

SIMS Pump Company

Since 1919

Simsite® Structural Composite Pumps

Sims Series 10000 Navy Pump



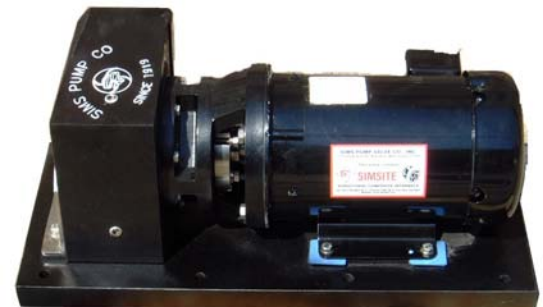
Sims Navy Standard Composite Pump



Sims Series 6000 Vertical In Line



Sims Horizontal Vortex Pump



“The only Pump that is Impervious to Salt Water Corrosion”



Sims Since 1919

PUMP VALVE CO., INC.

1314 Park Avenue, Hoboken, New Jersey 07030

OFFICE: 201-792-0600

MANUFACTURER OF SIMSITE®

FAX: 201-792-4803

COMPOSITE PUMP PARTS

Web: www.SIMSITE.com

Patent No. 5840399

SIMS Pump Valve Company is pleased to introduce the following:

SIMS Series 10000, Shock Qualified, Horizontal Navy Pumps

Sims Pump Company under incentives to develop COTS pumps for Navy applications, designed and developed the first structural composite pump from commercial applications to pass the rigorous shock qualification and vibration testing per Mil Spec 901D and Mil Std-167-1.

SIMS Navy Standard Composite Pumps

Inspired by NAVSEA directives for innovative technology and MACHALT 536, Sims Pump Company continues to be the leader in the composite industry, producing the first “production ready” Sims Navy Standard Composite Pump. Machined entirely from Simsite Structural Composite material, on 5-axis CNC machinery, Sims NSCP’s are lighter in weight, precision balanced and built to last. Improved reliability and reduced maintenance results in an excellent ROI and an estimated savings of \$1.5M annually when implemented Fleet-wide.

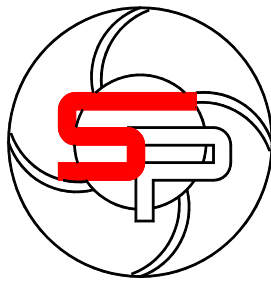
SIMS Series 6000, Maintenance Free, Vertical In-Line Pumps

Designed by Sims to be a “drop-in” replacement for Vertical In Line pumps, the Sims Series 6000 Pump is virtually maintenance free with permanently lubricated sealed bearings, and the flexibility for installation as VIL, Vertical Offset, or Vertical Suction configurations.

SIMS Horizontal Vortex Pumps

Sims Vortex is the solution to the harsh abrasion of shipboard sewage systems. The recessed impeller design eliminates close internal tolerances nearly eliminating contact between impeller and solids. Constructed utilizing **SimSite®** Patented Structural Graphite Composite materials with excellent mechanical and physical properties, wear characteristics, and unsurpassed corrosion resistance. Sims Vortex Pump combines the excellent qualities of our Simsite Composite material and superior engineering to produce the longest lasting non-clogging pump on the market today.

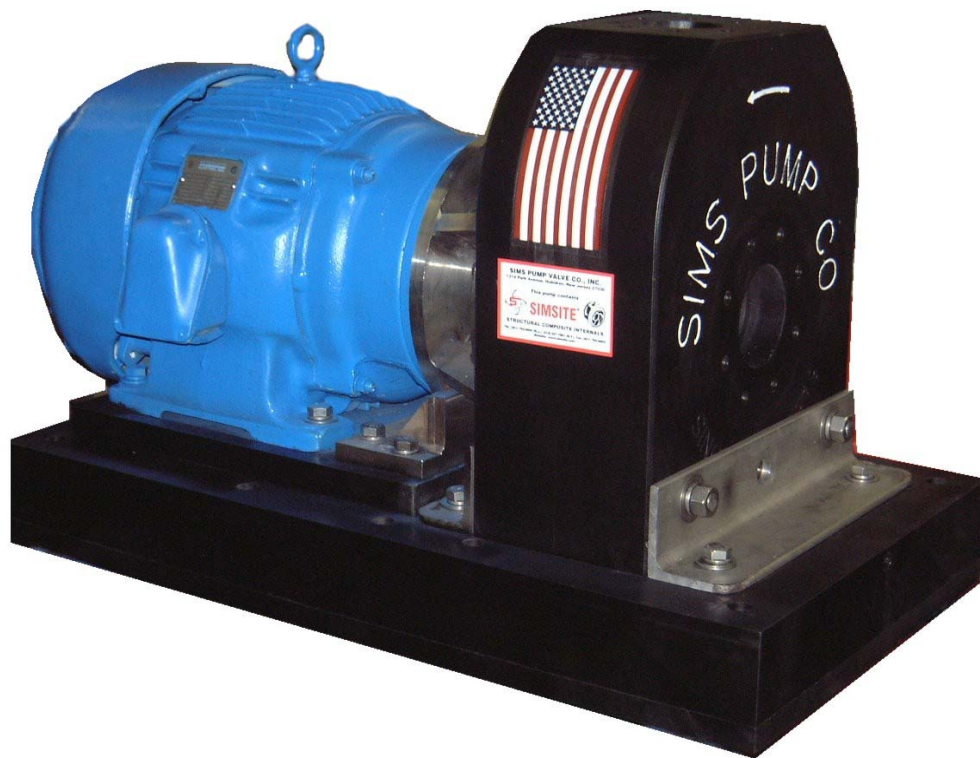
“The only Pump that is Impervious to Salt Water Corrosion”



SIMS Pump Company

Simsite® Structural Composite Pumps

SIMS Series 10000 NAVY Pump

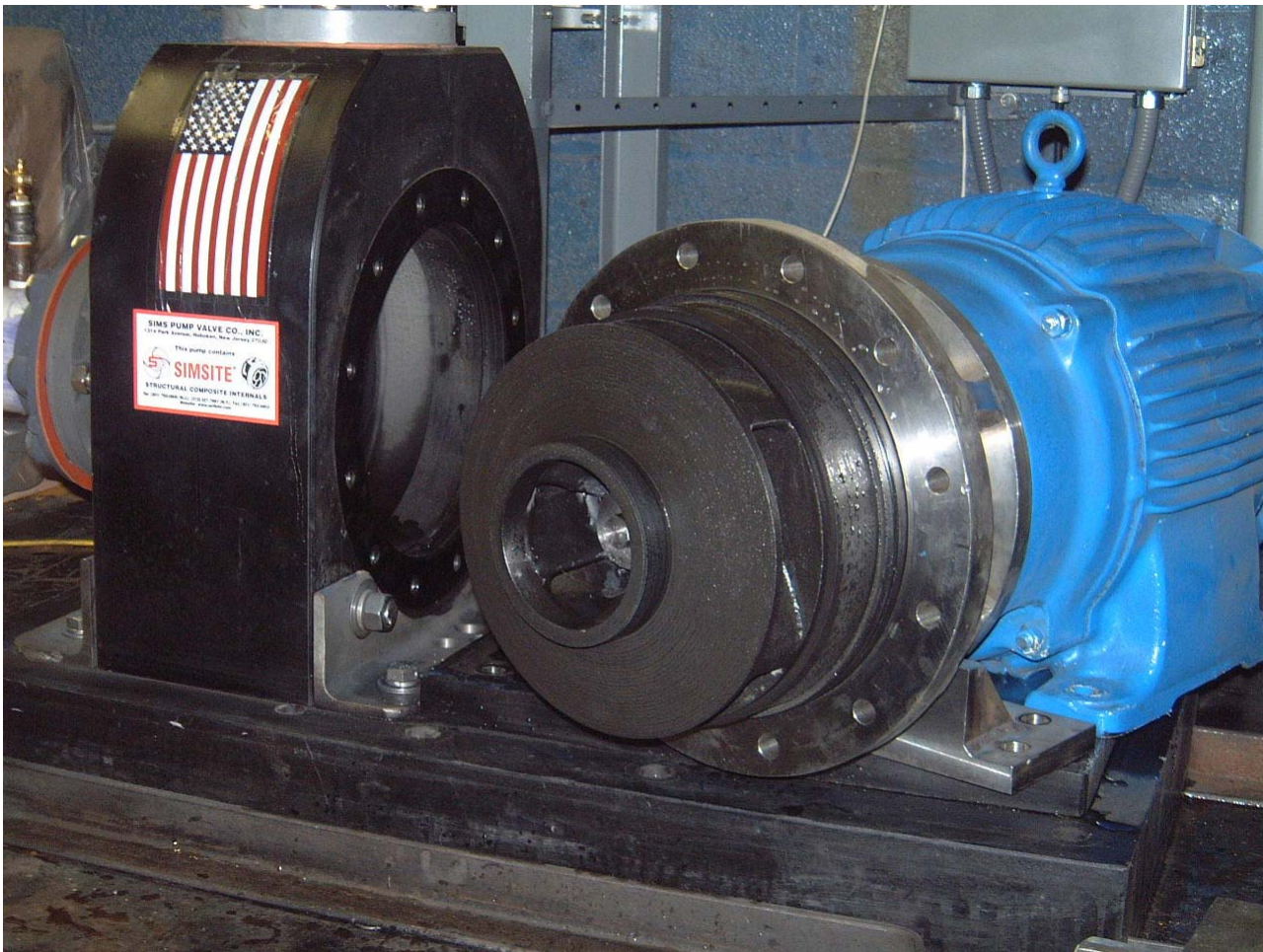


SIMS PUMP Company

Sims Series 10000 Navy Pump

Featuring: Simsite® Structural Composite Pump Assembly, Simsite® Base Plate, Closed Coupled Marine & Shock Qualified TEFC Motor w/ 316SS Shaft, Mechanical Seal Type Sims Single Cartridge CB/TC/EP

SIMSITE® Pumps and Impellers are custom engineered for high efficiency. Because the products are completely machined from solid blocks of composite, state-of-the-art CAD/CAM/FEA analysis and techniques are used to maximize performance, efficiency, and ease of use by maintenance personnel.



The back pullout design makes it extremely easy for maintenance personnel to check the casing volute or impeller without disturbing the piping set up.



SIMS Pump Company continues to prove its leadership capabilities with the design and manufacture of the first structural composite pumps and base plates to pass the US Navy Shock and Vibration Testing. The above pump and base plate is manufactured completely from SIMSITE®, a patented structural graphite tri-dimensional weave fiber composite manufactured by the Sims Pump Valve Company, Inc of Hoboken, New Jersey. This above pump is a 4 x 3 – 10 close coupled, horizontal pump designed for 500 GPM capacity, with a total discharge head of 100 feet at 1750 RPM with a 20 HP motor. This size pump is good up to capacities of 800 GPM. The motor is a redesigned and upgraded marine duty motor manufactured from ductile iron with a type 316 stainless steel shaft. The mechanical seal is a cartridge type seal with silicon carbide against tungsten carbide faces. SIMS chose this type of seal for reliability and ease of maintenance.



The SIMSITE® pump is on a Shock test bed at the NU Labs site in Philipsburg, NJ. The pump must sustain nine (9) blows in excess of 200 G's of force in three different axis orientations while running, without being damaged or leaking.



DEPARTMENT OF THE NAVY
NAVAL SURFACE WARFARE CENTER
CARDEROCK DIVISION

NAVAL SHIP SYSTEMS
ENGINEERING STATION
PHILADELPHIA, PA 19112-5083

REF ID: A66666

9503
Scr 9232/025

JUN 02 2003

Mr. John Kozel, President
SIMS Pump and Valve Co., Inc.
1314 Park Avenue
Hoboken, NJ 07030

Dear Mr. Kozel:

Subj: REVIEW OF SIMS PUMP AND VALVE COMPANY, 4X3-10, 20 H.P. COMPOSITE PUMP SHOCK TEST RESULTS.

SIMS Pump and Valve Co. has modified their Series 9000 Model 4x3-10 SIMSITE Structural Composite line of pumps and conducted testing in accordance with MIL-S-901D (Military Standards Specification Shock Tests, High Impact; Shipboard Machinery, Equipment and Systems Requirements for Grade A, Class 1) and MIL-STD-167-1 (Military Standards Mechanical Vibrations of Shipboard Equipment, Type 1). SIMS Pump and Valve Co. letter of 29 January 2003 requested Carderock Division, Naval Surface Warfare Center (NSWCCD-SSES) Code 9232, review shock and vibration test data. SIMS also provided Noise Unlimited Laboratories, Inc., test report 9604.1 of 27 November 2002 which details the shock and vibration testing performed on SIMS Model 4x3-10 composite pump with a Sterling 20 HP IEEE TFEC Marine Duty motor and a composite foundation. Tested pump was rated at 500 GPM at 100 Feet of Head at 1750 RPM. NSWCCD-SSES Code 9232 witnessed the shock test at Noise Unlimited Laboratories on 14 November 2002.

NSWCCD-SSES Code 9232, as requested by SIMS Pump and Valve Co., has reviewed Noise Unlimited Laboratories shock and vibration test report 9604.1 and found the results presented pertaining to the subject pump fully met MIL-S-901D and MIL-STD-167-1.

NSWCCD-SSES 9232 recommends the SIMS composite pump with composite foundation be approved for use on non-critical Navy ship systems where a commercial pump meeting military shock and vibration specifications is deemed acceptable.

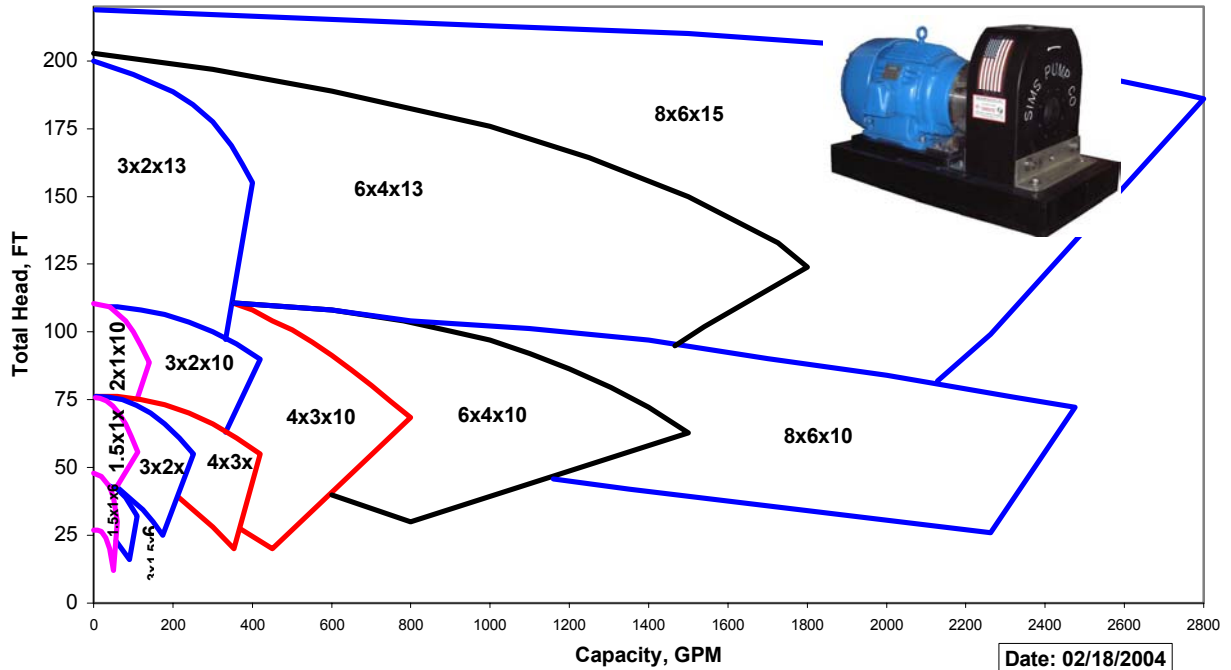
This letter does not authorize any change in terms, conditions, delivery schedule, price or amount of any existing government contract. Inquiries concerning this matter should be directed to Bob Coccano, NSWCCD-SSES Code 9232, Commercial (215) 897-7949.

Sincerely,


J.C. HILL

Copy to:
NAVSEA Washington, DC (Codes 05L3, 05M3, 05N)

**SIMS NAVY Pump, Series 10000
1750 RPM
Hydraulic Coverage**



The **Simsite® Pump** is different from any other pump on the market because the casing volute and impeller are completely machined from solid blocks of graphite composite and the pumps are engineered for your applications. **Simsite Pumps** are engineered to out last and out perform traditional pumps. This translates into dependability and lower maintenance costs for the pump user. **SIMS** manufactures a complete line of horizontal end suction pumps and vertical in-line pumps, as well as a complete line of vertical wet pit pumps. Additionally, **SIMS** “custom engineers” vertical turbine pumps for your specific applications.

SIMS PUMP VALVE CO., INC.

SIMS 4x3-10 Series 10000A, NAVY Pump

Customer:

SIMS

SIMS Order No.:

CR15239

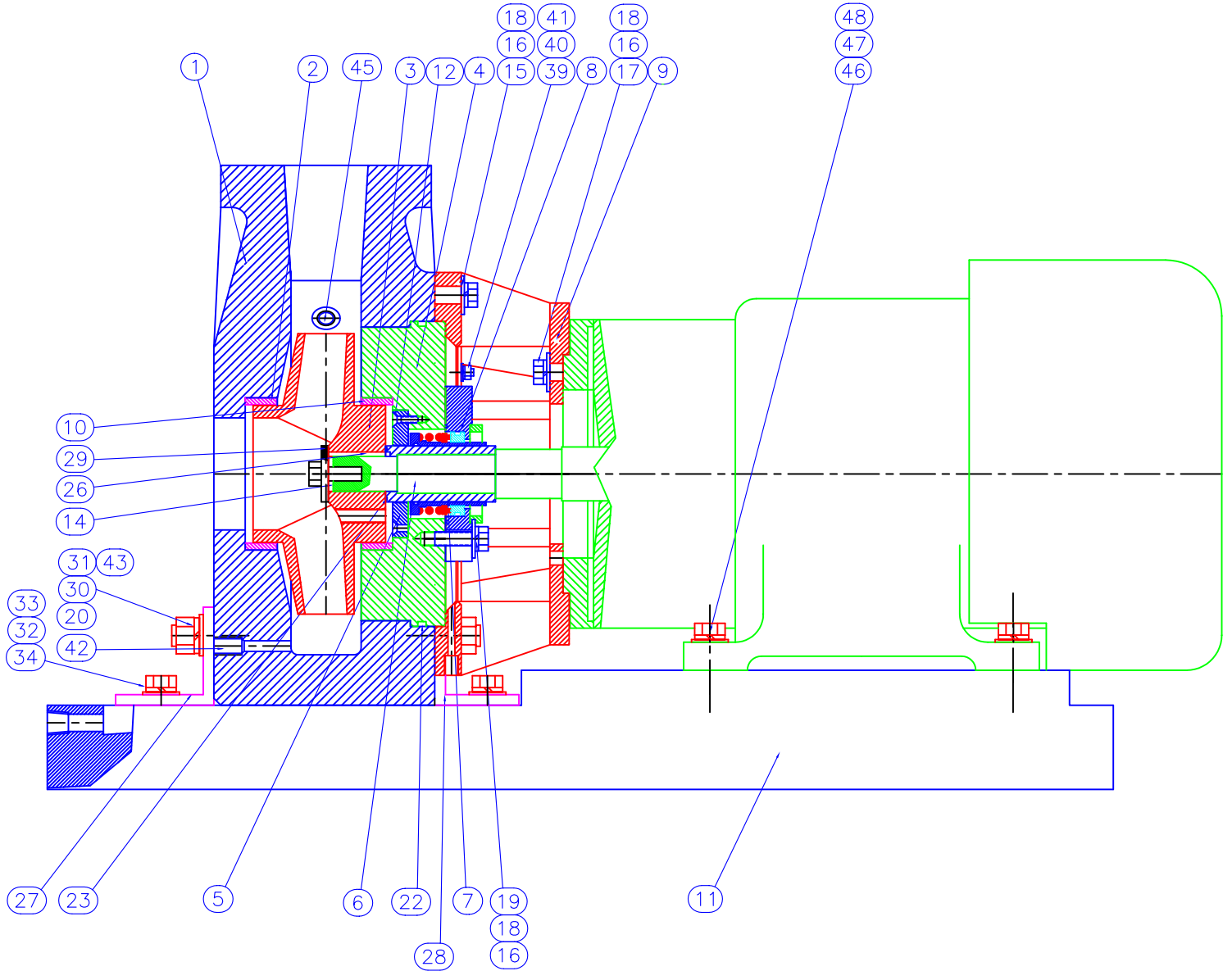
PART LIST

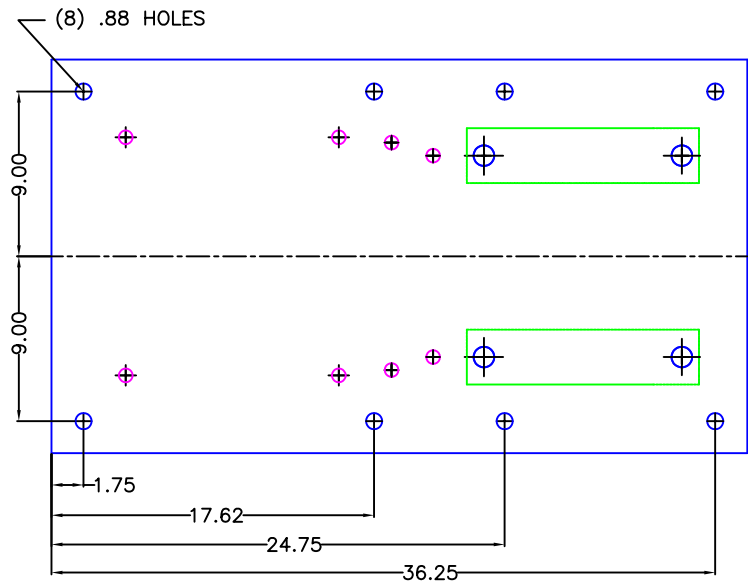
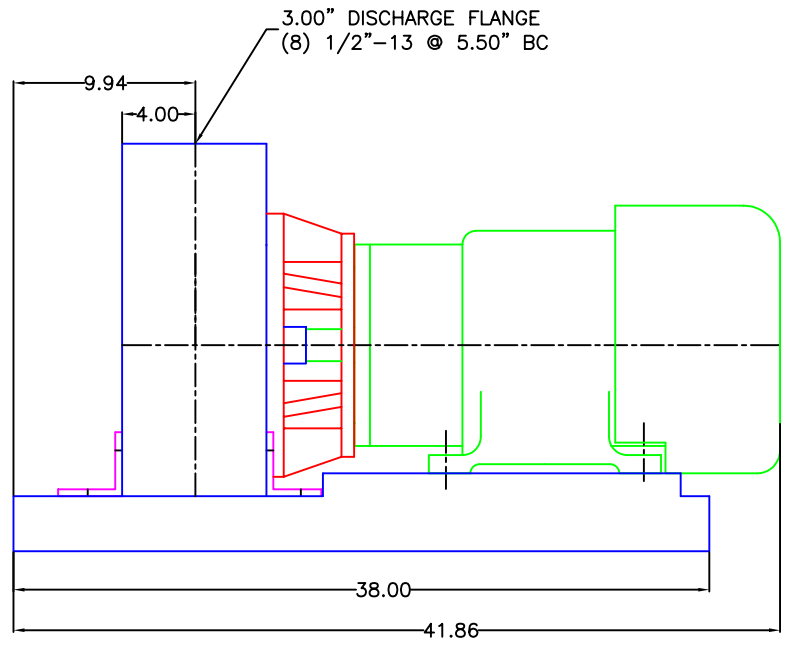
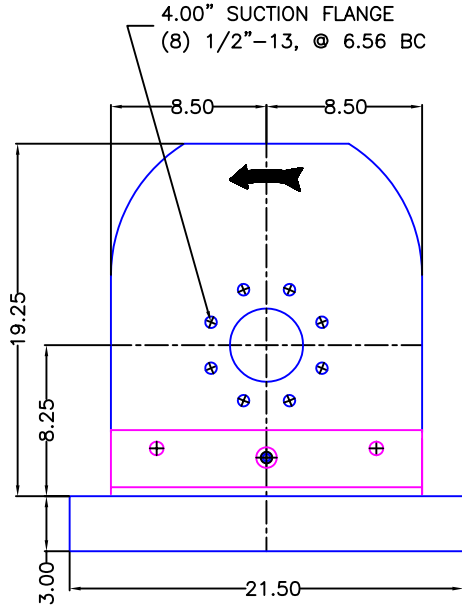
Part	Q'ty	Description	Part Number	SIMS Dwg. #	Material Code
1	1	Casing	152390101NSMS302	CR15239_0101	SMS 302
2	1	Casing Ring, Front	152390102NSMS375	CR15239_0102	SMS 375
3	1	Impeller (Max. OD)	152390300NSMS302	CR15239_0300	SMS 302
4	1	Back Plate	27690400NSMS302	MO2769_0400	SMS 302
5	1	Bearing	27690402NSMS302	MO2769_0402	SMS 302
6	1	Electric Motor	152390600NCI316	CR15239_0600	CI
7	1	Sleeve	27690700NSMS375	MO2769_0700	SMS 375
8	1	Seal Cartridge	27690800NASSY	MO2769_0800	Assy.
9	1	Frame Adapter	27690900NSS316	MO2769_0900	S/S 316
10	1	Casing Ring, Back	152390406NSMS375	CR15239_0406	SMS 375
11	1	Base Plate	152391100NSMS302	CR15239_1100	SMS302
12	4	CSK Screw	27690405NSS316	MO2769_0405	S/S 316
14	1	Impeller Bolt	27691400NSS316	MO2769_1400	S/S 316
15	12	Hex Head Bolt	27690103NSS316	MO2769_0103	S/S 316
16	20	Flat Washer	27690104NSS316	MO2769_0104	S/S 316
17	4	Hex Head Bolt	27690602NSS316	MO2769_0602	S/S 316
18	20	Lock Washer	27690105NSS316	MO2769_0105	S/S 316
19	4	Hex Head Bolt	27690403NSS316	MO2769_0403	S/S 316
20	2	Threaded Rod	27690106NSS316	MO2769_0106	S/S 316
22	1	O-Ring	27690404NBN70	MO2769_0404	Buna-N
23	1	O-Ring	27690702NBN70	MO2769_0702	Buna-N
26	1	Key, Impeller	27690302NSS316	MO2769_0302	S/S 316
27	1	Casing Support, Front	27690107NSS316	MO2769_0107	S/S 316
28	1	Casing Support, Back	27690108NSS316	MO2769_0108	S/S 316
29	1	O-Ring	27691402NBN70	MO2769_1402	Buna-N
30	4	Nut	27690109NSS316	MO2769_0109	S/S 316
31	4	Flat Washer	27690110NSS316	MO2769_0110	S/S 316
32	4	Lock Washer	27691103NSS316	MO2769_1103	S/S 316
33	4	Flat Washer	27691104NSS316	MO2769_1104	S/S 316
34	4	Hex Head Bolt	27691105NSS316	MO2769_1105	S/S 316
39	2	1/4"-20 Stud	27690409NSS316	MO2769_0409	S/S 316
40	2	1/4"-20 Nut	27690407NSS316	MO2769_0407	S/S 316
41	2	1/4" Lock Washer	27690408NSS316	MO2769_0408	S/S 316
42	1	Plug, Drain	27690111NSS316	MO2769_0111	S/S 316
43	4	3/4" Lock Washer	27690112NSS316	MO2769_0112	S/S 316
45	1	Plug, Vent	27690113NSS316	MO2769_0113	S/S 316
46	4	Hex Head Bolt	27691106NSS316	MO2769_1106	S/S 316
47	4	Lock Washer	27691107NSS316	MO2769_1107	S/S 316
48	4	Flat Washer	27691108NSS316	MO2769_1108	S/S 316

Date: 04/25/2003

SIMS

Series 10000A NAVY Pump Sectional View





SIMS PUMP VALVE CO.

1314 PARK AVE., HOBOKEN, NJ 07030

SIMS 4x3-10 10000A Series
Service:

PREP BY: GMC

SCALE:

DWG.

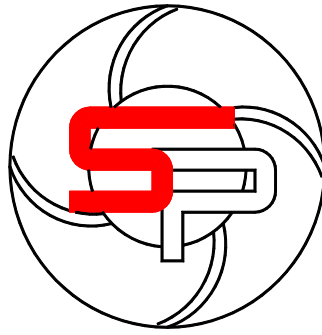
CHKD BY: VS

DATE: 4 Feb. 2003

CR15239

CAPACITY: 600 GPM HEAD: 67 FT. ROT. SPD: 1750 RPM.

DWG. CR15239



SIMS Pump Company

Simsite® Structural Composite Pumps

SIMS Navy Standard Composite Pump



“The only Pump that is Impervious to Salt Water Corrosion”

Sims Navy Standard Composite Pump

Featuring: Simsite® Structural Composite Pump Assembly, Simsite® Base Plate, Closed Coupled Mil Spec Motor, Mechanical Seal Type Sims Single Cartridge CB/TC/EP

Shown is a **Sims NSCP Model 3x2-6**, with 20HP Mil Spec Motor undergoing shock torturous qualification requiring the continuous operation during each of the nine blows.



Sims Pump Company is proud to be a part in the development and installation of the first **Sims Navy Standard Composite Pump** qualified and approved for application aboard US Navy vessels.

Current pump sizes are available from 1.5x1x6 up to 4x4x9, producing flow rates up to 950 GPM and pump heads up to 300 Feet utilizing motors from 5-40 HP.

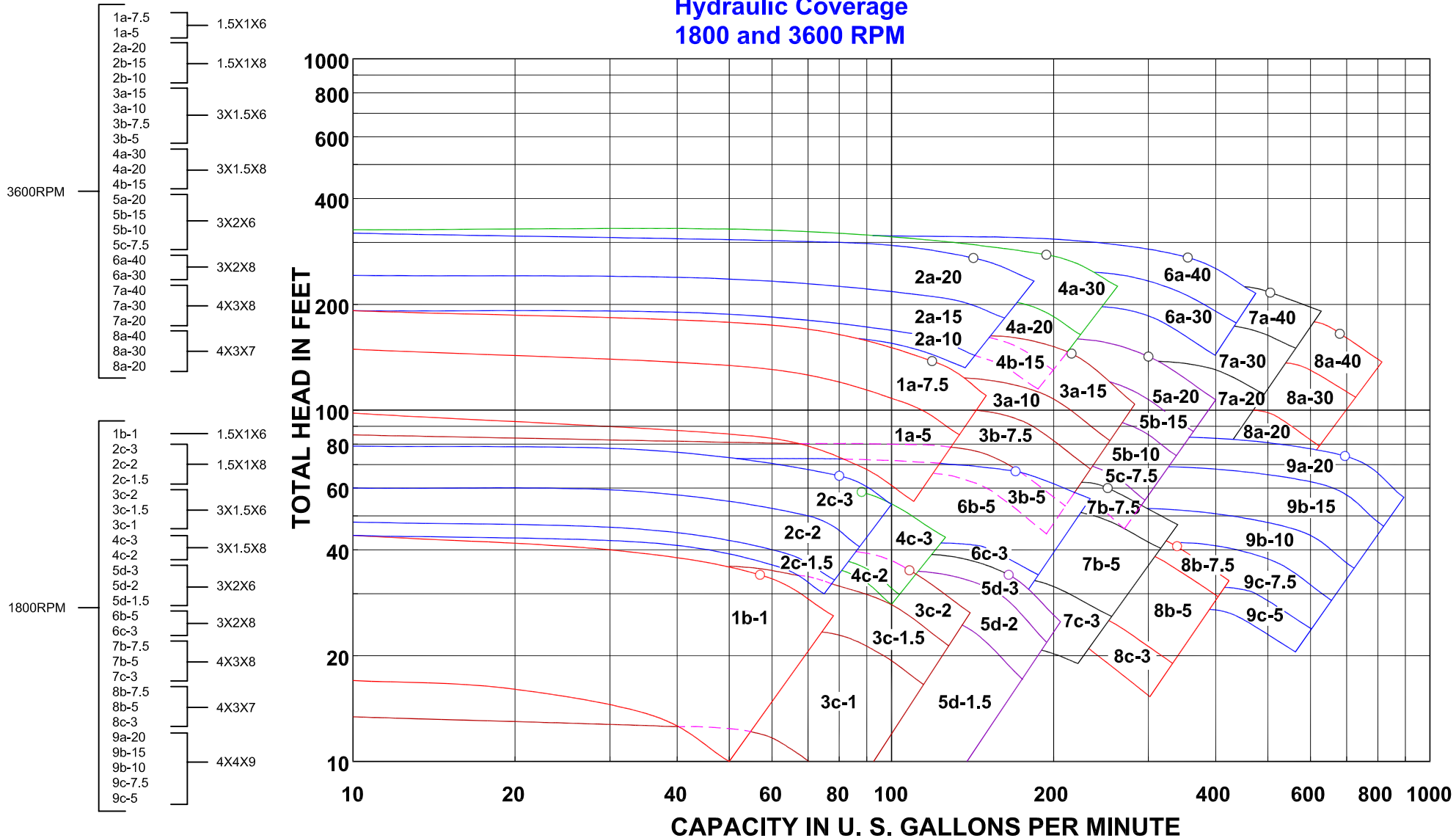
Because Sims products are completely machined from solid blocks of Simsite composite materials, state-of-the-art CAD/CAM/FEA analysis and techniques are used to maximize performance, efficiency, and ease of use by maintenance personnel.

“The only Pump that is Impervious to Salt Water Corrosion”

SIMS NAVY Pump, Series NS

Hydraulic Coverage

1800 and 3600 RPM



SIMS PUMP VALVE CO., INC.

SIMS 3x2-6 (Large Shaft), NAVY STANDARD Composite Pump

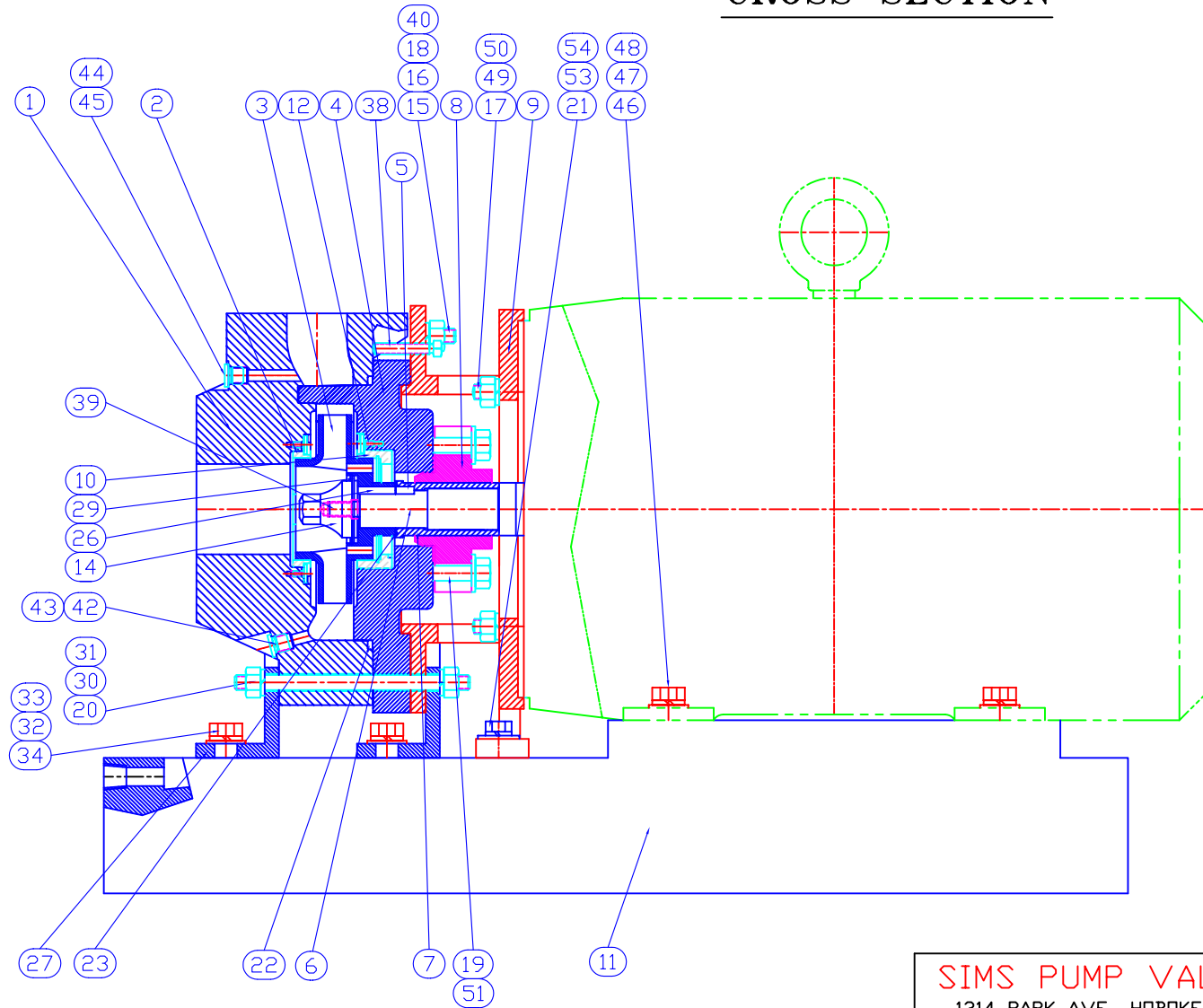
Customer: **SIMS**
SIMS Order No.: **MO2797**

PART LIST

Part	Q'ty	Description	Part Number	SIMS Dwg. #	Material Code
1	1	Casing	27970101NSMS302	MO2797_0101	SMS 302
2	1	Casing Ring	27970102NSMS375	MO2797_0102	SMS 375
3	1	Impeller	27970300NSMS302	MO2797_0300	SMS 302
4	1	Casing Cover	27970401NSMS302	MO2797_0401	SMS 302
5	1	Key, Sleeve	27970701NSS316	MO2797_0701	S/S 316
6	1	Electric Motor	27970600NDI316	MO2797_0600	DI
7	1	Shaft Sleeve	27970700NSMS375	MO2797_0700	SMS 375
8	1	Seal Cartridge	27970800NASSY	MO2797_0800	Assy.
9	1	Frame Adapter	27970900NSS316	MO2797_0900	S/S 316
10	1	Wearing Ring	27970406NSMS375	MO2797_0406	SMS 375
11	1	Base Plate	27971100NSMS302	MO2797_1100	SMS302
12	4	Screw	27970114NSMS375	MO2797_0114	S/S 316
14	1	Impeller Nut	27971401NSMS375	MO2797_1401	SMS375
15	8	Hex Head Bolt	27970103NSS316	MO2797_0103	S/S 316
16	8	Flat Washer	27970104NSS316	MO2797_0104	S/S 316
17	4	Stud	27970602NSS316	MO2797_0602	S/S 316
18	8	Lock Washer	27970105NSS316	MO2797_0105	S/S 316
19	4	Hex Head Bolt	27970802NSS316	MO2797_0802	S/S 316
20	4	Threaded Rod	27970106NSS316	MO2797_0106	S/S 316
21	2	Hex Head Bolt	27970902NSS316	MO2797_0902	S/S 316
22	1	O-Ring, Casing Cover	27970404NBN70	MO2797_0404	Buna-N
23	1	O-Ring, Sleeve	27970702NBN70	MO2797_0702	Buna-N
26	1	Key, Impeller	27970399NSS316	MO2797_0399	S/S 316
27	2	Casing Support	27970107NSS316	MO2797_0107	S/S 316
29	1	O-Ring, Impeller	27971402NBN70	MO2797_1402	Buna-N
30	8	Nut	27970109NSS316	MO2797_0109	S/S 316
31	8	Lock Washer	27970110NSS316	MO2797_0110	S/S 316
32	4	Lock Washer	27971103NSS316	MO2797_1103	S/S 316
33	4	Flat Washer	27971104NSS316	MO2797_1104	S/S 316
34	4	Hex Head Bolt	27971105NSS316	MO2797_1105	S/S 316
38	2	Jacking Bolt	27970905NSS316	MO2797_0905	S/S 316
39	1	Stud, Shaft	27970605NSS316	MO2797_0605	S/S 316
40	8	Nut	27970115NSS316	MO2797_0115	S/S 316
42	1	Plug, Drain	27970111NSS316	MO2797_0111	S/S 316
43	1	O-Ring, Drain Plug	27970116NBN70	MO2797_0116	Buna-N
44	1	O-Ring, Vent Plug	27970117NBN70	MO2797_0117	Buna-N
45	1	Plug, Vent	27970113NSS316	MO2797_0113	S/S 316
46	4	Hex Head Bolt	27971106NSS316	MO2797_1106	S/S 316
47	4	Lock Washer	27971107NSS316	MO2797_1107	S/S 316
48	4	Flat Washer	27971108NSS316	MO2797_1108	S/S 316
49	4	Lock Washer	27970603NSS316	MO2797_0603	S/S 316
50	4	Nut	27970604NSS316	MO2797_0604	S/S 316
51	4	Flat Washer	27970803NSS316	MO2797_0803	S/S 316
53	2	Flat Washer	27970903NSS316	MO2797_0903	S/S 316
54	2	Lock Washer	27970904NSS316	MO2797_0904	S/S 316

Date: 02/09/2004

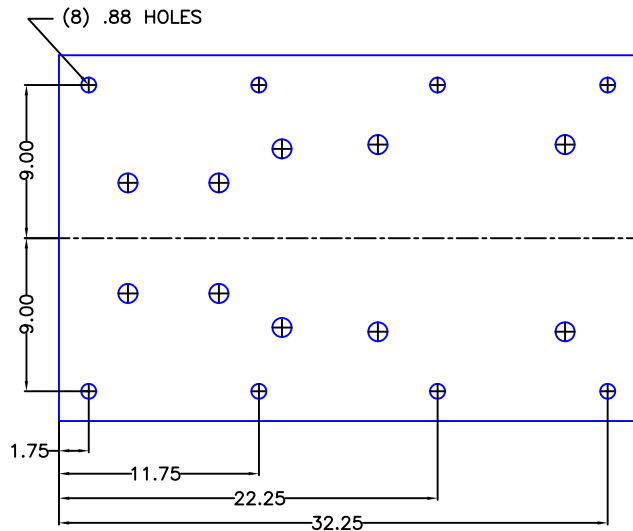
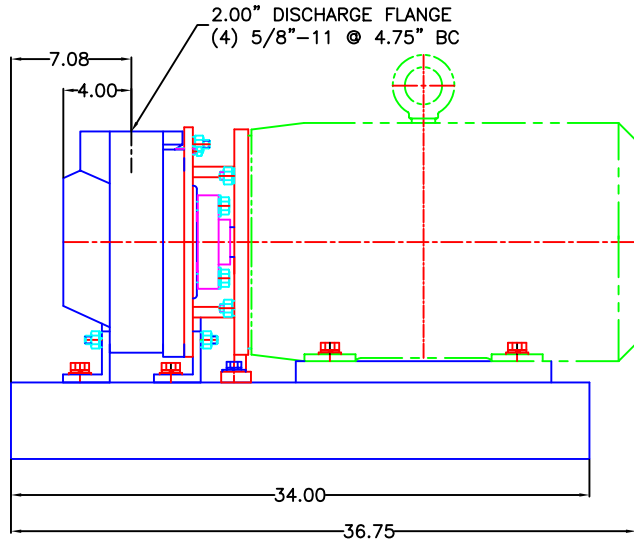
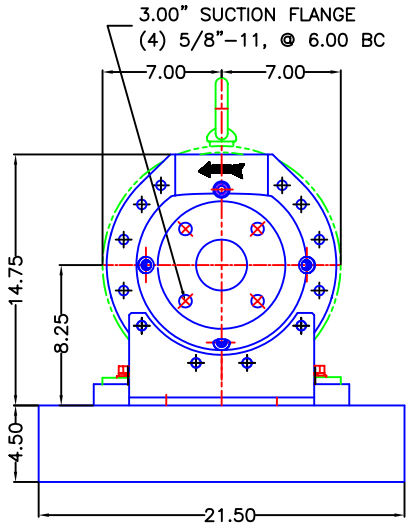
CROSS SECTION



SIMS PUMP VALVE CO. 1314 PARK AVE., HOBOKEN, NJ 07030		DWG. M02797_00
SIMS 3x2-6 Large Shaft Service:		
Project: NAVY COMPOSITE PUMP	PREP BY: GMC	SCALE: full
CHKD BY: VAS	DATE: 09 Feb. 2004	M02797_00

CAPACITY: 300 GPM	HEAD: 150 FT	ROT. SPD.: 3550 RPM
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DIMENSIONS



SIMS PUMP VALVE CO.

1314 PARK AVE., HOBOKEN, NJ 07030

SIMS 3x2-6 Large Shaft
Service:

PREP BY: GMC SCALE: full

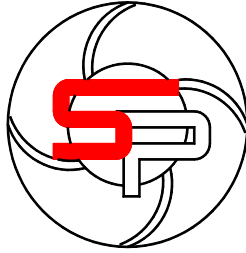
CHKD BY: VAS DATE: 09 Feb. 2004

MO2797_00

DWG. MO2797_00

CAPACITY 300 GPM HEAD 150 FT ROT. SPD. 3550 RPM

Project: NAVY COMPOSITE PUMP



SIMS Pump Company

Since 1919

1314 Park Ave., Hoboken, New Jersey 07030

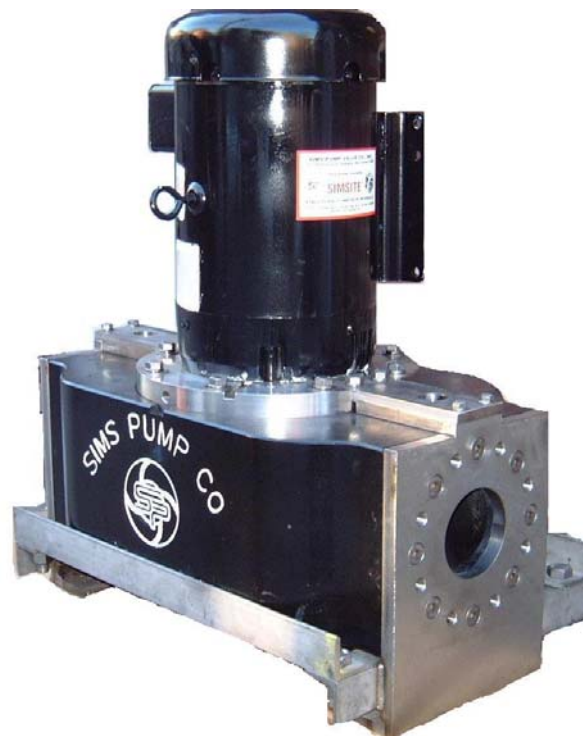
(201) 792-0600 (FAX (201) 792-4803

E-mail SIMSPUMP @ aol.com

Web Site: www.simsite.com

Simsite® Structural Composite Pumps

SIMS Series 6000 Vertical In-Line Pump



SIMS PUMP Company

Sims Series 6000 VERTICAL IN LINE Pump

Featuring: Simsite® Structural Composite Pump Assembly, Closed Coupled, Sealed Bearing, Heavy Duty Marine TEFC Motor w/ 316SS Shaft, Mechanical Seal Type is an integral Sims Spring Loaded Component Seal CB/TC/EP.

VIL 4X4-9 w/ 10 HP Motor has a Rated Capacity of 400 GPM at 60 feet TDH, 1750 RPM.

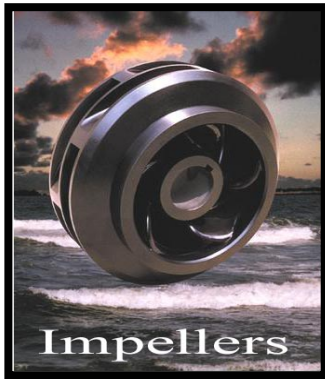
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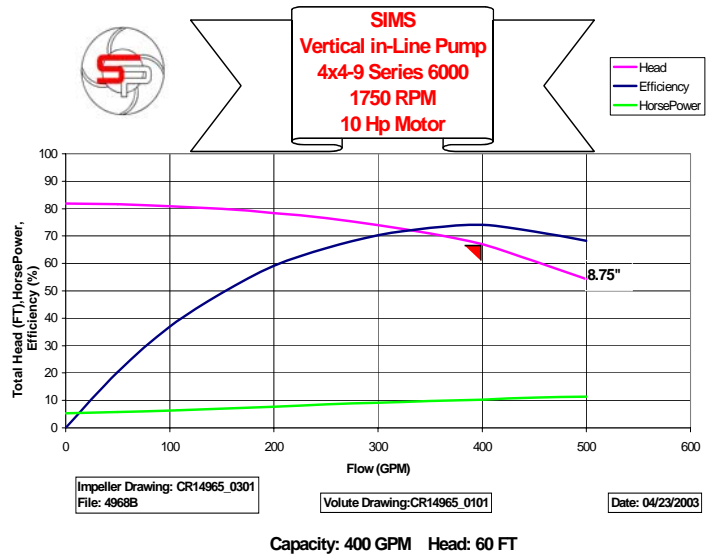
Sims has designed the 316 Stainless Steel Flange Support System to combine accurately aligned piping connections and structural support of the Pump and Motor.

These support legs can be set at various lengths to accommodate existing foundations.

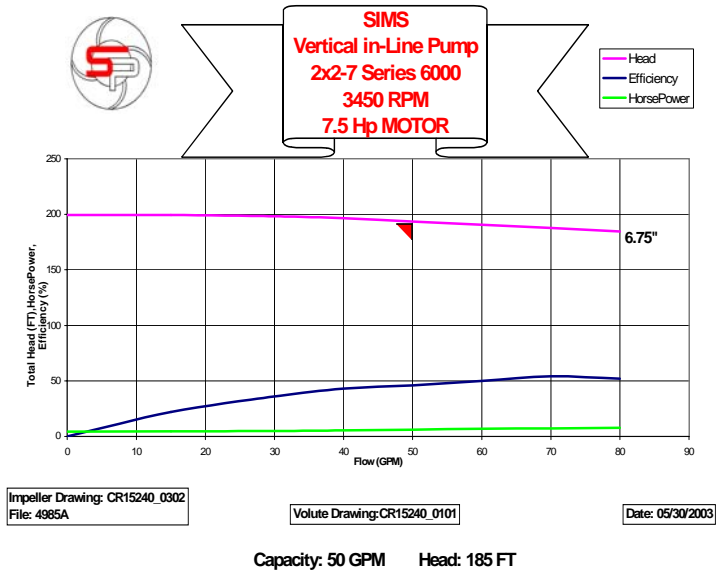
Additional features allow for conversion to vertical offset piping, as well as, vertical suction configurations.



Performance Curve Size 4x4-9



Performance Curve Size 2x2-7



Driven by your needs for “drop in” replacements of existing vertical pumps, **Sims Pump Company** is now introducing, the **Series 6000 Vertical In Line Pumps** designed with the flexibility to accommodate vertical offsets, as well as, vertical suction applications. The pump featured in this literature is a 4x4-9 close coupled, vertical in line pump designed for a 400 GPM capacity with a total discharge head of 60 feet at 1750 RPM with a 10 HP motor. The mechanical seal is a component type seal with silicon carbide against tungsten carbide faces. Our integral design provides for exact spring compression ratio and slip on shaft sleeve/rotating seal element to maximize the life of your seal while significantly reducing maintenance and repair time. Additional sizes range from 1x1-5 to 10x8-13.

SIMS PUMP VALVE CO., INC.

SIMS 4x4-9 Series 6000 Vert. In Line

Customer:
SIMS Order No.:

SIMS
CR14965

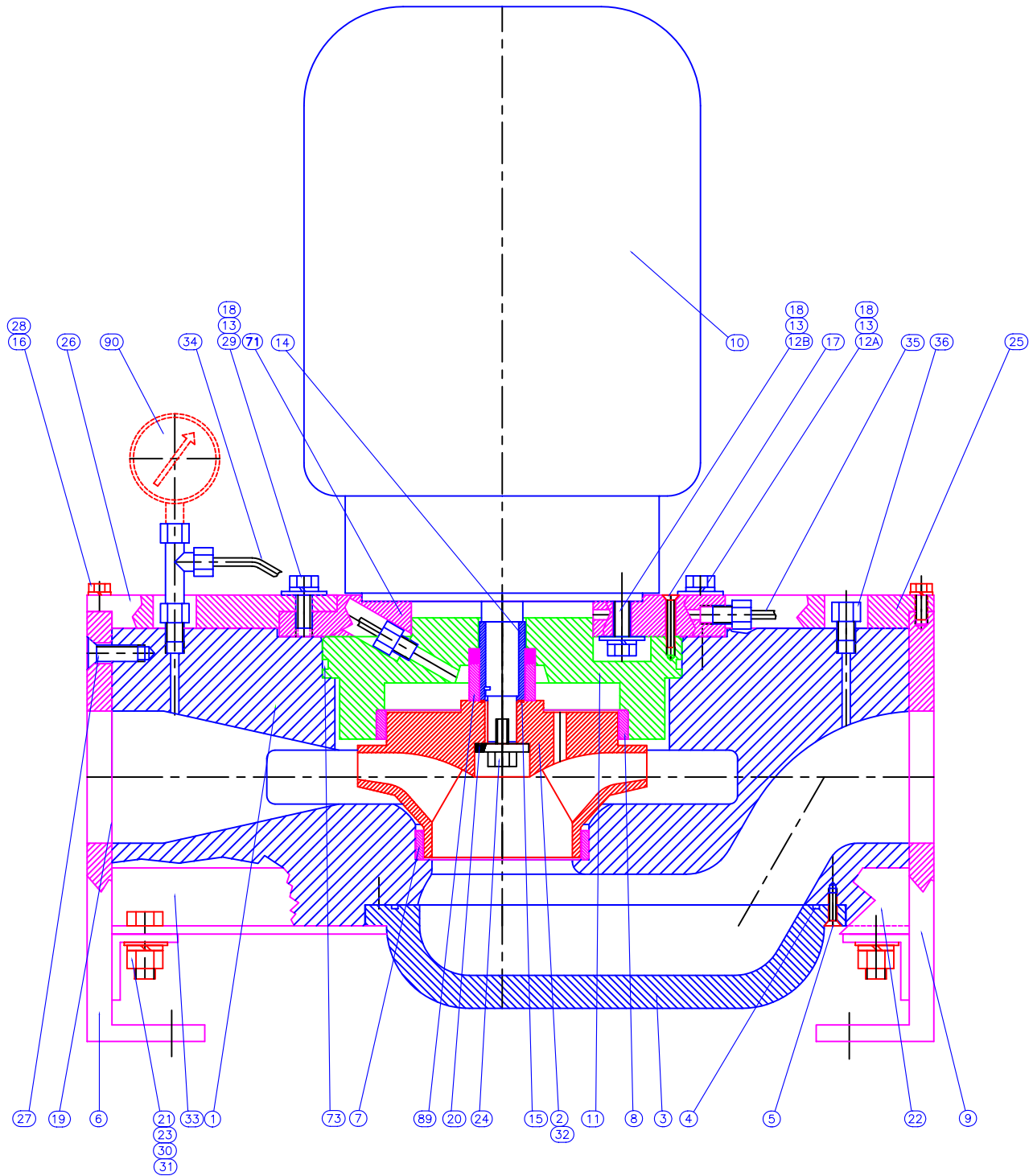
PART LIST

Part	Q'ty	Description	Part Number	SIMS Dwg. #	Material Code
1	1	Casing	149650101NSMS302	CR14965_0101	SMS 302
2	1	Impeller (Max. OD)	149650300NSMS302	CR14965_0300	SMS 302
3	1	Cover, Suction	149651201NSMS302	CR14965_1201	SMS 302
4	1	O-Ring	149651202NBN70	CR14965_1202	Buna_N
5	12	CSK Screw	149651203NSS316	CR14965_1203	S/S 316
6	1	Support, Discharge	149651501NSS316	CR14965_1501	S/S 316
7	1	Casing Ring, Front	149650102NSMS375	CR14965_0102	SMS 375
8	1	Casing Ring, Back	149650406NSMS375	CR14965_0406	SMS 375
9	1	Support, Suction	149651502NSS316	CR14965_1502	S/S 316
10	1	Electric Motor	149650600NCI316	CR14965_0600	CI
11	1	Back Plate	149650400NSMS302	CR14965_0400	SMS 302
12	12	Hex Head Bolt	149650103NSS316	CR14965_0103	S/S 316
13	16	Lock Washer	149650105NSS316	CR14965_0105	S/S 316
14	1	Sleeve	149650700NSMS375	CR14965_0700	SMS 375
15	1	O-Ring	149650702NBN70	CR14965_0702	Buna-N
16	4	Hex Head Bolt	149651503NSS316	CR14965_1503	S/S 316
17	2	Socket Head Cap Screw	149650407NSS316	CR14965_0407	S/S 316
18	16	Flat Washer	149650104NSS316	CR14965_0104	S/S 316
19	2	Gasket	149651505NGSG32	CR14965_1505	GSG 32
20	1	O-Ring	149651402NBN70	CR14965_1402	Buna-N
21	4	Hex Head Bolt	149651508NSS316	CR14965_1508	S/S 316
22	1	Side Support, Right	149651506NSS316	CR14954_1506	S/S 316
23	4	Nut	149651509NSS316	CR14965_1509	S/S 316
24	1	Impeller Bolt	149651400NSS316	CR14965_1400	S/S 316
25	1	Top Plate, Suction	149650905NSS316	CR14965_0905	S/S 316
26	1	Top Plate, Discharge	149650906NSS316	CR14965_0906	S/S 316
27	16	Socket Head Cap Screw	149650106NSS316	CR14965_0106	S/S 316
28	4	Lock Washer	149651504NSS316	CR14965_1504	S/S 316
29	4	Hex Head Bolt	149650902NSS316	CR14965_0902	S/S 316
30	4	Lock Washer	149651510NSS316	CR14965_1510	S/S 316
31	4	Flat Washer	149651511NSS316	CR14965_1511	S/S 316
32	1	Key, Impeller	149650302NSS316	CR14965_0302	S/S 316
33	1	Side Support, Left	149651507NSS316	CR14965_1507	S/S 316
34	1	Flush Line Assembly	149650111NSS316	CR14965_0111	Assy.
35	1	Drain Line (Optional)	149650112NSS316	CR14965_0112	Assy.
36	1	Plug, Suction Side	149650113NSS316	CR14965_0113	S/S 316
71	1	Frame Adapter	149650900NSS316	CR14965_0900	S/S 316
73	1	O-Ring	149650404NBN70	CR14965_0404	Buna-N
89	1	Seal, Mechanical	149650800NASSY	CR14965_0800	Assy.
90	1	Pressure Gauge	149650114NASSY	CR14965_0114	Assy.

Date: 4/29/2003

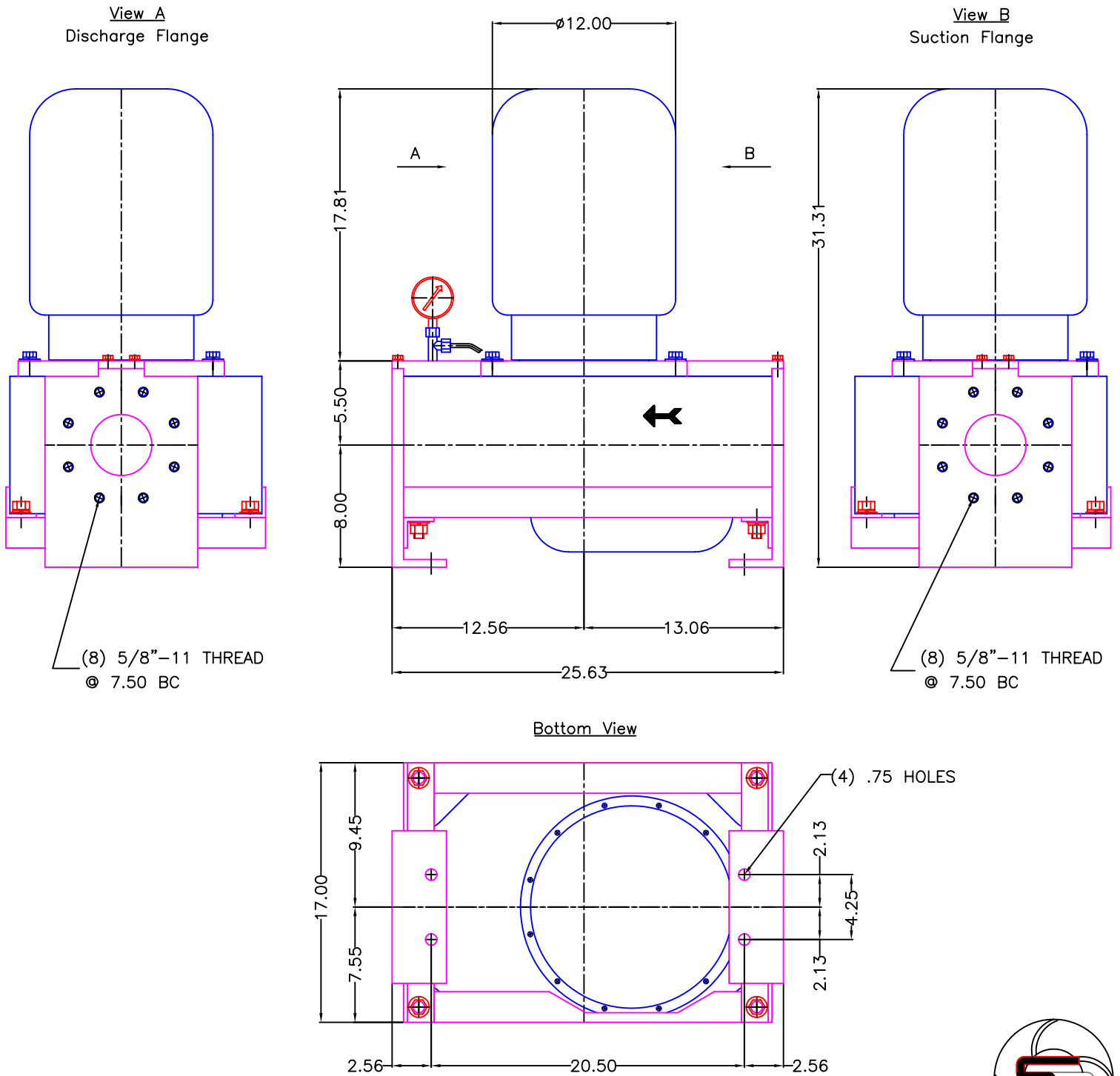
SIMS

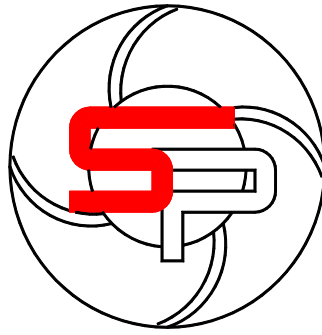
Series 6000 Vertical in Line Pump Sectional View



SIMS

Series 6000 Vertical in Line Pump Dimensions

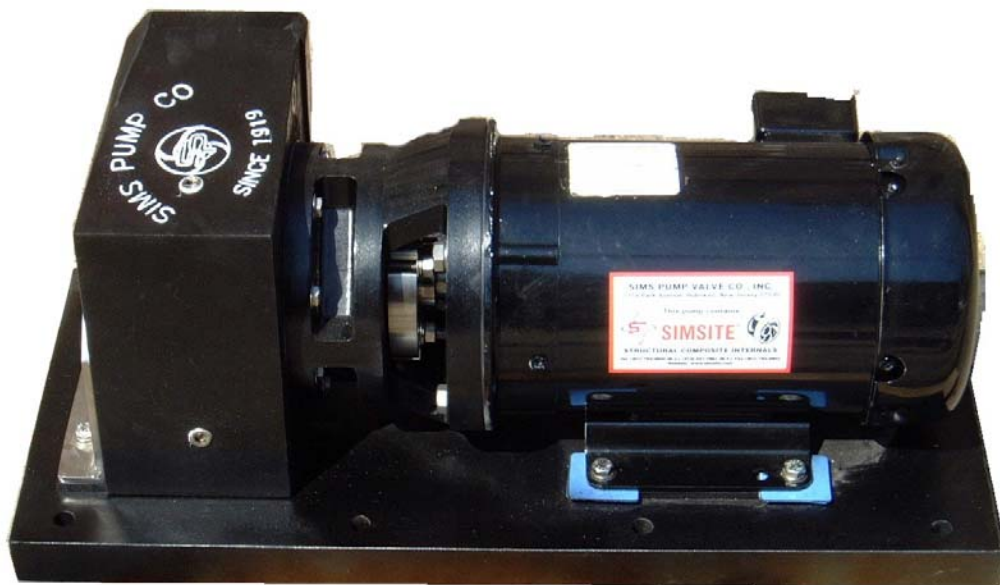




SIMS Pump Company

Simsite® Structural Composite Pumps

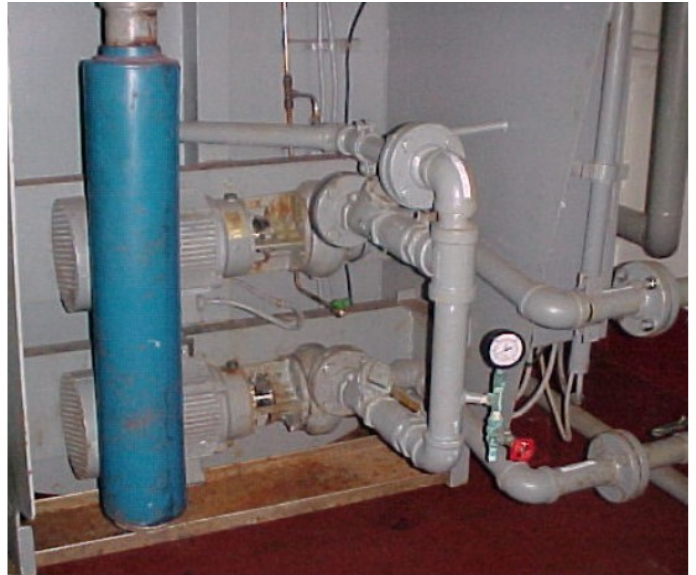
SIMS Horizontal Vortex Pump



“The only Pump that is Impervious to Salt Water Corrosion”

Sims Composite Vortex Pump

Sailing vessels have suffered with the detrimental effects of saltwater, abrasive sand and silt, since metal ships were first built. Corrosion and environmentally unfriendly waste products present real HAZARDS to shipboard components and personnel. With a desire to reduce operating cost and maintenance, Sims was asked to develop a corrosion free pump that possesses the strength and durability to stand up to the harsh environment of shipboard sewage system.

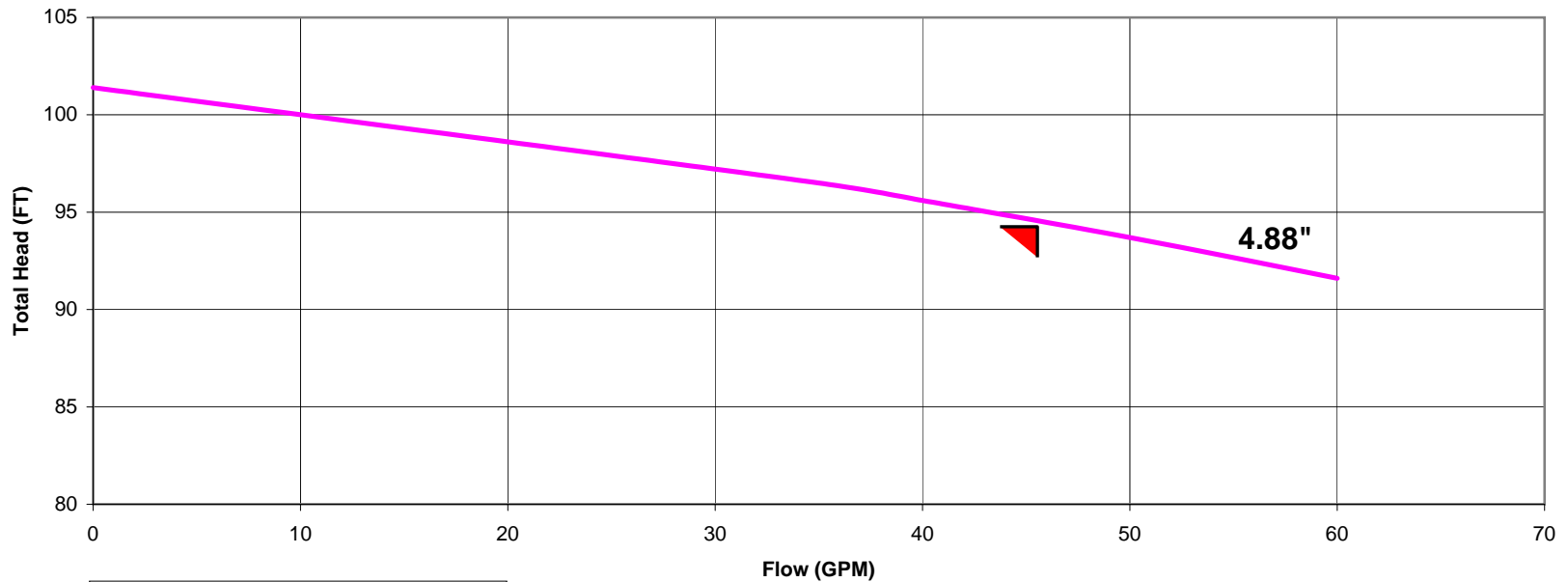
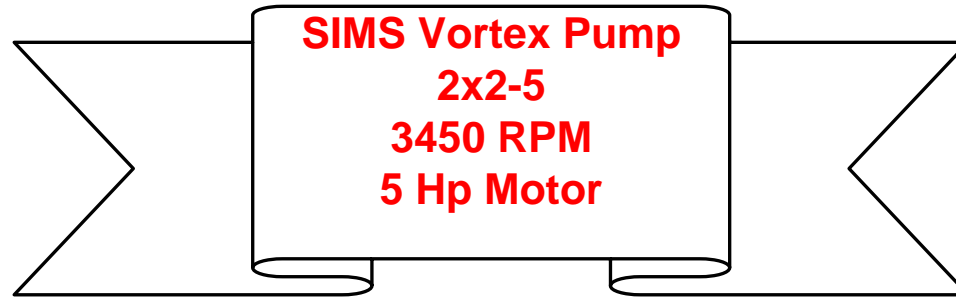


Sims Pump Company is proud to introduce the first SIMS Composite Vortex Pump specifically designed for operation in CHT applications. Sims specially designed, Simsite Impeller and horizontal pump casing volute creates a cyclonic effect that results in fluid being discharged with little or no contact with the impeller. The vortex developed inside the volute provides the ability to pass solid particles, while virtually eliminating wear of internal components.



Featuring: Simsite® Structural Composite Pump Assembly, Simsite® Base Plate, Closed Coupled Heavy Duty Marine Service Motor, Mechanical Seal Type Sims Single Cartridge CB/TC/EP

“The only Pump that is Impervious to Salt Water Corrosion”



Impeller Drawing: CR14966_0303
File: 4976A

Volute Drawing: CR14966_0101

Date: 05/23/2003

Capacity: 45 GPM Head: 90 FT

SIMS PUMP VALVE CO., INC.

SIMS 2x2-5 Vortex Horizontal

Customer:

SIMS Order No.:

SIMS

CR14966

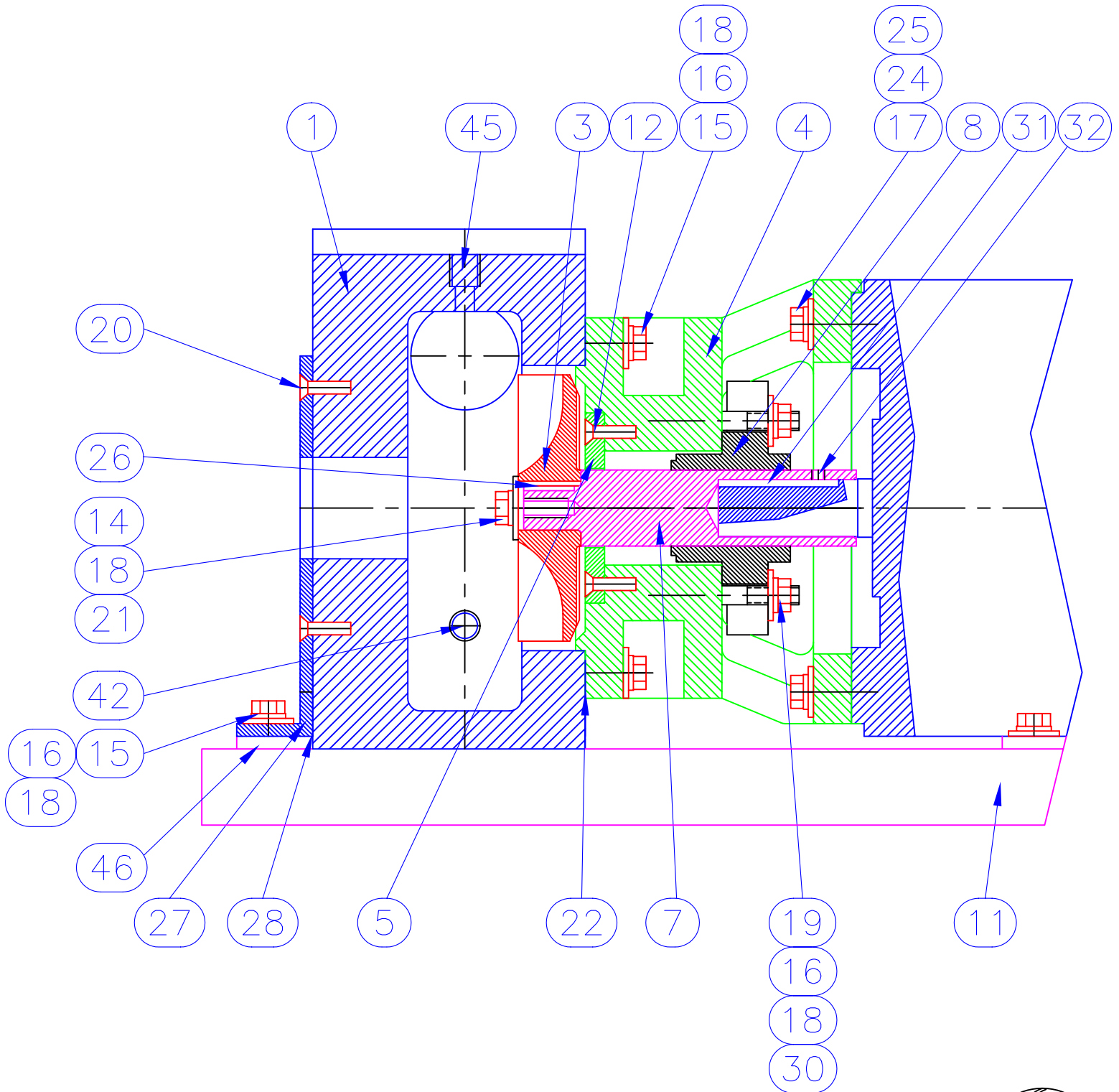
PART LIST

Part	Q'ty	Description	Part Number	SIMS Dwg. #	Material Code
1	1	Casing	149660101NSMS302	CR14966_0101	SMS 302
3	1	Impeller (Max. OD)	149660300NSMS375	CR14966_0300	SMS 375
4	1	Back Plate	149660400NSMS302	CR14966_0400	SMS 302
5	1	Bearing	149660402NSMS302	CR14966_0402	SMS 302
6	1	Electric Motor	149660600NCI316	CR14966_0600	CI
7	1	Stub Shaft	149660700NSS316	CR14966_0700	S/S 316
8	1	Seal Cartridge	149660800NASSY	CR14966_0800	Assy.
11	1	Base Plate	149661100NSMS302	CR14966_1100	SMS302
12	4	CSK Screw	149660405NSS316	CR14966_0405	S/S 316
14	1	Impeller Bolt	149661400NSS316	CR14966_1400	S/S 316
15	14	Hex Head Bolt	149660103NSS316	CR14966_0103	S/S 316
16	18	Flat Washer	149660104NSS316	CR14966_0104	S/S 316
17	4	Hex Head Bolt	149660602NSS316	CR14966_0602	S/S 316
18	19	Lock Washer	149660105NSS316	CR14966_0105	S/S 316
19	4	Stud	149660403NSS316	CR14966_0403	S/S 316
20	4	CSK Screw	149660106NSS316	CR14966_0106	S/S 316
21	1	Washer, Impeller Bolt	149661403NSS316	CR14966_1403	S/S 316
22	1	Gasket, Back Plate	149660404NGSG32	CR14966_0404	GSG 32
24	4	Flat Washer	149660605NSS316	CR14966_0605	S/S 316
25	4	Lock Washer	149660606NSS316	CR14966_0606	S/S 316
26	1	Key, Impeller	149660302NSS316	CR14966_0302	S/S 316
27	1	Casing Support	149660107NSS316	CR14966_0107	S/S 316
28	1	Gasket, Casing Support	149660108NGSG32	CR14966_0108	GSG 32
30	4	Nut	149660802NSS316	CR14966_0802	S/S 316
31	1	Key, Electric Motor	149660603NSS316	CR14966_0603	S/S 316
32	3	Set Screw	149660604NSS316	CR14966_0604	S/S 316
42	1	Plug, Drain	149660111NSS316	CR14966_0111	S/S 316
45	1	Plug, Vent	149660113NSS316	CR14966_0113	S/S 316
46	1	Spacer, Casing	149661102NSMS302	CR14966_1102	SMS 302
47	1	Spacer, Electric Motor	149661103NSMS302	CR14966_1103	SMS 302

Date: 05/14/2003

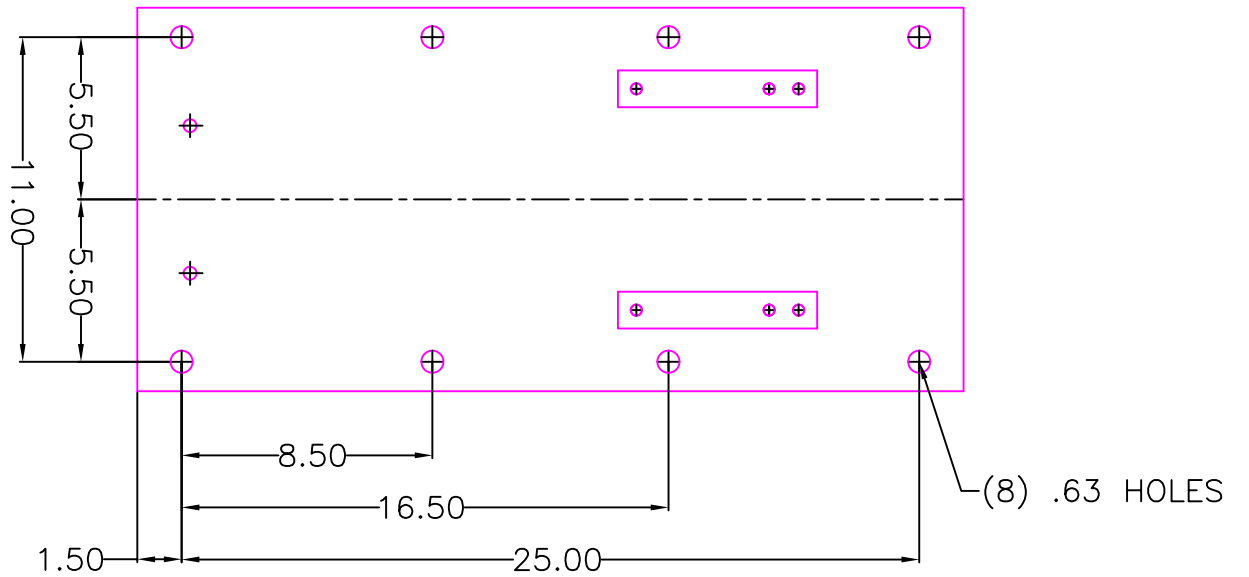
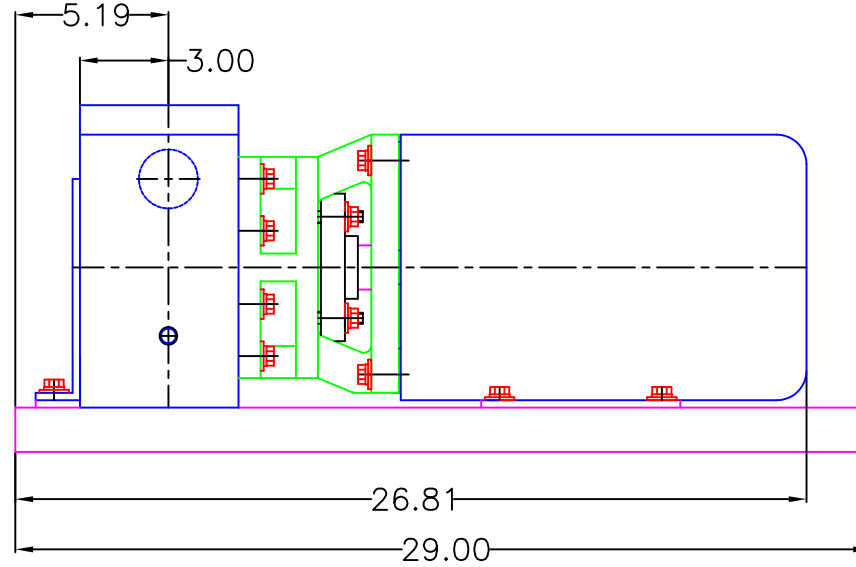
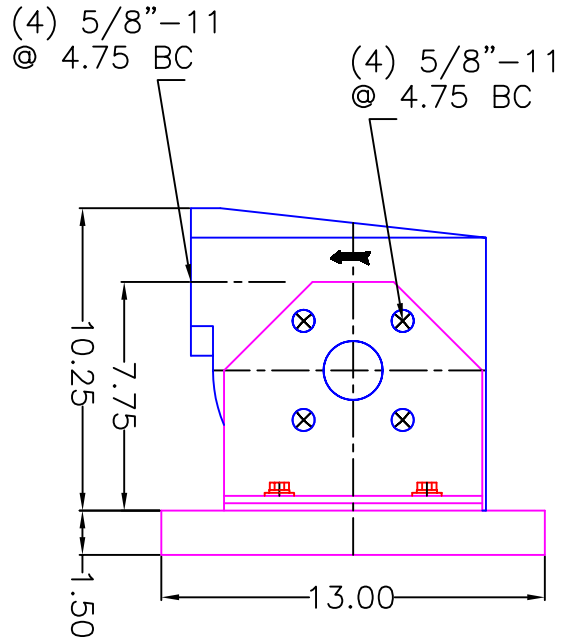
SIMS

VORTEX Horizontal Pump Sectional View (Detail)



SIMS

VORTEX Horizontal Pump Dimensions



SIMS Pump Company

Since 1919

SIMSITE STRUCTURAL COMPOSITE CARTRIDGE MECHANICAL SEAL

**The First Composite Cartridge Mechanical Seal
Shock Qualified and approved by the US NAVY.**

Design Feature:

Cartridge Seal
Gland: SIMSITE® Composite
Sleeve: SIMSITE® Composite (Optional)
Balanced Seal Design
Hastaloy C Springs (Isolated from fluid)

Sizes:

From 1" to 4" Shaft Diameter

Operating Limits:

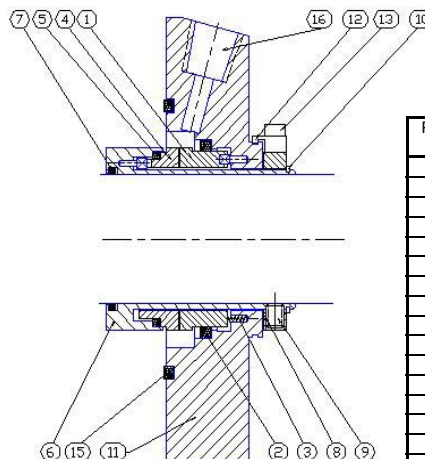
Temperature: -40°F to 300°F
Pressure: Up to 360 PSI
Maximum shaft peripheral speed: 52 ft/s

Applications:

Sea Water, River Water, Brine
Sewage, Waste water
Chemicals
Potable Water

Benefits:

Non-corrosive Seal
Light weight
Extends Pump Life
Balanced Seal
Easy installation



Part	Qty	Description	Material Code
1	1	Seal Face, Fixed	Carbon-Graphite
2	1	O-Ring	Viton
3	8	Spring	Hastelloy C
4	1	Seal Face, Rotating	Silicon-Carbide
5	1	O-Ring	Viton
6	1	Seal Housing	Monel
7	1	O-Ring	Viton
8	1	Driver	S/S 316
9	4	Set Screw	S/S 316
10	1	Retaining Ring	S/S 316
11	1	Gland	SMS 375
12	3	Assembly Fixture	S/S 304
13	4	Screw	S/S 316
14	1	Assembly Fixture	S/S 304
15	1	O-Ring	Viton
16	1	Screw	S/S 316

“The only Pump that is Impervious to Salt Water Corrosion”