

Marine Services

Installation and maintenance...

for every ocean

Alcatel·Lucent 

Innovation

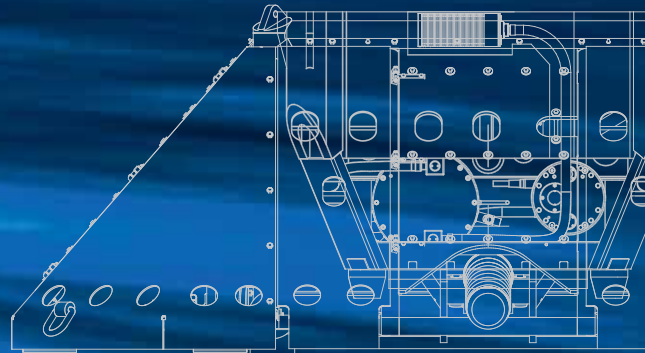


Oil & Gas

Alcatel-Lucent Submarine Networks own and operate state-of-the-art vessels, including remote operated vehicle spreads to operate in the Oil & Gas and renewable energy markets.

Deep Science

Alcatel-Lucent Submarine Networks develop technologies and install Deep Science, making power and fibre optics available on the seafloor for the Oil & Gas and Science communities.



Tailored service agreements to meet individual system owners' needs, based on:

- DMOQs
- Service scope
- System complexity
- Response time

Worldwide organisation with a large pool of operational resources:

- High performance vessels and ROVs
- Highly qualified personnel
- Wet plant spares storage on board or in depot
- Spares management
- Cable awareness for seabed users
- Dispersion management
- In-service repairs
- Post-repair burial
- Post-repair reporting and charting
- Periodic inspection and cable protection services



Cable jointing:

- All major jointing technologies
- Guaranteed supply of spares and piece-parts
- Full member of UJ Consortium
- Provision of UJ common components
- Provision of UJ kits and specific end kits for all UJ qualified cables

Marine Maintenance

Expertise and innovation



Complete all-inclusive service

- Deepwater repairs
- Shallow water repairs
- Pro-active maintenance
- 24/7/365 operations
- Worldwide coverage

Alcatel • Lucent 



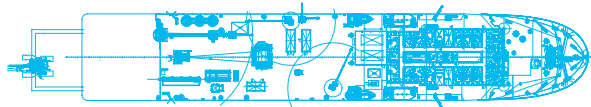
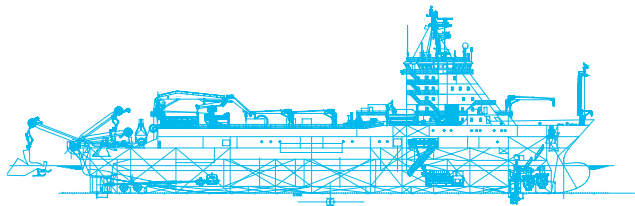
Ile de Brehat, Ile de Sein, Ile de Batz



Ile de Brehat / Ile de Sein / Ile de Batz

Technical Specifications

DESCRIPTION / POSITIONING	Three state-of-the-art vessels, highly powerful for long-haul cable installation and burying in the harshest conditions. Duplex DP and Integrated Control System
OWNER	ALDA MARINE
OPERATOR	ALDA MARINE S.A.S.
SHIP MANAGER	LOUIS DREYFUS ARMATEURS S.A.S.
FLAG	French
CONSTRUCTION YEAR	2002
LENGTH OVERALL	140.36 m
BREADTH	23.40 m
DRAFT	8.00 m (summer draft)
DEADWEIGHT	9820 mt
ACCOMMODATION	Single cabins: 60; double cabins: 5
CABLE TANK CAPACITY	Main cable tank: 2 x 2500 tonnes (max cap each tank: 3500 tonnes), 2 x 1500 m ³ Spare cable tank: 2 x 250 tonnes, 2 x 150 m ³
REPEATER STORAGE	2 x 100
CABLE MACHINERY	1 Linear Cable Engine - DOWTY 21 Wheel pairs, Drum Engine - DOWTY 6T DOHB / 28T Drum, 2 Transporter - DOWTY 2 Wheel Pairs, 1 Stern Hauler - DOWTY 2 Wheel Pairs
TYPE OF PLOUGH	1 SMD HD3 Plough - burial in all soils (including fractured rocks). Max burial: 3.00 m
CABLE LAYING SOFTWARE	MakaiLay
DYNAMIC POSITIONING	DP2 BV PDY MATAR ALSTOM
TRANSIT SPEED	15 knots
BOLLARD PULL	100 tonnes
POWER GENERATION	4 x 4320 kW MAK + 1 x 1360 kW MAK
THRUSTERS	2 x Lips 1500 kW Bow Thrusters, 1 x Lips 720 rpm - 1500 kW AZ Fore Thruster 2 x Lips 1500 kW Aft Thrusters
PROPULSION	2 electrically driven fixed pitch propellers. Output 4000 kW each. Propeller diameter: 3700 mm. Max propeller speed: 146 rpm





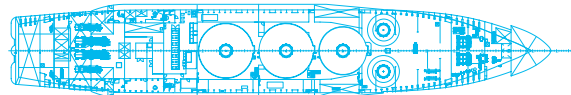
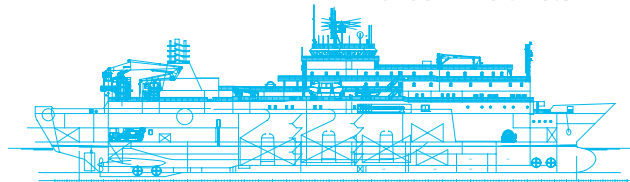
Ile de Ré



Ile de Ré

Technical Specifications

DESCRIPTION / POSITIONING	High-speed cable maintenance vessel, ideal for work in harsh conditions. Dynamic Positioning and Integrated Control System
OWNER	ALDA MARINE MAINTENANCE ILE DE RE S.A.S.
OPERATOR	ALDA MARINE S.A.S.
SHIP MANAGER	LOUIS DREYFUS ARMATEURS S.A.S.
FLAG	French
CONSTRUCTION YEAR	1982
CONVERSION YEAR	2002
LENGTH OVERALL	143.40 m
BREADTH	23.30 m
DRAFT	7.22 m (summer draft)
DEADWEIGHT	5378 mt
ACCOMMODATION	Single cabins: 40; double cabins: 10
CABLE TANK CAPACITY	2 x 1500 tonnes / 910 m ³ + 1 x 1100 tonnes / 680 m ³ + 2 x 350 tonnes / 195 m ³ + 1 x 240 tonnes / 142 m ³
REPEATER STORAGE	2 x 20
CABLE MACHINERY	Drum Cable Engine - 2 x 25 tonnes with Cable diverter, Hydralift DOHB Linear Cable Engines - 2 x DOHB 6T - Hydralift 6WP Transporters - 3 x DOHB 2T - Hydralift 2 WP
TYPE OF PLOUGH	SMD - ALPHA Plough
TYPE OF ROV	1 LD Travocean ROVJet 402 (300 kW, 2500 m)
CABLE LAYING SOFTWARE	MakaiLay and WinFrog
DYNAMIC POSITIONING	ALSTOM ADP 22
TRANSIT SPEED	15 knots
POWER GENERATION	2 x 2925 kW WARTSILA + 2 x 1440 kW WARTSILA
SIDE THRUSTERS	2 x Lips 1500 kW Bow Thrusters, 2 x Lips 1500 kW Aft Thrusters
PROPULSION	2 x 5295 kW (type "12 VDS48/42AL2") - 500 / 221 rpm + 2 x controllable pitch propellers 3400 mm diameter





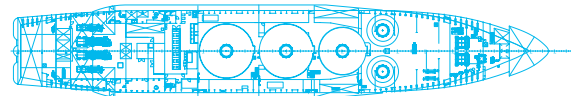
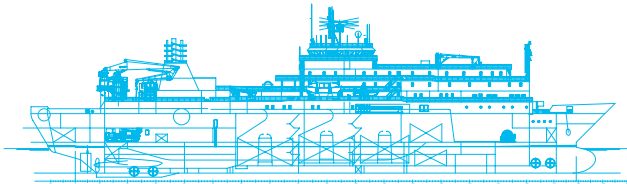
Lodbrog



Lodbrog

Technical Specifications

DESCRIPTION / POSITIONING	High-speed cable maintenance ship, ideal for work in harsh conditions. Dynamic Positioning and Integrated Control System
OWNER	ASN DK
OPERATOR	ALDA MARINE S.A.S.
SHIP MANAGER	LOUIS DREYFUS ARMATEURS S.A.S.
FLAG	French
CONSTRUCTION YEAR	1985
CONVERSION YEAR	2002
LENGTH OVERALL	143.40 m
BREADTH	23.30 m
DRAFT	7.48 m (summer draft)
DEADWEIGHT	5955 mt
ACCOMMODATION	Single cabins: 40; double cabins: 10
CABLE TANK CAPACITY	1500 tonnes / 920 m ³ + 1500 tonnes / 839 m ³ + 1100 tonnes / 628 m ³ 2 x 350 tonnes / 184 m ³ + 240 tonnes / 157 m ³
REPEATER STORAGE	2 x 20
CABLE MACHINERY	Drum Cable Engine - 2 x 25 tons with Cable diverter, Hydralift 1 x DOHB 6T - Hydralift 6WP + 1 x DOHB 1T - Hydralift 1WP Transporters - 3 x DOHB 2T - Hydralift 2 WP
TYPE OF ROV	1 LD Travocean ROVJet 401 (300 kW, 2500 m)
CABLE LAYING SOFTWARE	MakaiLay and WinFrog
DYNAMIC POSITIONING	ALSTOM ADP 22
TRANSIT SPEED	16 knots
POWER GENERATION	2 x 2925 kW WARTSILA + 2 x 1440 kW WARTSILA
SIDE THRUSTERS	2 x Lips 1500 kW Bow Thrusters, 2 x Lips 1500 kW Aft Thrusters
PROPULSION	2 x 5295 kW (type "12 VDS48/42AL2") - 500 / 221 rpm + 2 x controllable pitch propellers 3400 mm diameter





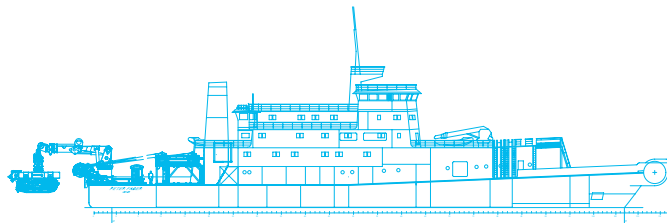
Peter Faber



Peter Faber

Technical Specifications

DESCRIPTION / POSITIONING	Maintenance cable ship
OWNER	ASN DK
OPERATOR	ALDA MARINE S.A.S.
SHIP MANAGER	LOUIS DREYFUS ARMATEURS S.A.S.
FLAG	French
CONSTRUCTION YEAR	1982
LENGTH OVERALL	78.38 m
BREADTH	13.60 m
DRAFT	5.01 m (summer draft)
DEADWEIGHT	2854 mt
ACCOMMODATION	Single cabins: 26; double cabins: 8
CABLE TANK CAPACITY	Cable tank: 1 x 231 m ³ ; 9.10 m - cable tank diameter; 4.00 m - cable tank coiling depth Cable hold: 1 x 173 m ³ ; 8.00 m - cable hold diameter; 4.00 m - cable hold coiling depth
CABLE MACHINERY	2 x Linear Cable Engines - 9 Wheel pairs + 1 Wheel pair, 1 tonne 2 x DOHB Cable winches - 4 WP port side foredeck + 3 WP starboard side foredeck 2 Capstan Cable Engines, DCE - 1 port side + 1 starboard side, cable pull 25 tonnes 1 LD Travocean ROVJet 403 (300 kW, 2500 m)
TYPE OF ROV	MakaiLay and WinFrog
CABLE LAYING SOFTWARE	1 x DP ALSTOM DPS 901 Simplex Dynamic Position Control System
DYNAMIC POSITIONING	12 knots
TRANSIT SPEED	2 x 562 kW + 1 x 728 kW shaft generator
POWER GENERATION	1 x 725 kW Bow Thruster; 1 x 675 kW Stern Thruster
THRUSTERS	2 B&W 1050 kW each + 1 x controllable pitch propeller
PROPULSION	





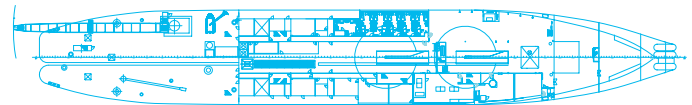
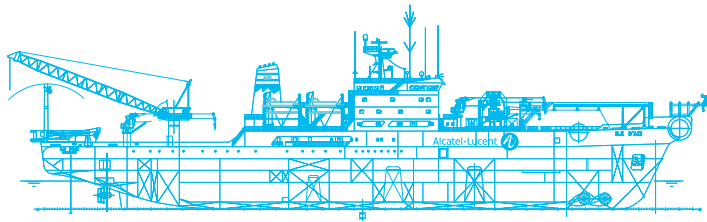
Ile d'Aix



Ile d'Aix

Technical Specifications

DESCRIPTION / POSITIONING	Maintenance cable ship
OWNER	LOUIS DREYFUS ARMATEURS S.A.S.
OPERATOR	ALDA MARINE Gestion Lodbrog Peter Faber S.A.S.
SHIP MANAGER	LOUIS DREYFUS ARMATEURS S.A.S.
FLAG	French
CONSTRUCTION YEAR	1991
LENGTH OVERALL	151.54 m
BREADTH	21.60 m
DRAFT	7.80 m (summer draft)
DEADWEIGHT	7892 mt
ACCOMMODATION	Single cabins: 8; double cabins: 40; 4-crew cabins: 27; 6-crew cabins: 2
CABLE TANK CAPACITY	1 x 1133 m ³ - 1 x 497 m ³ - 1 x 367 m ³ - 2 x 58 m ³
REPEATER STORAGE	36
CABLE MACHINERY	1 x Dowty, 21 Wheels Pairs - 2 x Drum Cable Engine (Dowty 3.5 m diam.)
TYPE OF ROV	ROV ST206
CABLE LAYING SOFTWARE	WinFrog
DYNAMIC POSITIONING	Kongsberg SDP 21 (Upgrade 2007)
TRANSIT SPEED	13.5 knots
POWER GENERATION	3 x Wartsila 9R32D - 3300 kW + 2 x Wartsila 6R22MD - 990 kW
SIDE THRUSTERS	2 x KaMeWa TT2400G/BMS-CP - Ø 2400 mm - 4 blades, Bow Thrusters
PROPULSION	2 x Azimuth KaMeWa 2800/28 RON-CP - Ø 2800 mm - 4 blades, Stern Thrusters.





Alpha Plough



Alpha Plough

Technical Specifications

GENERAL SPECIFICATION

WEIGHT	14200 kg
LENGTH	Auxiliary share deployed and skids up - 9.90 m
WIDTH	Across stabilising wheels - 4.40 m
HEIGHT	Top of tow swivels when drawbar at 90° and steering at 0° - 4.50 m
BURIAL SYSTEM	Passive blade
CUTTING DISC	When deployed, the disc defines the inclined face of a trapezium of soil that is lifted to bury the cable
OPERATION	Pulled by tow wire from surface vessel. Full remote control from shipboard control console whilst being towed
OPERATING DEPTH	1500 m max
TOWING FORCES	50 tonnes max
BURIAL DEPTH	Up to 1100 mm
REAR STABILISERS	1500 mm with the burial share extension fitted (soil conditions permitting)
SOIL TYPE	Hydraulically adjustable rear stabilisers in wheel Any, with good rock ripping capability Soft mud capacity 5 kPa minimum
PLOUGHING SPEED	Up to 1 m/s
HYDRAULIC SYSTEM	
MOTOR	15 kW 3 Phase, 2000 V 50/60 Hz. Oil filled and pressure compensated
PUMP	Constant displacement gear pump giving 36 litres/min up to 250 bar at 60 Hz
SURVEILLANCE EQUIPMENT	The surveillance equipment comprises CCTV cameras, associated lamps, pan and tilt units
OBSTACLE AVOIDANCE SONAR	Manufactured by Simrad type Mesotech 971 675 kHz OA fan beam Range selectable up to 200 m Depth rating 2000 m Used with Mesotech MS 900 Sonar Processor



SMD HD3 Plough



SMD Heavy Duty HD3 Plough

Technical Specifications

GENERAL SPECIFICATION AND OPERATION

DIMENSIONS

10.82 m long (skids down, plough hinged, depressor down)

4.80 m high (plough hinged)

5.96 m wide (over rear stabilisers)

25 tonnes (excluding ripper and jetting package)

Pulled by tow wire from surface vessel

Full remote control from shipboard control cabin or from remote control console whilst being towed

+/- 16°

2.30 m trench depth at zero share pitch (soil dependent)

3.00 m achievable in soft soils with plough pitched aft

Optional interchangeable share 1.5 m available

A forward mounted Rock Tooth can cut the trench in rock usually with a layer of soil above it

1500 m maximum

Repeater burial depth 50-90% of plough burial depth, dependent on soil conditions

Any, within limits of pull force (130 tonnes)

5 kPa minimum

Recommended maximum 2 knots depending on seabed conditions

RESERVOIR: Flexible pressure compensated, 100 litres working capacity

SYSTEM HYDRAULIC OIL: Houghton Vaughan Hydrodrive HPE 22

Heavy duty marine type with welded swivel eyes

The surveillance equipment comprises CCTV cameras, associated lamps, pan and tilt units

CAMERAS: 3 x SIT

LAMPS: 5 x 150 W 24 V incandescent

SONAR: Mesotech 1000 digital sonar head (range up to 100 m)

HYDROPHONE: A hydrophone is provided with an integral pre-amplifier

ACOUSTIC POSITIONING: Provision is made for responder/ transponder unit

SUBMERGED WEIGHT

OPERATION

CONTROL

STEER ANGLE

BURIAL DEPTH

OPERATING DEPTH

REPEATER BURIAL

SOIL TYPE

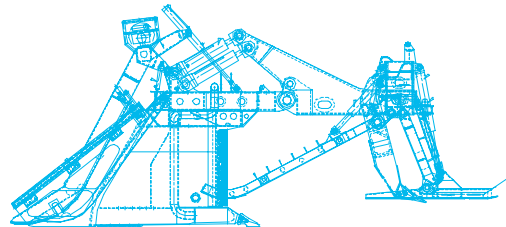
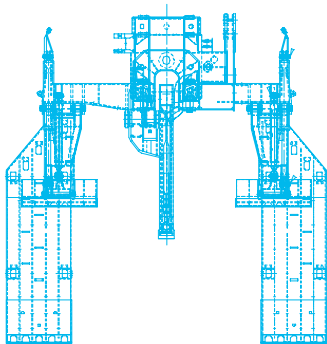
SOFT MUD CAPACITY

PLOUGHING SPEED

HYDRAULIC SYSTEM

CYLINDERS

SURVEILLANCE EQUIPMENT





SMD MD3 Plough

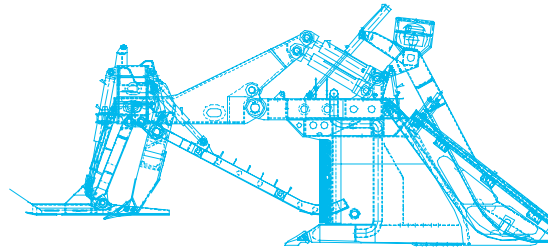
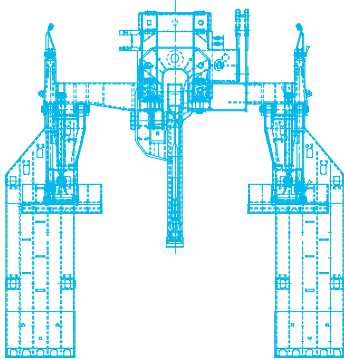


SMD MD3 Plough

Technical Specifications

GENERAL SPECIFICATION AND OPERATION

WEIGHT	22500 kg (in air)
LENGTH	9.50 m long (skids and auxiliary share down)
WIDTH	5.60 m
HEIGHT	5.00 m high (skids and drawbar fully down)
BURIAL SYSTEM OPERATION	Parallel sided blade - optional disc trenching system Pulled by tow wire from surface vessel Full remote control from shipboard control console whilst being towed
OPERATING DEPTH	2000 m maximum
TOWING FORCES	10-60t
BURIAL DEPTH	Depths of 2.0 m to 2.2 m are achieved by plough sinkage until rear stabilisers reach fully up position Depth is increased from 2.2 m to 3.0 m by rotating the share hinge position with rear stabilisers fully up Hydraulically adjustable rear stabilisers
REAR STABILISERS	
SOIL TYPE	Any, with good rock ripping capability. Soft mud capacity 5 kPa minimum
PLOUGHING SPEED	Up to 1 m/s
HYDRAULIC SYSTEM	RESERVOIR: Flexible pressure compensated, 100 litres working capacity HYDRAULIC OIL: Houghton Vaughan Hydrodrive HPE 118 CYLINDERS: Heavy duty marine type with welded swivel eyes
SURVEILLANCE EQUIPMENT	The surveillance equipment comprises CCTV cameras, associated lamps, pan and tilt units
OBSTACLE AVOIDANCE SONAR	A scanning sonar head is mounted at the front of the plough. A Mesotech 9000 or equivalent sonar system can be installed





ROVJet 400 & Dynacon LARS



ROVJet 400 & Dynacon LARS

Technical Specifications

LARS

Dynacon Model 1015 Telescoping horizontal luffing, lifting umbilical SWL 13.5 tonnes, max operating sea state: 6

ROV

CONFIGURATION

Vehicle free-swimming or on tracks

TOTAL POWER

300 kW (400 hp)

MAXIMUM DEPTH RATING

2500 m

DIMENSIONS (APPROX.)

Length: 5.00 m; Width (on tracks): 3.40 m; Height: 2.00 m

WEIGHT IN AIR (APPROX.)

10 tonnes with tracks, 9 tonnes without tracks

HP JETTING SYSTEM

1 x 93 kW 2 pole 3.3 kV electro-jetting units for HP Jetting

1 x 125 HP Flowserve Type QN102-2A HP jetting pump

Nominal Jet Pressure: 7 bar (300 m³/h)

LP JETTING SYSTEM

1 x 93 kW 2 pole 3.3 kV electro-jetting units for LP Jetting

1 x 125 HP Flowserve Type QN122-1A LP jetting pump

Nominal Jet Pressure: 3 bar (550 m³/h)

JETTING TOOLS

1 x Main Jetting Tool

HP & LP Flow for Depth Burial

Depth control: 0-2000 mm (0-3000 mm on Lodbrog) with main swords

1 m and 2 m swords option (3 m sword option on Lodbrog)

Transducers: Tool Depth (transducer fitted on cylinder)

Depressor height, Water pressure, Cable Detection

1 x Forward Jetting Tool

HP Flow for Surface Trenching

Depth control: 0-400 mm

SURVEILLANCE EQUIPMENT

2 x Typhoon 22:1 Colour Zoom, 2 x CCD monochrome,

1 x Tornado Low Light Camera

PAN & TILTS

2 x PT10-FB-120V-OIL-AL with feedback

OA SONAR

Tritech Super Seeking DFS

ECHO SOUNDER

Tritech PA500:6-S. Range: 50 m

CABLE TRACKER

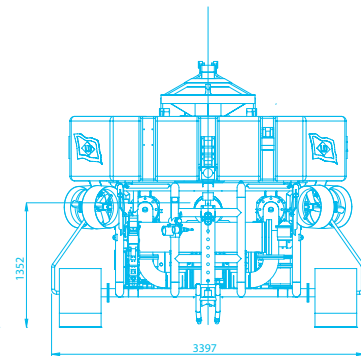
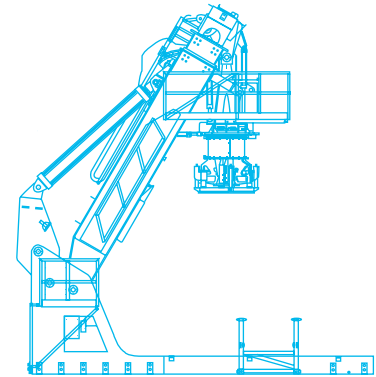
TSS 440/350 Dual track on deployment frame

CABLE TOOLS PACKAGE

1 x Schilling Orion 7P, 1 x LD Travocean 3R

(special for cutting application),

Webtool HCV100, LD Travocean Cable Clamp





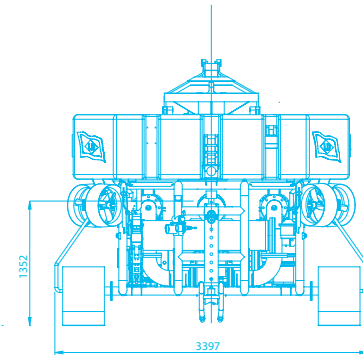
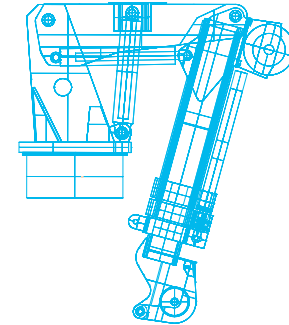
ROVJet 400 and Heila LARS

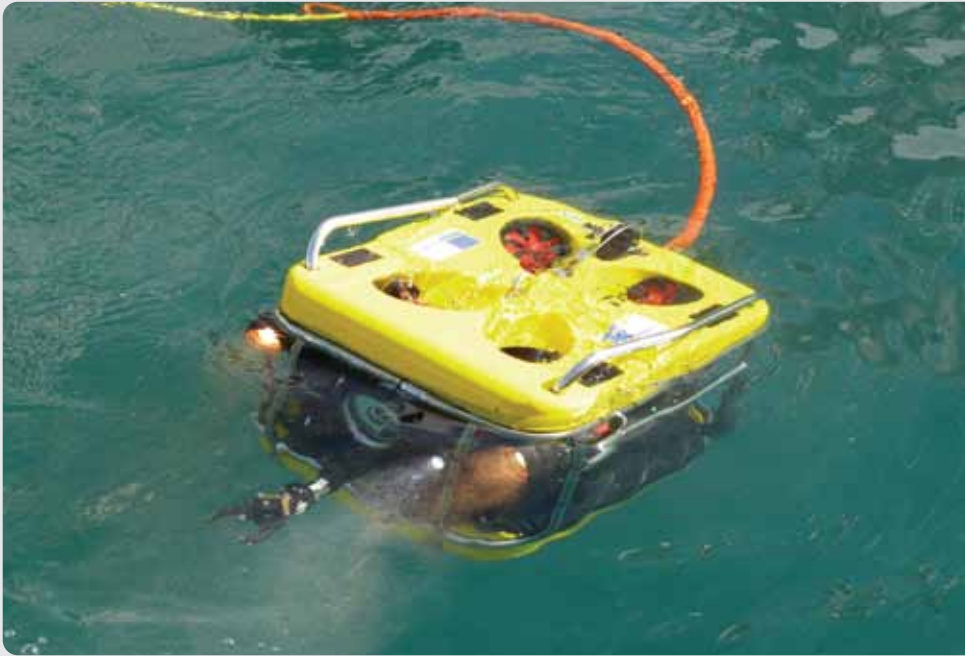


ROVJet 400 & Heila LARS

Technical Specifications

LARS	HEILA HLRM 240/2S crane SWL 7.1 tonnes, max operating sea state : 4
ROV	Vehicle free-swimming or on tracks
CONFIGURATION	300 kW (400 hp)
TOTAL POWER	2500 m
MAXIMUM DEPTH RATING	Length: 5.00 m; Width (on tracks): 3.40 m; Height: 2.00 m
DIMENSIONS (APPROX.)	10 tonnes with tracks, 9 tonnes without tracks
WEIGHT IN AIR (APPROX.)	1 x 93 kW 2 pole 3.3 kV electro-jetting units for HP Jetting 1 x 125 HP Flowserve Type QN102-2A HP jetting pump Nominal Jet Pressure: 7 bar (300 m3/h)
HP JETTING SYSTEM	1 x 93 kW 2 pole 3.3 kV electro-jetting units for LP Jetting 1 x 125 HP Flowserve Type QN122-1A LP jetting pump Nominal Jet Pressure: 3 bar (550 m3/h)
LP JETTING SYSTEM	1 x Main Jet Tool HP & LP Flow for Depth Burial Depth control: 0-2000 mm (0-3000 mm on Lodbrog) with main swords 1 m and 2 m swords option (3 m sword option on Lodbrog) Transducers: Tool Depth (transducer fitted on cylinder) Depressor height, Water pressure, Cable Detection
JETTING TOOLS	1 x Forward Jetting Tool HP Flow for Surface Trenching
SURVEILLANCE EQUIPMENT	2 x Typhoon 22:1 Colour Zoom, 2 x CCD monochrome, 1 x Tornado Low Light Camera 2 x PT10-FB-120V-OIL-AL with feedback Tritech Super Seeking DFS Tritech PA500:6-S Range: 50 m TSS 440/350 Dual track on deployment frame 1 x Schilling Orion 7P, 1 x LD Travocean 3R (special for cutting application), Webtool HCV100, LD Travocean Cable Clamp
PAN & TILTS	
OA SONAR	
ECHO SOUNDER	
CABLE TRACKER	
CABLE TOOLS PACKAGE	





V8 Sii ROV



V8 Sii ROV

Technical Specifications

CONFIGURATION

360° freedom of movement in three dimensions,
8 vectored thrusters
Extremely advanced control system.

POWER

5 kW

DEPTH RATING

500 m

DIMENSIONS (APPROX.)

Length: 780 mm; Width: 670 mm; Height: 470 mm

WEIGHT IN AIR (APPROX.)

60kg

MANIPULATORS

1 function

CAMERA AND LIGHT

1 x wide angle Bowtech Surveyor colour zoom

1 x small camera with light back end

SONAR

Tritek Micron

POSITIONING

USBL 319 micro beacon

TRANSMISSION

Fibre-Optic, NTSC or PAL

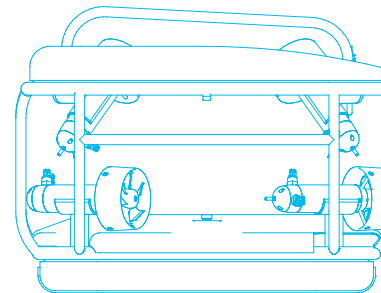
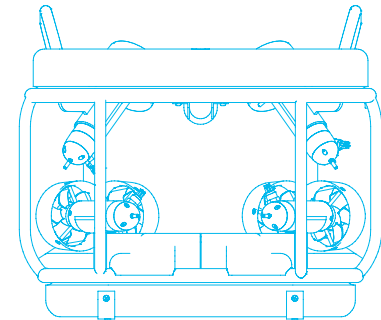
LIGHT

Bowtech LED-3200

UMBILICAL

Length 400 m fibre-optic on winch

Self-contained 20ft container for L&R during DP operations.
Compass, auto depth, auto heading, pitch & roll, depth sensor.
Laptop with software for sonar and recording,
HDD recorder with external screen.





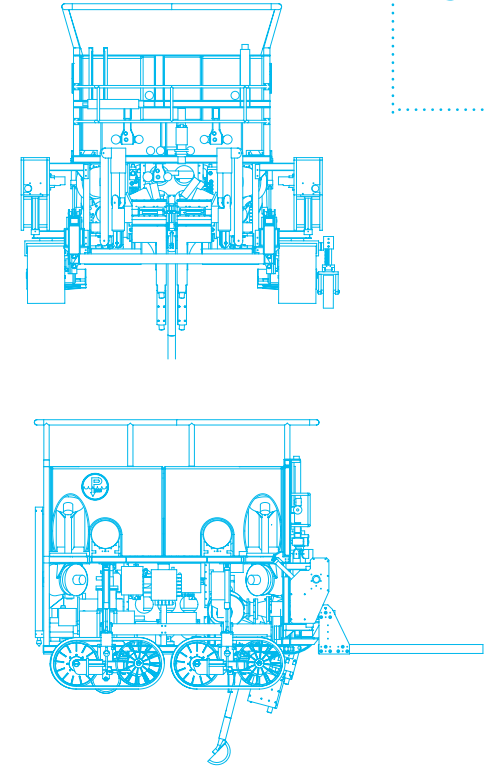
ST206 ROV



ST206 ROV

Technical Specifications

CONFIGURATION	Vehicle free-swimming or on tracks
TOTAL POWER	150 kW
MAXIMUM DEPTH RATING	2500 m
DIMENSIONS (APPROX.)	Length: 3.30 m; Width (on tracks): 3.94 m; Height: 2.92 m
WEIGHT IN AIR (APPROX.)	7 tonnes with tracks, 6 tonnes without tracks
JETTING SYSTEM	Two Fibroc high pressure water pumps are directly coupled to and driven by the hydraulic motors. They deliver 700 gpm, 120 psi at 3500 rpm. Power sharing Hydraulic system under operator control.
JETTING TOOLS	Perry Trittech Advanced Cable Burial tool mounted in front of ROV, optimized for 0 to 30 kPa. Burial tools for different seabed condition can be installed. Interchangeable jetting configurations with 0.7 m and 1.5 m legs providing burial up to 1.5 meters.
SURVEILLANCE EQUIPMENT	1 x Simrad 1324T SIT camera, 3 x Simrad 1366T CCD colour cameras (zoom), 1 x Simrad 1392T black & white camera, 2 x 14-100 mini CCD colour cameras, all fitted in Titanium housings.
PAN & TILTS	3 x Perry Trittech PT2712 units 1 x Perry Trittech Tilt unit
OA SONAR	Mesotech 900D with 1071 upgraded head
DEPTH SENSOR:	High Accuracy Digiquartz Paroscientific pressure transducer
CABLE TRACKER	TSS 440/350 Dual track. Armoured cable range up to 1.2 m
CABLE TOOLS PACKAGE	2 x Schilling Orion 7RE, 7 functions Webbtool HCV-100 for cutting, Capacity up to 108 mm double row armoured Slingsby Engineering TA-0017 up to 100 mm cable diameter for gripping.





Cut and hold grapnel



Deep Sea Cut and Hold Grapnel

Capable of recovering a cable from depths of up to 9000 m. Designed jointly by Alcatel-Lucent and Ocean Cable Technologies.

The use of a cut and hold grapnel can significantly enhance marine repair operations when locating and recovering the first cable end, particularly in deeper waters on lightweight cable variants. Use of this tool will save on average 18 hours of operational time compared to using traditional cut and hold methods.

The cut and hold grapnel has been designed to locate, cut and recover all LW and LWP cables currently in use. Capable of holding the cable up to and beyond its NTTS value, regardless of size or strength, it ensures the cable is retrieved effectively to the surface and the risk of the cable end being lost during recovery is minimal.

The Ocean Cable Technologies cut and hold grapnel utilises the energy derived from the vessel's tow cable as the power source. This purely mechanical design with no electrical or hydraulic parts means that the tool is not only energy efficient but also highly reliable.

Technical Specifications

DIMENSIONS

LENGTH	2300 mm
WIDTH	1000 mm
HEIGHT (excluding tine)	360 mm
DEPTH (including tine)	880 mm

CABLES QUALIFIED

OR UNDER QUALIFICATION

ASN OALC4 LW, Pirelli 18 mm LWP
ASN OALC4 LWP, OCC SC300 LWP
STC NL, OCC SC100 LWP

GRIPPING DEVICE TEST CRITERIA

Tyco SL 17 mm, Siemens Minisub LW
Tensile Test to NTTS 1 hour
Tensile Test to NTTS through 90° 1 hour
Tensile Test to Failure
Tensile Test to Failure through 90°
12 hour at NTTS
Full depth recovery test
All tests repeated in salt water, sand, mud, gravel, grease and oil

PHYSICAL PROPERTIES

MAXIMUM TENSILE STRENGTH	15 tonnes
ACTIVATION LOAD	Variable 0.3-2.0 tonne
BREAK OUT LOAD	10 tonne
WEIGHT	2 tonne





Jointing and services



Jointing and Services

The **Jointing and Services team (JAS)** located at the Alcatel-Lucent Submarine Network cable production site in Calais, France is responsible for the organisation of jointing activities on board Alcatel-Lucent installation and maintenance ships and testing during system repair operations.

Cable Jointing

Cable jointing is a specialised activity that requires a high level of skill and experience in the use of jointing tools and equipment. All Alcatel-Lucent jointing personnel are fully qualified to make optical fibre cable joints and undergo regular refresh training in the Alcatel-Lucent Jointer Training School to ensure their skill levels are maintained to the agreed standard. Jointers are trained to use current and legacy jointing technologies and equipment to maintain their skills and qualifications at the highest level. A complete set of jointing equipment including contingency spares is held on board all Alcatel-Lucent vessels and is regularly checked and maintained to ensure optimum reliability and availability at all times.

The Jointing and Services team also manages stocking and replenishing of jointing kits with the main focus on ensuring that the right type and quantity of kits are in the right place at the right time for any incident that requires a cable joint.

Specifically developed for the maintenance of optical fibre cable systems, Universal Jointing (UJ) technology is the main jointing technology deployed on board Alcatel-Lucent vessels allowing joints to be made between cables from different manufacturers. Alcatel-Lucent installation ships are also equipped to use ASN jointing technology, which is consistent with the jointing techniques used in the factory during the manufacture of Alcatel-Lucent cables.

Testing

For repair operations, testing is a key stage in the process of fault location and to ensure that the cable is safe for jointing. On each Alcatel-Lucent maintenance ship there is a test engineer, who is responsible for the testing and validation of submarine cables and associated submerged equipment such as repeaters, equalisers and branching units. The test engineer directs and controls inspection and testing, interprets, evaluates and documents test results and provides technical support to customers, if required. The test engineer is also responsible for the operation and maintenance of all electrical and optical testing equipment on board the vessel.

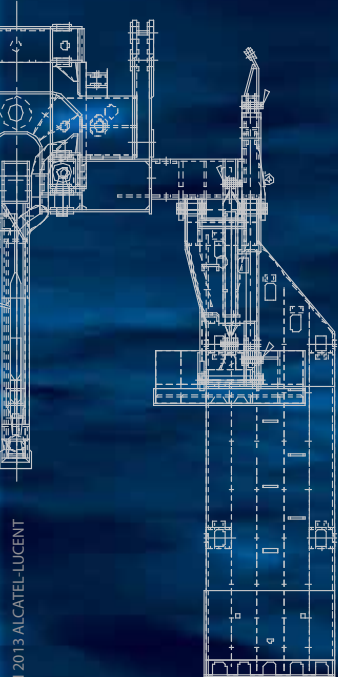




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