

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

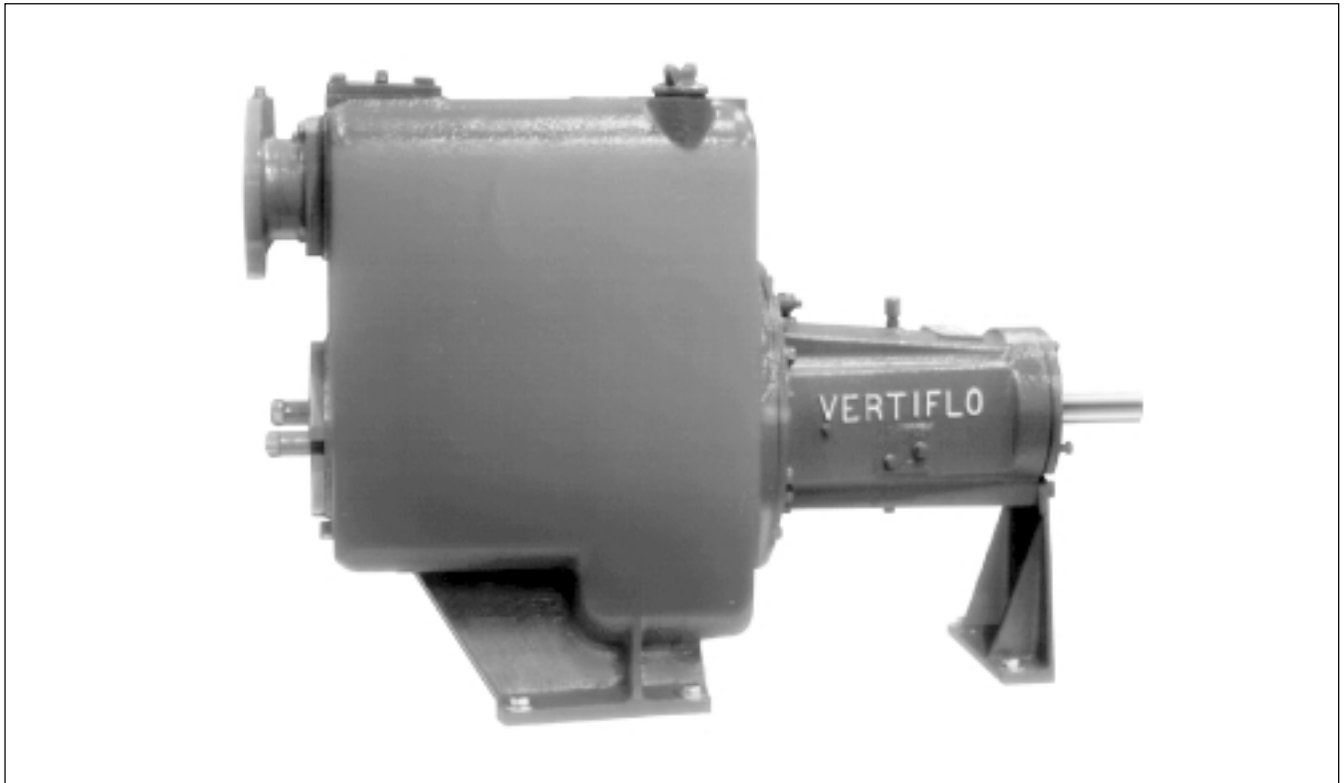
Horizontal End Suction
Pumps-Vortex Series 1500 and 1600

**Horizontal Self-priming
Pumps- Centrifugal Series 2100**

Engineering Sample Specifications

VERTIFLO Series 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

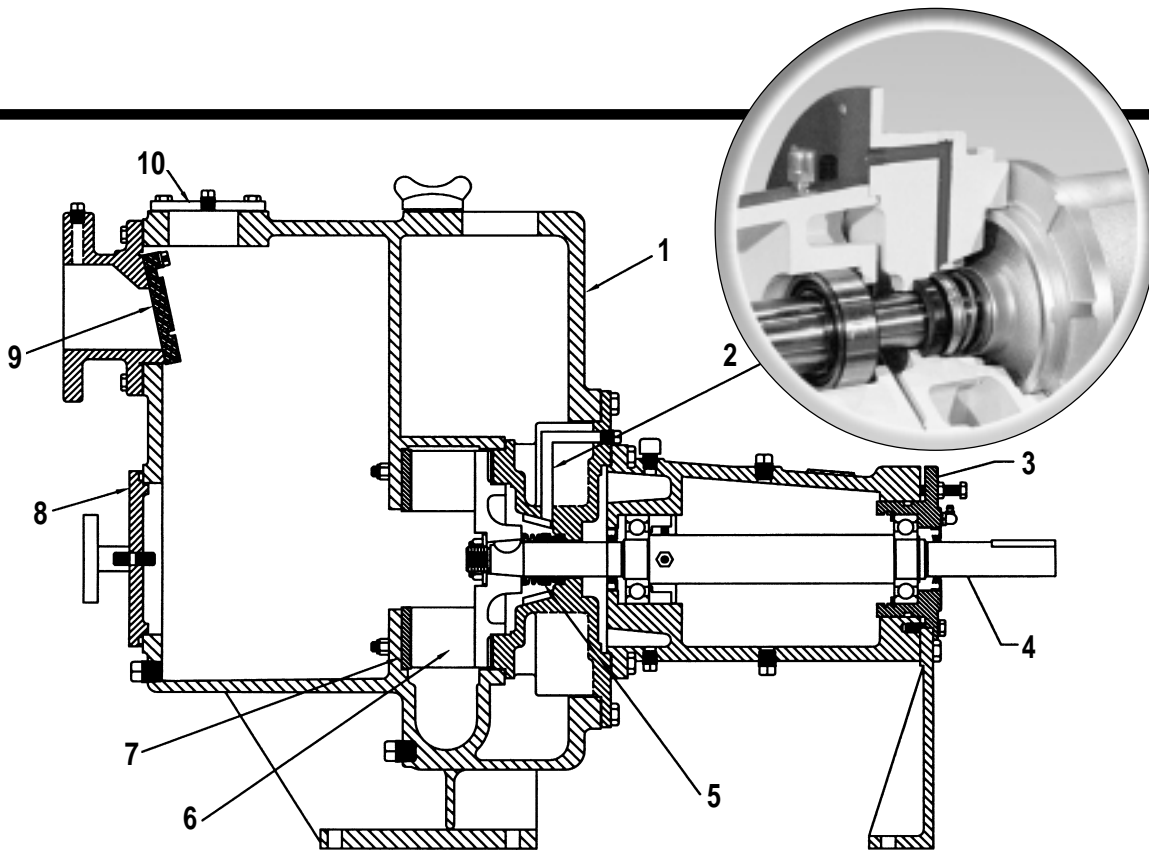
CAPABILITIES:

- 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 ease 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 sound 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:

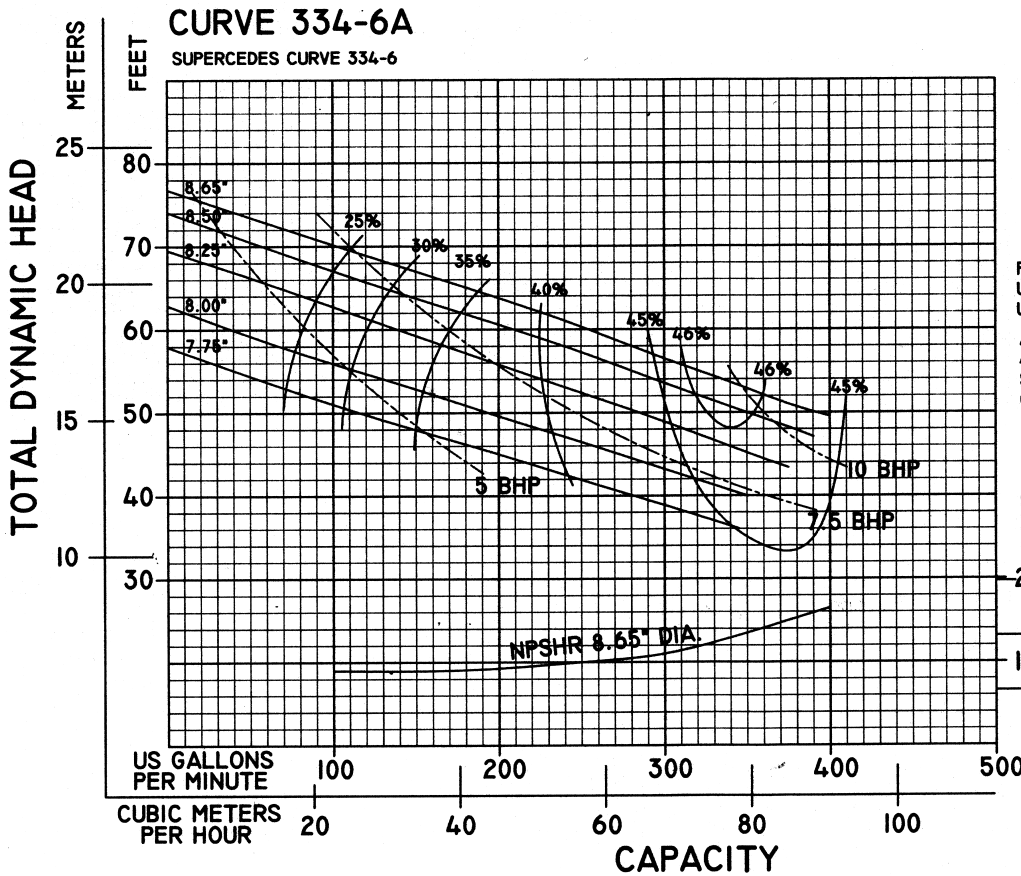
316 stainless steel fitted and CD4MCu fitted pumps are available with optional 316 stainless steel or CD4MCu seal cover in lieu of cast iron.

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"

VERTIFLO PUMP COMPANY Performance Curves

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



*REPRIMING LIFTS	
8.65"	21 FEET
8.50"	20 FEET
8.25"	19 FEET
8.00"	19 FEET
8.75"	18 FEET

* WITHOUT CHECK VALVE

FIGURE NPSH REQ'D PRIOR TO USING ABOVE TABLE. DO NOT USE AS AVAILABLE SUCTION LIFT

ALL TEST DATA BASED ON 4 FT LENGTH OF 3" SCH40 SUCTION PIPE AND 68°F (20°C) CLEAN WATER AT SEA LEVEL.

FEET
METERS
NPSHR

Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

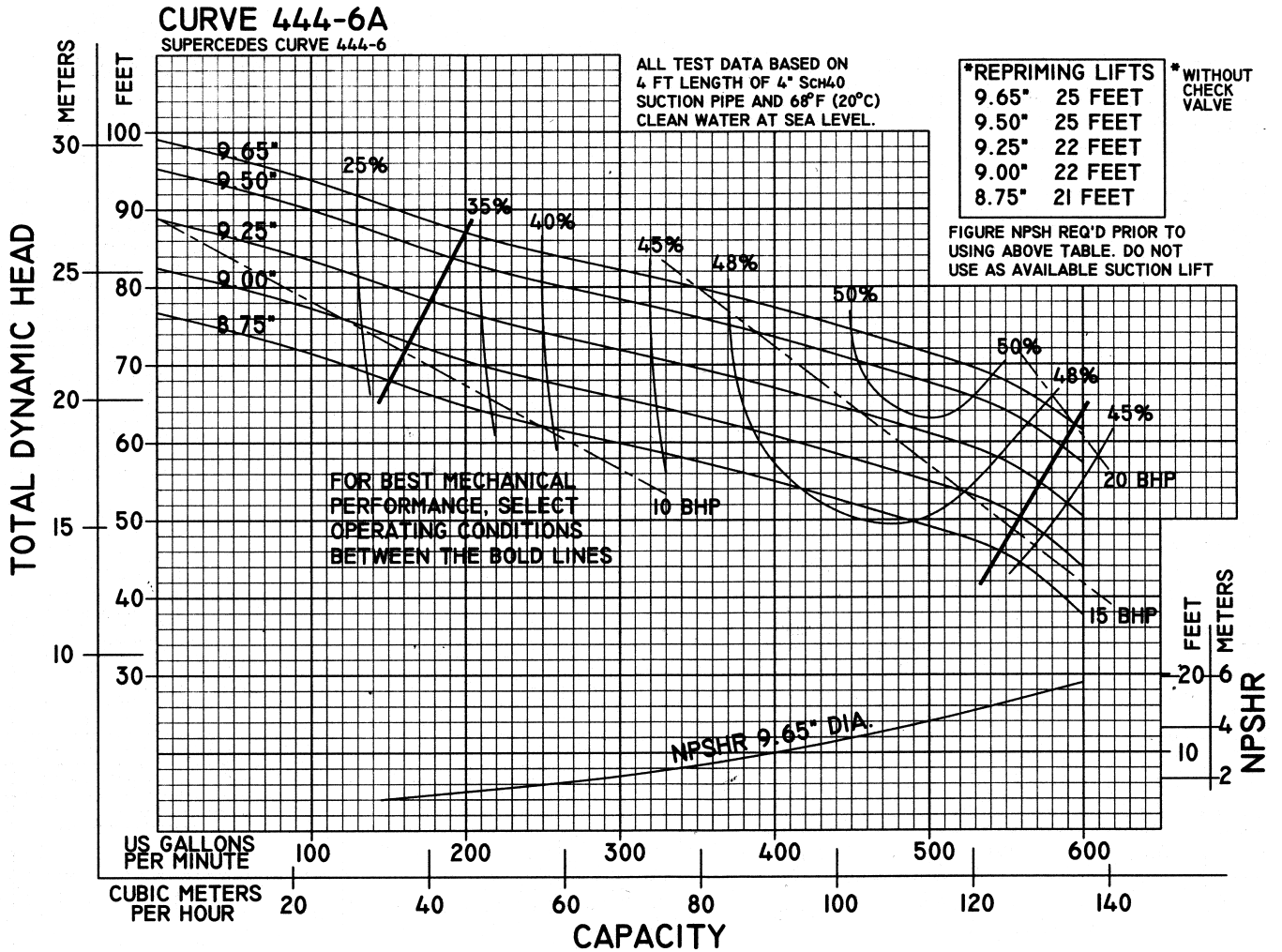
ENGINEER _____

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"



Performance at Casing Discharge Flange

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

CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

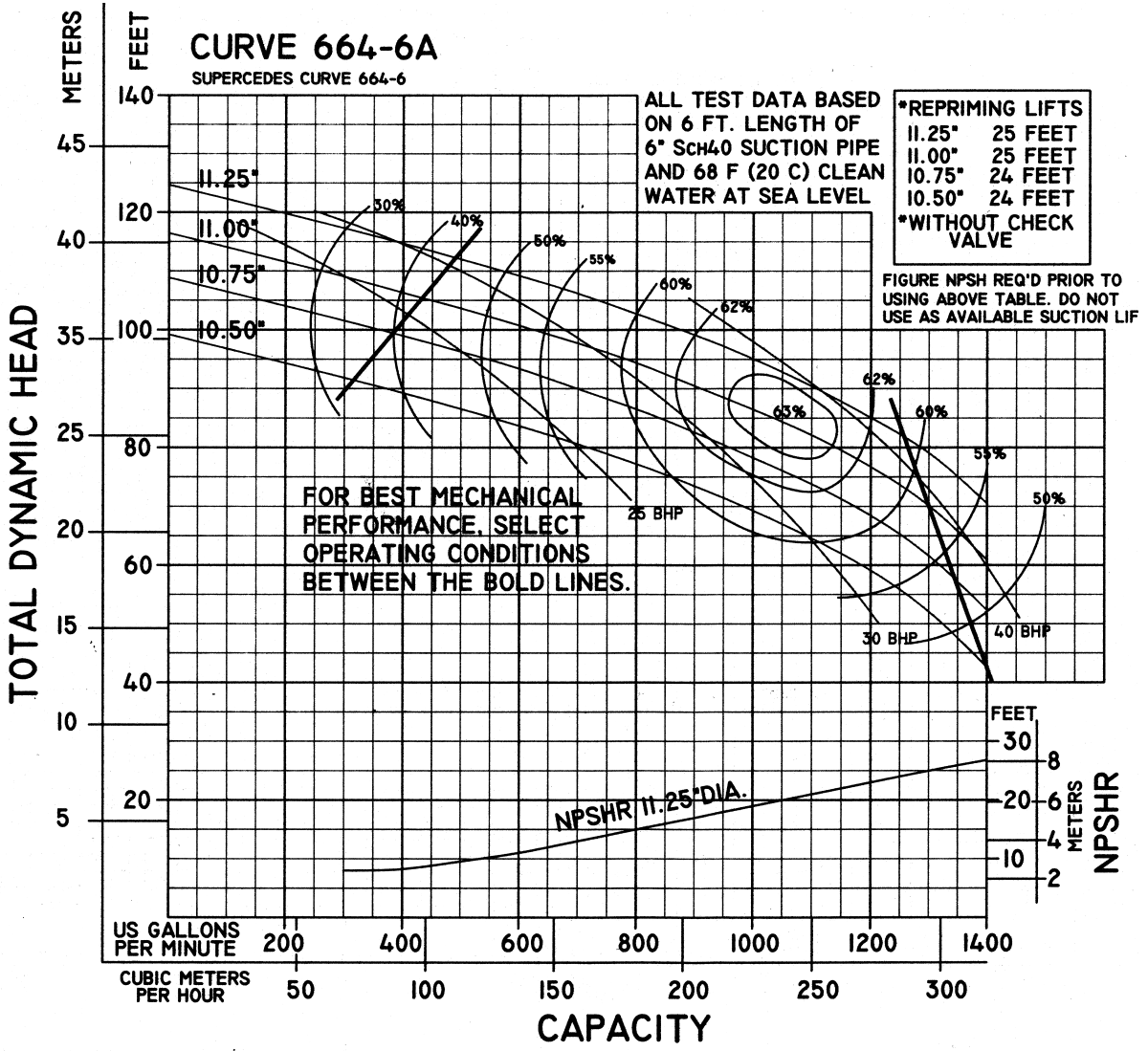
ENGINEER _____

CONTRACTOR _____

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

VERTIFLO PUMP COMPANY Performance Curves

Model 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

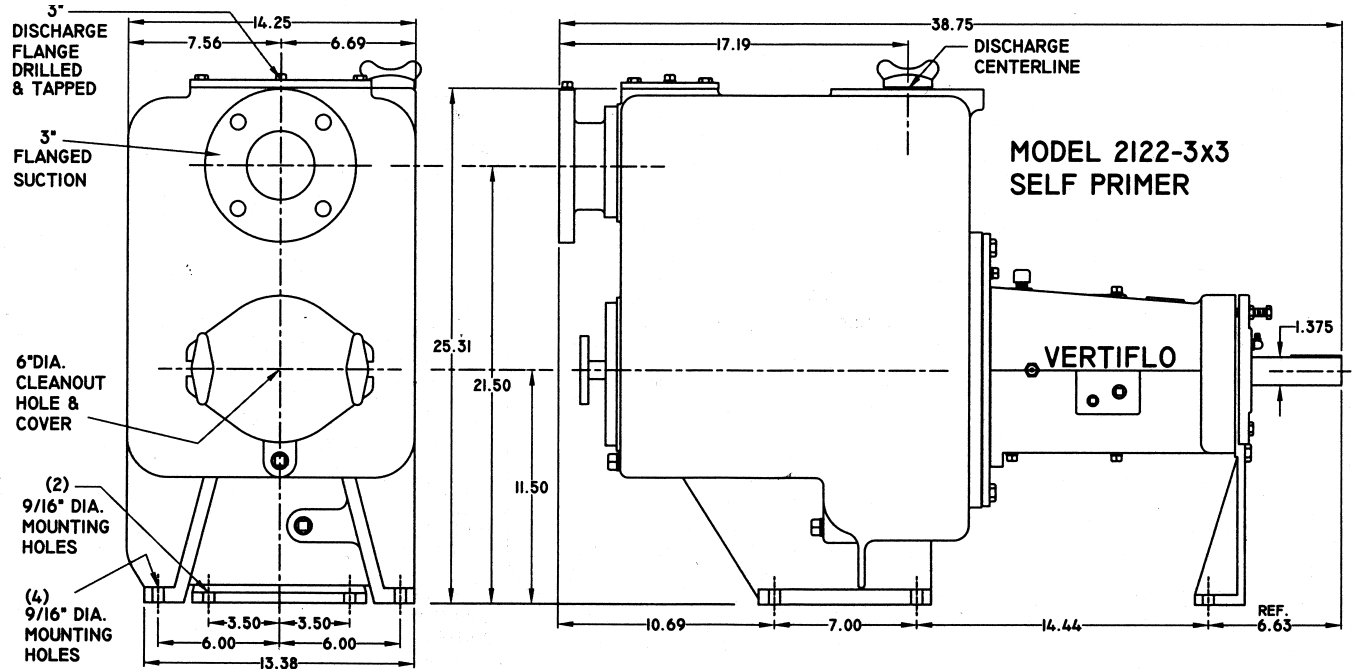
CUSTOMER _____ CUSTOMER NO. _____

PROJECT _____

ENGINEER _____

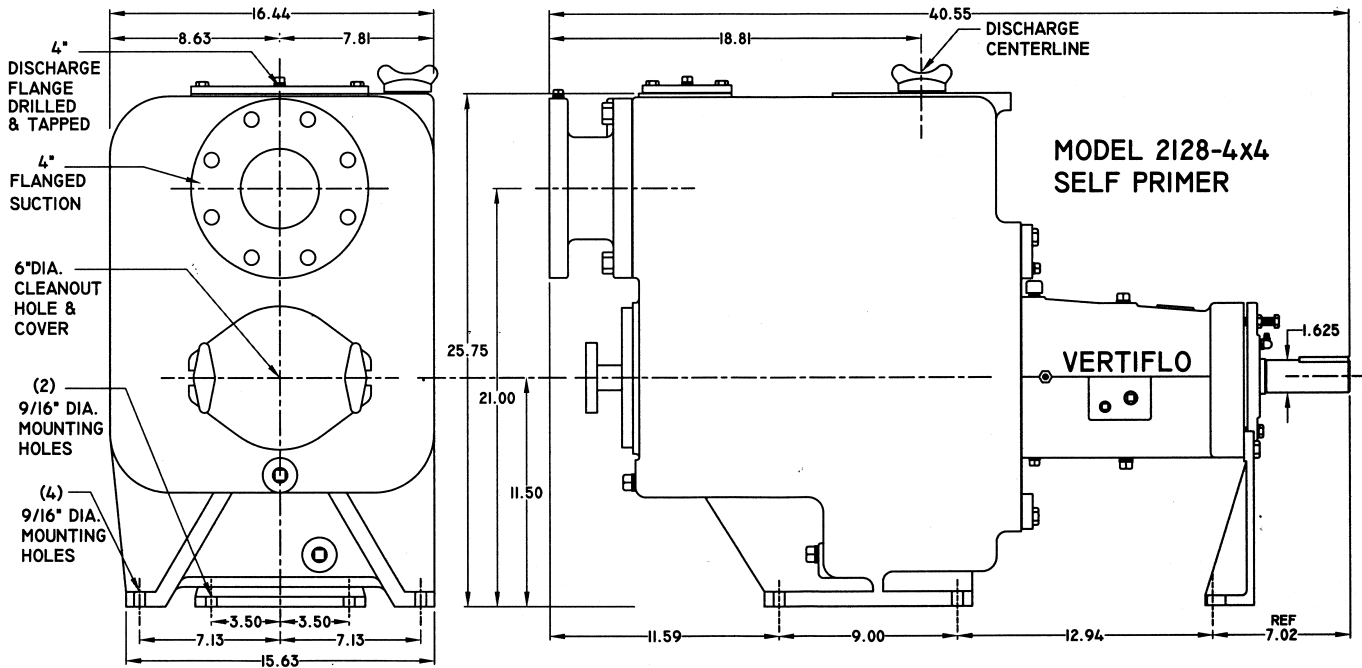
CONTRACTOR _____

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



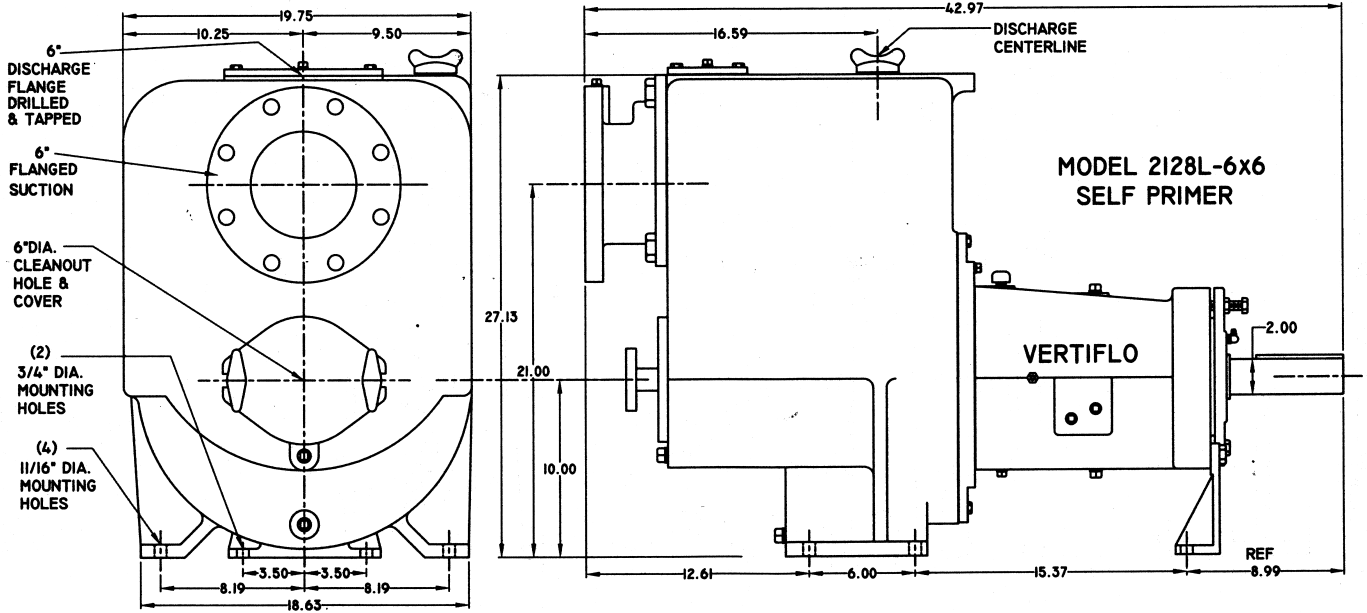
CUSTOMER _____ CUSTOMER NO. _____
 PROJECT _____ SERIAL NO. _____
 ENGINEER _____ LOCATION _____
 CONTRACTOR _____
 PUMP Model Size Curve No. GPM Head SP. GR. @Temp.
 DATA _____
 MOTOR Mfgr. HP RPM Volt-Phase-Cycle Frame ENC. Furnished by Mounted by
 DATA _____
 Shop Order _____ Certified by _____ Date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

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 _____

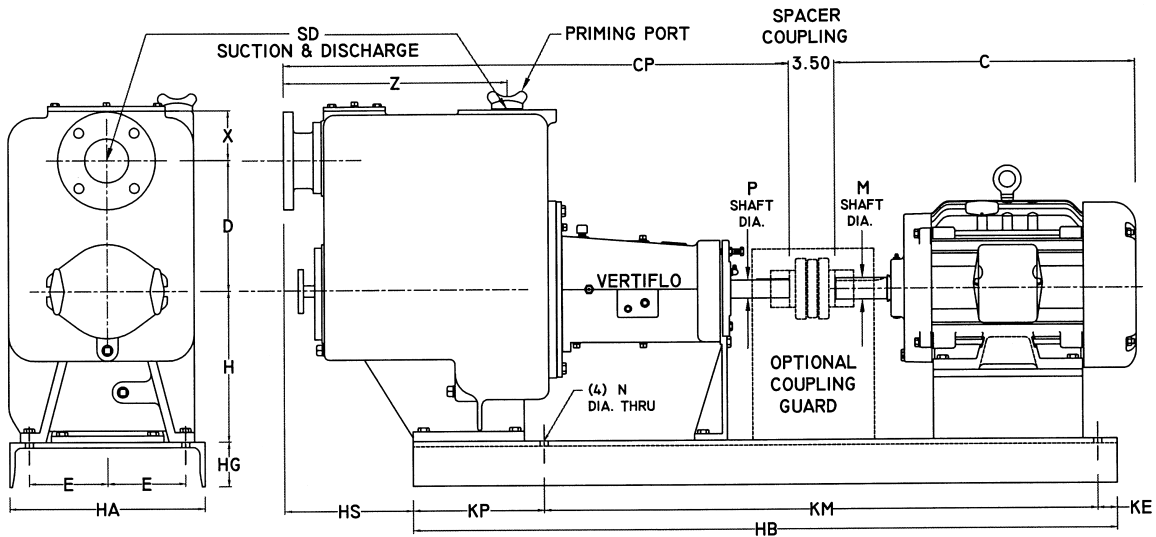
Revised 10-15-02



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