# HEAVY DUTY PLOUGH

## BURIAL TOOL



#### **DESCRIPTION**

The technologically advanced Heavy Duty HD3 Plough is based upon a proven and successful industry accepted design, several of which are in operation today. The HD3 Plough is capable of burying large diameter cables with large bend radii and is suitable for flexi pipes. Features include subsea jet assisted ploughing to reduce bollard pulls in sands and a subsea crane for remote loading and unloading. The HD3 Plough is able to work with both single cables and also bundled cables. It comes fully equipped with a high degree of instrumentation and surveillance equipment as standard.



### **TECHNICAL SPECIFICATIONS**

# ♦ KEY FEATURES

- $\cdot$  3M cable MBR
- $\cdot$  Share suitable for cable size up to 350 mm
- 150 tons bollard pull
- $\cdot$  3.3 m depth for burial adjustable
- Subsea cable loading and unloading capabilities
- $\cdot$  Subsea pumps for jet assisted ploughing
- Single and bundled cables ploughing capability
- Comprehensive instruments and surveillance

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- Remote operation beach kit
- Surface fed pumps

#### CABLE OPERATIONS KEY FEATURES

All performance figures quoted are nominal, actual performance is dependent on environmental conditions prevailing at the time of operations.

# GENERAL

| Depth Rating          | 500 m   |
|-----------------------|---|
| Dimensions<br>(LxWxH) | 15 m x 6.5 m x 7.0 m  |
| Weight                | 47 tons (share size<br>dependent)   |
| Burial Depth          | Up to 3.3 m   |
| Maximum Tow<br>Force  | 150 tons  |
| Depth Control         | Continuously variable<br>between 0 m and 3.3 m<br>using front skids and<br>hinged chassis |
| Soft mud capacity     | 5 kPa min   |

# CABLE LOADING / UNLOADING CONFIGURATION

Remote subsea crane mounted aft with 3 tonne 3 m MBR grab and 12 m lift capacity

High lift slewing depressor

Hydraulic thruster for alignment during landing

Cylinder actuated bellmouth tines

Surveillance system for positioning during landing

Starboard stabilizer slewing capablity to facilitate loading



| SUBSEA JETTING SYSTEM |   |  |
|-----------------------|---|--|
| Configuration         | High flow, low pressure<br>water used to fluidise in<br>front of plough share |  |
| Pump                  | 250kW mixed flow<br>pump  |  |
| Pressure              | 6 bar   |  |
| Flow Rate             | 800 m3/hr   |  |

| SUBSEA ELECTRONICS |   |
|--------------------|---|
| Cameras            | Enhanced Low Light<br>CCD, Colour with manual |
|                    | zoom, Mini Observation                        |
|                    | Camera  |
| Lamps              | LED lamps                                     |
| Sonar              | Obstacle avoidance                            |
|                    | sonar, Gemini sonar                           |
| Gyro               | iXBlue Octans                                 |
| Bathy / Altimeter  | Tritech SK704 / Tritech<br>PA500              |