



MODEL: MSVSS

**OPERATING INSTRUCTIONS, INSTALLATION & MAINTENANCE
MANUAL INCLUDING SPARE PARTS LIST**



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LIFE IS PRECIOUS – SAFETY FIRST

IMPORTANT!



Read all instructions in this manual before operating pump. Mody Pumps Inc. is dedicated to provide the most optimal product for the application by making continuous product improvements and enhancements. Mody Pumps Inc. reserves the right to change product specifications without prior written notification.

IMPORTANT!

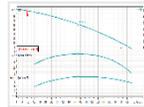


All maintenance work involving the dismantling and re-assembly of the pump, must be carried out by qualified and trained specialized personnel. All maintenance work must be carried out with the pump disconnected from the power supply. To reduce risk of electrical shock, pumps and control panels must be properly grounded in accordance with state or province norms.

Most accidents can be avoided by using
COMMON SENSE THINK SAFETY!



Do not wear loose apparel that may become entangled in the impeller or other moving parts. Keep clear of suction and discharge openings **Do not** insert fingers in pump while still connected.



Do not exceed manufacturer's recommendation for optimum performance, as this could cause the motor/pump to overheat and lead to premature wear or failure.



Always use appropriate safety equipment, such as safety glasses, when working on the pump or piping.



Do not block or restrict discharge hose, as it may whip or burst catastrophically under pressure.



Pumps build up heat and pressure during operation. Allow time for pumps to cool before handling or servicing.



Secure the pump in its operating position so it does not tip over, fall or slide.

Do not operate pump without adequate protection and safety devices in place. **Make sure** lifting handles/hooks are securely fastened each time before lifting.



Do not pump flammable or hazardous materials (gasoline, acids, alkalis, etc.)



Submersible Pumps are not approved for use in swimming pools, recreational water installations, decorative fountains or any installation where human contact with the pumped fluid is common.



Do not lift pump by the power cord under any circumstances.

Never operate a pump with a power cord that has frayed or brittle insulation. Cable should be protected at all times to avoid punctures, cuts, and abrasions - inspect frequently.

Never operate a pump with a plug-in type power cord without a ground fault circuit interrupter, adequate overload and short circuit protection.

IMPORTANT! Mody Pumps Inc. is not responsible for losses, injury, or death resulting from failure to observe these safety precautions, misuse or abuse of pumps or equipment.

INTRODUCTION

The “**Mody**” motor driven portable submersible pumps have been developed due to a long felt need of having a truly maintenance free pump-set for various applications. The pump is a lightweight, compact unit that can be used in most sea-craft and difficult land installations. The unit consists of a vertical centrifugal pump with an in-built squirrel cage, induction electric motor which is available for various electric supply configurations. The pumped water is used as a cooling medium which cools the electric motor.

The service life of a submersible pump depends mainly on two things: the dependability of the sealing system and the wear resistance of the pump wear parts.

All “**Mody**” submersible sump pumps incorporate a unique sealing system. The construction consists of double silicon carbide/silicon carbide and carbon/ceramic mechanical seals, immersed in an oil bath combined with an external oil seal. The complete package is a pressure compensated sealing device which ensures a minimal pressure differential across the seal faces, irrespective of the depth setting of the pump or the head against which the pump is operating.

In “**Mody**” submersible sump pumps, all wear parts are rubber lined/covered and are readily replaceable as needed. Both wear and electricity consumption are still further reduced when the pumps are fitted with built-in level controls for automatic starting and stopping. **Pumps have built-in thermal protection and Split Capacitor - Single Phase Models are ready to plug into AC voltage (115/230).**

It is in the interest of the user to go through this manual in detail before using the pump. The manual will help the user to understand the constructional features and to obtain trouble free service from the pump.

GENERAL INFORMATION

MODY NON-CLOG VORTEX SS SLUDGE PUMPS have basically been designed and manufactured with the highest quality components and used as heavy-duty dewatering/wastewater units to pump out flooded installations or any other conditions that need removal of solids laden unwanted fluids. The pumps are capable of handling water contaminated with oil as well as stringy solids normally associated with raw and sewage water with pH levels ranging from 3 - 10.

TECHNICAL DESCRIPTION	
MOTOR	<ul style="list-style-type: none"> • 2Pole, 1 and 3 Phase continuous rated squirrel cage induction motor. • Stator insulation class H 180°C, rated IP68 • Speed: 3450RPM @60 Hz • Power rating: 0.5 to 10HP @ 60Hz • In-built Circle Thermal protection. • Max. Start/stop per hour 15 • Service factor: 1.15 • Max. fluid temperature 104F/40C
POWER SUPPLY	AC 1 phase, 60 Hz, 120V, 240V, and 3 phase, 240/480V
STARTING METHOD	Plug-in, Float, DOL
OUTLET/ DISCHARGE	2", 3",4" NPT/Flange
PUMP ROTOR SHAFT	Rugged aluminum die cast rotor dynamically balanced with a 410 duplex Stainless-Steel shaft.
BEARINGS	Two single row deep groove Ball Bearings for Radial and thrust loads.
SEALS	Double SC/SC and Carbon/Ceramic mechanical seals enclosed in pressure compensated oil chamber.
IMPELLER	Vortex 316SS
FRAME AND OUTER CASE	316 stainless steel.
HARDWARE	316 Stainless steel
POWER CABLE	<ul style="list-style-type: none"> • Waterproof/ oilproof, rubber-insulated, neoprene- sheathed cooper conductor flexible cable. • UL SJTW/STOW, 50ft 4 core. (Optional Cable Lengths Available)
VOLUTE	<ul style="list-style-type: none"> • 316 Stainless Steel. Spherical solids handling 1.5" (38mm) & 2" (50mm).
SUBMERGENCE	MIN: 2", MAX: 65' (20m). (Below liquid surface)
ORINGS/ ELASTOMERS	FKM - VITON.
LIQUID DATA	Temp.: 104°F (40°C); pH Range 3 – 11; Specific Gravity: 1.1 Max
OPTIONAL	GUIDE RAIL SYSTEM

PUMP HANDLING RECOMMENDATIONS

1. Receiving:

Pump should be inspected for damage upon receiving. If damage has occurred, contact Mody Pumps Inc. or your authorized distributor to file a claim immediately.

2. Check Insulation and Phase Ohm Resistance:

Before operating pump, ensure the voltage and phase information stamped on Name Plate matches with the available power.

- a. **Ohm resistance test:** Using a Multimeter, perform a line to line ohm resistance test on all three phases. For three phase motors, the ohm resistance should show similar readings.
- b. **Insulation Resistance Test:** Set the Megohmmeter on the insulation mode. Connect a power lead on the positive side of the meter probe. Connect negative meter probe to ground and press the test button. The reading must show the values given in table 1 or greater, to pass the insulation test. Perform the same procedure for all three power leads connected to the ground cable. Failing of this test indicates a faulty stator.

IR Value of Submersible Motor: (As per NETA ATS 2007. Section 7.15.1)

IR Value of Submersible Motor	
Motor Out off Well (Without Cable)	IR Value
New Motor	20 MΩ
A used motor which can be reinstalled	10 MΩ
Motor Installed in Well (With Cable)	
New Motor	2 MΩ
A used motor which can be reinstalled	0.5 MΩ

- c. **Megger Test:** Set the Meg Meter to Hi-Voltage Test (<1000v). In three phase pumps short all three power leads, Red/White/Black and connect to Positive (Red Probe) on Meter and Connect the Green (Ground) Wire to the Black Probe on Meter. Do not touch the body of Pump - Stand Back and test. A minimum of 500 Meg-Ohms is the desired level.

3. Inspection of thermal and moisture sensors if provided:

Identify control cables. Mody Pumps provides a reference such as color-coded labels or sticker on the cable.

a. Probe Sensor. Normally open

Using a multimeter and setting it on the Ohm resistance mode, connect meter terminals to wires (Probe) and Green (Ground) and check for ohm resistance. An open-connection reading must be obtained, otherwise pump has a wet stator or water in the oil chamber which may require further inspection of the complete pump unit.

b. Thermal sensor: Normally closed

Using a multimeter set the instrument on ohm-resistance mode and connect terminals to wires Thermal 1 and Thermal 2. These terminals represent the thermal switches embedded in all three windings connected internally in series and should show continuity indicating a normally closed circuit. In the event there is no reading indicating an open circuit the stator will have to be removed for further evaluation.



All pumps and control panels must be properly grounded.

4. Installation:

a. **Ensure site voltage** corresponds with voltage value stamped on pump nameplate.

b. **Check for pump rotation before installation.** Improper rotation may result in poor pump performance and can damage the pump motor. Pumps are provided with tags that show the rotation of the impeller and the Kick start. The kick start, thus rotation can be checked by energizing the pump for a short period of time. If the “kick” is not noticeable suspend pump freely and energize it momentarily. Shift any two phases in the power supply if the kick is wrong.



Do not operate Pump in reverse rotation - severe damage may result.

c. Lifting:

Do not lift or pull the pump under any circumstances by means of the power cable. Always lift pump by securely fitted lifting hooks/eyebolts provided with pump.

d. Discharge/ Suction:

Ensure discharge connection is correctly and securely fitted. Ensure delivery hose is free from kinks and sharp bends. Pump should have strainer affixed at all times. Inspect and clean strainer periodically for maximum efficiency and performance.

e. Float system: if applicable

Attach "ON" and "OFF" floats at a desired level. The "OFF" float must be below the "ON" float. It is recommended that pump is completely submerged when the level control is on the "OFF" position.



Avoid running the pump on dry for a long time as damage to the motor and seals may occur due to snoring and cavitation conditions.

5. Monitoring the unit:

Check Amperage periodically. Do not let pump run if an overload condition occurs. The FLA stamped on the nameplate is an indicator that the pump is in overloading conditions. If a generator is the power source, check for voltage variation periodically. Motors are designed to operate on single voltage and frequency. Max. Deviation in voltage allowed is + - 10 % and frequency +- 3%. Check name plate for operating voltage and frequency.

MAINTENANCE

Pumps must be frequently inspected at least once a month depending on usage. All electrical parts such as the cable and wiring shall be kept in a dry condition preferably cool and indoors shielded from the elements and inspected for cuts or insulation damage. Do not store pumps outside in sub-zero weather which will cause rotating elements to freeze up. Ensure that all fasteners are in place, properly tightened and secured ensuring watertight (IP68) joints.

All O-rings must be replaced whenever parts are dismantled.

Seal elastomer parts should never be re-used after dis-assembly.

Do not refill bearing grease. Always replace new bearings with special high temperature grease.

Seals:

Condition of seals shall be checked every 2500 hrs. of operation by ascertaining the condition of oil in the seal chamber. Milky white oil indicates the presence of water in the oil chamber and a pressure check needs to be performed.

Pressure test:

The pressure test must be performed to ensure the seal faces are properly installed during assembly. A pressure gauge assembly is necessary to perform this test. Disassemble pump unit until the oil chamber and oil plug is exposed. Remove plug from bearing housing and drain oil completely. Tighten the pressure gauge assembly into Oil plug hole. Pressurize oil chamber to 5 PSI, rotate shaft by hand, and check for leaks. If no leaks are observed and the pressure holds for 15 minutes, slowly release the pressure valve and remove the pressure gauge assembly. If the pressure does not hold, the leak must be located and fixed. Cleaning the seal faces and reinstalling the seals may fix the problem.



Handle seals with extreme care. Keep seal faces clean. Do not scratch seal faces.

Do not hammer on seal pusher.

- Ensure that the pump is properly trimmed at all times. as the impeller gets worn out, the capacity of the unit will drop, and it is essential to maintain the original clearance between the impeller and diffuser to obtain satisfactory performance. This can be adjusted by inserting trimming spacers behind the impeller hub.
- Periodically (once a month) it is advisable to dismantle the strainer and to clean the impeller cavities. frequently foreign matter will be deposited which should be cleaned for optimum performance.
- If pump is not used and lying in storage for more than 30 days please ensure that the seal faces are not gauge locked – rotate the impeller/kick start the unit once a month. Refer to instructions on disassembly/reassembly of mech. seals in the event the faces have locked.

SERVICE CENTERS:

For the location of the nearest Factory Authorized Mody Pumps Service Center, check with your Local Mody Representative in your Country or State/Province or contact Mody Pumps Inc. We are located at 2166 Zeus Court Bakersfield, CA 93308 USA
Tel.: +1 661-392-7600 FAX.: +1 661-392-7601.

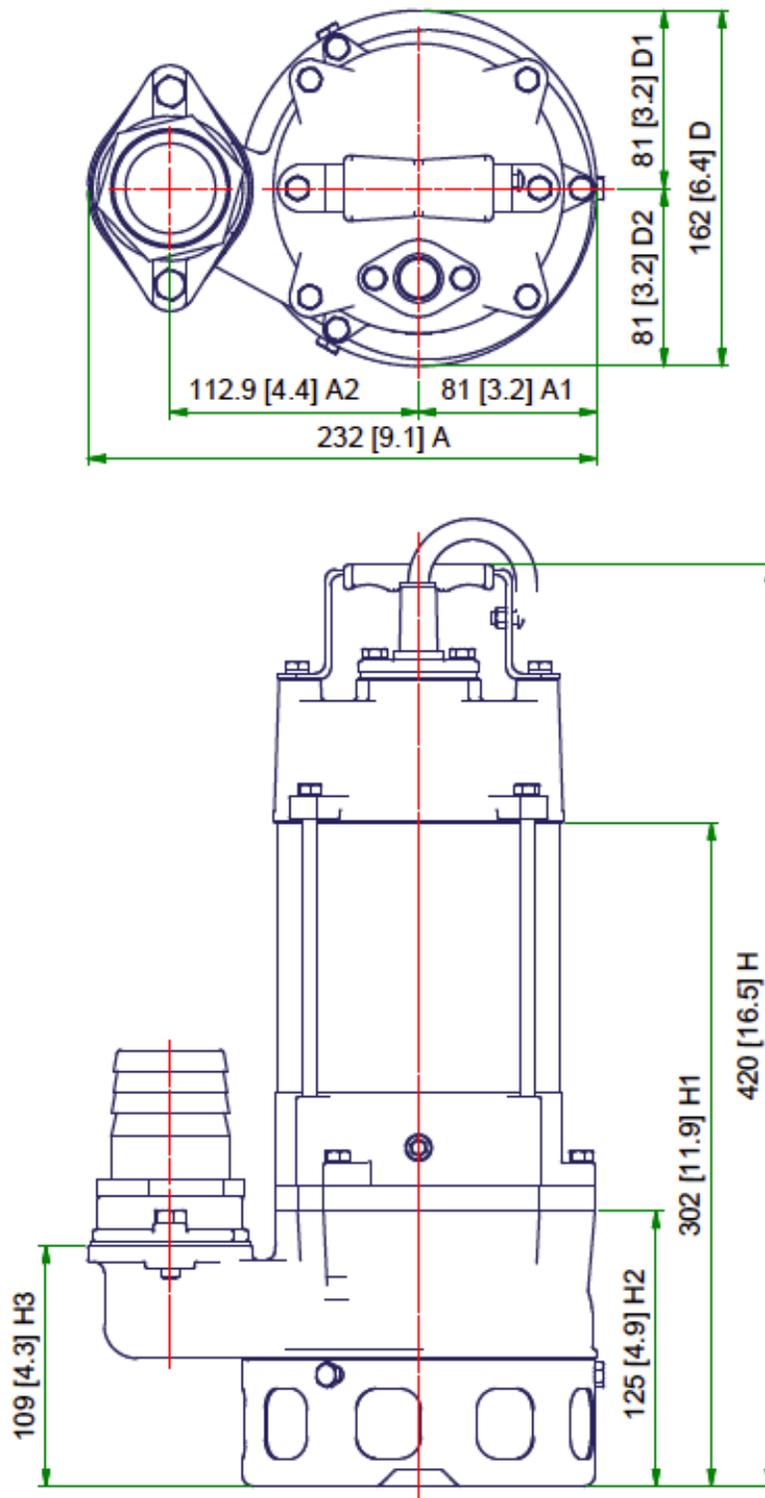
<http://www.modypump.com>

TROUBLESHOOTING:

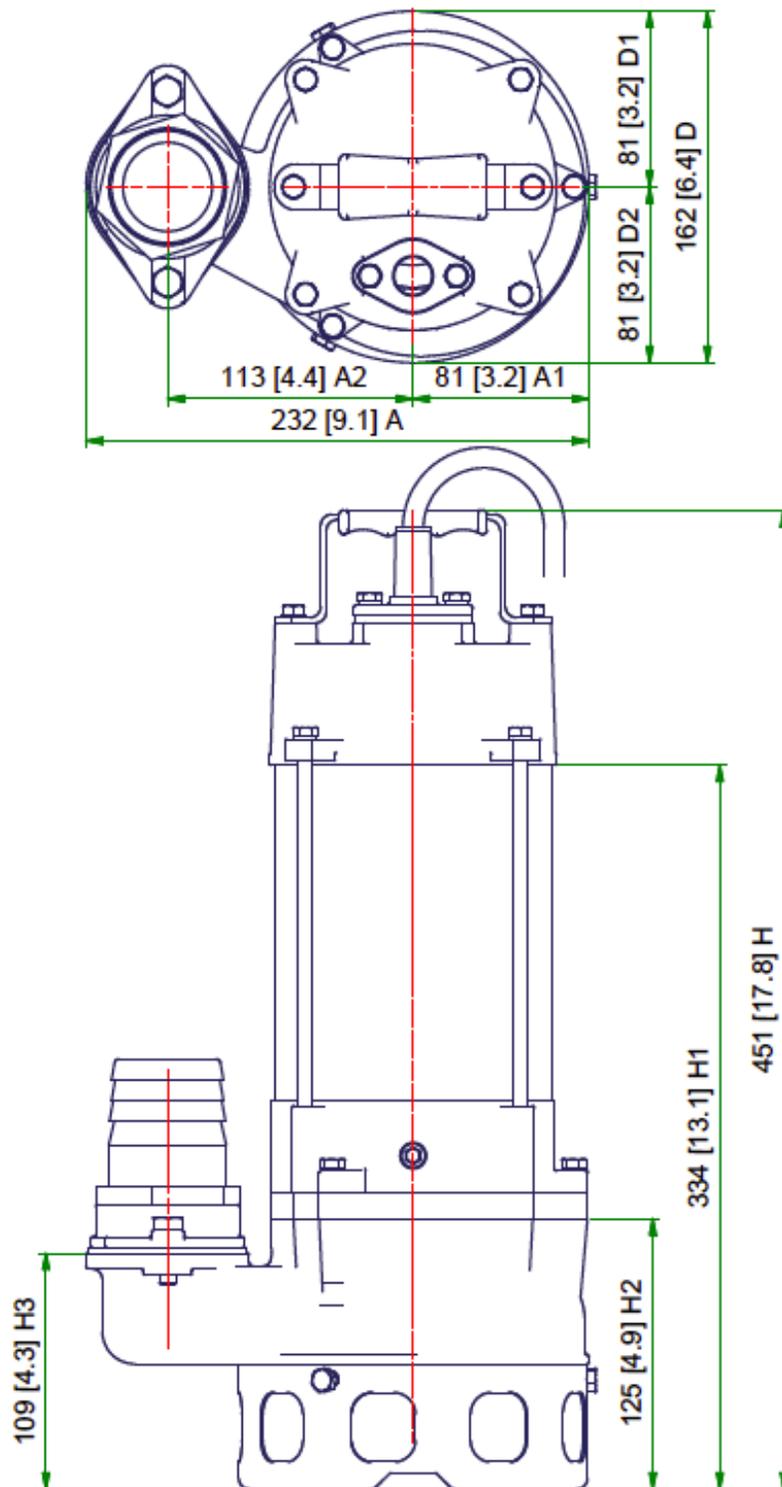


SYMPTOM						CAUSE	CORRECTIVE ACTION
Pump will not run	Pump runs but suddenly stops	Pump will not turn OFF	Pump hums but does not run	Pump delivers insufficient capacity	Pump operates noisily or vibrates excessively		
✓	✓					Poor electrical connection, blown fuse, tripped breaker or other interruption of power	Check power supply, replace fuses, max deviation in valotage is +- 10%
✓			✓			Damaged cable	Replace cable.
		✓				H-O-A switch on control panel in "Hand" position	Turn to automatic position if float system is being used.
✓						Wet stator	Bake stator and Perform line ohm resistance/ insulation test to ensure stator is in operating conditions.
✓			✓			Stator winding burnt	Rewind or Replace stator and Perform line ohm resistance/insulation test to ensure stator is in operating conditions.
	✓		✓			Incorrect voltage	Ensure the voltage and phase information stamped on Name Plate matches with the available power.
✓	✓	✓				Float movement restricted	Reposition floats, clean surroundings to provide adequate clearance to floats, ensure float switches are properly functioning by using ohmmeter and checking resistance for on and off position.
	✓		✓			Blocked impeller	Clean impeller, remove debris that is blocking the impeller from rotation. Ensure impeller is properly torqued and in position.
				✓	✓	Pump not properly sized for application	Recheck all sizing calculations to determine proper pump size.
				✓	✓	Pump running backwards	Check kickstart/ rotation. If power supply is three phase, reverse any two of the power leads.
				✓		Clogged strainer	Clean strainer.
				✓	✓	Pump running dry	Turn the power OFF.
				✓		Discharge restricted	Check discharge line for restrictions, twisted hose, check valve stucked closed or installed backwards.
				✓		Shut-off valve close	Open valve.
				✓		Pump may be air-locked	Loosen union slightly to allow trapped air to escape. Verify that turn OFF float is set so that the suction is always flooded.
	✓					Excesive water temperature	Check pump temperature limits and fluid temperature.
				✓		Unbalanced impeller	Ensure impeller is properly balanced.
				✓		Worn down wear parts	Adjust impeller diffuser clearance. Replace wear components.
				✓		Worn bearings, motor shaft bent.	Replace bearings following dismantling instructions.
				✓		Head presssure too high	Resize pump or use pumps on tandem arrangement.

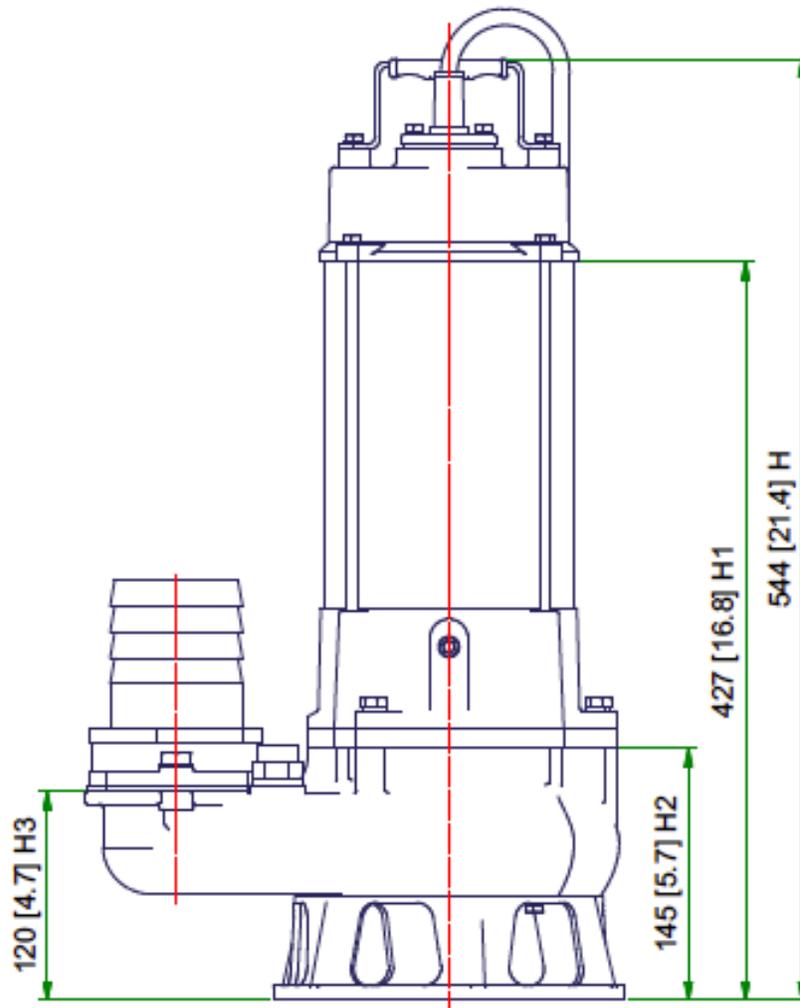
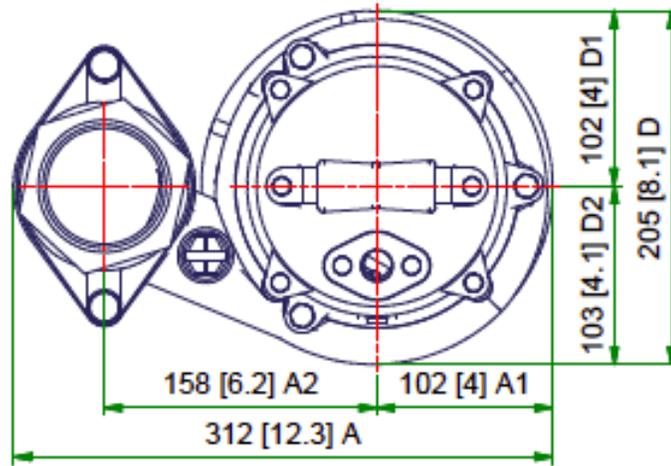
SPECIFICATIONS AND DIMENSIONS



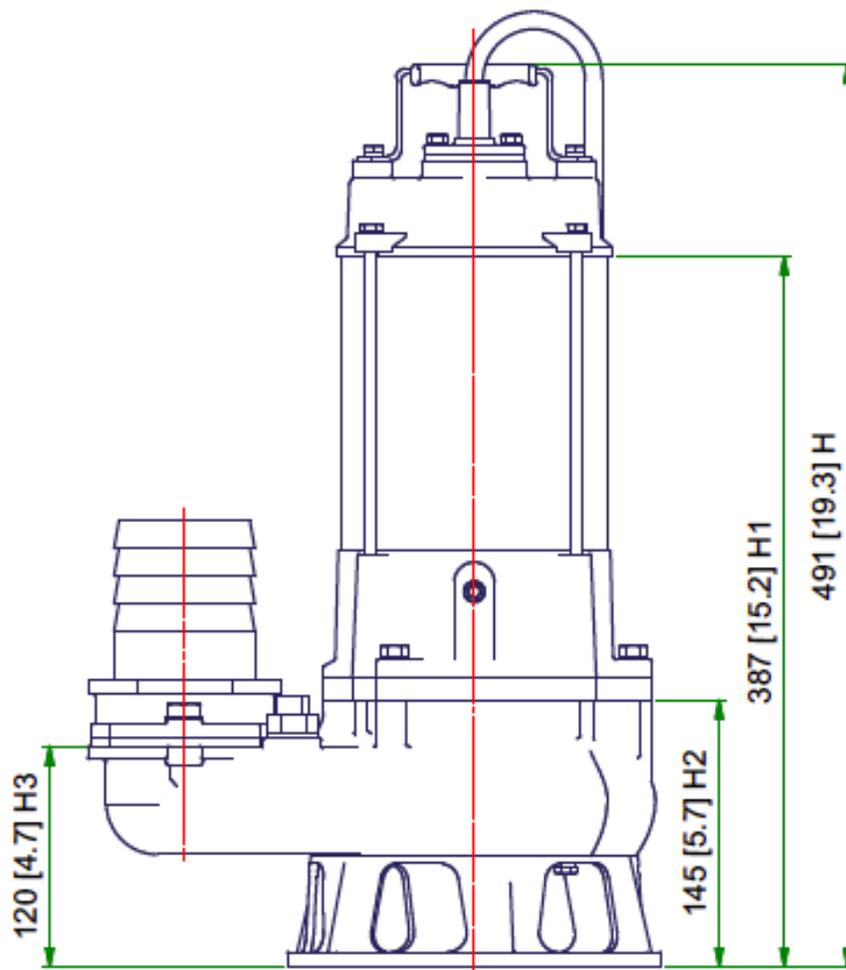
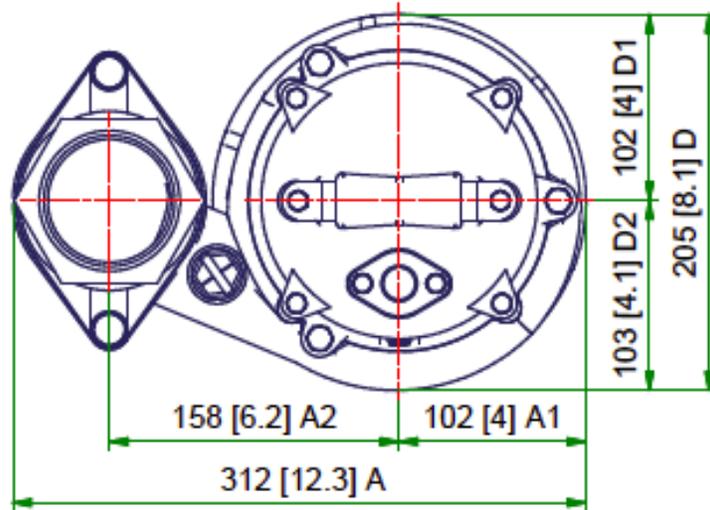
MSVSS05-1



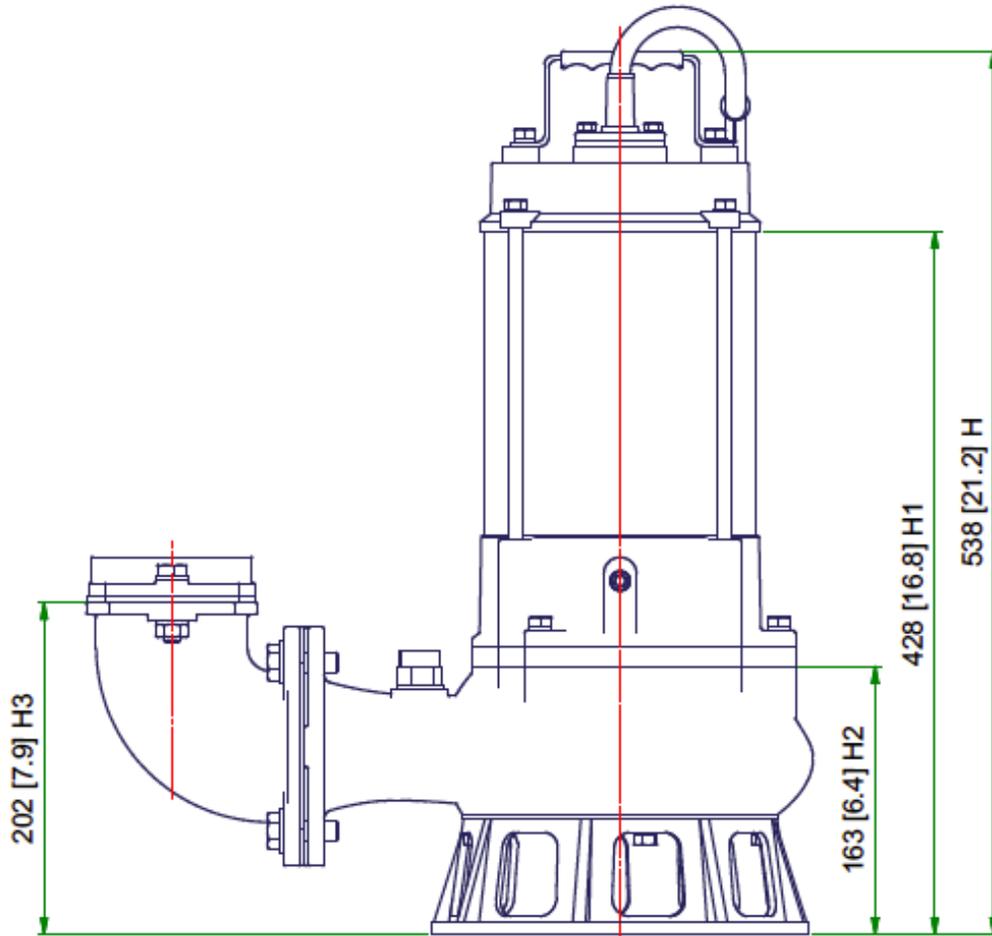
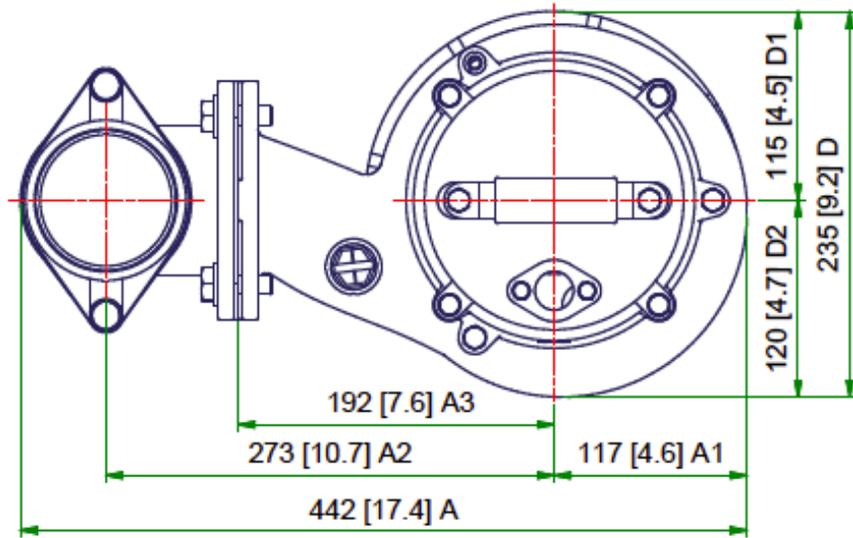
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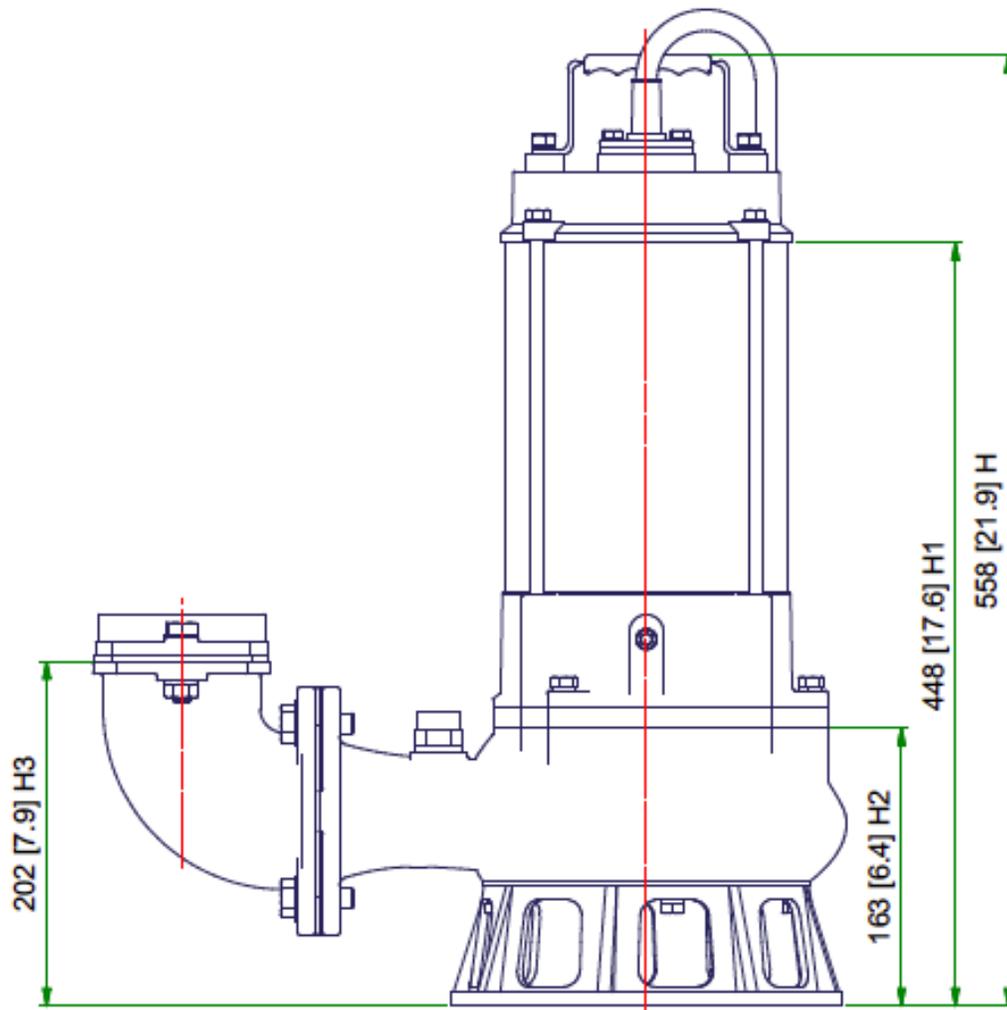
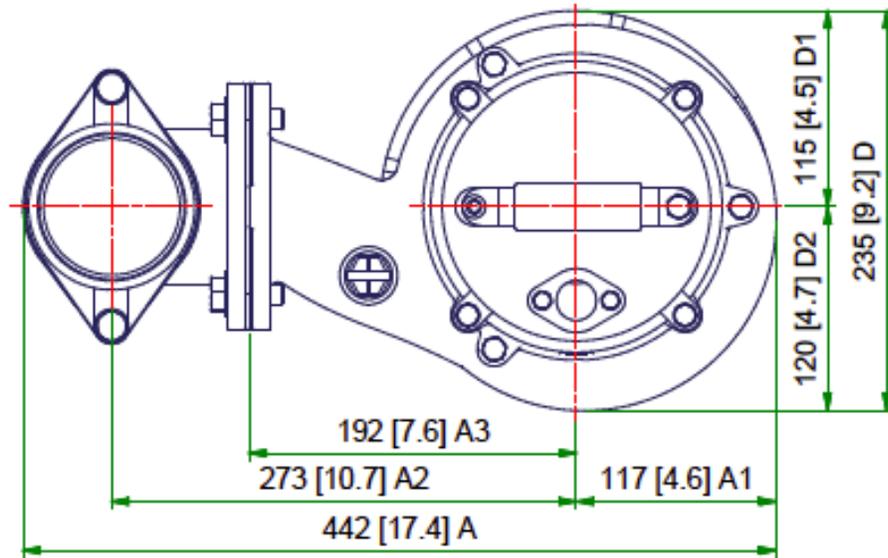
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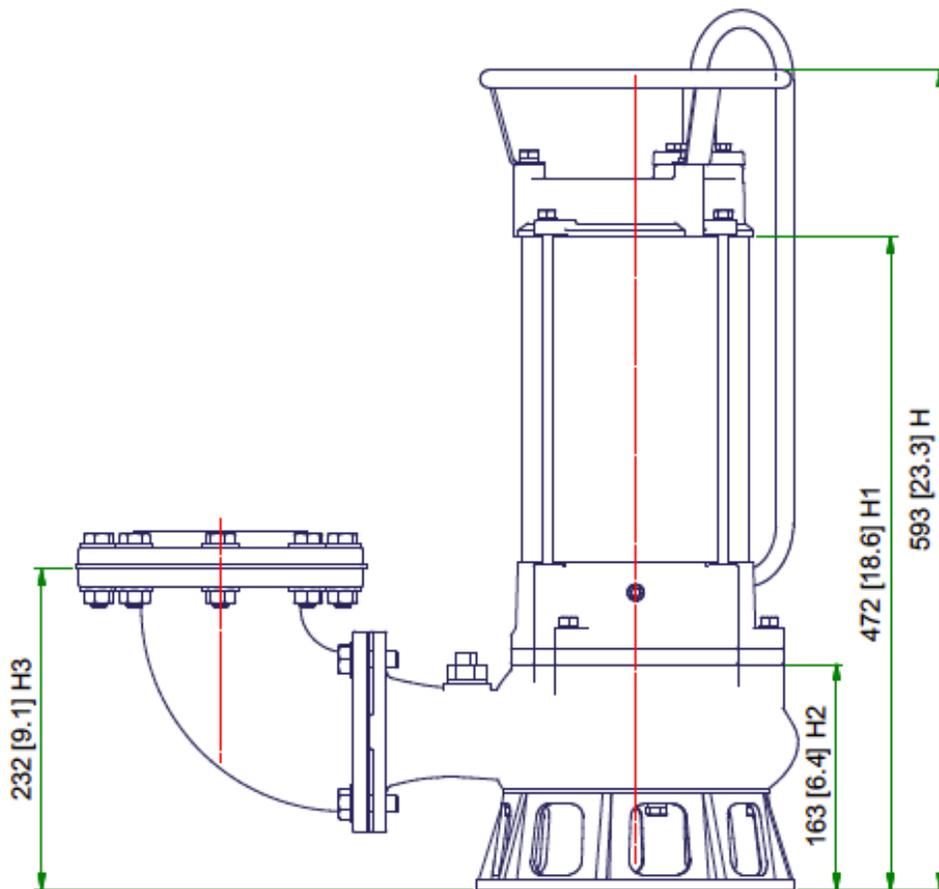
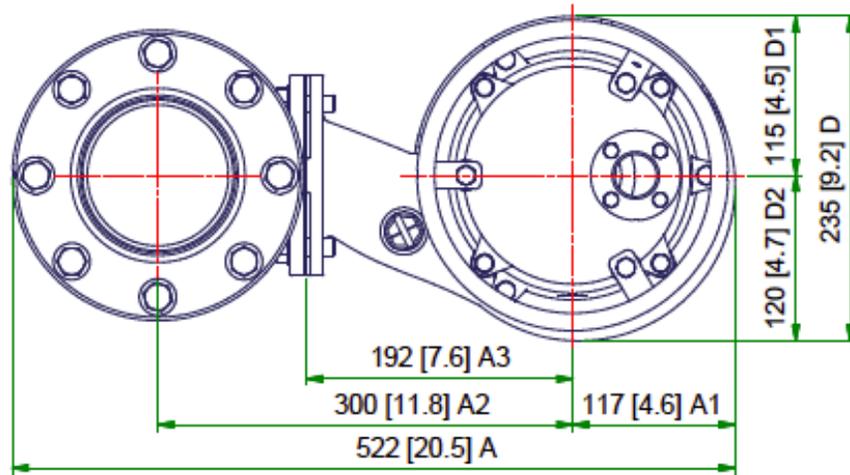
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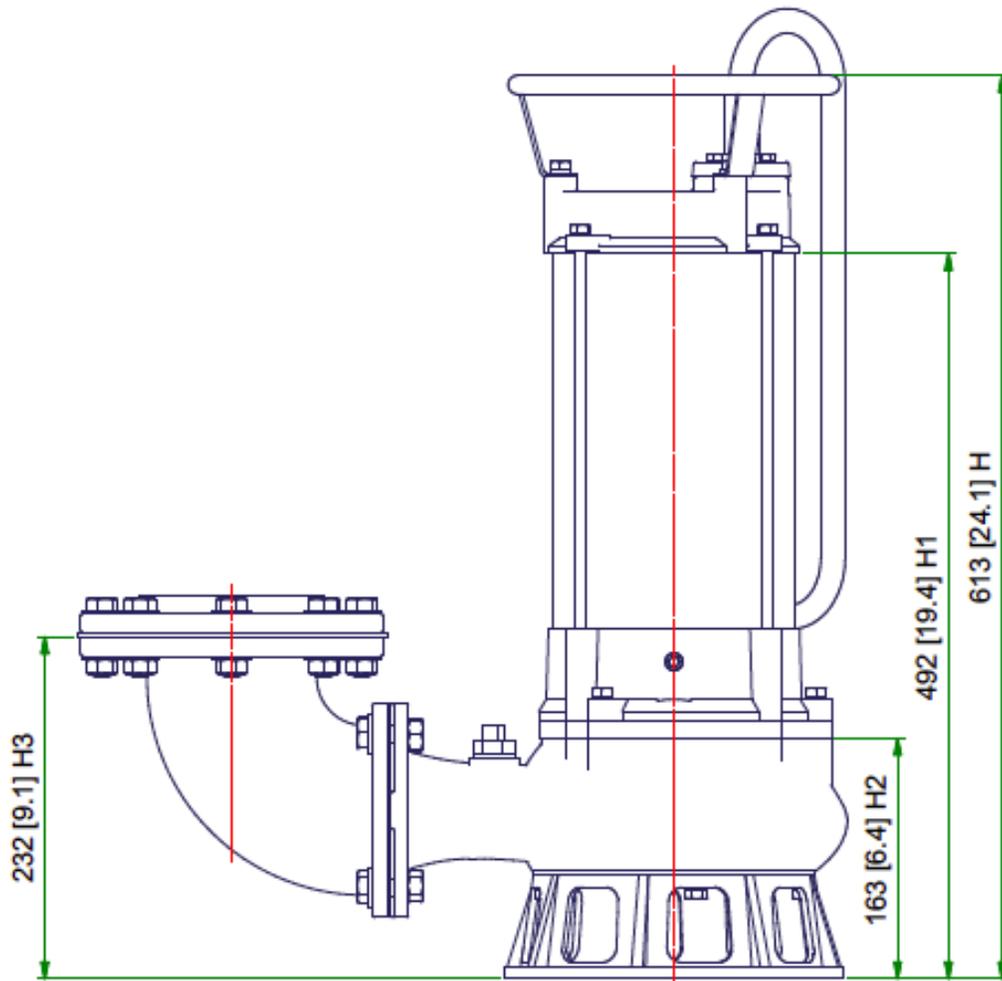
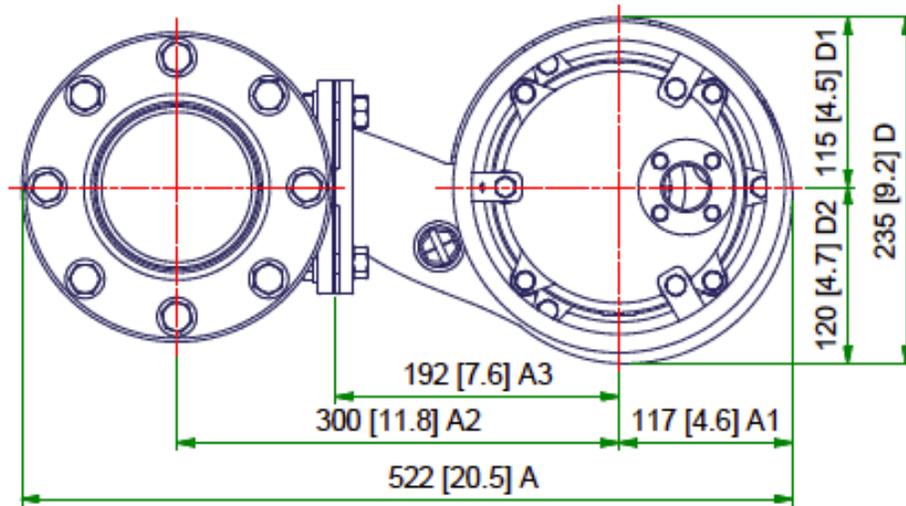
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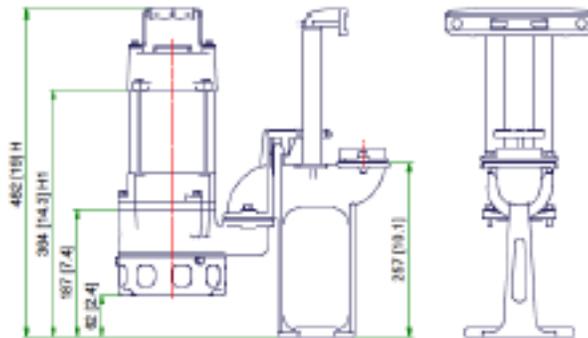
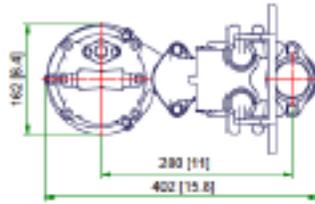
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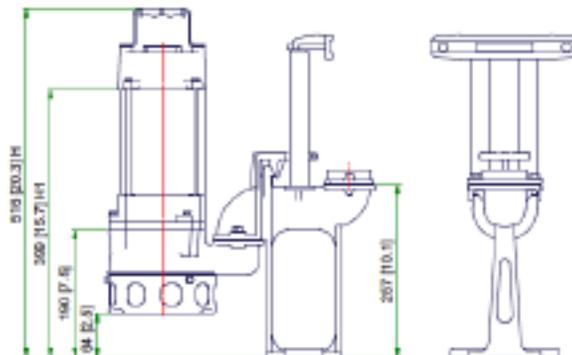
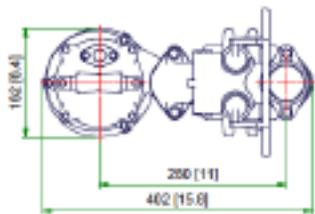
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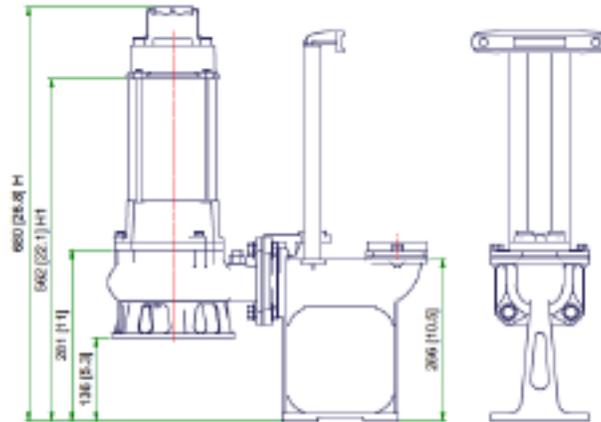
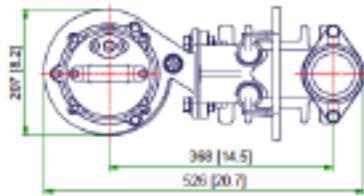
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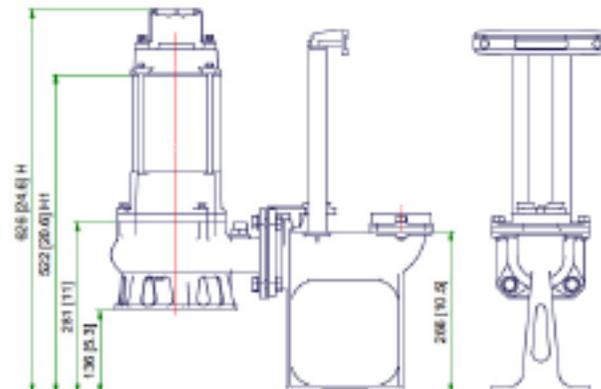
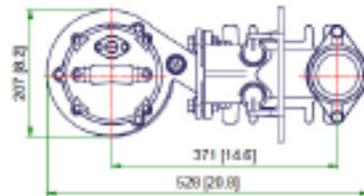
TUS2" + MSVSS0.5-1



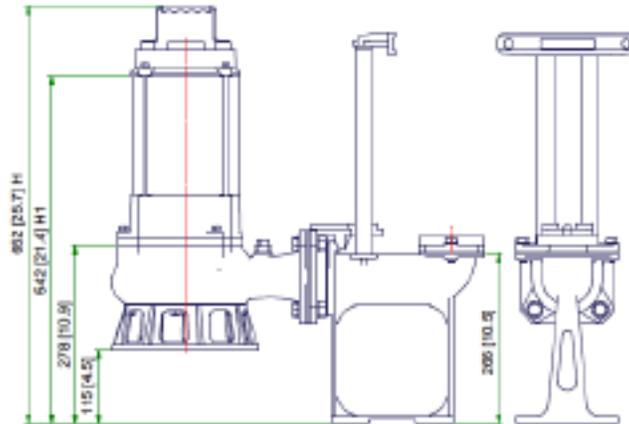
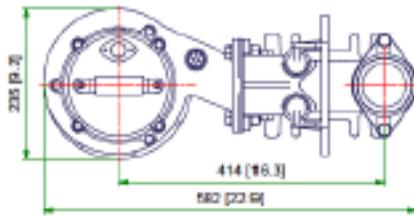
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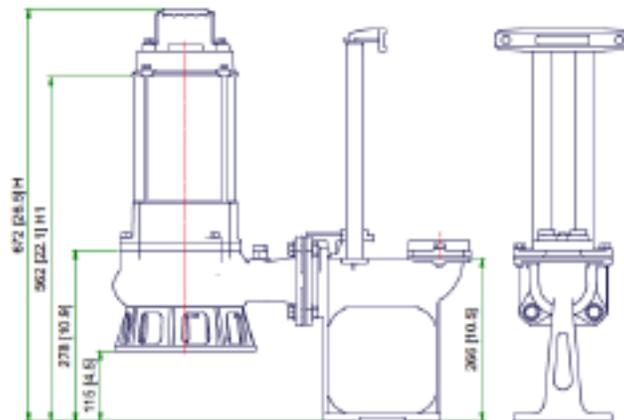
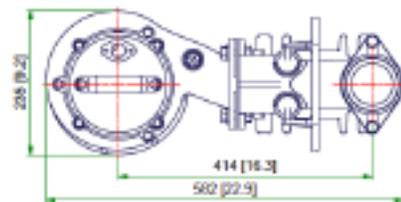
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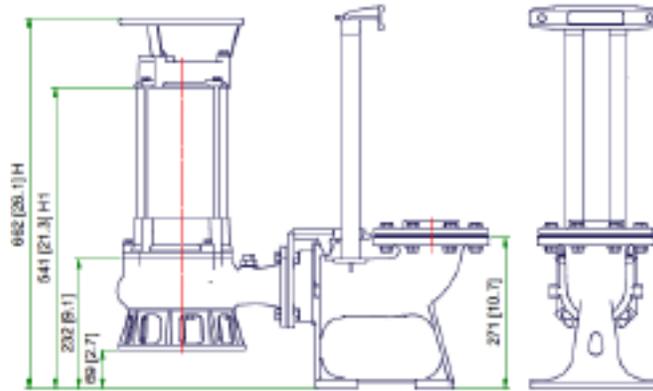
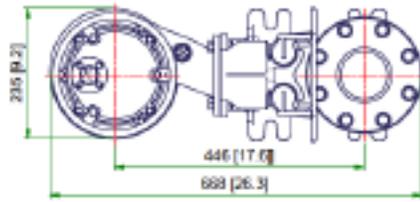
TUS2" + MSVSS2-3



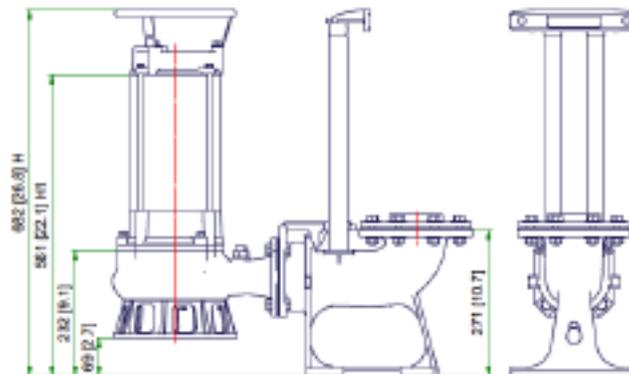
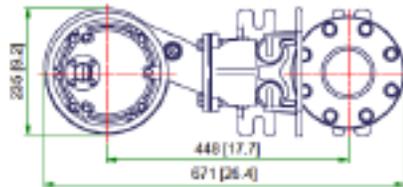
TUS3" + MSVSS3-3



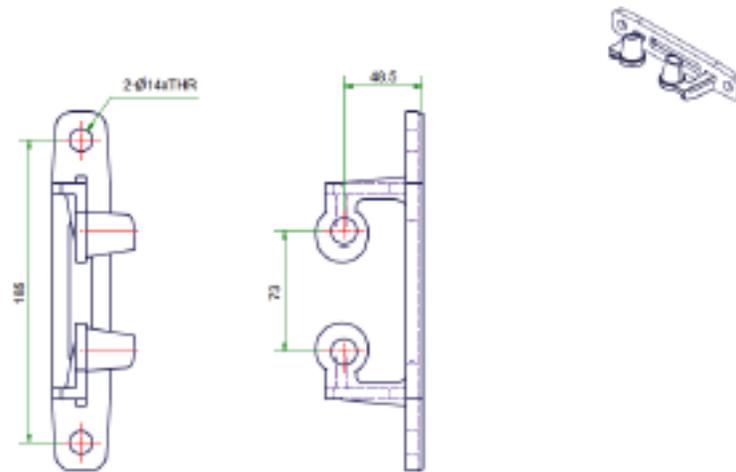
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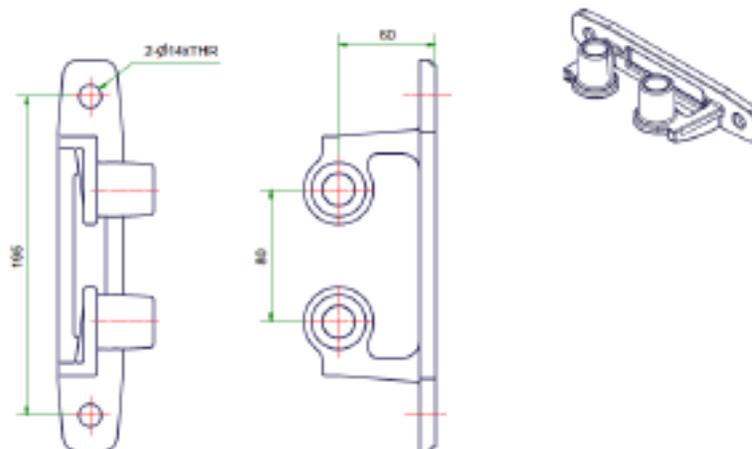
TUS4" + MSVSS4-7.5



TUS4" + MSVSS4-10

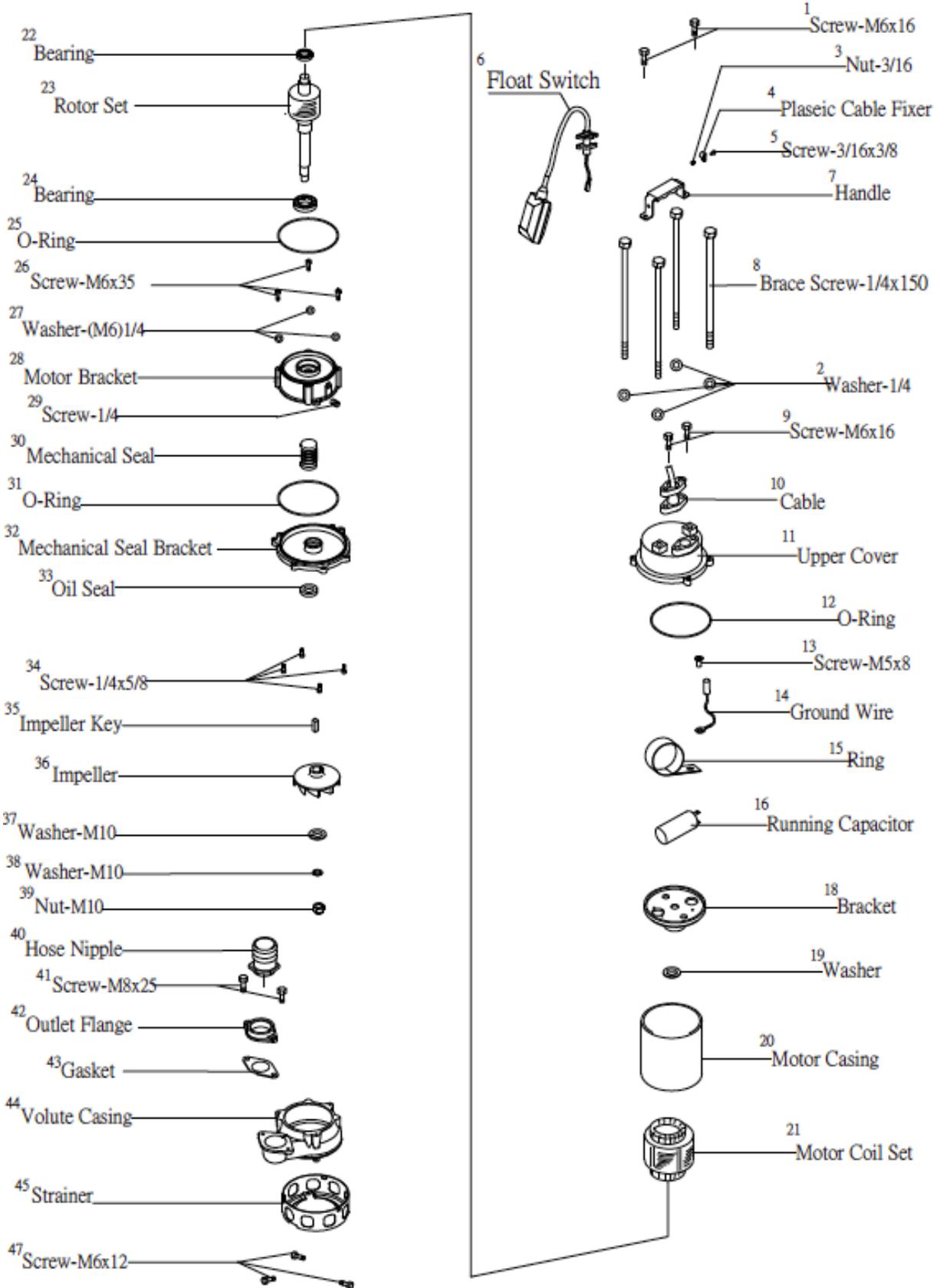


TUS2"/3" Upper Guide Rail Bracket



TUS4" Upper Guide Rail Bracket

MSVSS0.5-1



MSVSS0.5-1

D. #	Part No.	Description	Specification
1	P680200S	Screw	M6x16
2	P686100S	Washer	M6(1/4)#316
3	P685100S	Nut	M5#316
4	Z9805100	Plaseic Cable Fixer	UC-1.5-B
5	P684900S	Screw	M5x12#316
6	R5401100	Float Swich	15A/250V (46cm)
7	R7153000	Handle	140mm#316
8	P625200S	Brace Screw	1/4x150#316
9	P680300S	Screw	M6x20#316
10	P7023700	Cable	16AWGx3Cx15 UL/CSA
11	R110300S	Upper Cover	123mm-P-1/2&1HP#316
12	P520200V	O-Ring	111x2
13	P650200K	Screw	M5x8
14	P9899000	Ground Wire	Copper
15	P5606000	Ring	S-40
16	P4606000	Running Capacitor	35uF/300V
17	Z9821000	Snap Bushing	OSB-26
18	R122300C	Bracket	123mm-T.G.P-1/2&1HP
19	P910300K	Washer	6202
20	R604900S	Motor Casing	123x123-16-#316
21	R828800H	Stator	60Hz 110V
22	P4803000	Bearing	6202-2RS
23	R816500S	Rotor Set	123*61*45-1/2HP 2P#316
24	P4804000	Bearing	6303-2RS
25	P520200V	O-Ring	111x2
26	P680600S	Screw	M6x35#316
27	P686100S	Washer	M6(1/4)#316
28	R133500S	Motor Bracket	123mm-P-1/2&1HP#316
29	P668100S	Screw	1/4PT
30	P503000V	Mechanical Seal	ED560N-M15mm(SIC)
31	P520700V	Oil Seal	116x3
32	R144300S	Mechanical Seal Bracket	123mm-P-1/2&1HP#316
33	P5120000	Oil Seal	15x28x6-SUS
34	P684100S	Screw	M6x16
35	P400900S	Impeller Key	4x4x10mm
36	R175400S	Impeller	123mm-P1/2HP-N葉#316 60Hz
37	P686800S	Washer	3/8(M10)
38	P686300S	Washer	M10(7/16 3/8)
39	P685800S	Nut	M10
40	P1802100	Hose Nipple	2"
41	P681300S	Screw	M8x25
42	R310110S	Outlet Flange	2"-#316
43	P8501000	Gasket	2"
44	R158910S	Volute Casing	123mm-P-1/2~1HP-#316
45	R631330S	Strainer	158mm-(30x32)
46	R631300S	Strainer	158mm-(7mm)
47	P680100S	Screw	M6x12#316

MSVSS1-1

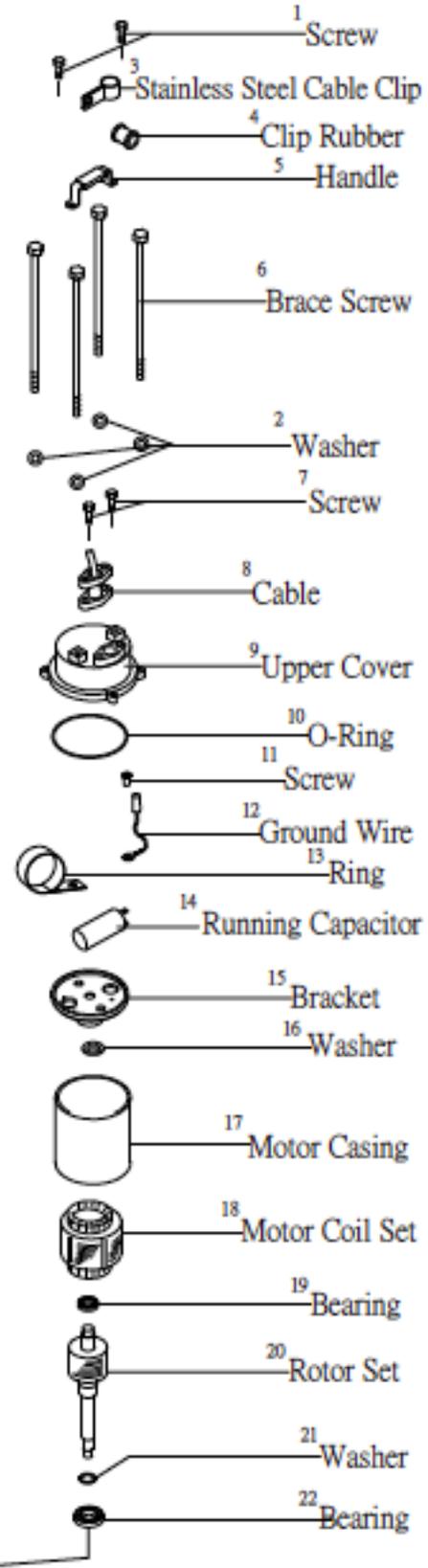
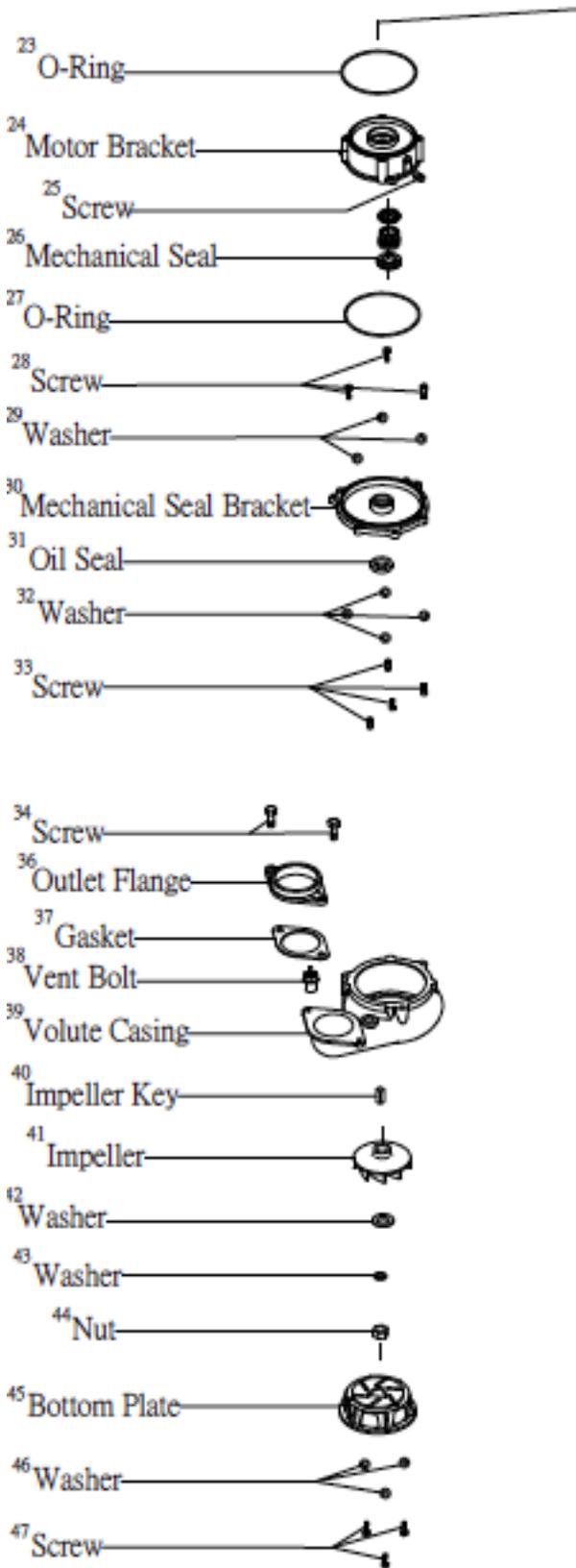
- 20 Bearing
- 21 Rotor Set
- 22 Bearing
- 23 O-Ring
- 24 Screw
- 25 Washer
- 26 Motor Bracket
- 27 Screw
- 28 Mechanical Seal
- 29 O-Ring
- 30 Mechanical Seal Bracket
- 31 Oil Seal
- 32 Screw
- 33 Impeller Key
- 34 Impeller
- 35 Washer
- 36 Washer
- 37 Nut
- 38 Hose Nipple
- 39 Screw
- 40 Outlet Flange
- 41 Gasket
- 42 Volute Casing
- 43 Strainer
- 44 Screw

- 1 Screw
- 2 Stainless Steel Cable Clip
- 3 Float Switch
- 4 Clip Rubber
- 5 Handle
- 6 Brace Screw
- 7 Washer
- 8 Screw
- 9 Cable
- 10 Upper Cover
- 11 O-Ring
- 12 Screw
- 13 Ground Wire
- 14 L Type Fixed Piece
- 15 Running Capacitor
- 16 Bracket
- 17 Washer
- 18 Motor Casing
- 19 Motor Coil Set

MSVSS1-1

D. #.	Part No	Description	Specification
1	P680200S	Screw	M6x16#316
2	P7605000	Stainless Steel	316
3	R5401100	Float Switch	15A/250V (46cm)
4	P7501000	Clip Rubber	1.25
5	R7153000	Handle	140mm
6	P625400S	Brace Screw	1/4x180#316
7	P686100S	Washer	M6(1/4)#316
8	P680300S	Screw	M6x20#316
9	P7038100	Cable	14AWGx3Cx5 UL/CSA
10	R110300S	Upper Cover	1/2&1HP#316
11	P520200V	O-Ring	111x2
12	P650200K	Screw	M5x8
13	P9899000	Ground Wire	Copper
14	P5601000	L Type Fixed Piece	(19x40x0.8t)
15	P4604000	Running Capacitor	60Hz
	P4608000		50Hz
16	R122300C	Bracket	123mm-T
17	Z9821000	Snap Bushing	OSB-26
18	R605000S	Motor Casing	123x155-16#316
19	R822500H	Stator	60Hz 110V
20	P4803000	Bearing	6202-2RS
21	R815300S	Rotor Set	123*61*65-#316
22	P4804000	Bearing	6303-2RS
23	P520200V	O-Ring	111x2
24	P680600S	Screw	M6x35#316
25	P686100S	Washer	M6(1/4)#316
26	R133500S	Motor Bracket	1/2&1HP#316
27	P668100S	Screw	1/4PT
28	P503000V	Mechanical Seal	ED560N-M15m(SIC)
29	P520700V	O-Ring	116x3
30	R144300S	Mechanical Seal	1/2&1HP#316
31	P5120000	Oil Seal	15x28x6-SUS
32	P684100S	Screw	M6x16
33	P400100S	Impeller Key	4x4x13mm
34	R175500S	Impeller	60Hz
35	P686800S	Washer	M10(3/8)#316
36	P686300S	Washer	M10(3/8)#316
37	P685800S	Nut	M10
38	P1802100	Hose Nipple	2"
39	P681300S	Screw	M8x25#316
40	R310110S	Outlet Flange	2"#316
41	P8501000	Gasket	2"
42	R158910S	Volute Casing	123mm-1/2~1HP-316
43	R631330S	Strainer	158mm (7mm)
44	P680100S	Screw	M6x12#316

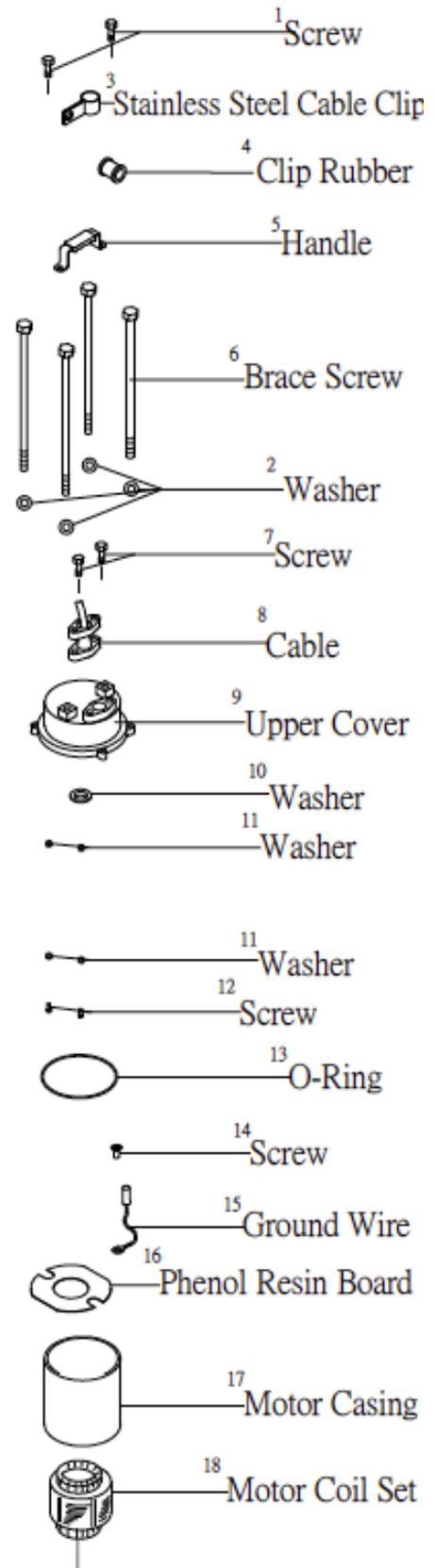
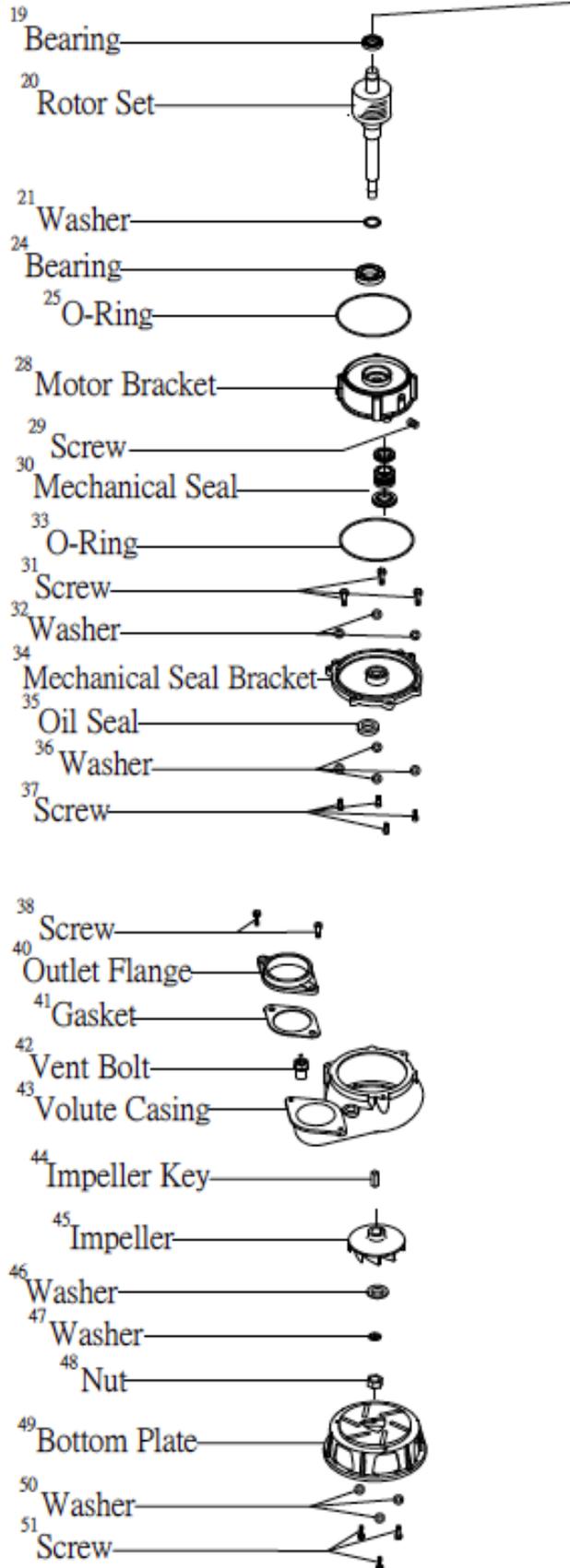
MSVSS2-1



MSVSS2-1

D. #	Part No	Description	Specification
1	P680200S	Screw	M6x16#316
2	P686100S	Washer	M6(1/4)#316
3	P7605000	Stainless Steel Cable Clip	#316
4	P7501000	Clip Rubber	1.25
5	R7153000	Handle	140mm#316
6	P625600S	Brace Screw	1/4x225#316
7	P687300S	Screw	1/4x3/4#316
8	P7025300	Cable	14AWGx3Cx15 UL/CSA
9	R112200S	Upper Cover	140mm-P-2HP#316
10	P5203000	O-Ring	132x2.0
11	P650200K	Screw	M5x8
12	P9899000	Ground Wire	Copper
13	P5604000	Ring	MS
14	P4609000	Running Capacitor	35uF/450V
15	R122100C	Bracket	P-140mm-P-2HP
16	Z9819000	Washer	OSB-19
17	R600100S	Motor Casing	139.8x20015mm
18	R822400H	Motor Coil Set	140*70*100--220V
19	P4824000	Bearing	6302ZZ
20	R815510S	Rotor Set	140*70*100-2HP
21	P9412000	Washer	6305
22	P4805000	Bearing	6305ZZ
23	P520300V	O-Ring	132x2.0
24	R131700S	Motor Bracket	P-2HP #316
25	P668100S	Screw	1/4PT
26	P501000V	Mechanical Seal	ED560N-M20-(SIC)
27	P520900V	O-Ring	132x3
28	P651600K	Screw	M5x10
29	P672200K	Washer	M5
30	R141700S	Mechanical Seal Bracket	P-2HP #316
31	P5108000	Oil Seal	20x35x7-SUS-K.Q
32	P686100S	Washer	M6(1/4)#316
33	P684100S	Screw	M6x16#316
34	P682100S	Screw	M10x25#316
35	R686800S	Washer	M10-#316
36	R310710S	Outlet Flange	3"
37	P8502000	Gasket	3"
38	R8402000	Vent Bolt	1/2PF
39	R159700S	Volute Casing	140mm-P-2HP
40	P400200S	Impeller Key	5x5x18mm
41	R177000S	Impeller	140mm-P-2HP-#316
42	P686900S	Washer	M12(1/2)#316
43	P686400S	Washer	M12(1/2)#316
44	P685400S	Nut	M12#316
45	R200700S	Bottom Plate	P2HP.Q1HP-#316
46	P686100S	Washer	M6(1/4)#316
47	P680200S	Screw	M6x16#316

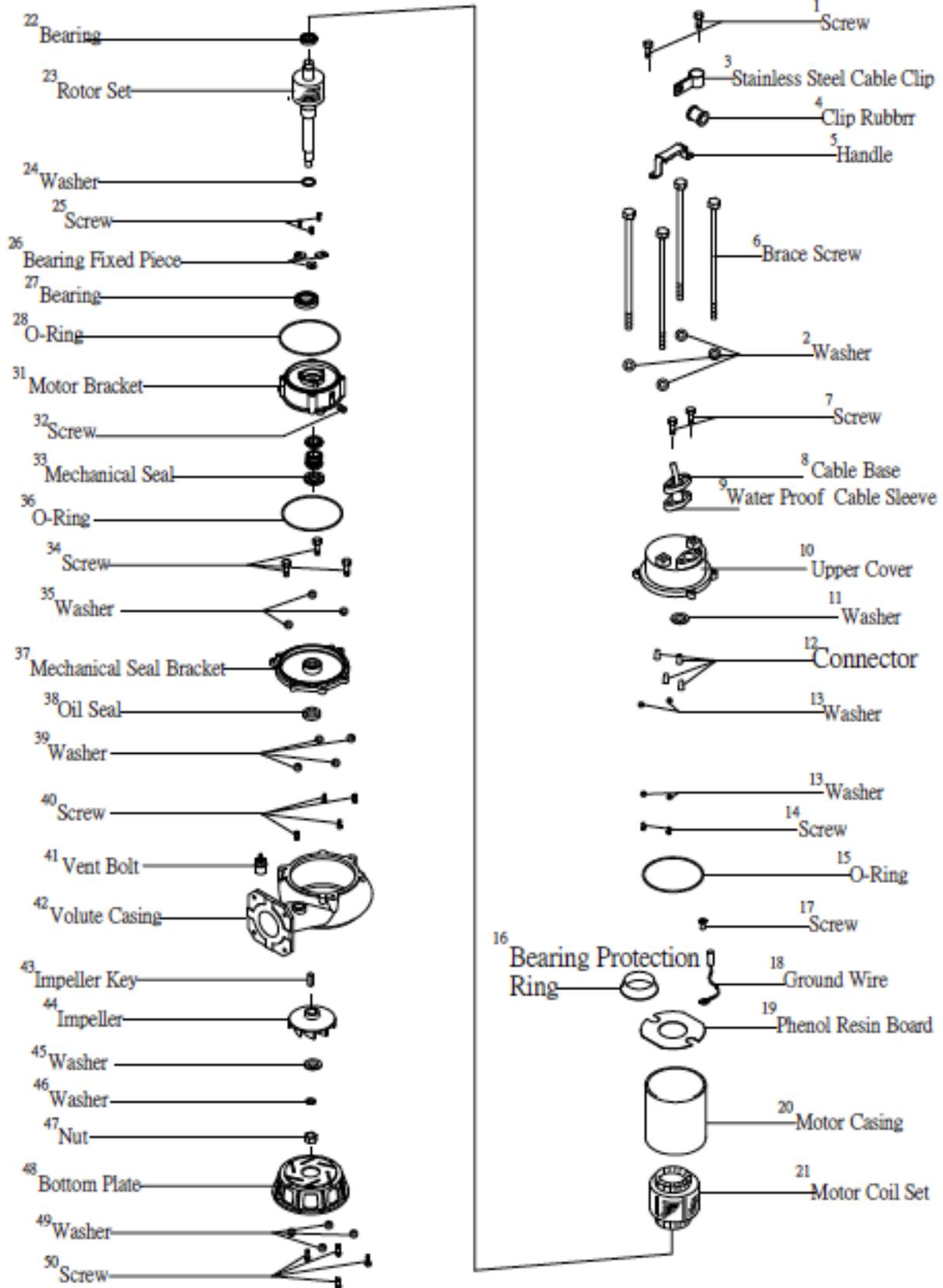
MSVSS2-3



MSVSS2-3

D. #	Part No	Description	Spec
1	P680200S	Screw	M6x16#316
2	P686100S	Washer	M6(1/4)#316
3	P7605000	Stainless Steel Cable	#316
4	P7501000	Clip Rubber	1.25
5	R7153000	Handle	140mm #316
6	P625500S	Brace Screw	1/4x185#316
7	P680300S	Screw	M6x20#316
8	P7054000	Cable	1.25x4Cx8 UL/CSA
9	R114700S	Upper Cover	140mm-P-2HP#316
10	P910500K	Washer	6302
11	P670100K	Washer	M4(5/32)
12	P650100K	Screw	M4x12-
13	P520300V	O-Ring	132x2.0
14	P650200K	Screw	M5x8
15	P9899000	Ground Wire	Copper
16	P9203000	Phenol Resin Board	140mm
17	R600210S	Motor Casing	139.8x160#316
18	R826910H	Motor Coil Set	60Hz 220V
19	P4824000	Bearing	6302ZZ
20	R816310S	Rotor Set	140*75*80
21	P9412000	Washer	6305
22	P651600K	Screw	M5x10
23	P9410000	Washer	13*18*6.5
24	P4805000	Bearing	6305ZZ
25	P520300V	O-Ring	132x2.0
26	P681600S	Screw	M8x40#316
27	P686200S	Washer	M8(5/16)#316
28	R131700S	Motor Bracket	P-2HP #316
29	P668100S	Screw	1/4PT
30	P501000V	Mechanical Seal	ED560-M20-(SIC/VITON)
31	P651600K	Screw	M5x10-
32	P672200K	Washer	M5
33	P520900V	Oil Seal	132x3
34	R141700S	Mechanical Seal	P-2HP #316
35	P5108000	Oil Seal	20x35x7-SUS-K.Q
36	P686100S	Washer	M6(1/4)#316
37	P684100S	Screw	M6x16
38	P682100S	Screw	M10x25#316
39	P686800S	Washer	M10#316
40	R310710S	Outlet Flange	3"
41	P8502000	Gasket	3"
42	R8402000	Vent Bolt	1/2PF
43	R159700S	Volute Casing	140mm-P-2HP
44	P400200S	Impeller Key	5x5x18mm
45	R177000S	Impeller	60Hz
46	P686900S	Washer	M12(1/2)#316
47	P686400S	Washer	M12(1/2)#316
48	P685400S	Nut	M12#316
49	R200700S	Bottom Plate	P2HP.Q1HP-#316
50	P686100S	Washer	M6(1/4)#316
51	P680200S	Screw	M6x16#316

MSVSS3-3



MSVSS3-3

D. #	Part No	Description	Specification
1	P681100S	Screw	M8x16#316
2	P686200S	Washer	M8#316
3	P7605000	Stainless Steel Cable	#316
4	P7503000	Clip Rubber	3.5
5	R7154000	Handle	160mm #316
6	P625700S	Brace Screw	5/16x215 #316
7	P680300S	Screw	M6x20 #316
8	P7451000	Cable Base	#316
9	P7321000	Water Proof Cable	Viton
10	R114500S	Upper Cover	160mmP-3&5HP#316
11	P910600K	Washer	6303
12	Z9803100	Connector	CE5
13	P670100K	Washer	M4(5/32)
14	P650100K	Screw	M4x12
15	P520500V	O-Ring	150x2.5
16	P5265000	Bearing Protection Ring	Ethylene Propylene
17	P650200K	Screw	M5x8
18	P9899000	Ground Wire	Copper
19	P9204000	Phenol Resin Board	160mm
20	R601710S	Motor Casing	159.8x185 #316
21	R823610H	Stator	60Hz 240/480
22	P4804100	Bearing	6303ZZ
23	R816010S	Rotor Set	160*80*80-P-3HP
24	P9412000	Washer	6305(25*32)
25	P651600K	Screw	M5x10
26	P9410000	Bearing Fixed Piece	13*18*6.5
27	P4805000	Bearing	6305ZZ
28	P520500V	O-Ring	150x2.5
29	P681600S	Screw	M8x40#316
30	P686200S	Washer	M8(5/16)#316
31	R131800S	Motor Bracket	160mm-P-3&5HP#316
32	P668100S	Screw	1/4PT
33	P501000V	Mechanical Seal	ED560N-M20(SIC)
34	P651600K	Screw	M5x10
35	P672200K	Washer	M5
36	P521000V	Oil Seal	150x3
37	R141800S	Mechanical Seal	160mm-P-3&5HP#316
38	P5108000	Oil Seal	TC20x35x7-SUS
39	P686100S	Washer	M6(1/4)#316
40	P684100S	Screw	M6x16#316
41	R8402000	Vent Bolt	1/2PF
42	R159000S	Volute Casing	160mm-P-3~10HP#316
43	P400200S	Impeller Key	5x5x18mm
44	R177100S	Impeller	160mm-P-3HP #316
45	P686900S	Washer	M12(1/2)#316
46	P686400S	Washer	M12(1/2)#316
47	P685400S	Nut	M12#316
48	R201000S	Bottom Plate	P-3~10HP
49	P686200S	Washer	M8#316
50	P681100S	Screw	M8x16#316

MSVSS3-5

- 26 Bearing
- 27 Rotor Set
- 28 Washer
- 29 Screw-M5x10
- 30 Bearing Fixed Piece
- 31 Bearing
- 32 O-Ring
- 33 Screw-M8x40
- 34 Washer-M8(5/16)
- 35 Motor Bracket
- 36 Screw-1/4
- 37 Mechanical Seal
- 40 O-Ring
- 41 Mechanical Seal Bracket
- 42 Oil Seal
- 43 Washer-1/4
- 44 Screw-1/4x5/8
- 45 Vent Bolt
- 46 Volute Casing
- 47 Impeller Key
- 48 Impeller
- 49 Washer-1/2
- 50 Washer -1/2
- 51 Nut-1/2
- 52 Bottom Plate
- 53 Washer-M8(5/16)
- 54 Screw-M8x16

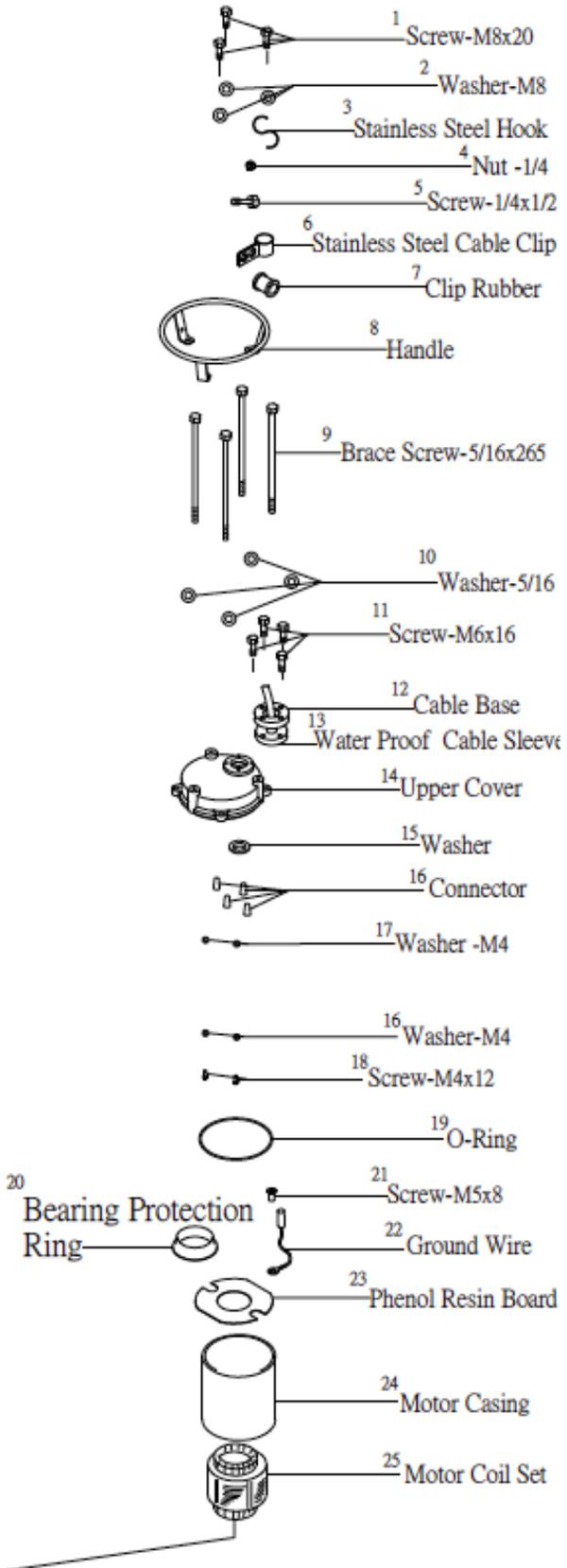
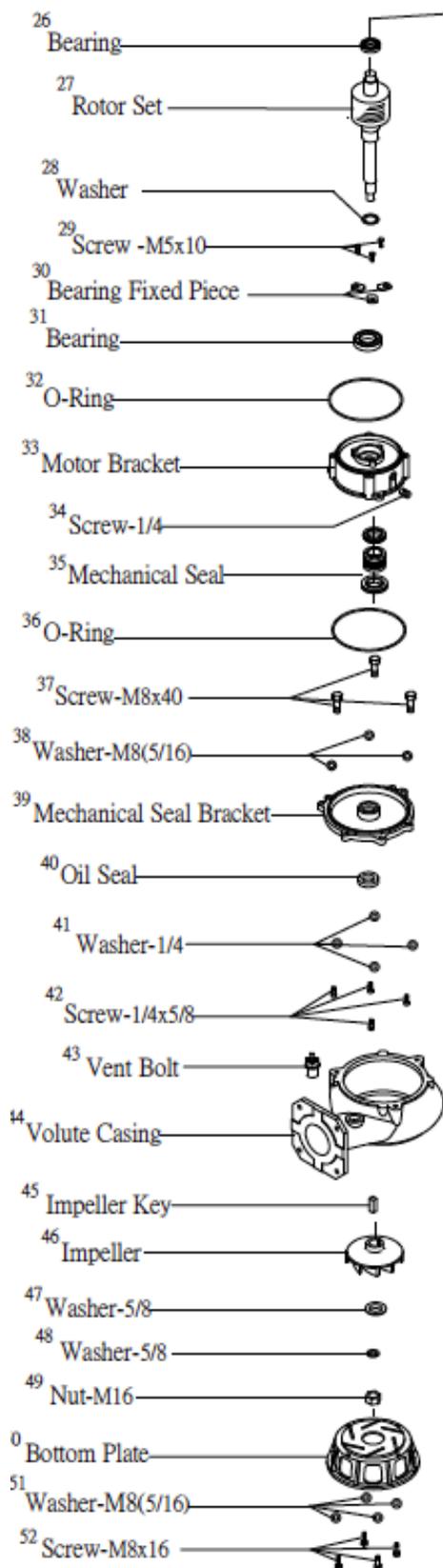
- 1 Screw-M8x16
- 3 Stainless Steel Hook
- 4 Nut-1/4
- 5 Screw-1/4x1/2
- 6 Stainless Steel Cable Clip
- 7 Clip Rubber
- 8 Handle
- 9 Brace Screw-5/16x235
- 11 Washer-5/16
- 10 Screw-M6x20
- 12 Cable Base
- 13 Water Proof Cable Sleeve
- 14 Upper Cover
- 15 Washer
- 16 Connector
- 17 Washer-M4
- 17 Washer-M4
- 18 Screw-M4x12
- 19 O-Ring
- 20 Bearing Protection Ring
- 21 Screw-M5x8
- 22 Ground Wire
- 23 Phenol Resin Board
- 24 Motor Casing
- 25 Motor Coil Set



MSVSS3-5

D. #	Part No	Description	Specification
1	P681100S	Screw	M8x16#316
2	P686200S	Washer	M8#316
3	P7701000	Stainless Steel Hook	#316
4	P685110S	Nut	M6#316
5	P680100S	Screw	M6x12#316
6	P7603000	Stainless Cable Clip	#316
7	P7503000	Clip Rubber	3.5
8	R7154000	Handle	160mm #316
9	P625800S	Brace Screw	5/16x235#316
10	P680300S	Screw	M6x20#316
11	P686100S	Washer	M6(1/4)#316
12	P7451000	Cable Base	#316
13	P7322000	Water Proof Cable	Ethylene Propylene
14	R114500S	Upper Cover	160mmP-3&5HP #316
15	P910600K	Washer	6303
16	Z9803100	Connector	CE5
17	P670100K	Washer	M4(5/32)
18	P650100K	Screw	M4x12
19	P520500V	O-Ring	150x2.5
20	P5265000	Bearing Protection Ring	Ethylene Propylene
21	P650200K	Screw	M5x8
22	P9899000	Ground Wire	Copper
23	P9204000	Phenol Resin Board	160mm
24	R601810S	Motor Casing	159.8x205(509*208)#316
25	R823910H	Stator	60Hz 240/480V
26	P4804100	Bearing	6303ZZ
27	R816110S	Rotor Set	160*80*100-P-5HP
28	P9412000	Washer	6305(25*32)
29	P651600K	Screw	M5x10
30	P9410000	Bearing Fixed Piece	13*18*6.5
31	P4805000	Bearing	6305ZZ
32	P520500V	O-Ring	150x2.5
33	P681600S	Screw	M8x40#316
34	P686200S	Washer	M8(5/16)#316
35	R131800S	Motor Bracket	160mm-P-3&5HP#316
36	P668100S	Screw	1/4PT
37	P502400V	Mechanical Seal	ED560N-M20(SIC)
38	P651600K	Screw	M5x10
39	P672200K	Washer	M5
40	P521000V	Oil Seal	150x3
41	R141800S	Mechanical Seal Bracket	160mm-P-3&5HP#316
42	P5108000	Oil Seal	TC20x35x7-SUS
43	P686100S	Washer	M6(1/4)#316
44	P684100S	Screw	M6x16#316
45	R8402000	Vent Bolt	1/2PF
46	R159000S	Volute Casing	160mm-P-3~10HP#316
47	P400200S	Impeller Key	5x5x18mm
48	R177200S	Impeller	160mm-P-5HP-N #316
49	P686900S	Washer	M12(1/2)#316
50	P686400S	Washer	M12(1/2)#316
51	P685400S	Nut	M12#316
52	R201000S	Bottom Plate	P-3~10HP
53	P686200S	Washer	M8(5/16)#316
54	P681100S	Screw	M8x16#316

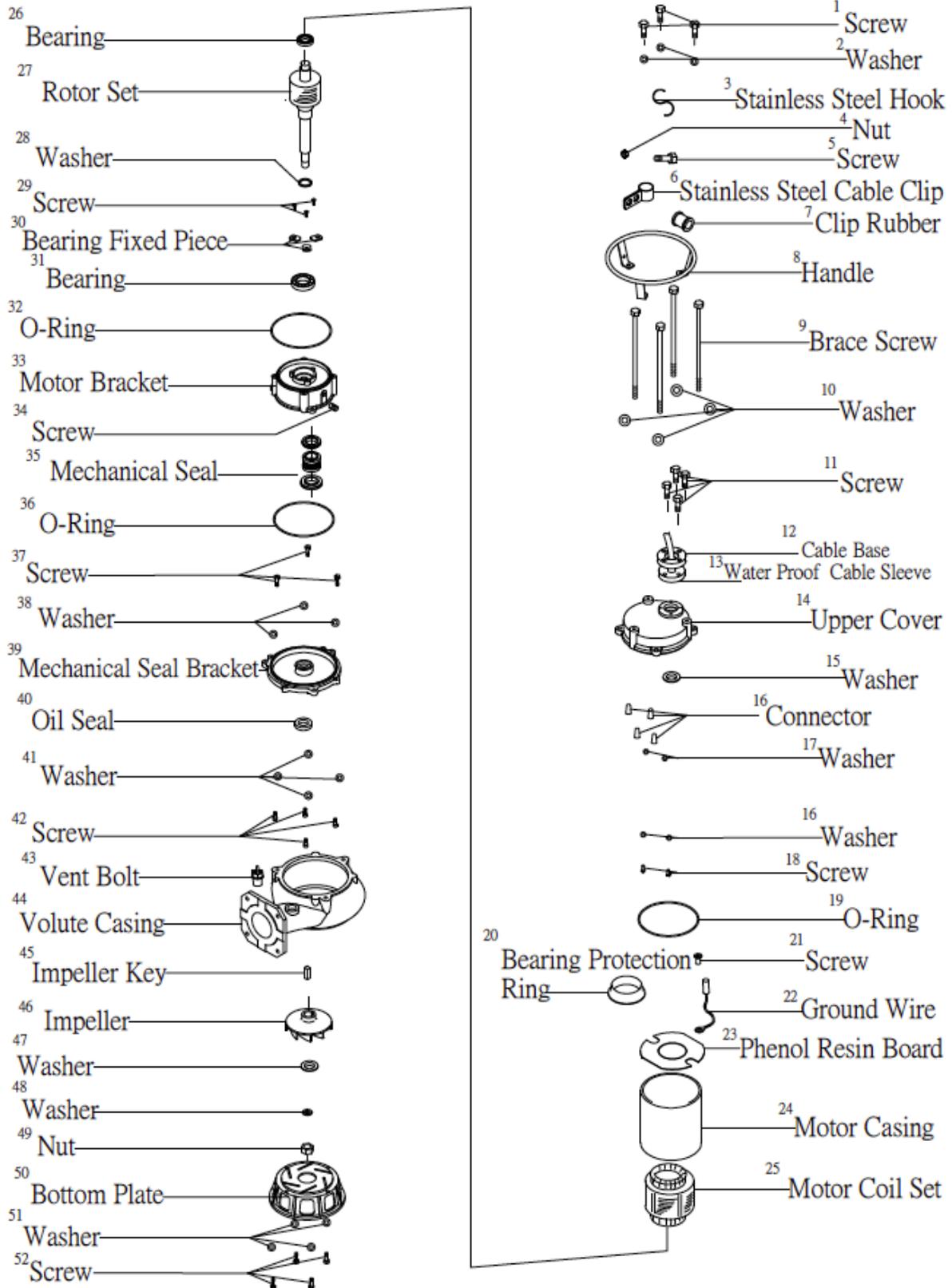
MSVSS4-7.5



MSVSS4-7.5

D. #	Part No.	Description	Specification
1	P681100S	Screw	M8x16#316
2	P686200S	Washer	M8#316
3	P7701000	Stainless Steel Hook	#316
4	P685110S	Nut	M6#316
5	P680100S	Screw	M6x12#316
6	P7603000	Cable 50 Feet	UL/CSA SOOW
7	P7503000	Clip Rubber	3.5(11)
8	R7155000	Handle	9mm-R
9	P625900S	Brace Screw	5/16x265#316
10	P686200S	Washer	5/16#316
11	P680200S	Screw	M6x16#316
12	P7453000	Cable Base	#316
13	P7325000	Water Proof Cable	Viton
14	R114800S	Upper Cover	160mm-P-7.5&10HP#316
15	P910700K	Washer	6304
16	Z9803100	Connector	CE5
17	P670100K	Washer	M4(5/32)
18	P650100K	Screw	M4x12
19	P520500V	O-Ring	150x2.5
20	P5265000	Bearing Protection Ring	Ethylene Propylene
21	P650200K	Screw	M5x8
22	P9899000	Ground Wire	Copper
23	P9204000	Phenol Resin Board	160mm
24	R605110S	Motor Casing	159.8x235#316
25	R834600H	Stator	60Hz 240/480V
26	P4820000	Bearing	6304ZZ
27	R802400S	Rotor Set	160*85*125PS7.5HP #316
28	P9412000	Washer	6305(25*32)
29	P651600K	Screw	M5x10
30	P9410000	Bearing Fixed Piece	13*18*6.5
31	P4805000	Bearing	6305ZZ
32	P520500V	Oil Seal	150x2.5
33	R131900S	Motor Bracket	160mm-P-7.5&10HP#316
34	P668100S	Screw	1/4PT
35	P502400V	Mechanical Seal	ED-560-25mm(SIC)
36	P521000V	Oil Seal	150x3
37	P681600S	Screw	M8x40#316
38	P686200S	Washer	(M8)5/16#316
39	R141900S	Mechanical Seal	160mm-P-7.5&10HP#316
40	P5105000	Oil Seal	25x44x7-SOS
41	P686100S	Washer	M6(1/4)#316
42	P684100S	Screw	M6x16
43	R8402000	Vent Bolt	1/2PF
44	R159000S	Volute Casing	160mm-P-3~10HP#316
45	P400200S	Impeller Key	5x5x18mm
46	R173100S	Impeller	160mm-P-7.5HP-N #316
47	P687000S	Washer	M16(5/8)#316
48	P686500S	Washer	M16(5/8)#316
49	P686000S	Nut	M16
50	R201000S	Bottom Plate	P-3~10HP
51	P686200S	Washer	M8(5/16)#316
52	P681100S	Screw	M8x16#316

MSVSS4-10



MSVSS4-10

D. #	Part No	Description	Specification
1	P681100S	Screw	M8x16#316
2	P686200S	Washer	M8#316
3	P7701000	Stainless Steel Hook	S
4	P660200S	Nut	1/4#316
5	P642700S	Screw	1/4x1/2#316
6	P7604000	Stainless Steel Cable Clip	#316
7	P7503000	Clip Rubber	3.5(11)
8	R7155000	Handle	9mm-R
9	P626000S	Brace Screw	5/16x285#316
10	P686200S	Washer	5/16#316
11	P680200S	Screw	M6x16#316
12	P7453000	Cable Base	#316
13	P7326000	Water Proof Cable Sleeve	Viton
14	R114800S	Upper Cover	160mm-P-7.5&10HP#316
15	P910700K	Washer	6304
16	Z9803100	Connector	CE5
17	P670100K	Washer	M4(5/32)
18	P650100K	Screw	M4x12
19	P520500V	O-Ring	150x2.5
20	P5265000	Bearing Protection Ring	Ethylene Propylene
21	P650200K	Screw	M5x8
22	P9899000	Ground Wire	Copper
23	P9204000	Phenol Resin Board	160mm
24	R605210S	Motor Casing	159.8x255#316
25	R835100H	Stator	60Hz 240/480V 160*85*150
26	P4820000	Bearing	6304ZZ
27	R803000S	Rotor Set	160*85*150PS10HP #316
28	P9412000	Washer	6305(25*32)
29	P651600K	Screw	M5x10
30	P9410000	Bearing Fixed Piece	13*18*6.5
31	P4805000	Bearing	6305ZZ
32	P520500V	Oil Seal	150x2.5
33	R131900S	Motor Bracket	160mm-P-7.5&10HP#316
34	P668100S	Screw	1/4PT
35	P502400V	Mechanical Seal	ED-560-25mm(SIC)
36	P521000V	Oil Seal	150x3
37	P681600S	Screw	M8x40#316
38	P686200S	Washer	(M8)5/16#316
39	R141900S	Mechanical Seal Bracket	160mm-P-7.5&10HP#316
40	P5105000	Oil Seal	25x44x7-SOS
41	P686100S	Washer	M6(1/4)#316
42	P684100S	Screw	1/4x5/8
43	R8402000	Vent Bolt	1/2PF (PP)
44	R159000S	Volute Casing	160mm-P-3~10HP#316
45	P400200S	Impeller Key	5x5x18mm
46	R173200S	Impeller Key	160mm-P-10HP-N #316 60Hz
47	P687000S	Washer	M16(5/8)#316
48	P686500S	Washer	M16(5/8)#316
49	P686000S	Nut	M16
50	R201000S	Bottom Plate	P-3~10HP
51	P686200S	Washer	M8(5/16)#316
52	P681100S	Screw	M8x16#316



LIMITED WARRANTY

WARRANTY PERIOD: We warrant that our pumps, when installed and maintained in accordance with our instructions, will be free of defects in material and workmanship under normal use and service, during the following time: **One (1) year from the date of installation, or (18) months from the date of shipment, whichever occurs first**

WARRANTY CLAIM PROCEDURE: Within the above Warranty Period, we will evaluate claims under this warranty, provided that such claims are submitted in the following sequential steps:

(a) Customer submits to Mody Pumps, Inc. - via fax, e-mail attachment, or trackable mail service - a completed Warranty Evaluation Form (WEF) within five (5) days after discovery of the claimed defect;

(b) Mody Pumps, Inc. issues the Customer a **written** Return Material Authorization (RMA), via fax or e-mail, within seven (7) business days of receiving the Customer's WEF;

(c) No later than five (5) business days after the date recorded on the RMA, the subject pump must either be received at, or placed in the shipper's possession for transport to, Mody Pumps, Inc. or its Authorized Service Center. A warranty-claimed pump can only be received at Mody Pumps, Inc. or its Authorized Service Center if it is returned with a valid RMA from Mody Pumps, Inc.

VOIDING FACTORS: This warranty shall not apply when damage is caused by such factors as, but not limited to: (a) improper installation, (b) improper voltage, (c) lightning, (d) sand or other abrasive materials, (e) scale or corrosion build-up due to excessive chemical content, (f) errors in specifications, (g) errors in bills of materials, (h) any modification of the product. We will not be responsible for loss, damage, or labor and other related costs that result from interruption of service caused by defective parts. Neither will we accept charges incurred by others without our prior written approval. This warranty is void if our inspection reveals that the product was used in a manner inconsistent with normal industry practice and/or our recommendations or instructions. The Customer is responsible for communicating all vital information about the application and use of the product. **THE SOLE AND EXCLUSIVE REMEDY FOR A VALID CLAIM ON ANY AND ALL PRODUCT WARRANTIES SHALL BE PRODUCT REPLACEMENT OR REPAIR AT OUR ELECTION, FOB POINT OF MANUFACTURE OR AUTHORIZED REPAIR STATION, OF SUCH PRODUCTS AND/OR PARTS AS PROVEN DEFECTIVE.**

Any additional guarantees involving special, unusual or extraordinary performance specifications must be in writing, and such writing must be signed by an authorized representative of Mody Pumps, Inc., BEFORE the subject pump is used under such additional guarantees. Whenever user-commissioned field testing results differ from our field-conditions-adjusted lab results, our laboratory results shall control. Components or accessories that come with our pumps, but have been manufactured by others, are subject only to the original manufacturer's warranty. Recommendations for special applications, or those based on our systems analyses and evaluations, will be based on our best available experience and published or generally accepted industry standards. **SUCH RECOMMENDATIONS DO NOT CONSTITUTE A WARRANTY OF SATISFACTORY PERFORMANCE, AND NO SUCH WARRANTY IS EVER GIVEN.**

THIS WARRANTY RELATES ONLY TO OUR PRODUCT. WE WILL VIGOROUSLY DEFEND AGAINST ANY CLAIM OF OUR LIABILITY FOR DAMAGES AND COSTS THAT FLOW FROM FACTORS BEYOND OUR DIRECT AND PROXIMAL CONTROL, INFLUENCE, AND RESPONSIBILITY, INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, LOST INCOME, LABOR CHARGES, OR DELAYS IN PRODUCTION. THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER EXPRESS OR IMPLIED WARRANTY, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

No rights extended under this warranty shall be assigned to any person, whether by operation of law or otherwise, without our prior written approval. This warranty is subject to change without notice.