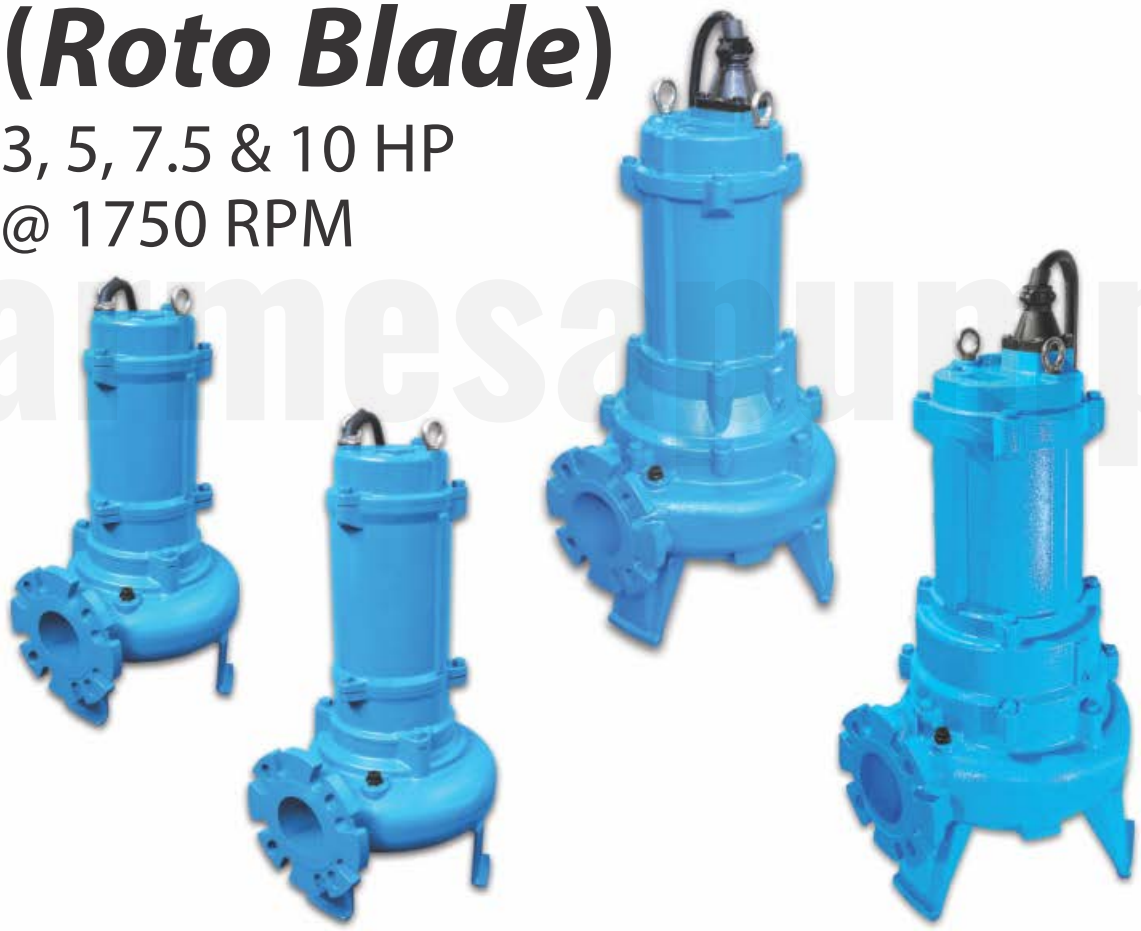
Barmesa Pumps

Installation, Operation & Maintenance Manual

Submersible Sewage Pumps
with Cutter Blade

CUT series (*Roto Blade*)

3, 5, 7.5 & 10 HP
@ 1750 RPM



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IMPORTANT! - Read all instructions in this manual before operating or servicing a pump.

Last update: JUL/24/2026

Before installation, read the following instructions carefully. Failure to follow instruction and safety information could cause serious bodily injury, death and/or property damage. Each Barmesa product is carefully inspected to insure proper performance. Closely following these instructions will eliminate potential operating problems, assuring years of trouble-free service.

⚠ DANGER **"Danger" indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.**

⚠ WARNING **"Warning" indicates an imminenty hazardous situation which, if not avoided, MAY result in death or serious injury.**

⚠ CAUTION **"Caution" indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury.**

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

ALL RETURNED PRODUCTS MUST BE CLEANED, SANITIZED, OR DECONTAMINATED PRIOR TO SHIPMENT, TO INSURE EMPLOYEES WILL NOT BE EXPOSED TO HEALTH HAZARDS IN HANDLING SAID MATERIAL. ALL APPLICABLE LAWS AND REGULATIONS SHALL APPLY.

⚠ WARNING Installation, wiring, and junction connections must be in accordance with the National Electric Code and all applicable state and local codes. Requirements may vary depending on usage and location.

⚠ WARNING Installation and servicing is to be conducted by qualified personnel only.

Keep clear of suction and discharge openings. Do not insert fingers in pump with power connected; the rotating cutter and/or impeller can cause serious injury.

Always wear eye protection when working on pumps. Do not wear loose clothing that may become entangled in moving parts.

⚠ DANGER

Pumps build up heat and pressure during operation. Allow time for pumps to cool before handling or servicing the pump or any accessory items associated with or near the pump.

⚠ DANGER

This pump is not intended for use in swimming pools or water installations where there is human contact with pumped fluid.

⚠ DANGER

Risk of electric shock. To reduce risk of electric shock, always disconnect pump from power source before handling. ***Lock out power and tag.***

⚠ WARNING **Do not** use these pumps in water over 104 ºF. **Do not** exceed manufacturers recommended maximum performance, as this could cause the motor to overheat.

⚠ DANGER

Do not lift, carry or hang pump by the electrical cables. Damage to the electrical cables can cause shock, burns or death. **Never** handle connected power cords with wet hands. Use appropriate lifting device.

⚠ WARNING Sump and sewage pumps often handle materials which could cause illness or disease. Wear adequate protective clothing when working on a used pump or piping. Never enter a basin after it has been used.

⚠ DANGER

Failure to permanently ground the pump, motor and controls before connecting to power can cause shock, burns or death.

⚠ DANGER

These pumps are not to be installed in locations classified as hazardous in accordance with the National Electric Code, ANSI/NFPA 70.

⚠ WARNING **Do not** introduce into any sewer, either directly, or through a kitchen waste disposal unit or toilet: *seafood shells, aquarium gravel, cat litter, plastic objects (toys, utensils, etc.), sanitary napkins or tampons, diapers, rags, disposable wipes or cloth, medications, flammable material, oil or grease, strong chemicals, gasoline.*

IMPORTANT! - Prior to installation, record Model Number, Serial, Amps, Voltage, Phase and HP from pump name plate for the future reference. Also record the Voltage and Current Readings at Startup:

3 Phase Models	
Amps L1-2:	Volts L1-2:
Amps L2-3:	Volts L2-3:
Amps L3-1:	Volts L3-1:

Model Number: _____

Serial: _____

PHASE: _____ HP: _____

DISCHARGE: 4" flange, horizontal.

LIQUID TEMPERATURE: 104 °F (40 °C) max.

VOLUTE: Cast iron ASTM A-48 class 30.

MOTOR HOUSING: Cast iron ASTM A-48 class 30.

IMPELLER: Cast iron ASTM A-48 class 30.

SUCTION PLATE: Ductile iron ASTM A536 100-70-03.

SHAFT: AISI 410 stainless steel (3 HP), AISI 420 stainless steel (5, 7.5 & 10 HP).

O-RINGS: Buna-N.

PAINT: Air dry enamel, water based.

SEAL: Double mechanical, oil lubricated. Silicon carbide outboard, carbon ceramic inboard seal, with stainless steel hardware.

HARDWARE: Stainless steel.

CORD: 40 ft of neoprene cord STOW, sealed against moisture.

BEARINGS: Ball, single row, oil lubricated.

MOTOR: Three phase, 230 & 460 V, 1750 RPM, 60 Hz. Air-filled watertight, built-in overload, IP68 protection and class F insulation.

LUBRICATION: The unit contains oil exclusively in the seal chamber (frame), not in the motor. The motor is a dry type and remains oil-free.

ACCESSORIES: Includes discharge elbow.

OPTIONAL EQUIPMENT: Slide Rail Coupling QL-100.

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MODEL	OUTPUT		DISCHARGE	F.L.A.		RATED		UL CORD (4C)			SPHERICAL	WEIGHT	Q.D.C.
	HP	kW		230 V	460 V	HEAD (ft)	GPM	(ft)	SIZE	TYPE	SLD HNDLG	(lb)	
CUT303	3	2.2	4"	9	-	26.2	185	40	14 AWG	STOW	2.2"	165	QL-100
CUT304				-	4.6								
CUT503	5	3.7	4"	14	-	36.1	235	40	14 AWG	STOW	3.15"	198	QL-100
CUT504				-	7.2								
CUT753	7.5	5.5	4"	20	-	42.6	235	40	12 AWG	STOW	2.68"	308	QL-100
CUT754				-	10								
CUT1003	10	7.5	4"	26.6	-	52.5	235	40	10 AWG	STOW	2.68"	363	QL-100
CUT1004				-	13.6				12 AWG				

* Weight without cable.

LUBRICATING OIL REQUIRED BY PUMP MODEL			
MODEL	HP	TYPE	QTY. (gal.)
CUT303/304	3	Turbine #32 ISO VG-32	0.317
CUT503/504	5	Turbine #32 ISO VG-32	0.357
CUT753/754	7.5	Turbine #32 ISO VG-32	1.123
CUT1003/1004	10	Turbine #32 ISO VG-32	1.374

Receiving inspection

Upon receiving the pump, it should be inspected for damage or shortages. If damage has occurred, file a claim immediately with the company that delivered the pump. If the manual is removed from the packaging, do not lose or misplace.

Storage

Any product that is stored for a period longer than six (6) months from the date of purchase should be bench tested prior to installation. A bench test consists of, checking the impeller to assure it is free turning and a run test to assure the motor (and switch if provided) operate properly.

Before Installation

Insulation resistance measurement

With the motor and cable (excluding the power supply cable) immersed in water, use a megger to measure the insulation resistance between ground and each phase of the motor, and again between each phase of the motor. The megger should indicate an insulation resistance of not less than 20 mega ohms. While making the measurement, keep the power supply cable off the ground. **We recommend that an auxiliary pump be kept on hand in case of emergency.**

Installation

⚠ WARNING Under no circumstances should cable be pulled while the pump is being transported or installed. Attach a chain or rope to the grip and install the pump.

1. This pump must not be installed on its side or operated in a dry condition. Ensure that it is installed upright on a secure base.

2. Install the pump at a location in the tank where there is the least turbulence.

3. If there is a flow of liquid inside the tank, support the piping where appropriate. Install piping so that air will not be entrapped. If piping must be installed in such a way that air pockets are unavoidable, install an air release valve wherever such air pockets are most likely to develop.

4. Do not permit end of discharge piping to be submerged, as backflow will result when the pump is shut down.

⚠ WARNING Non-automatic pumps do not have an automatic operating system Do not operate the pump for a long time with the water level near the lowest water level (H2) as shown in Figure 1, as the automatic cut-off switch incorporated inside the motor will be activated.

Wiring:

a) Wire as indicated for the appropiate start system as shown in Figure 2.

b) Loose connections will stop the pump. Make sure all electrical connections are secure.

Cable:

⚠ WARNING c) Never let the end of the cable contact water.

d) If the cable is extended, do not immerse the splice in water.

e) Fasten the cable to the discharge piping with tape or vinyl strips.

f) Install the cable so that it will not overheat. Overheating caused by coiling the cable and exposing it to direct sunlight.

Grounding:

Connect the green wire to ground. Under no circumstances should the green wire be connected to the power supply.

⚠ DANGER Use short circuit breakers to prevent danger of electrical shock.

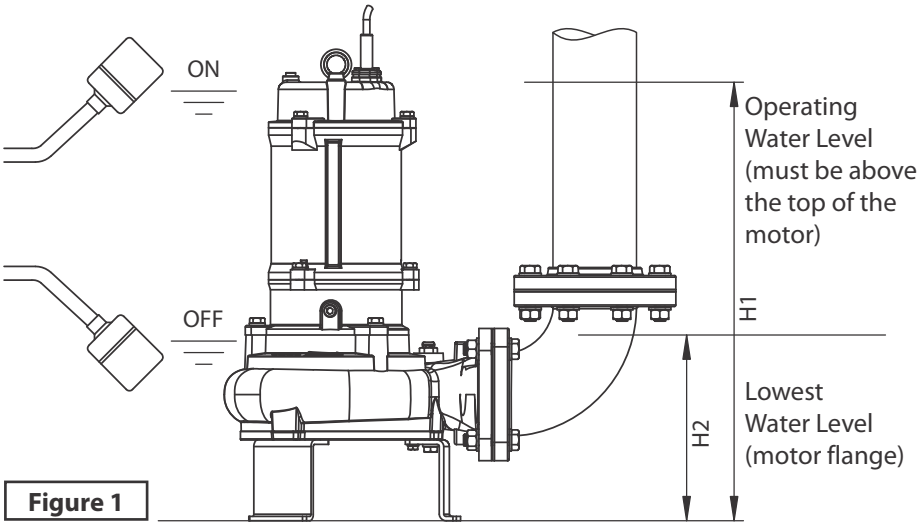

Figure 1

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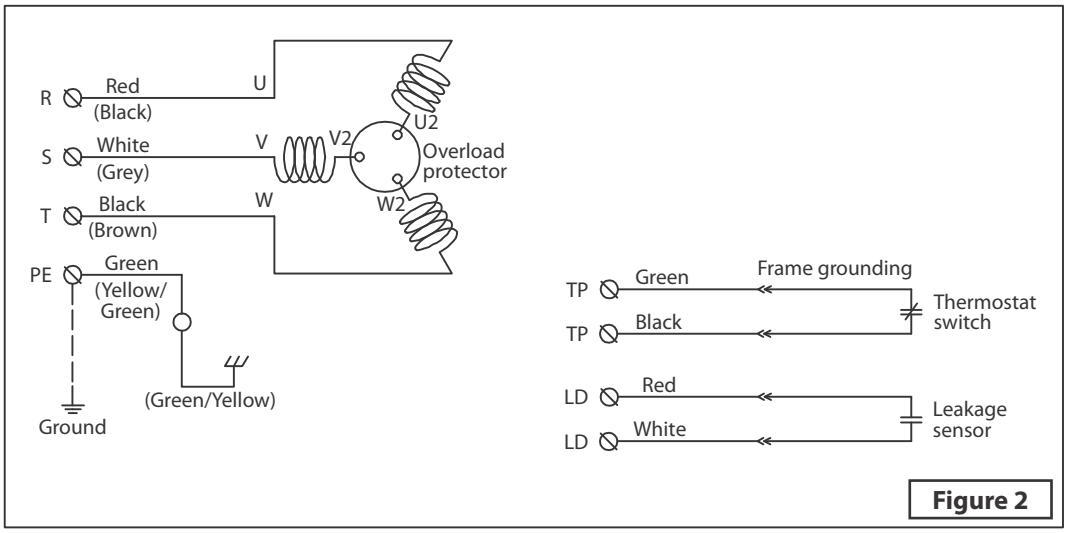

Figure 2

Before Starting the Pump

1) After completing installation, measure the insulation resistance again as described in Installation.
2) Check water level. If the pump is operated continuously for an extended period of time in a dry condition or at the lowest water level, the motor protector will be shut off the power. Constant operating in above condition will shorten pump life time. Do not start the pump again in such a situation before the motor has completely cooled.

Test operation

Non-automatic pump:

1) Turn the operating switch on and off a couple of times to check for normal pump start.
2) Next, check direction and rotation. If discharge volume is low or unusual sounds are heard when the pump is operating, rotation has been reversed. When this happens, reverse two of the wires.

Maintenance

Check pressure, output, voltage, current and other specifications. Unusual readings may indicate. Refer to Troubleshooting and correct as soon as possible.

Daily inspections:

1) Check current and ammeter fluctuation daily. If ammeter fluctuation is high, even though within the limits of pump rating, foreign matter may be clogging the pump. If the quantity of liquid discharged falls suddenly, foreign matter may be blocking the suction inlet.

Monthly inspections:

Measure the insulation resistance. The value should be more than 1M ohm. If resistance starts to fall rapidly even with an initial indication of over 1M ohm, this may be an indication of trouble and repair work is required.

Annual inspections:

To extend the service life of the mechanical seal, replace the oil in the mechanical seal chamber once a year. Water mixed with the oil or cloudy textures are indications of a defective mechanical seal requiring replacement. When replacing the oil, lay the pump on its side with filler plug on top. Inject suitable amount turbine oil no. 32 (ISO VG-32).

Inspections at 3-5 year intervals:

Conduct an overhaul of the pump. These intervals will preclude the possibility of future trouble.

Parts that will need to be replaced:

Replace the appropriate part when the following conditions are apparent. See Table 1. (Note: replacement schedule is based on normal operating conditions)

Table 1

REPLACEABLE PART	Mechanical seal	Oil filler plug gasket	Lubricating oil	O-rings
REPLACEAMENT GUIDE	Whenever oil in the mechanical seal chamber is clouded	Whenever oil is inspected or replaced	Whenever clouded or dirty	Whenever pump is overhauled
FRECUENCY	Annually	Every six months	Every six months	Annually

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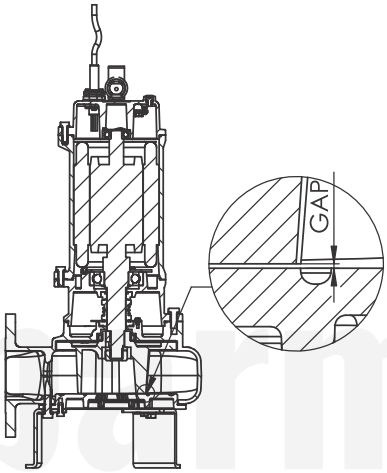
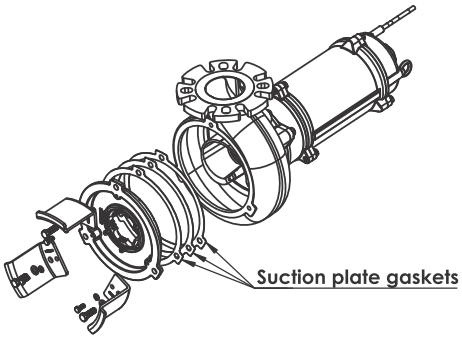
Maintenance option

Every cutter pumps is equipped with multiple suction plate gaskets.
Throughout a period of time, the cutter ability and performance will drop as the impeller and suction plate start to wear. It is recommended to remove suction plate gaskets to reduce back the gap in order to maintain cutter's slicing ability and hydraulic performance until the impeller and suction plate are completely worn out.





Disassembly

When disassembling pump, have a piece of cardboard or wooden board ready to place the different parts on as you work. Do not pile parts on top of each other. They should be laid out neatly in rows. The o-ring and gasket cannot be used again once they are removed. Have replacement parts ready. Disassemble in the following order, referring to the sectional view.

⚠ WARNING Be sure to cut off power source before disassembly.

1. Remove pump casing bolts, raise the motor section and remove pump casing.

2. Remove shaft head bolt and impeller.

3. Remove seal cavity oil filler plug and drain lubricating oil.

4. Remove intermediate casing bolts and intermediate oil chamber. (Remember that any lubricating oil remaining in the mechanical seal chamber will flow out.)

5. Carefully remove mechanical seal, taking care not to scratch sliding surface or motor shaft.

Assembly

Re-assemble in reverse order of disassembly. Be careful of the following points:

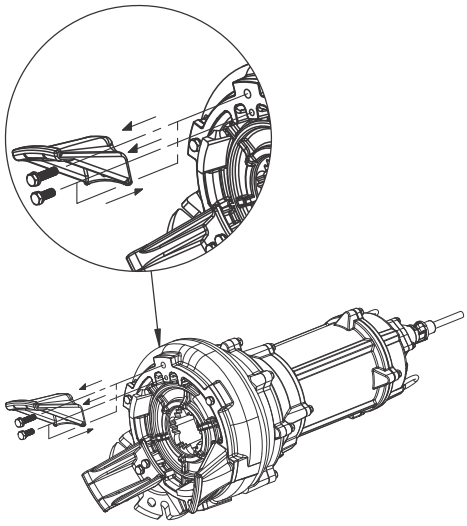
6. During re-assembly, rotate the impeller by hand and check for smooth rotation. If rotation is not smooth, perform steps (3) through (5) again.

7. Upon completion of re-assembly step 1 rotate the impeller by hand from the suction the suction inlet and check that it rotates smoothly without touching the suction cover before operating the pump.

Please obtain o-rings, packing, shaft seals and other parts from pump dealer.

Installing the QL-100

Remove both hex bolts and use the M12 x 30 hex bolt to assemble back the suction plate to the volute.



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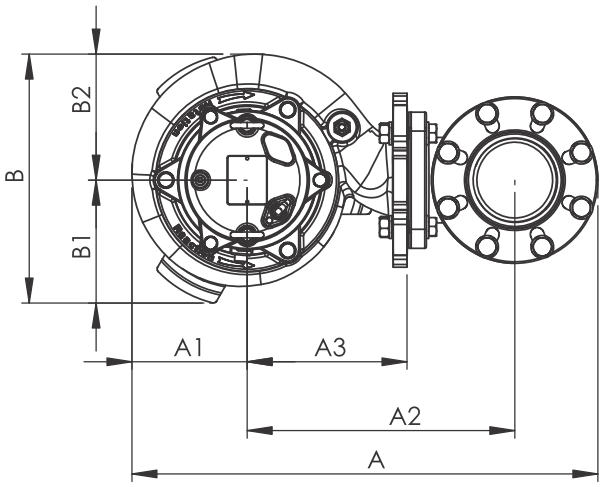
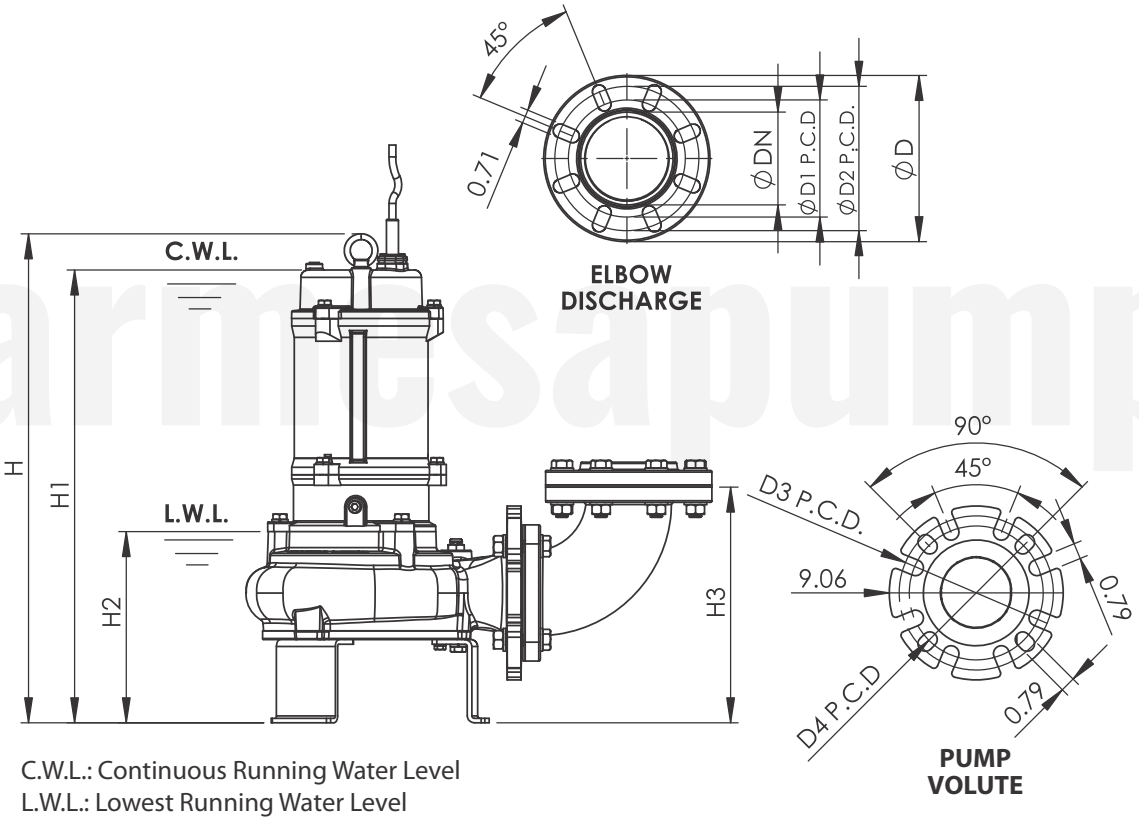
CUT303 / 304





C.W.L.: Continuous Running Water Level
L.W.L.: Lowest Running Water Level
(Most effective motor heat dissipation when fully submerged)

A	A1	A2	A3	B	B1	B2	DN	D	D1
24.2	6.0	13.9	8.3	13.0	6.4	6.6	4	8.7	7.5

D2	D3	D4	D5	D6	H	H1	H2	H3	WT
6.1	7.5	6.9	7.5	5.7	25.3	23.5	10.0	13.6	165

- Dimensions in inches.
- Weight in pounds, without the cable.

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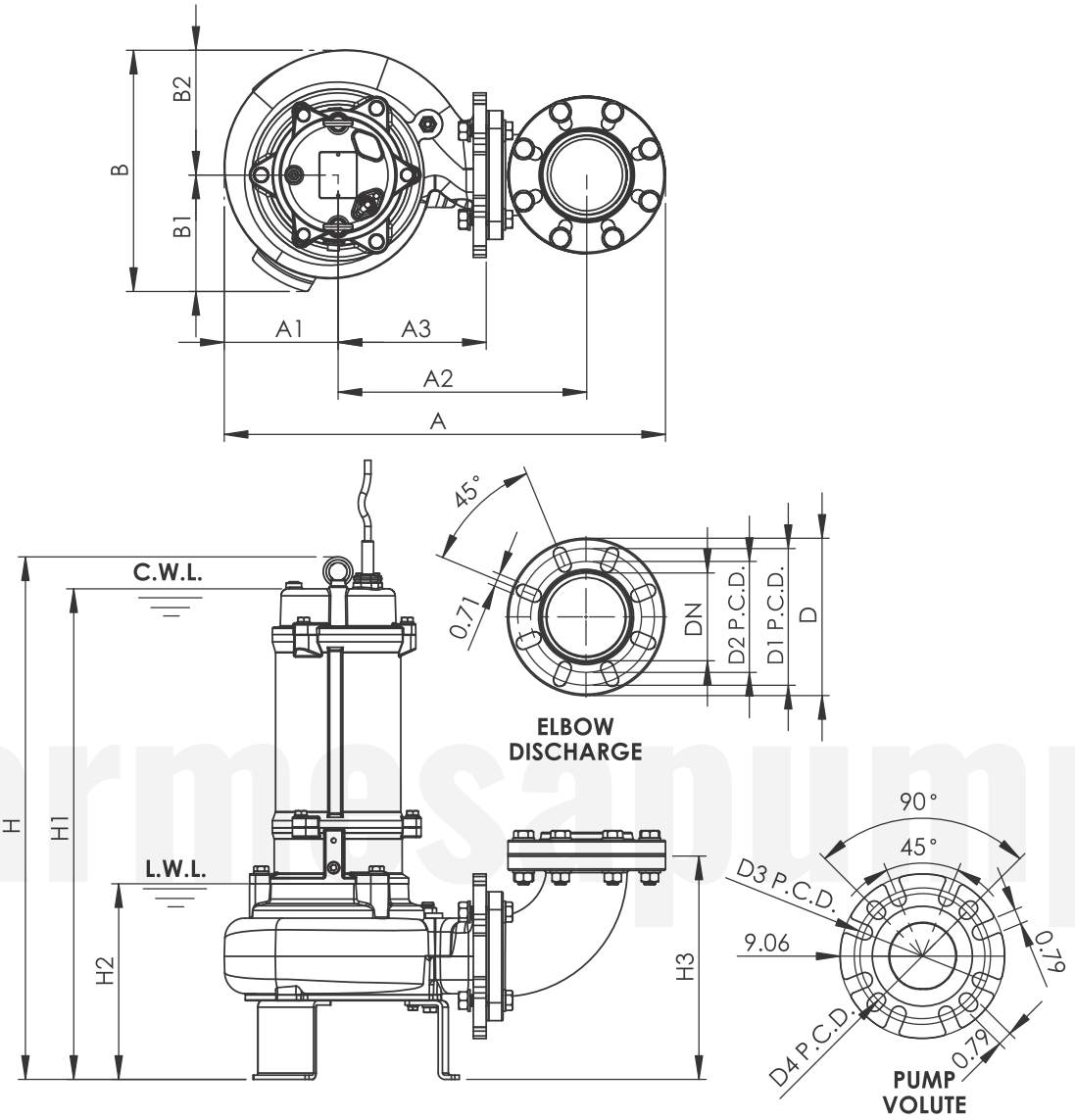
CUT503 / 504



C.W.L.: Continuous Running Water Level
L.W.L.: Lowest Running Water Level
(Most effective motor heat dissipation when fully submerged)

A	A1	A2	A3	B	B1	B2	DN	D	D1
24.4	6.3	13.7	8.2	13.3	6.4	6.9	4	8.7	7.5

D2	D3	D4	D5	D6	H	H1	H2	H3	WT
6.1	7.5	6.9	7.5	5.7	28.8	27	10.8	12.3	198

- Dimensions in inches.
- Weight in pounds, without the cable.

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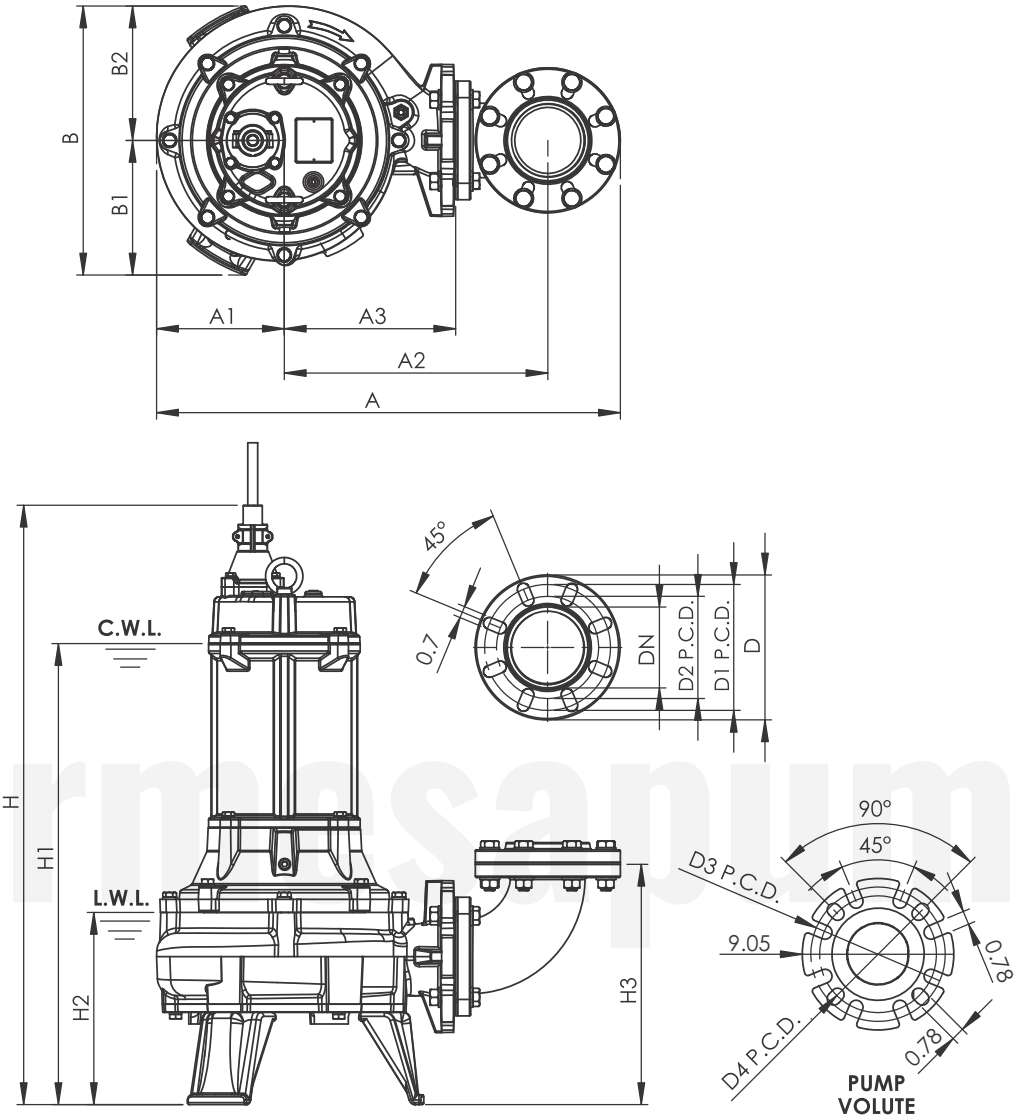
CUT753 / 754



C.W.L.: Continuous Running Water Level
L.W.L.: Lowest Running Water Level
(Most effective motor heat dissipation when fully submerged)

A	A1	A2	A3	B	B1	B2	DN	D	D1
27.8	7.7	15.8	10.2	16.1	8.1	8.1	4	8.7	7.5

D2	D3	D4	D5	D6	H	H1	H2	H3	WT
6.1	7.5	6.9	7.5	5.7	35.8	27.6	11.5	14.4	308

- Dimensions in inches.
- Weight in pounds, without the cable.

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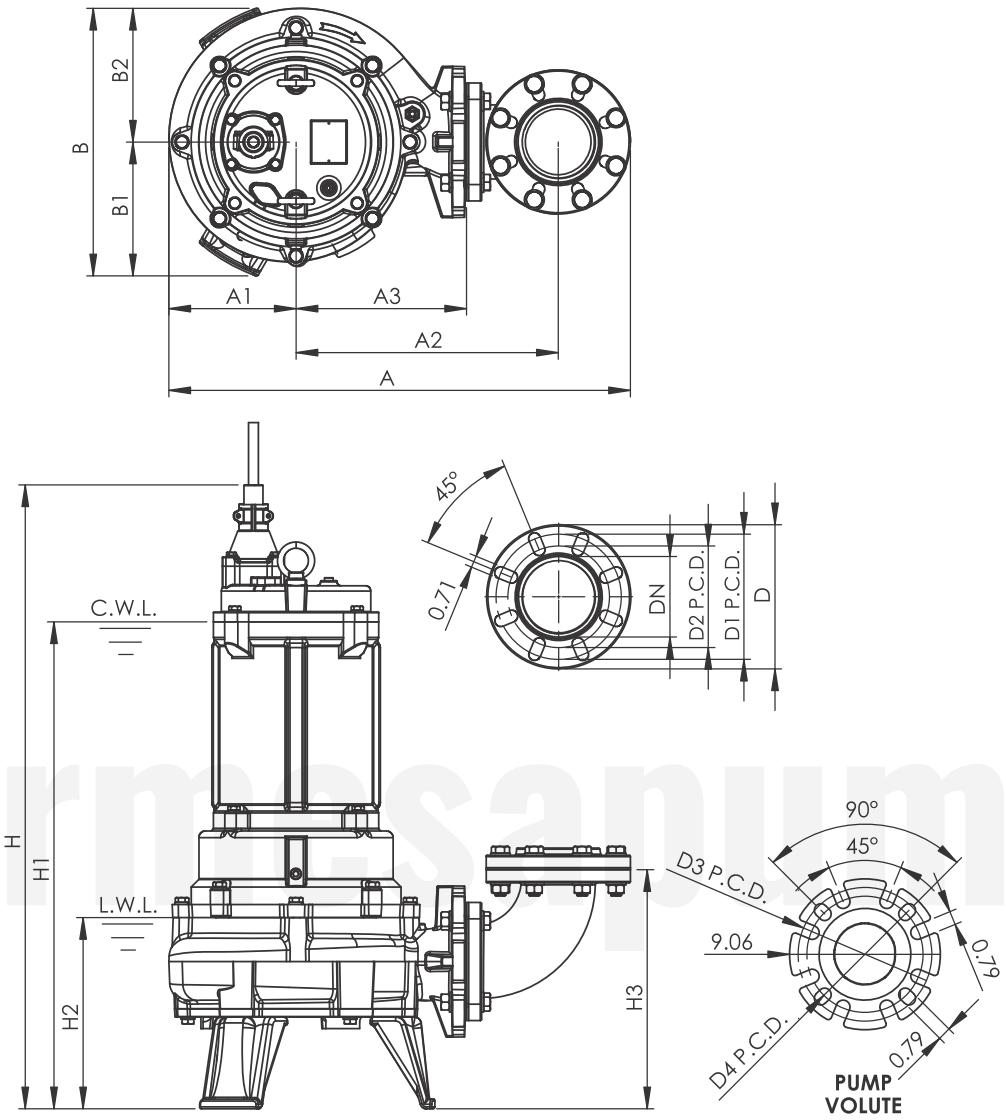
CUT1003 / 1004



C.W.L.: Continuous Running Water Level
L.W.L.: Lowest Running Water Level
(Most effective motor heat dissipation when fully submerged)

A	A1	A2	A3	B	B1	B2	DN	D	D1
27.8	7.7	15.8	10.2	16.1	8.1	8.1	4	8.7	7.5

D2	D3	D4	D5	D6	H	H1	H2	H3	WT
6.1	7.5	6.9	7.5	5.7	37.5	29.3	11.5	14.4	363

- Dimensions in inches.
- Weight in pounds, without the cable.

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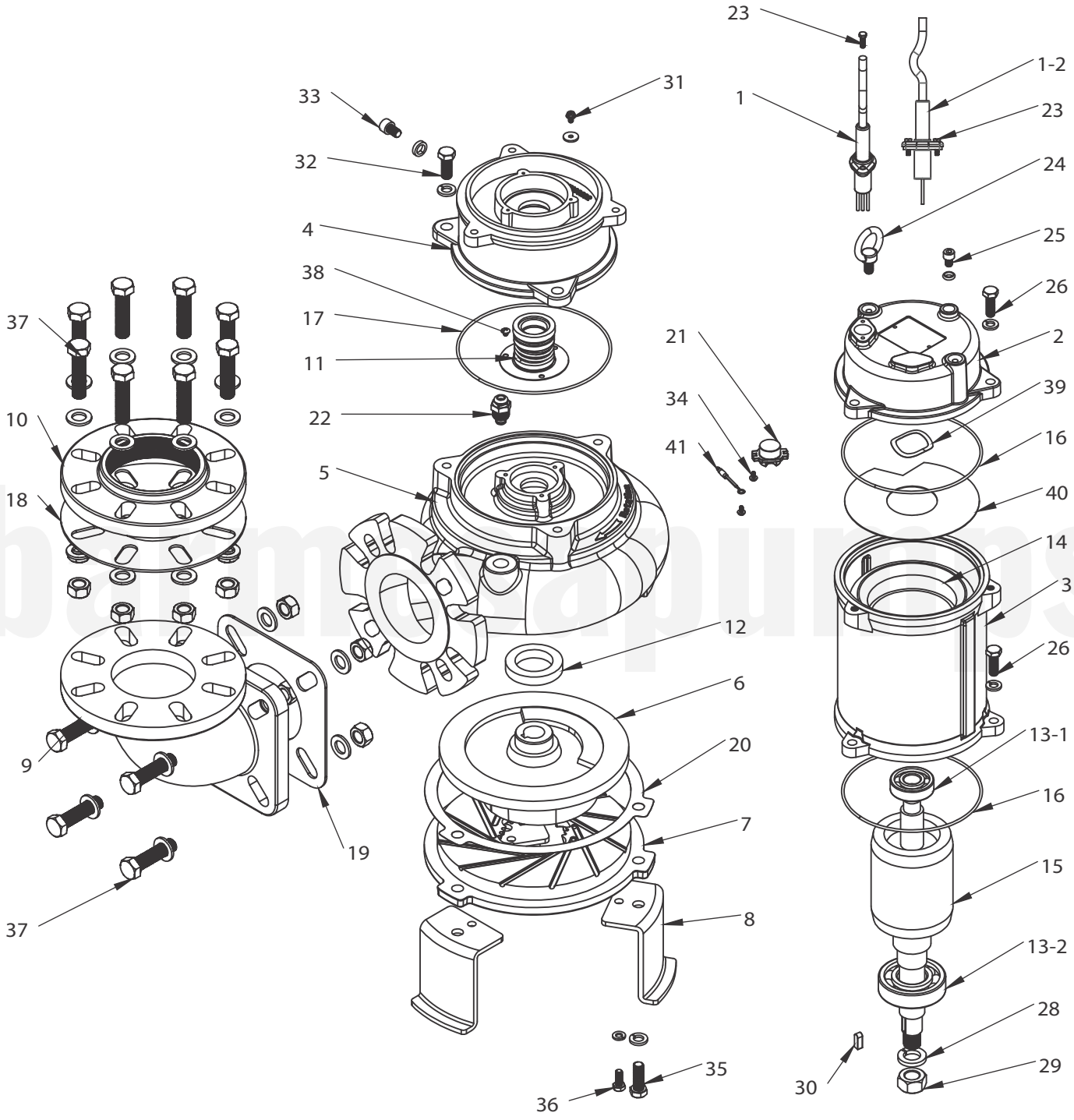
CUT303 / 304



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For repair part please supply: Model Number and Serial as shown on Name Plate, and Part Description and Part Number as shown on Parts List.

CUT303 / 304

CODE	SPARE	ITEM	DESCRIPTION	MATERIAL
-	-	1	Cable	STOW
-	-	1-2	Sensor cable	SJTOW
-	-	2	Motor cover	ASTM A48 class 30
80020430B	✓	3	Motor housing	ASTM A48 class 30
80020430B	✓	4	Oil chamber	ASTM A48 class 30
80020430B	✓	5	Volute	ASTM A48 class 30
80020430B	✓	6	Impeller	ASTM A48 class 30
80020430B	✓	7	Suction plate	ASTM A536 100-70-03
-	-	8	Pump feet	SC
-	-	9	Discharge elbow	ASTM A48 class 30
-	-	10	Flange	ASTM A48 class 30
80020430B	✓	11	Mechanical seal	SIC / SIC CA / CE
-	-	12	Lip seal	Buna N
80020430B	✓	13-1	6304 bearing	NTN
80020430B	✓	13-2	6307 bearing	NTN
80020430B	✓	14	Stator	-
80020430B	✓	15	Rotor with shaft	AISI 410
80020430B	✓	16	O-ring	Buna N
80020430B	✓	17	O-ring	Buna N
-	-	18	Flange gasket	Buna N
-	-	19	Discharge gasket	Buna N
-	-	20	Suction plate gasket	PE
80020430B	✓	21	Overload protector	-
80020430B	✓	22	Air release valve	PP
-	-	23	Hex. bolt	AISI 304
-	-	24	M10 eye bolt	AISI 304
-	-	25	Socket screw / O-ring	AISI 304 / Buna N
-	-	26	Hex. bolt & spring washer	AISI 304
-	-	28	Spring washer	AISI 304
-	-	29	Hex nut	AISI 304
-	-	30	Key	AISI 304
-	-	31	Hex. bolt & washer	SC
-	-	32	Hex. bolt & spring washer	AISI 304
-	-	33	Socket screw & O-ring	AISI 304 / Buna N
-	-	34	Phillips screw	SC
-	-	35	Hex. bolt & spring washer	AISI 304
-	-	36	Hex. bolt & spring washer	AISI 304
-	-	37	Hex. bolt, spring washer, hex. nut	AISI 304
-	-	38	Truss bolt	SC
-	-	39	Wave washer	SC
-	-	40	Insulation sheet	Paper
-	-	41	Ground lead	-
-	-	44	VG-32 oil	0.32 gallon

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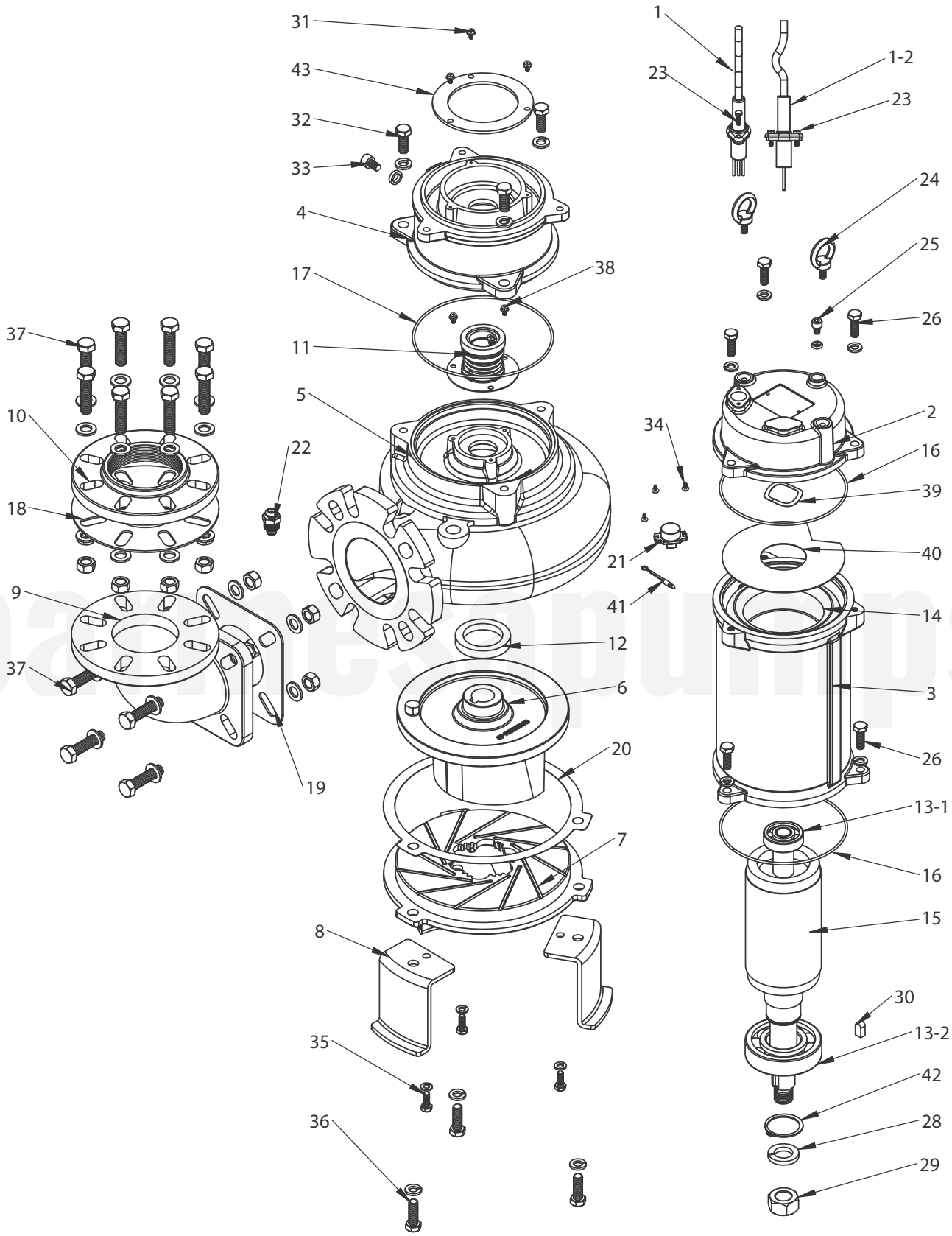
CUT503 / 504



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For repair part please supply: Model Number and Serial as shown on Name Plate, and Part Description and Part Number as shown on Parts List.

CUT503 / 504

CODE	SPARE	ITEM	DESCRIPTION	MATERIAL
-	-	1	Cable	STOW
-	-	1-2	Sensor cable	SJTOW
-	-	2	Motor cover	ASTM A48 class 30
80020430D	✓	3	Motor housing	ASTM A48 class 30
80020430D	✓	4	Oil chamber	ASTM A48 class 30
80020430D	✓	5	Volute	ASTM A48 class 30
80020430D	✓	6	Impeller	ASTM A48 class 30
80020430D	✓	7	Suction plate	ASTM A536 100-70-03
-	-	8	Pump feet	SC
-	-	9	Discharge elbow	ASTM A48 class 30
-	-	10	Flange	ASTM A48 class 30
80020430D	✓	11	Mechanical seal	SIC / SIC CA / CE
-	-	12	Lip seal	Buna N
80020430D	✓	13-1	6304 bearing	NTN
80020430D	✓	13-2	6307 bearing	NTN
80020430D	✓	14	Stator	-
80020430D	✓	15	Rotor with shaft	AISI 420
80020430D	✓	16	O-ring	Buna N
80020430D	✓	17	O-ring	Buna N
-	-	18	Flange gasket	Buna N
-	-	19	Elbow gasket	Buna N
-	-	20	Suction plate gasket	PE
80020430D	✓	21	Overload protector	Klixon
80020430D	✓	22	Air release valve	PP
-	-	23	Hex. bolt	AISI 304
-	-	24	M10 eye bolt	AISI 304
-	-	25	Socket screw / O-ring	AISI 304 / Buna N
-	-	26	Hex. bolt & spring washer	AISI 304
-	-	28	Spring washer	AISI 304
-	-	29	Hex. nut	AISI 304
-	-	30	Key	AISI 304
-	-	31	Hex. bolt	SC
-	-	32	Hex. bolt & spring washer	AISI 304
-	-	33	Socket screw & O-ring	AISI 304 / Buna N
-	-	34	Phillips screw	SC
-	-	35	Hex. bolt & spring washer	AISI 304
-	-	36	Hex. bolt & spring washer	AISI 304
-	-	37	Hex. bolt, spring washer, hex. nut	AISI 304
-	-	38	Truss bolt	SC
-	-	39	Wave washer	SC
-	-	40	Insulation sheet	Paper
-	-	41	Ground lead	-
-	-	42	Shaft retaining ring	SC
-	-	43	Bearing holder	SC
-	-	44	VG-32 oil	0.36 gallon

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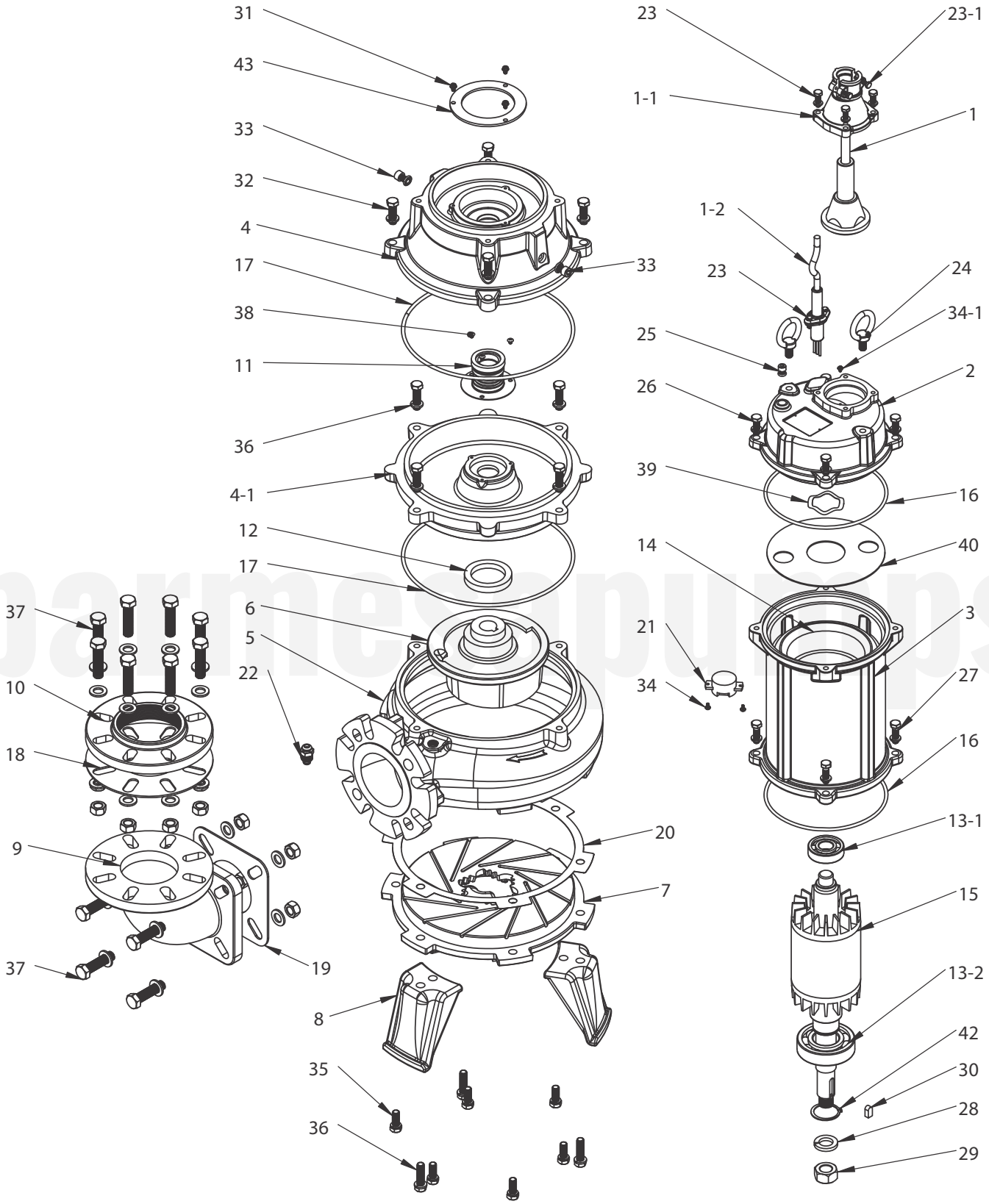
CUT753 / 754



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CUT753 / 754

CODE	SPARE	ITEM	DESCRIPTION	MATERIAL
-	-	1	Cable	STOW
-	-	1-2	Sensor cable	SJTOW
-	-	2	Motor cover	ASTM A48 class 30
80020430F	✓	3	Motor housing	ASTM A48 class 30
80020430F	✓	4	Oil chamber	ASTM A48 class 30
-	-	4-1	Seal bracket	ASTM A48 class 30
80020430F	✓	5	Volute	ASTM A48 class 30
80020430F	✓	6	Impeller	ASTM A48 class 30
80020430F	✓	7	Suction plate	ASTM A536 100-70-03
-	-	8	Pump feet	ASTM A48 class 30
-	-	9	Discharge elbow	ASTM A48 class 30
-	-	10	Flange	ASTM A48 class 30
80020430F	✓	11	Mechanical seal	SIC / SIC CA / CE
-	-	12	Lip seal	Buna N
80020430F	✓	13-1	6305 bearing	NTN
80020430F	✓	13-2	6309 bearing	NTN
80020430F	✓	14	Stator	-
80020430F	✓	15	Rotor with shaft	AISI 420
80020430F	✓	16	O-ring	Buna N
80020430F	✓	17	O-ring	Buna N
-	-	18	Flange gasket	Buna N
-	-	19	Elbow gasket	Buna N
-	-	20	Suction plate gasket	Buna N
80020430F	✓	21	Overload protector	Klixon
80020430F	✓	22	Air release valve	PP
-	-	23	Hex. bolt	AISI 304
-	-	23-1	Hex. bolt	AISI 304
-	-	24	M12 eye bolt	AISI 304
-	-	25	Socket screw / O-ring	AISI 304 / Buna N
-	-	26	Hex. bolt & spring washer	AISI 304
-	-	27	Hex. bolt & spring washer	AISI 304
-	-	28	Spring washer	AISI 304
-	-	29	Hex. nut	AISI 304
-	-	30	Key	AISI 304
-	-	31	Hex. bolt	SC
-	-	32	Hex. bolt & spring washer	AISI 304
-	-	33	Socket screw & O-ring	AISI 304 / Buna N
-	-	34	Phillips screw	SC
-	-	34-1	Phillips screw	SC
-	-	35	Hex. bolt & spring washer	AISI 304
-	-	36	Hex. bolt & spring washer	AISI 304
-	-	37	Hex. bolt, spring washer, hex. nut	AISI 304
-	-	38	Truss bolt	SC
-	-	39	Wave washer	SC
-	-	40	Insulation sheet	Bakelite
-	-	42	Shaft retaining ring	SC
-	-	43	Bearing holder	SC
-	-	44	VG-32 oil	1.12 gallon

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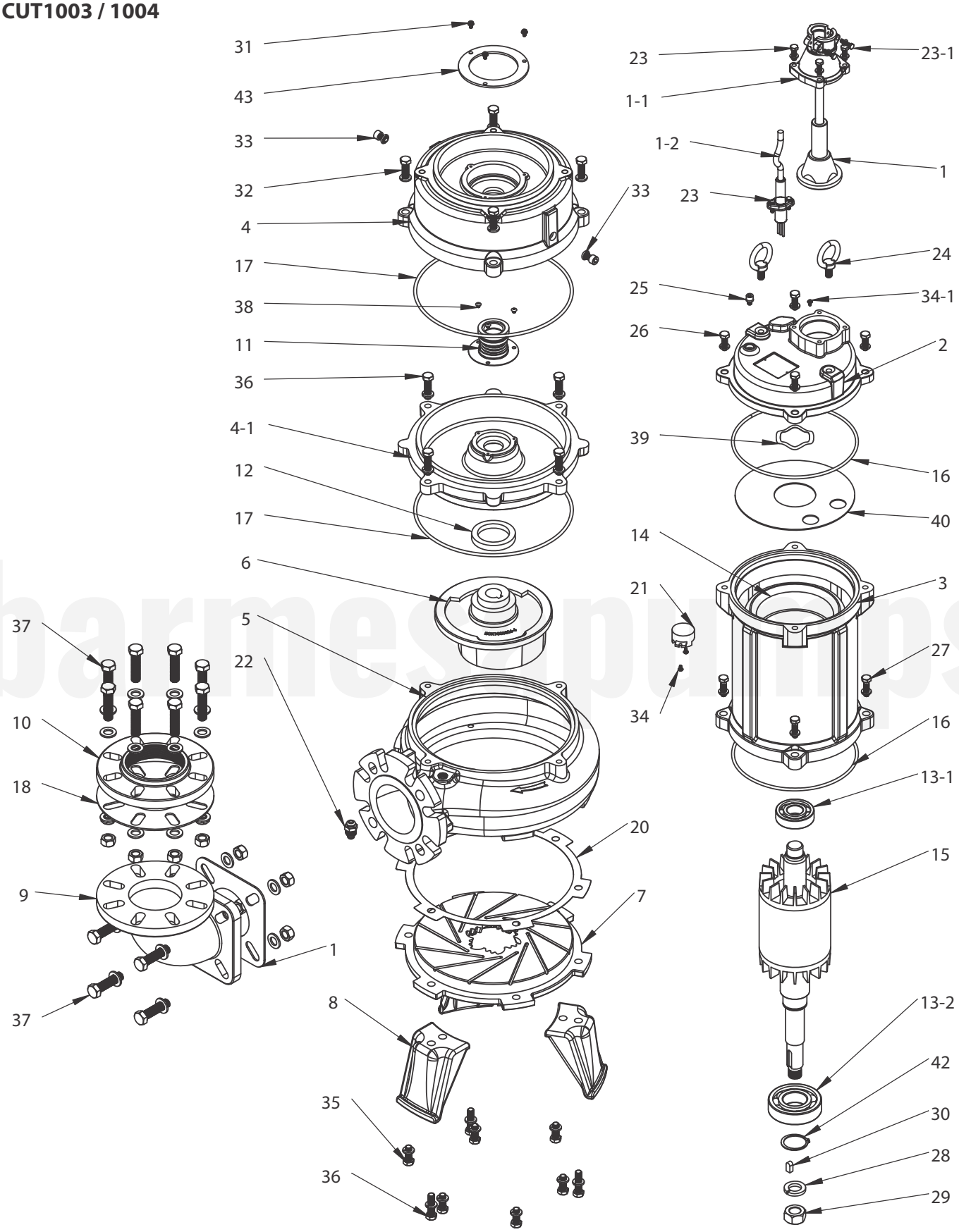
CUT1003 / 1004



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For repair part please supply: Model Number and Serial as shown on Name Plate, and Part Description and Part Number as shown on Parts List.

CUT1003 / 1004

CODE	SPARE	ITEM	DESCRIPTION	MATERIAL
-	-	1	Cable	STOW
-	-	1-2	Sensor cable	SJTOW
-	-	2	Motor cover	ASTM A48 class 30
80020430H	✓	3	Motor housing	ASTM A48 class 30
80020430H	✓	4	Oil chamber	ASTM A48 class 30
-	-	4-1	Seal bracket	ASTM A48 class 30
80020430H	✓	5	Volute	ASTM A48 class 30
80020430H	✓	6	Impeller	ASTM A48 class 30
80020430H	✓	7	Suction plate	ASTM A536 100-70-03
-	-	8	Pump feet	ASTM A48 class 30
-	-	9	Discharge elbow	ASTM A48 class 30
-	-	10	Flange	ASTM A48 class 30
80020430H	✓	11	Mechanical seal	SIC / SIC CA / CE
-	-	12	Lip seal	Buna N
80020430H	✓	13-1	6306 bearing	NTN
80020430H	✓	13-2	6309 bearing	NTN
80020430H	✓	14	Stator	-
80020430H	✓	15	Rotor with shaft	AISI 420
80020430H	✓	16	O-ring	Buna N
80020430H	✓	17	O-ring	Buna N
-	-	18	Flange gasket	Buna N
-	-	19	Elbow gasket	Buna N
-	-	20	Suction plate gasket	PE
80020430H	✓	21	Overload protector	Klixon
80020430H	✓	22	Air release valve	PP
-	-	23	Hex. bolt & spring washer	AISI304
-	-	23-1	Hex. bolt & spring washer	AISI304
-	-	24	M12 eye bolt	AISI304
-	-	25	Socket screw / O-ring	AISI304 / Buna N
-	-	26	Hex. bolt & spring washer	AISI304
-	-	27	Hex. bolt & spring washer	AISI304
-	-	28	Spring washer	AISI304
-	-	29	Hex. nut	AISI304
-	-	30	Key	AISI304
-	-	31	Hex. bolt	SC
-	-	32	Hex. bolt & spring washer	AISI304
-	-	33	Socket screw / O-ring	AISI304 / Buna N
-	-	34	Phillips screw	SC
-	-	34-1	Phillips screw	SC
-	-	35	Hex. bolt & spring washer	AISI304
-	-	36	Hex. bolt & spring washer	AISI304
-	-	37	Hex. bolt, flat washer & hex. nut	AISI304
-	-	38	Truss bolt	SC
-	-	39	Wave washer	SC
-	-	40	Insulation sheet	Bakelite
-	-	42	Shaft retaining ring	SC
-	-	43	Bearing holder	SC
-	-	44	VG-32 oil	1.37 gallon

barnespumps

Risk of electric shock. Always disconnect the pump from the power source before handling inspections or repairs.

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Does not start. Starts, but immediately stops.	(1) Power failure. (2) Large discrepancy between power source and voltage. (3) Significant drop in voltage. (4) Motor phase malfunction. (5) Electric circuit connection faulty. (6) Faulty connection of control circuit. (7) Fuses is blown. (8) Faulty magnetic switch. (9) Water is not at level indicated by float. (10) Float is not in appropriate level. (11) Float is not effective. (12) Short circuit breaker is functioning. (13) Foreign matter clogging pump. (14) Motor burned out. (15) Motor bearing broken.	(1)~(3) Contact electric power company and devise counter-measures. (4) Inspect electric circuit. (5) Correct wiring. (6) Inspect connections and magnetic coil. (7) Check circuit then replace fuse. (8) Replace with correct one. (9) Raise water level. (10) Adjust the position of float. (11) Repair or replace. (12) Repair location of short circuit. (13) Remove foreign matter. (14) Repair or replace. (15) Repair or replace.
Operates, but stops after a while.	(1) Prolonged dry operation has activated motor protector and caused pump to stop. (2) High liquid temperature has activated motor protector and caused pump to stop. (3) Reverse rotation.	(1) Raise water level to C.W.L. (2) Lower liquid temperature. (3) Correct rotation.
Does not pump. Inadequate volume.	(1) Reverse rotation. (2) Significant drop in voltage. (3) Operating a 60 Hz pump with 50 Hz. (4) Discharge head is high. (5) Large piping loss. (6) Low operating water level causes air suction. (7) Leaking from discharge piping. (8) Clogging of discharge piping. (9) Foreign matter in suction inlet. (10) Foreign matter clogging pump. (11) Worn impeller.	(1) Correct rotation (see Operation). (2) Contact electric power company. (3) Check nameplate. (4) Recalculate and adjust. (5) Recalculate and adjust. (6) Raise water level or lower pump. (7) Inspect, repair. (8) Remove foreign matter. (9) Remove foreign matter. (10) Remove foreign matter. (11) Replace impeller.
Over current.	(1) Unbalanced current and voltage. (2) Significant voltage drop. (3) Motor phase malfunction. (4) Operating 50 Hz pump on 60 Hz. (5) Reverse rotation. (6) Low head. Excessive volume of water. (7) Foreign matter clogging pump. (8) Motor bearing is worn out or damaged.	(1) Contact electric power company. (2) Contact electric power company and devise counter-measure. (3) Inspect connections and magnetic switch. (4) Check nameplate. (5) Correct rotation (see Operation 2). (6) Replace pump with high head pump. (7) Remove foreign matter. (8) Replace bearing.
Pump vibrates; excessive operating noise.	(1) Reverse rotation. (2) Pump clogged with foreign matter. (3) Piping resonates. (4)Strainer is closed too far.	(1) Correct rotation. (2) Disassemble and remove foreign matter. (3) Improve piping. (4) Open strainer.

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NOTE: Barmesa Pumps assumes no responsibility for damage or injury due to disassembly in the field. Disassembly of the pumps or supplied accessories other than at Barmesa Pumps or its authorized service centers, automatically voids warranty.

BARMESA PUMPS
FACTORY WARRANTY

Barmesa Pumps warrants that products of our manufacture will be free of defects in material and workmanship under normal use and service for 18 months from date of manufacture or 12 months from installation date whichever occurs first. This warranty gives you specific legal rights, which vary from state to state.

This warranty is a limited warranty, and no warranty related claims of any nature whatsoever shall be made against Barmesa Pumps, until the ultimate consumer or his/her successor notifies us in writing of the defect and delivers the product and/or defective part(s) freight prepaid to our factory or nearest authorized service station as instructed by Barmesa Pumps. THERE SHALL BE NO FURTHER LIABILITY, WHETHER BASED ON WARRANTY, NEGLIGENCE OR OTHERWISE. PRODUCT SHALL BE EITHER REPLACED OR REPAIRED AT THE ELECTION OF BARMESA PUMPS. Guarantees relating to performance specifications provided in addition to the foregoing material and workmanship warranties on a product manufactured by Barmesa Pumps, if any, are subject to possible factory testing. Any additional guarantees, in the nature of certified performance specifications or time frame must be in writing and such writing must be signed by our authorized factory manager at time of order placement and/or at time of quotation. Due to inaccuracies in field testing and should a conflict arises between the results of field testing conducted by or for the user, Barmesa Pumps reserves the right to have the product returned to our factory for additional testing.

This warranty shall not apply when damage is caused by (1) improper installation, (2) improper voltage, (3) lightning, (4) excessive sand or other abrasive material, (5) corrosion build-up due to excessive chemical content or (6) uncontrollable acts of god. Any modification of the original equipment will also void the warranty. We will not be responsible for loss, damage or labor cost due to interruption of service caused by defective pumps, parts or systems. Barmesa Pumps will not accept charges incurred by others without our prior written approval.

This warranty is void if our inspection reveals the product was used in a manner inconsistent with normal industry practice and/or our specific recommendations. The purchaser is responsible for communication of all necessary information regarding the application and use of the product. UNDER NO CIRCUMSTANCES WILL WE BE RESPONSIBLE FOR ANY OTHER DIRECT OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO TRAVEL EXPENSES, CONTRACTOR FEES, UNAUTHORIZED REPAIR SHOP EXPENSES, LOST PROFITS, LOST INCOME, LABOR CHARGES, DELAYS IN PRODUCTION, IDLE PRODUCTION, WHICH DAMAGES ARE CAUSED BY ANY DEFECTS IN MATERIAL AND/OR WORKMANSHIP AND/OR DAMAGE OR DELAYS IN SHIPMENT. THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER EXPRESS OR IMPLIED WARRANTY. No rights extended under this warranty shall be assigned to any other person, whether by operation of law or otherwise, without our prior written approval.

IMPORTANT!
If you have a claim under the provision of the warranty, contact Barmesa Pumps or your authorized Barmesa Pumps Distributor:
warranty@barmesapumps.com
www.barmesapumps.com/US

Barmesa®
Pumps