

VORTEX
SUBSEA SOLUTIONS



Ashtead
Technology



2 1/2" and 3" inch Electric dredge

Content subject to change without notice April 2025

VORTEX
SUBSEA SOLUTIONS

ELECTRIC DREDGE INTRODUCTION:

- **Performance:** (using power factor of 0.86)
- **3 inch Venturi, 660V dredge pump voltage and current as follows:**
- **660/690 volts**
- **60 Hz**
- **Current – 6.2-5.9**
- **= 50kPa inlet suction using 5.8kw**
- **Removal rates: Based on Magnetite iron sand and rocks weighing 2.7kg per liter.**
- **Ton per hour = 6.8t /hr**
- **Cubic meters per hour = 4.5 m³/hr**
- **Solids by volume = 6%**
- **Power supply = 620 VAC minimum**

ELECTRIC DREDGE SPECIFICATIONS

Power supply requirement:

660/690 volts

60 Hz

Current – 6.2-5.9

•Depth limitations: 3000mtr plus

- Weight of tool = 80 kg in air
Weight of tool = 48 kg in fresh water



700 mm



540 mm

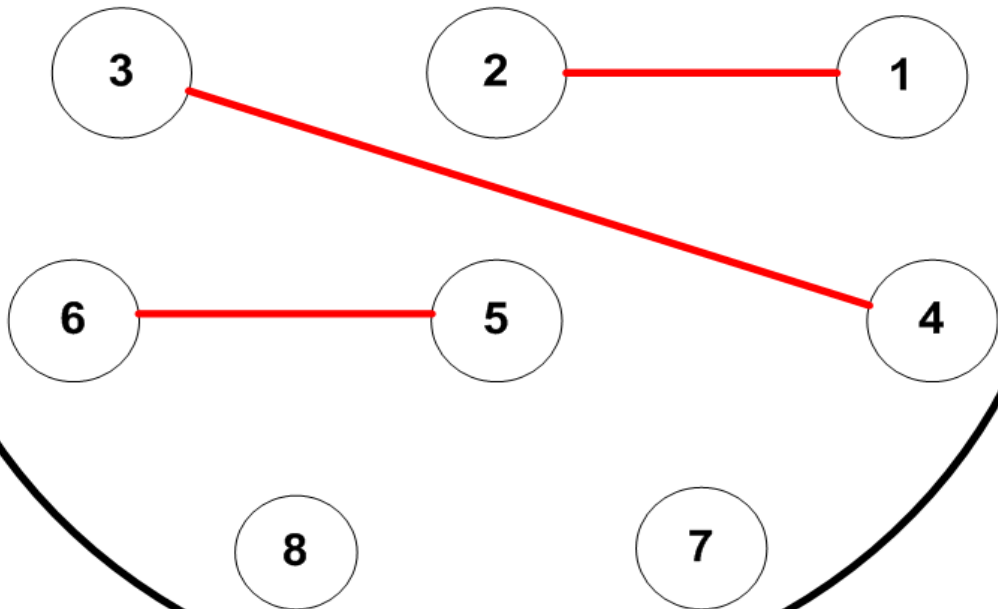
480 mm

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ELECTRIC DREDGE INSTALLATION

Burtons male connector on electric motor:

1 and 2 common on one phase.
3 and 4 common on one phase.
5 and 6 common on one phase.
7 and 8 for future water alarm.



Mount motor / pump to ROV in a safe and secure location. Connect compensator to motor. Ensure compensator is charged when fitted to motor.

If Venturi not fitted to top of dredge, fit dredge Venturi in safe and secure location on ROV, connect water pump to Venturi hose.

Connect wiring as shown in following picture. Test phase rotation. Pump direction shown on pump. **(remove pump inlet screen and look at impeller).** Pump impeller will not spin off if rotation is in reverse.

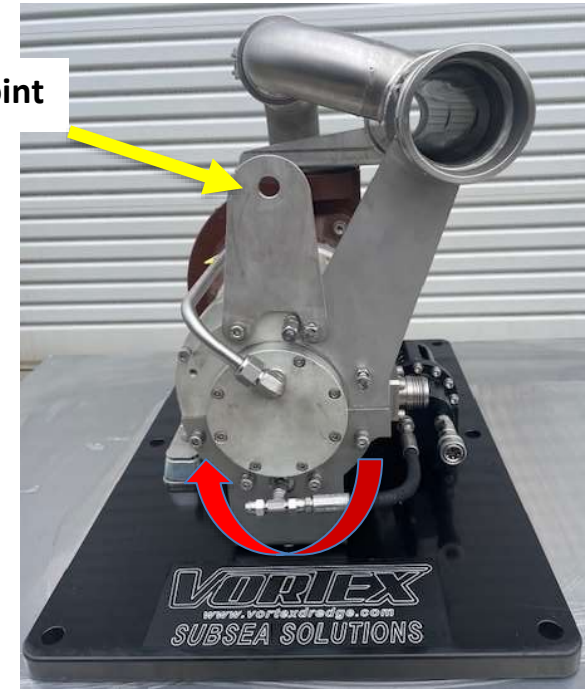
ELECTRIC DREDGE INSTALLATION CONTINUED

Suction end

Pump discharge for jetter kits

Exhaust end

Lifting point



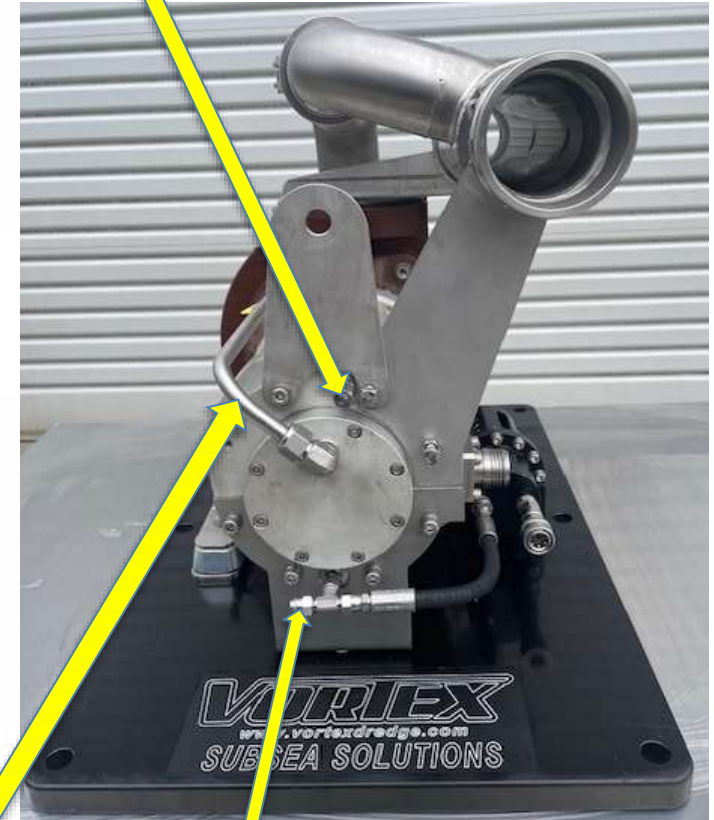
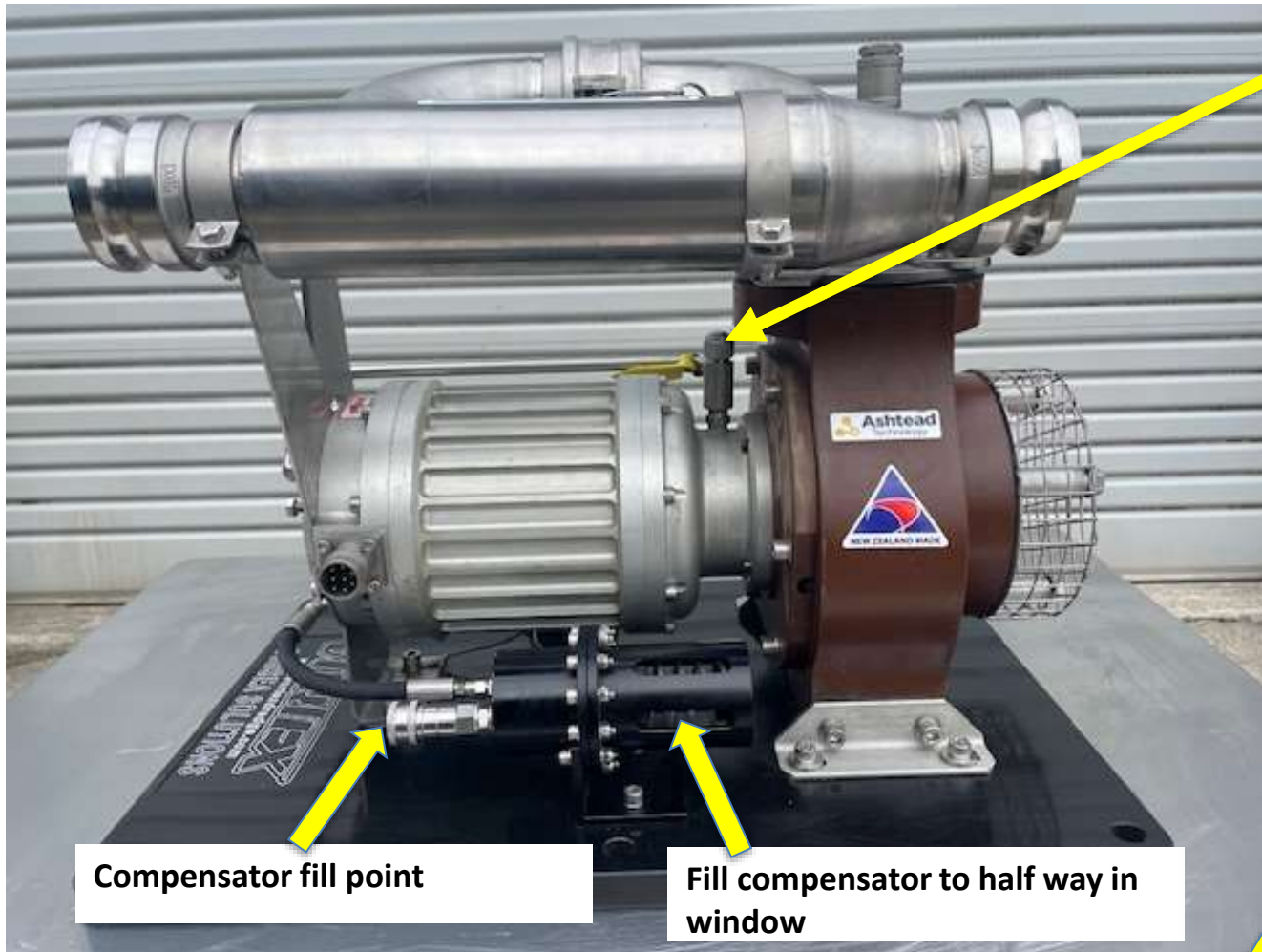
Motor rotation.

Mounting plate. Use existing holes to bolt through to ROV or skid frame.

ELECTRIC DREDGE INSTALLATION CONTINUED

Motor drain point / Oil Line to compensator.

ALWAYS BLEED MOTOR AND LINES BEFORE OPERATION.



Motor oil balance tube

ELECTRIC DREDGE INSTALLATION CONTINUED



Vortex Electric dredge with shown installed on SAAB Panther XT Plus.

ELECTRIC DREDGE WATER PUMP SHIPPING BOX & INVENTORY

Water pump spares:

400V ELECTRIC

- 10964 IMPELLER – ELECTRIC 400V
- 10194 VORTEX MECH SEAL KIT
- 10753 ORING 175 X 4 N70 (CASING)
- 10754 ORING ARP240 N70 (CIRC PUMP HOUSING)
- 10755 ORING ARP236 N70 (SEAL HOUSING)
- 10073 ORING – IMPELLER
- 10363 ORING VOLUTE CASING
- 10181 SEAL SEAT RETAINER
- 10067 RESIN CAPNUT
- 10182 SS CIRCLIP

Water pump spares:

660V ELECTRIC

- 10965 IMPELLER – ELECTRIC 660V
- 10194 VORTEX MECH SEAL KIT
- 10753 ORING 175 X 4 N70 (CASING)
- 10754 ORING ARP240 N70 (CIRC PUMP HOUSING)
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- 10073 ORING – IMPELLER
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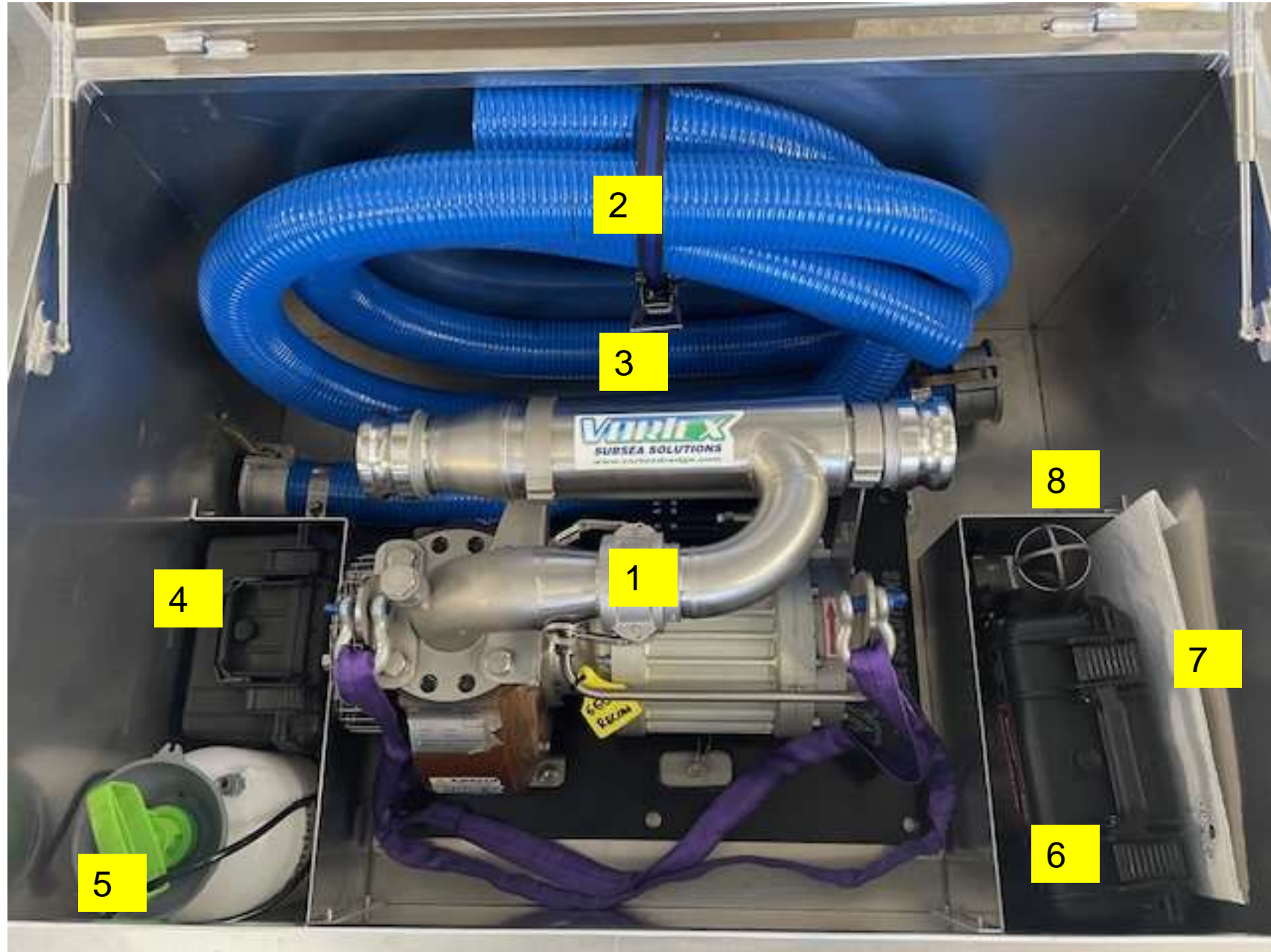
Electric power cable:

- 3 ft cable with 8-way Burtons female plug



ELECTRIC DREDGE WATER PUMP SHIPPING BOX & INVENTORY

1. 3 inch venturi and electric motor complete assembly
2. 3 inch suction hose x 4000 mm long with female cam lock
3. 3 inch exhaust hose x 1500 mm long with female cam lock
4. Electric cable
5. Comp bottle
6. Water pump spares
7. Manual
8. Suction hose inlet nozzle with two x 85 to 91 mm hose clamps





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