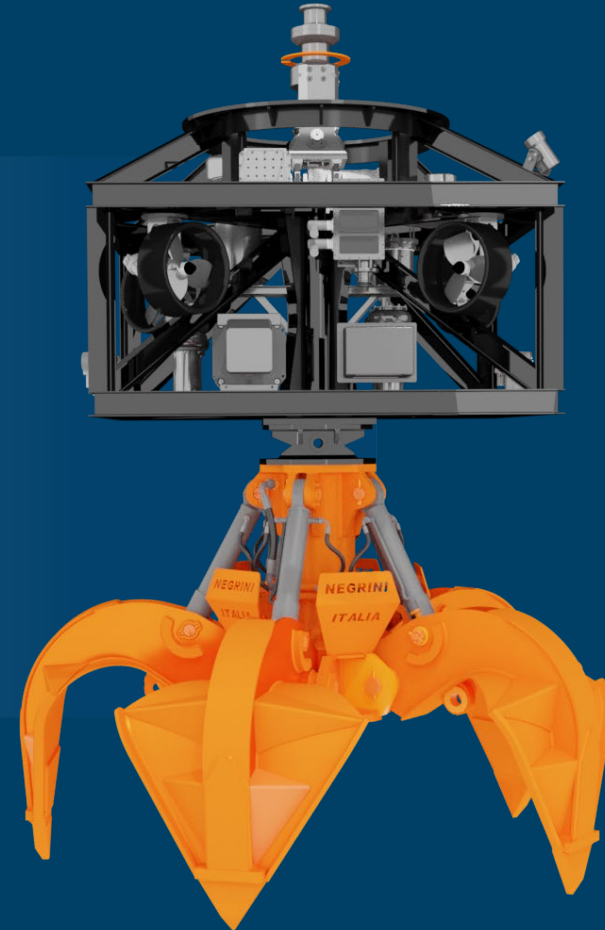


AssoGrapple II

Underwater Hydraulic Grapple



AssoGrapple II

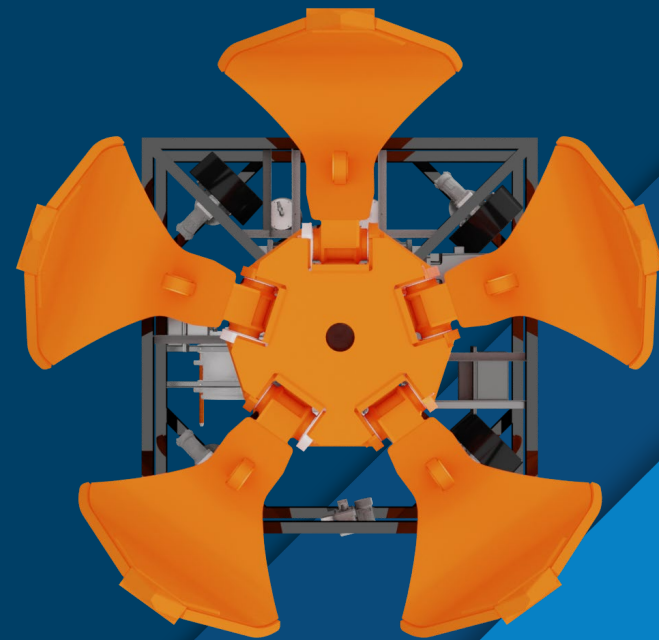
Underwater Hydraulic Grapple

The Assograpple II is a multi purpose-built tool designed for seabed intervention. It also incorporates a grapple frame which is focused in increased control and product positioning accuracy. The frame can accommodate a wide variety of equipment such as tine grab, clamshell, mattresses installation equipment, survey equipment etc.

This in-house system is designed for fast and accurate removal of boulders/-spoil heaps and similar products as well as for provision of protection on cables, pipelines and crossings. It is ideal selection for crossings protection and cable/pipe free-span rectification.

The AssoGrapple II eliminates the need for complicated/bulky support equipment on deck that would, in other cases, assist in frame's maneuvering.

This new version is extremely versatile and can easily be incorporated onto existent trenching spreads taking advantage of existent deck equipment and minimizing mobilization / demobilization time.



Specifications

Length	2.3 m
Width	2.3 m
Height	4.3 m
Weight	8000 kg
Power	200 Hp
Max. Capacity heaped	3.05 m ³
Max. Operational Depth	2000 m

5-Tine Hydraulic Grab

Dimensions Open	
Length	3.06 m
Height	2.07 m
Dimensions Closed	
Length	2.29 m
Height	2.50 m

Hydraulic Grapple

AssoGrapple II is differentiated from the competition as it is a self-propelled autonomous grapple frame. Its dimensions (3.0m x 2.0m), along with four thrusters and a powerful 200HP HPU unit provide a formidable outcome able to operate at high water depths with adverse local conditions like high currents.

This configuration provides full two dimensional control (sway, yaw, surge) which along with the incorporated electronics that provide operator feedback including but not limited to pitch, roll, heave, water depth, altimeter, sonar readings etc.

Hydraulic Clamshell

Length	2.6 m
Width close	2.3 m
Height	2.5 m
Capacity static	14 T
Capacity dynamic	10 T
Pressure close	330 bar
Pressure open	280 bar

Instrumentation

- Up to 8 low light cameras
- Up to 4 pan/tilt
- Up to 12 LED lights fully dimmable
- Up to 4 sonar (both imaging & profiling)
- 1 x altimeter with option for more
- 1 x gyro compass
- Up to two SSBL transponder

Power supply and communication with the Grapple Frame is affected through a dedicated umbilical, managed from the deck through suitable deck equipment.

Boulder dimensions

Min boulder dimensions	5-tine grab offers a fully enclosed environment
Max boulder weight	10 Te
Load cell SWL25T for load monitoring	

Mattress Installation

The Assomat is a high quality equipment to ensure the precise positioning of mattresses during installation operations. The innovative frame of Assomat can easily be incorporated onto the existent Assograpple II spread taking advantage of the already installed deck equipment (HPU, thrusters, instruments).

The upgraded frame design is highly flexible and can be easily adjusted to the AssoGrapple II through highly precision-made connecting pins minimizing downtime during mobilization/ demobilization and improving installation process efficiency.

The installation frame carries a mattress secure and release mechanism. The release mattress mechanism is activated by the powerful 200HP HPU of multitool.

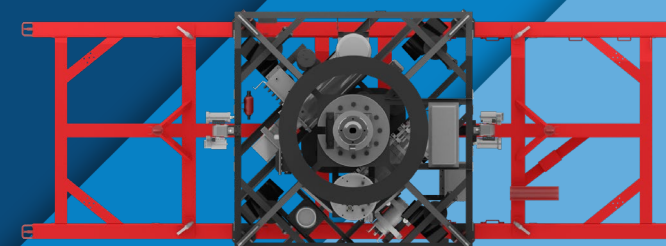
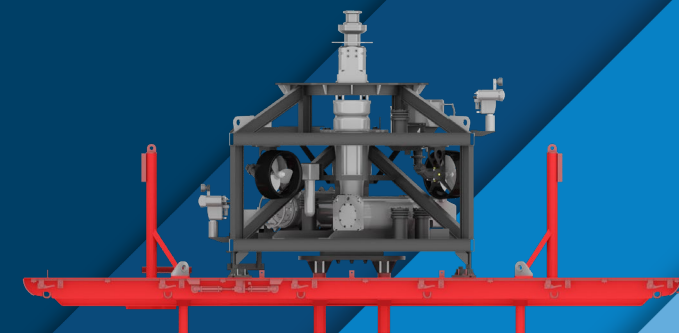
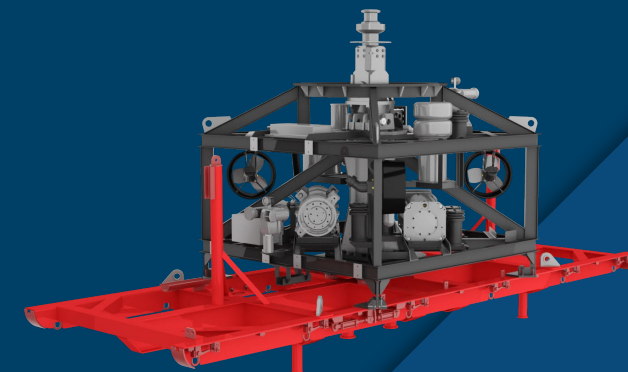
The specific arrangement has been developed to allow for accurate positioning of the mattresses along the protected route and proper alignment of the sequence of mattresses.

Specifications

Length	6.3 m
Width	2.3 m
Height	2.4 m
Weight	5500 kg
Power	200 Hp
Max. Operational Depth	2000 m
Safe Working Load (SWL)	25000 kg

Title

- Accurate mattress heading and Positioning Control
- Suitable for the installation of a wide range of mattresses
- Increased Flexibility



Deck Equipment

Control Container

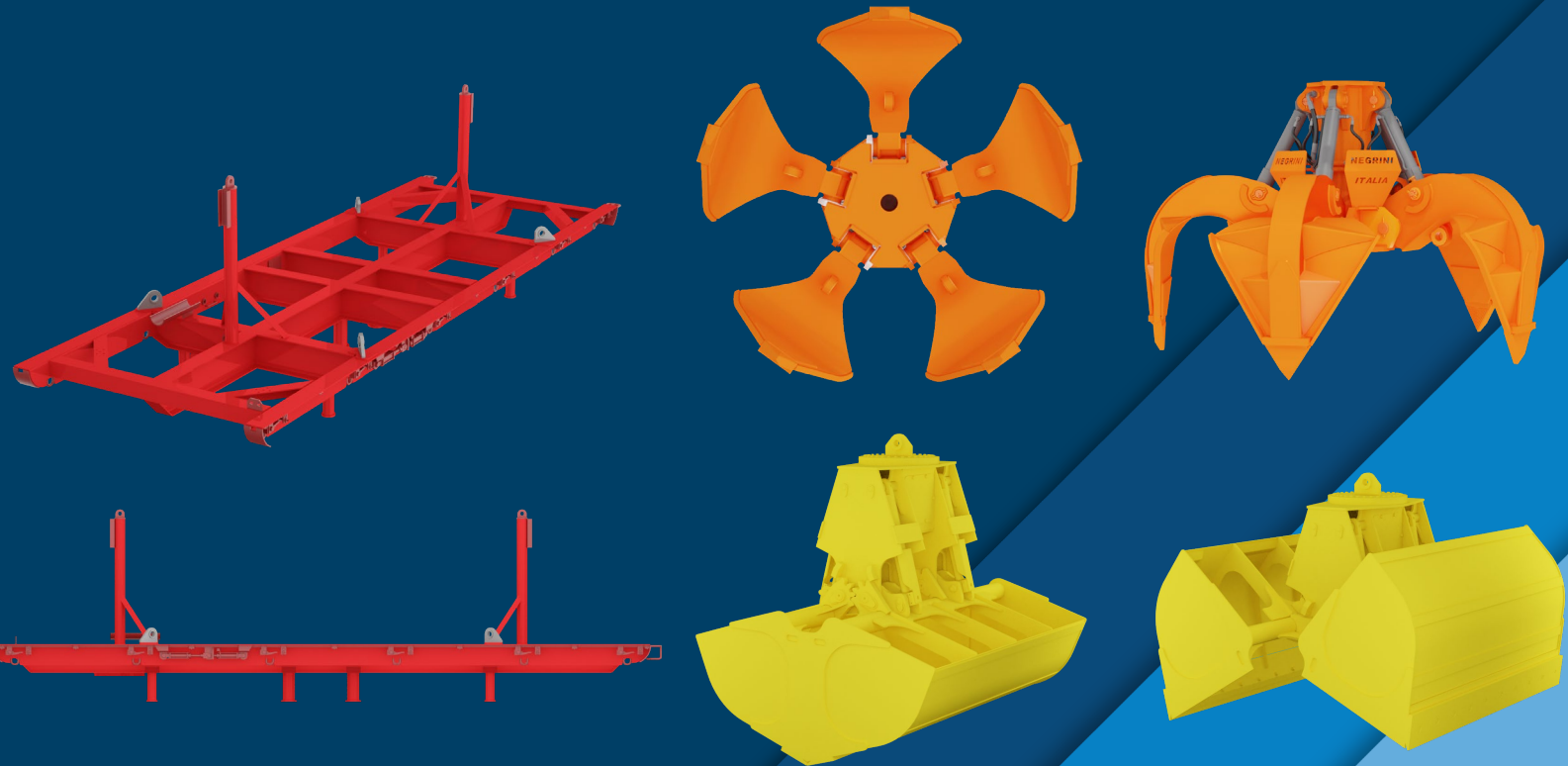
The control room is a 20ft container properly modified containing the controls of the AssoGrapple II, in addition to the computers and the displays of cameras and sonars.

LARS

The AssoGrapple II is designed to fit throughout a wide range of LARS available throughout ASSO fleet, particular attention in protection provided by launching through dedicated A-Frame or conventional side launch through certified vessel's crane providing flexibility.

Winch

The AssoGrapple II can be launched through dedicated winch which carries the load and the communication needs of the system. Alternatively, AssoGrapple II is supported by vessel's crane which carries the load while the umbilical winch carries only vehicle communications.



Membership - Accreditations



Disclaimer

The specification details are illustrative for marketing purposes only. Actual equipment may be different as a result of product improvement or other reasons. Specific interface and performance information should be reconfirmed at time of order placement. Specifications are subject to change without any prior notification.

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