall be furnished in all packed pumps. Impeller shall be semi-open and have the capability of passing " diameter solids. Shaft sleeve shall be 316 stainless steel. Suction and discharge openings shall be flanged and pumps 4 X 3 X 10 and larger shall be double volute. The pump shall be close-coupled to a horizontal foot-mounted JP shaft motor, HP Phase Cycle Volts RPM (drip-proof) (totally enclosed) (explosion-proof) (chemical duty) electric motor.

Pump and motor unit shall be installed according to the manufacturer's recommendations. In accordance with the Standards of the Hydraulic Institute, there shall be no strain transmitted to the pump.

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The contractor shall furnish and install (as shown on the plans) **VERTIFLO Series 1400**, Model (1420, 1424) horizontal flexible coupled back pull-out centrifugal pump(s) size x x of (all iron) (316 stainless steel fitted) (all 316 stainless steel) construction. Each pump shall have a capacity of GPM at FT total head, with a temperature of °F., specific gravity. Pump is to be furnished with (packing)(mechanical seal). A Teflon® lantern ring and split packing gland shall be furnished in all packed pumps. Impeller shall be semi-open and have the capability of passing " diameter solids. Impeller shall be externally adjustable. Shaft shall be (416 stainless steel) (316 stainless steel) and tapered at the impeller and attached with castellated nut, washer and cotter pin. Thrust and radial bearings shall be (grease) (oil) lubricated. Cast iron power frame shall be one piece construction. Suction and discharge openings shall be flanged and all pumps 4 X 3 X 10 and larger shall be double volute. Pump and motor shall be mounted on a common steel base. The pump shall be flexible coupled to a horizontal HP RPM (drip-proof) (totally enclosed) (explosion-proof) (chemical duty) electric motor.

Pump and motor unit shall be installed according to the manufacturer's recommendations. In accordance with the Standards of the Hydraulic Institute, there shall be no strain transmitted to the pump.

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The contractor shall furnish and install (as shown on the plans) **VERTIFLO Series 1500**, Model (1520, 1524) horizontal flexible coupled back pull-out Vortex recessed impeller pump(s) size x of (all iron) (316 stainless steel fitted) (all 316 stainless steel) construction. Each pump shall have a capacity of GPM at FT total head, with a temperature of °F., specific gravity. Each pump is to be furnished with (packing) (mechanical seal). A Teflon® lantern ring and split packing gland shall be furnished in all packed pumps. Impeller shall be fully recessed and have the capability of passing " diameter solids. Impeller shall be externally adjustable. Shaft shall be (416 stainless steel) (316 stainless steel) and shall be tapered at impeller attached with castellated nut, washer and cotter pin. Thrust and radial bearings shall be (grease) (oil) lubricated. Cast iron power frame shall be one-piece construction. Suction and discharge openings shall be flanged. Pump and motor shall be mounted on a common steel base. The pump shall be flexible coupled to a horizontal HP RPM (drip-proof) (totally enclosed) (explosion-proof) (chemical duty) electric motor.

Pump and motor unit shall be installed according to the manufacturer's recommendations. In accordance with the Standards of the Hydraulic Institute, there shall be no strain transmitted to the pump.

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The contractor shall furnish and install (as shown on the plans) **VERTIFLO Series 1600**, Model (1620, 1626) horizontal close-coupled back pull-out Vortex recessed impeller pump(s) size x x of (all iron) (316 stainless steel fitted) (all 316 stainless steel) construction. Each pump shall have a capacity of GPM at FT total head, with a temperature of °F., specific gravity. Each pump is to be furnished with (packing) (mechanical seal). A Teflon® lantern ring and split packing gland shall be furnished in all packed pumps. Impeller shall be fully recessed and have the capability of passing " diameter solids. Shaft sleeve shall be 316 stainless steel. Suction and discharge openings shall be flanged. The pump shall be close-coupled to a horizontal foot-mounted JP shaft motor, HP Phase Hertz Volts RPM (drip-proof) (totally enclosed) (explosion-proof) (chemical duty) electric motor.

Pump and motor unit shall be installed according to the manufacturer's recommendations. In accordance with the Standards of the Hydraulic Institute, there shall be no strain transmitted to the pump.

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The contractor shall furnish and install (as shown on the plans) VERTIFLO Series 2100, (Model 2122, 2128 2128L), size _____ x _____, solid-handling, self-priming centrifugal pump. Material of construction shall be (cast iron), (316 stainless steel fitted), (CD4Mcu fitted), (all 316 stainless steel), (all CD4Mcu). Pump shall have a capacity of _____ GPM against _____ feet of TDH, including a maximum total dynamic suction lift of _____ feet, and a minimum re-prime lift of _____ feet. The pump shall pass a sphere _____ inch(es) in diameter.

The priming chamber shall be a one-piece, heavy-duty casting with an integral smooth wall volute, priming plug, 6" diameter inspection/clean-out cover and check valve cover plate. Suction and discharge connections shall be flanged. Seal chamber shall have oversized tapered bore with flow bars and external fresh water flush to seal faces. Mechanical seal shall be a single, self-aligning, with solid Silicon Carbide vs Silicon Carbide seal faces.

Heavy-duty cast iron Power Frame. Back pullout design with external impeller adjustment. Grease or oil lube bearings. Shaft shall be 17-4ph stainless steel and shall be tapered at impeller, attached with locknut, washer and Woodruff key.

Impeller shall be semi-open, solid handling with rear wiping vanes and balancing hub. Pump shall be fitted with a replaceable impeller wear plate.

Suction inlet flange shall be cast and with gauge tap. Replaceable, molded one-piece Neoprene or Viton check valve with integral rupture disc shall be inspected and serviced through the check valve cover plate without draining the priming chamber or removing piping.

Unit shall be installed according to the manufacturer's recommendations. In accordance with the standards of The Hydraulic Institute, there shall be no strain transmitted to the pump, suction or discharge piping.

