

Airablo

(BELLY RELEASER)



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Congratulations! Your choice proves of your liking for high technology equipment and well designed machines. Indeed you have purchased one of the most advanced technology equipment, carefully built in accordance with the highest standards of the industry. It will be of service a long time with its various applications. However, we advise you read and follow scrupulously the following instructions.

How does it work

Once sap level reaches the desired height, the electrode activates the switch to start the pump. After the sap is pumped-out, the electrode at the middle stops the pump

Installation

-The extractor should be installed where ambient temperature is at least 1 deg C. Otherwise, the reservoir

will need to be drained everyday.

-Extractor need to be levelled properly

Hook-Up Requirements

-Vacuum pump to be selected according to number of taps.

-Use PVC or ABS pipe. Size depending on vacuum pump (1 ½'',2'',2 ½'',3'')

-Vacuum regulator must be installed between vacuum pump & extractor.

-For oil cooled pumps only, a humidity/Sap trap must be installed between vacuum pump & extractor for protection against flooding & avoid sugar build-up.

Maintenance

Pre-season:

-Inspect: switch, cracks, mobile parts, hoses, fittings & clamps

-Lubricate float rod, covers gaskets, etc...

During season:

-Remove clear covers and clean entire extractor thoroughly with dish soap and water solution.

-Rinse

-Drain water pump to avoid freezing

-Avoid heating source near-by plastic components

Anti-particle filter:

Your releaser is equipped with a plate anti-particle filter. A regular verification of the filter is necessary in order to prevent foreign material obstruction.

Troubleshooting

-Problem: Sap reservoir stays full --> check for leaks/cracks, fittings, check valve

-Problem: Pump will not start --> check vacuum pump switch by activating manually

Problem	Possible cause/how to check	Possible remedy
1. Pump does not run.	a) No power at pump control panel. How to check: Check for voltage at control panel.	If no voltage at control panel, check feeder panel for tripped circuits.
	b) Fuses are blown or circuit breakers are tripped. How to check: Remove fuses and check for continuity with ohmmeter.	Replace blown fuses or reset circuit breaker. If new fuses blow or circuit breaker trips, the electrical installation and motor must be checked.
	c) Motor starter overloads are burnt or have tripped out (three-phase only). How to check: Check for voltage on line or load side of starter.	Replace burnt heaters or reset. Inspect starter for other damage. If heater trips again, check the supply voltage and starter holding coil.
	d) Starter does not energize (three-phase only). How to check: Energize control circuit and check for voltage at the holding coil.	If no voltage, check control circuit. If voltage, check holding coil for short circuits. Replace bad coil.
	e) Defective controls. How to check: Check all safety and pressure switches for operation. Inspect contacts in control devices.	Replace worn or defective parts.
	f) Motor and/or cable are defective. How to check: Turn off power. Disconnect motor leads from control box. Measure the lead-to-lead resistances with the ohmmeter (Rx1). Measure lead-to-ground values with ohmmeter (Rx100K). Record measured values.	If open motor winding or ground is found, pull pump from the well and recheck values at the surface. Repair or replace motor or cable.
	g) Defective capacitor (single-phase only). How to check: Turn off the power, then discharge capacitor. Check with an ohmmeter (Rx100K). When meter is connected, the needle should jump forward and slowly drift back.	If there is no ohmmeter needle movement, replace the capacitor.

Troubleshooting

Problem	Possible cause/how to check	Possible remedy
2. Pump runs but does not deliver water.	a) Integral pump check valve is blocked. How to check: Check the pump's performance against its curve; see section 9.2 Checking pump performance on page 19.	If the pump is not operating close to the pump curve, pull pump from the well and inspect discharge section. Remove blockage, repair valve and valve seat if necessary. Check for other damage. Rinse out pump and re-install.
	b) Inlet strainer is clogged. How to check: Check the pump's performance against its curve; see section 9.2 Checking pump performance on page 19.	If pump is not operating close to the pump curve, pull pump from the well and inspect. Clean inlet strainer, inspect integral check valve for blockage, rinse out pump and re-install.
	c) Pump is damaged. How to check: Check the pump's performance against its curve; see section 9.2 Checking pump performance on page 19.	If pump is damaged, repair as necessary. Rinse out pump and re-install.
3. Pump runs but at reduced capacity.	a) Wrong direction of rotation (three phase only). How to check: Check for proper electrical connection in control panel.	Correct wiring and change leads as required.
	b) Drawdown is larger than anticipated. Check drawdown during pump operation.	Lower the pump if possible. If not, throttle discharge valve and install water level control.
	c) Discharge piping or valve leaking. How to check: Examine system for leaks.	Repair leaks.
	d) Pump inlet strainer or check valve are clogged. How to check: Check the pump's performance against its curve; see section 9.2 Checking pump performance on page 19.	If not close to the pump curve, pull pump from the well and inspect. Clean strainer, inspect integral check valve for blockage, rinse out pump and re-install.
	e) Pump is worn. How to check: Check the pump's performance against its curve; see section 9.2 Checking pump performance on page 19.	If not close to pump curve, pull pump from the well and inspect.

Troubleshooting

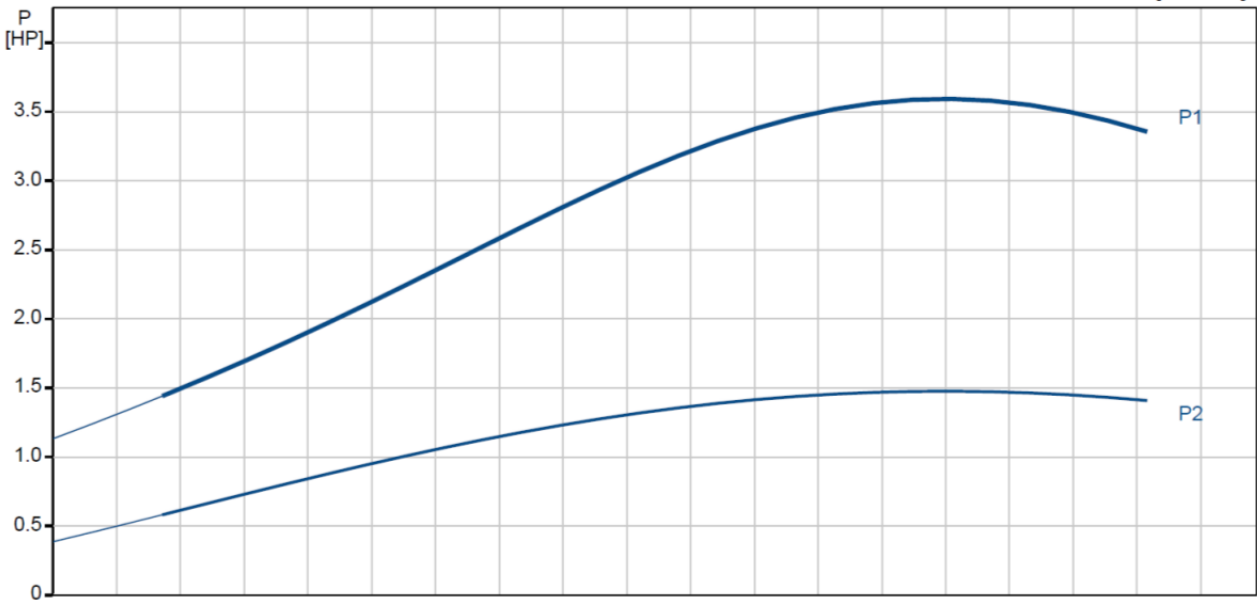
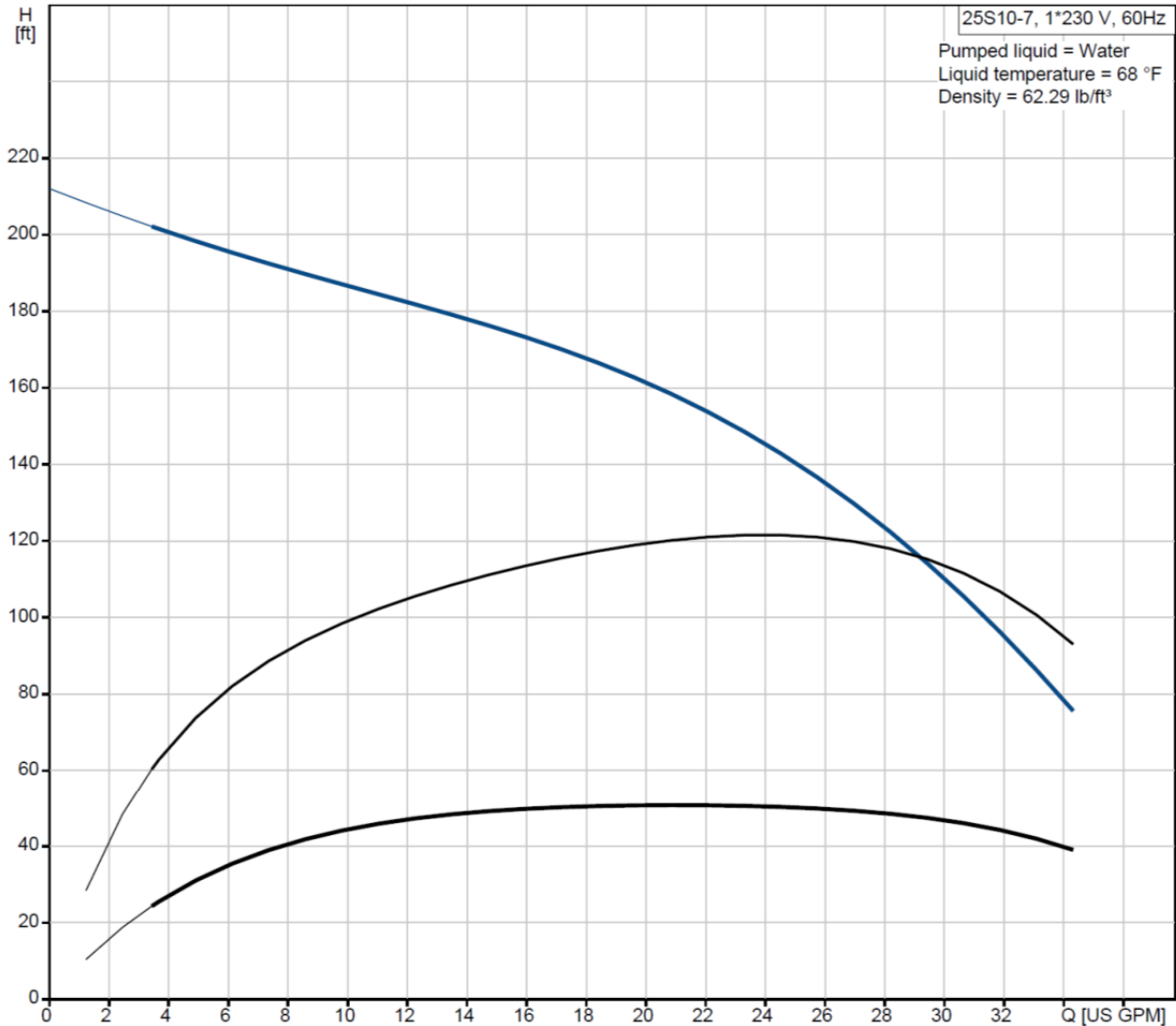
Problem	Possible cause/how to check	Possible remedy
5. Fuses blow or circuit breakers trip	a) High or low voltage. How to check: Check voltage at pump control panel. If not within $\pm 10\%$, check cable size and length of run to pump control panel.	If cable size is correct, contact power company. If not, correct and/or replace as necessary.
	b) Three-phase current imbalance. How to check: Check current draw on each lead. Imbalance must be within $\pm 5\%$.	If current imbalance is not within $\pm 5\%$, contact power supply company.
	c) Control box wiring and components (single-phase only). How to check: Check that control box parts match the parts list. Check to see that wiring matches wiring diagram. Check for loose or broken wires or terminals.	Correct as required.
	d) Defective capacitor (single-phase only). How to check: Turn off power and discharge capacitor. Check by means of an ohmmeter (Rx100K). When the ohmmeter is connected, the needle should jump forward and slowly drift back.	If there is no ohmmeter needle movement, replace the capacitor.
	e) Starting relay (certain types of single-phase only). How to check: Check resistance of relay coil by means of an ohmmeter (Rx1000K). Check contacts for wear.	Replace defective starting relay.

GUARANTEE:

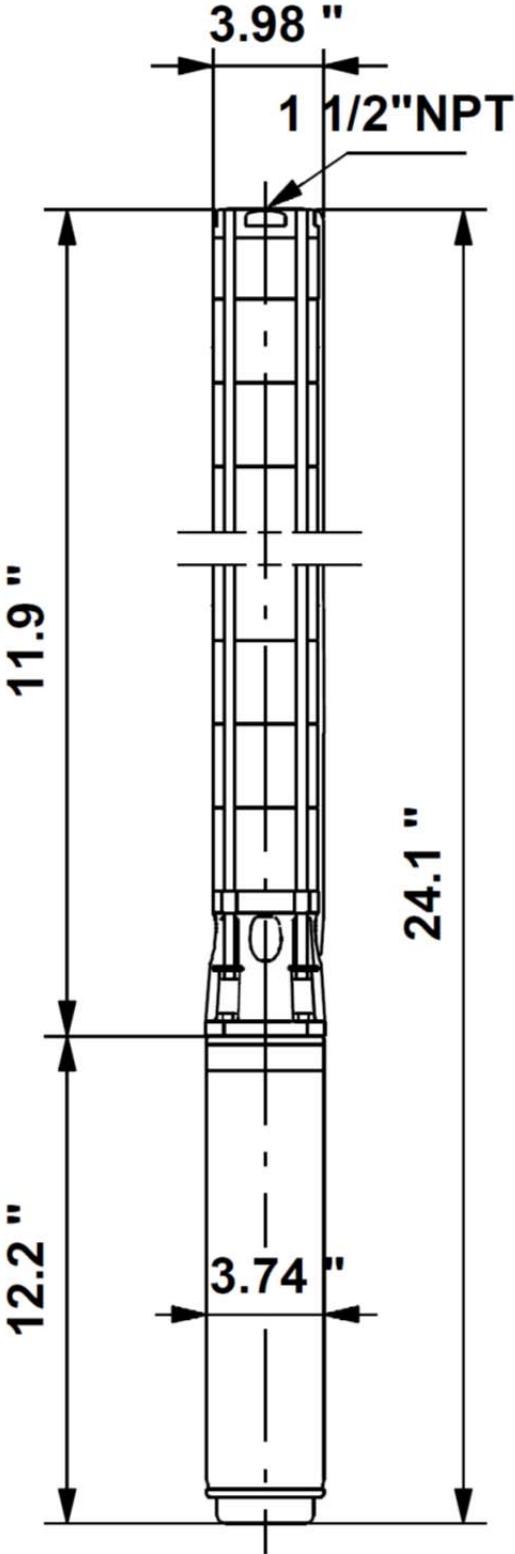
Your releaser is guaranteed by the manufacturer against any fabrication defects for a 2 year period if used in maple industry. The manufacturer's responsibility regarding this guarantee is restricted in replacing the parts as he pleases or doing the repairs. All the parts that are changed under guarantee become the property of the manufacturer.

The manufacturer would not be responsible for any damage resulting from carelessness, abuse or non respect of the operating instructions, or injuries inflicted to an individual.

Curve at 0hg pump 1hp



Dimension pump 1hp



Technical data pump 1hp

The motor is a 1-phase motor with sand shield, liquid-lubricated bearings and pressure equalizing diaphragm.

Liquid:

Maximum liquid temperature: 104 °F

Max liquid t at 0.15 m/sec: 104 °F

Technical:

Speed for pump data: 3450 rpm

Rated flow: 26.4 US GPM

Shaft seal for motor: LIPSEAL

Approvals on nameplate: CE,EAC,CSACOMP,UR

Materials:

Pump: DIN W.-Nr. 1.4301

Motor: Stainless steel

DIN W.-Nr. 1.4301

AISI 304

Installation:

Pump outlet: 1 1/2"NPT

Motor diameter: 4 inch

Capacity:

At 20hg

At 0psi = 25gpm

At 25psi = 24gpm

At 50psi = 19gpm

At 80psi = 0gpm

25hg

At 0psi = 20gpm

At 25psi = 18gpm

At 50psi = 16gpm

At 80psi = 0gpm

27hg

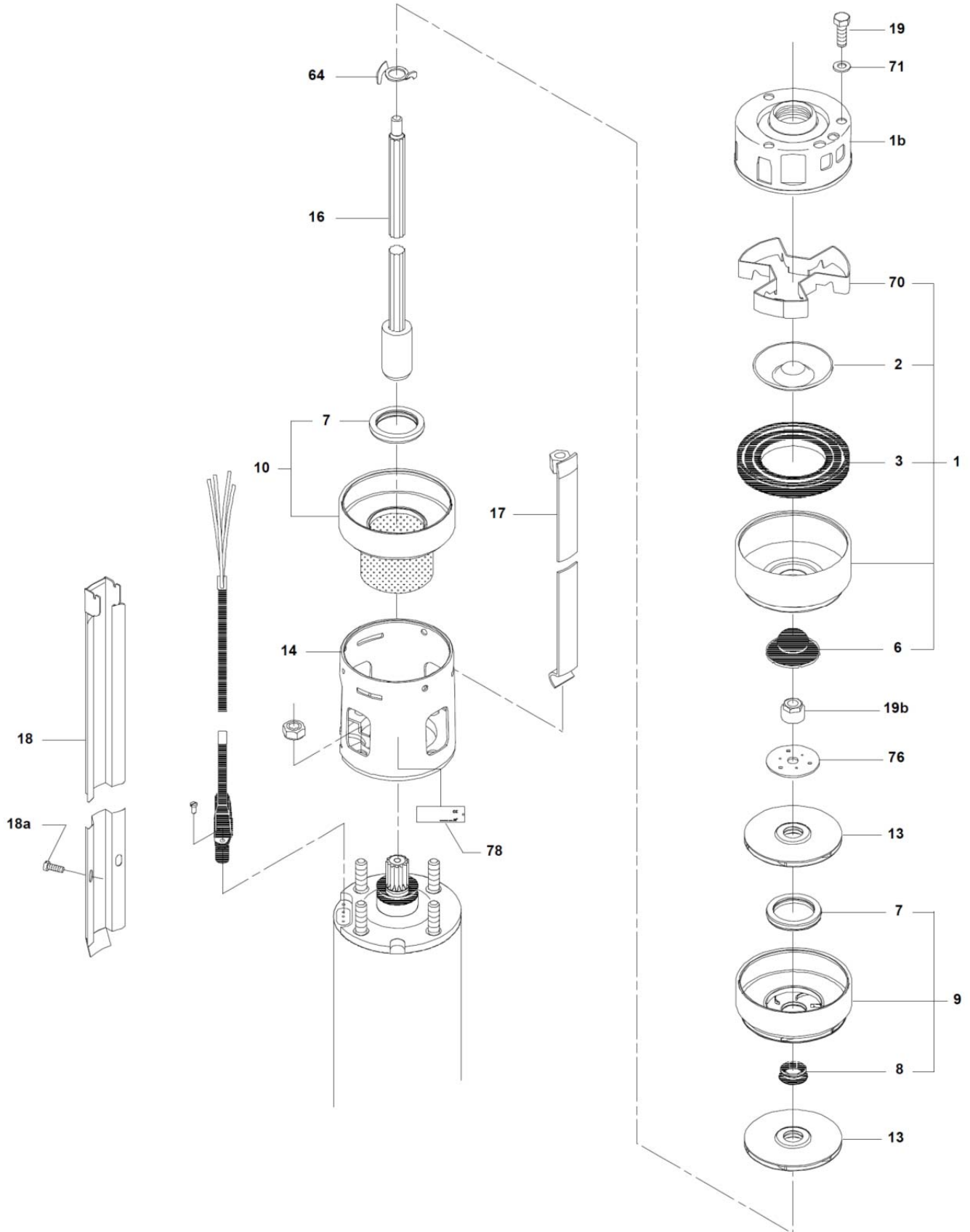
At 0psi = 18gpm

At 25psi = 16gpm

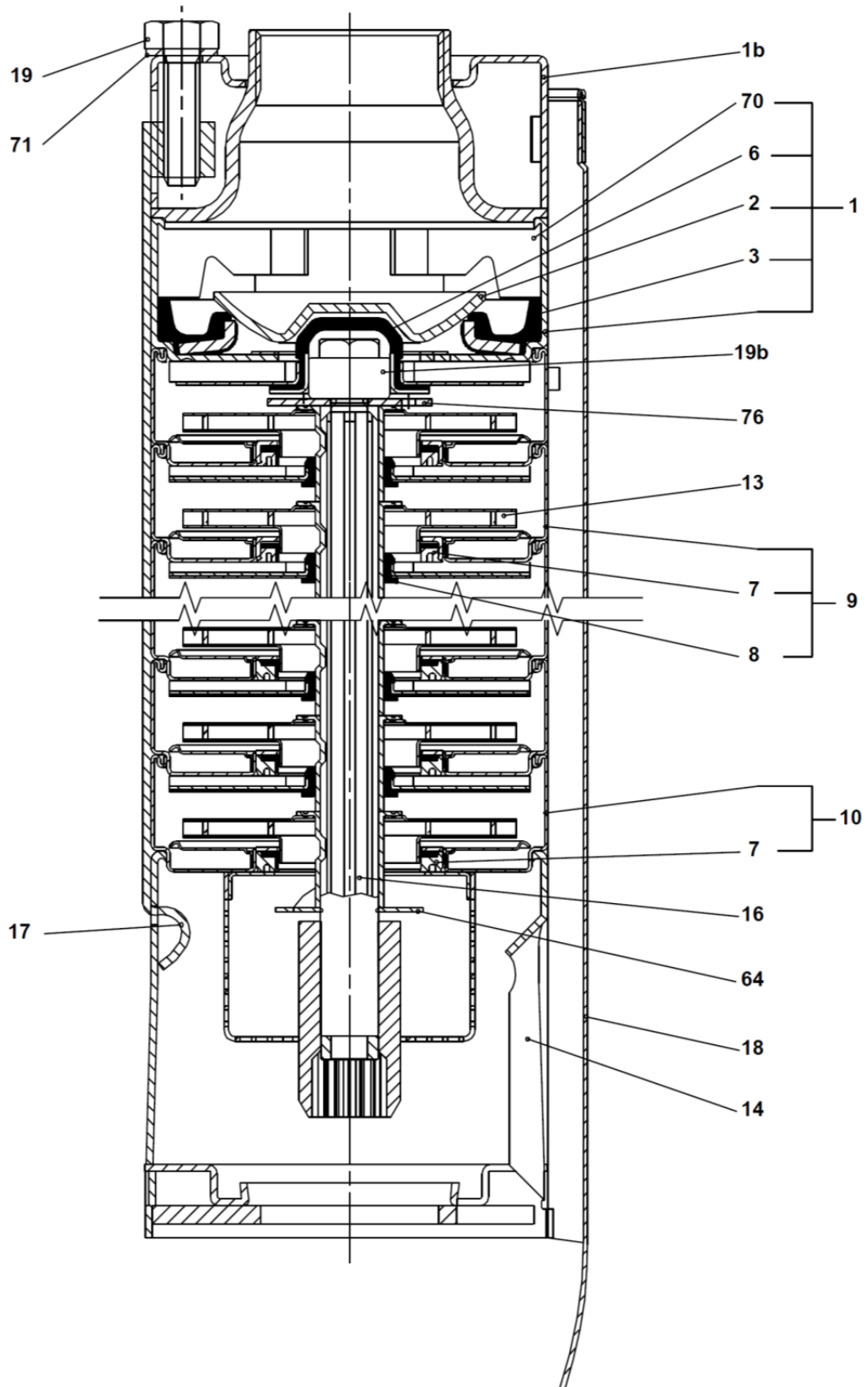
At 50psi = 14gpm

At 75psi = 0gpm

Exploded view pump 2hp



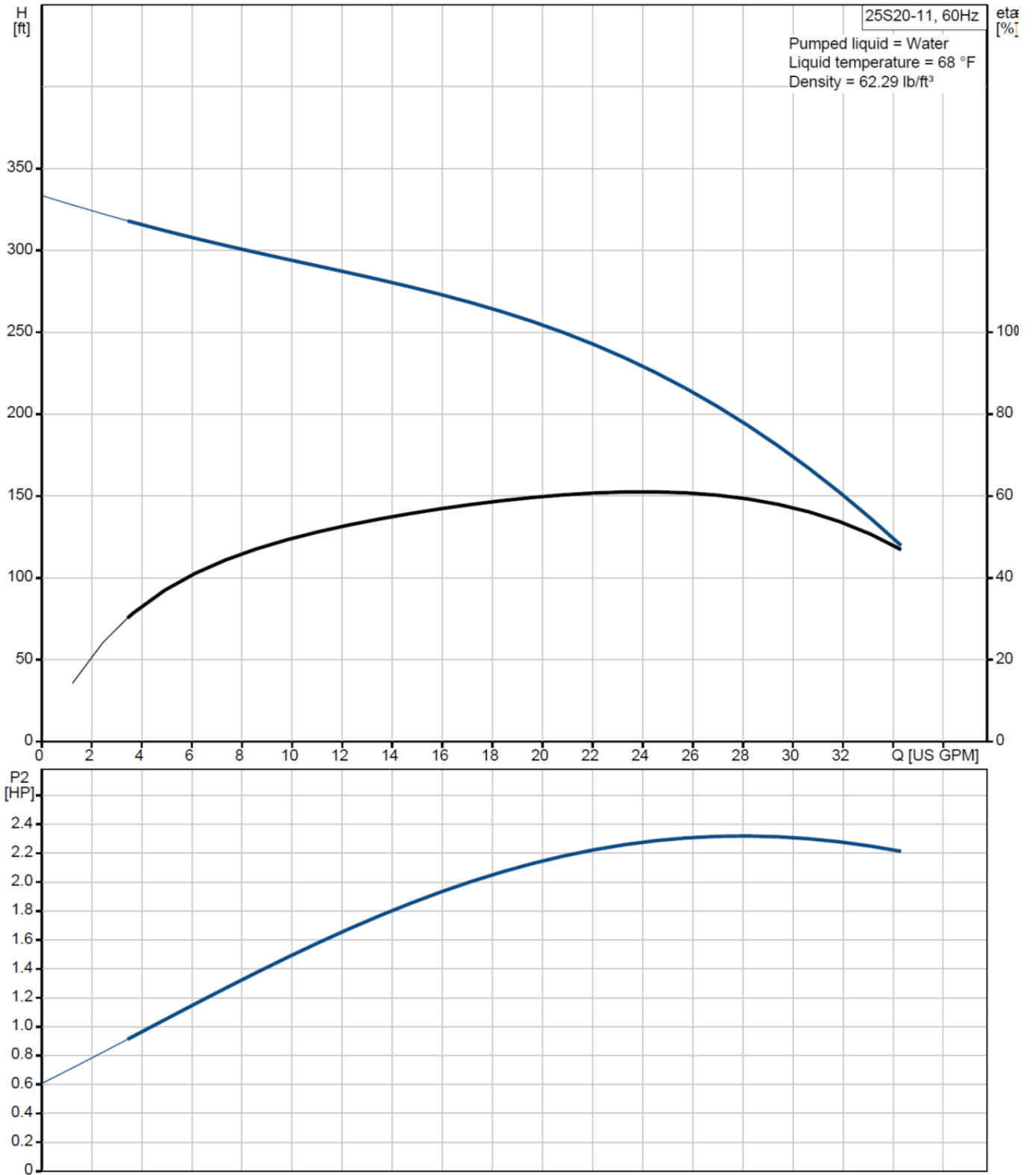
Sectional drawing pump 2hp



Part list pump 2hp

	Nut		1	pcs
	Impeller		11	pcs
	Washer		1	pcs
- 1	Valve casing cpl.		1	pcs
	Valve casing		1	pcs
	Bearing, top		1	pcs
2	Valve cone		1	pcs
3	Valve seat		1	pcs
70	Valve guide		1	pcs
1b	Distance piece		1	pcs
- 9	Chamber		10	pcs
	Chamber w/o guide vanes		1	pcs
	Bearing		1	pcs
7	Neck ring		1	pcs
- 10	Chamber, bottom		1	pcs
	Chamber w/o guide vanes		1	pcs
7	Neck ring		1	pcs
14	Suction interconnector		1	pcs
16	Shaft cpl.	Length (mm): 287,5	1	pcs
17	Strap	Length (mm): 296	3	pcs
18	Cable guard		1	pcs
18a	Screw	Length (mm): 32,00 Thread: M08	2	pcs
19	Bolt		3	pcs
64	Priming disc		1	pcs
76	Nameplate		1	pcs

Curve at 0hg pump 2hp



Technical data pump 2hp

Multi-stage submersible pump for sap water

The pump is made entirely of Stainless steel DIN W.-Nr. DIN W.-Nr. 1.4301.

Liquid:

Maximum liquid temperature: 104 °F

Technical:

Speed for pump data: 3450 rpm

Curve tolerance: ISO 9906:2012 Grade 3B

Materials:

Pump: Stainless steel

DIN W.-Nr. 1.4301

AISI 304

Impeller: Stainless steel

DIN W.-Nr. 1.4301

AISI 304

Installation:

Pump outlet: 1 1/2"NPT

Motor diameter: 4 inch

Electrical data:

Power (P2) required by pump: 2.33 HP

Capacity:

At 20hg

At 0psi = 50gpm

At 25psi = 45gpm

At 50psi = 40gpm

At 75psi = 0gpm

25hg

At 0psi = 48gpm

At 25psi = 45gpm

At 50psi = 35gpm

At 72psi = 0gpm

27hg

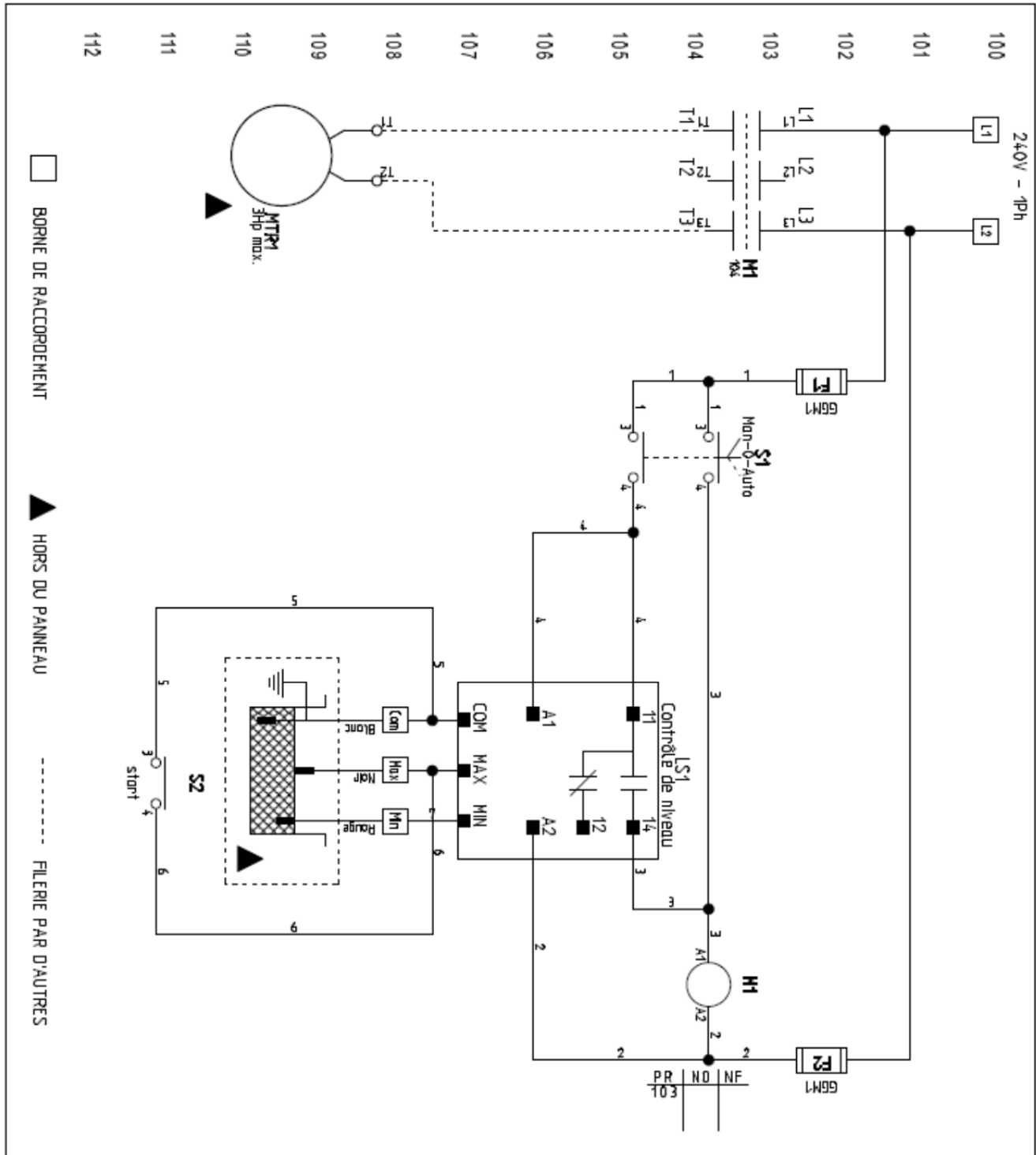
At 0psi = 48gpm

At 25psi = 45gpm

At 50psi = 30gpm

At 70psi = 0gpm

Electrical drawing

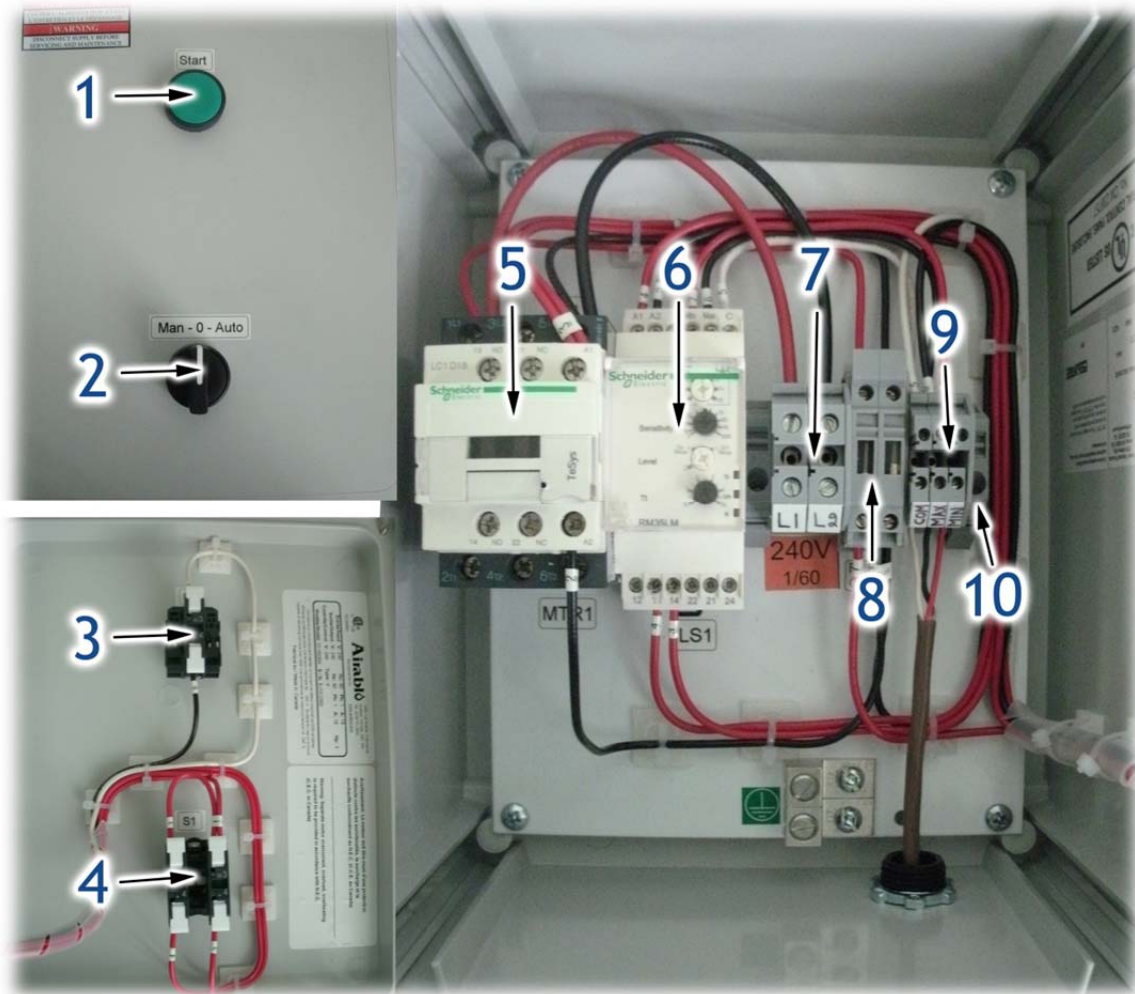


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	Date: 2011-11-08	Projet: Contrôle de niveau		Page: 1 / 1



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Electrical box part



1	01155461	PUSH BUTTOM SCHNEIDER
2	01155436	SELECTOR 3 POSITIONS SCHNEIDER
3	01155438	CONTACT NO CLAMP SWITCH SCHNEIDER
4	01155437	ADAPTOR BASE SWITCH SCHNEIDER
5	01155404	CONTACTOR LC1D18 240VAC SCHNEIDER
6	01155460	ELECTROD LEVEL CONTROL SCHNEIDER
7	01155254	TERMINAL BLOCK 22-6 AWG CTS10U
8	01155250	TERMINAL BLOCK FUSE 22-10 AWG CSFL4U
8	01155348	ELECTROD LEVEL CONTROL SCHNEIDER
9	01155248	TERMINAL BLOCK 22-12 AWG CTS2.5U-N
10	01155261	TERMINAL BLOCK END STOP CA802
*	01155009	BOX HOFFMAN POLYPRO NEMA 4X 10X8X4
*	01150922	STAINLESS BACK PLATE 8.75" * 6.88"



01250360 BELLEY RELEASER 22" PLEXIGLASS COVER AFTER 2012
01250345 BLUE RELEASER 1HP AND 2HP O-RING



01280056 ZINC CLIP FOR BOOSTER
7721058 ADJUSTABLE ZINC CLIP 3.8" * 4.7" CAP 600
01250340 ADJUSTABLE STAINLESS CLIP 3.8" * 4.7" CAP 600