

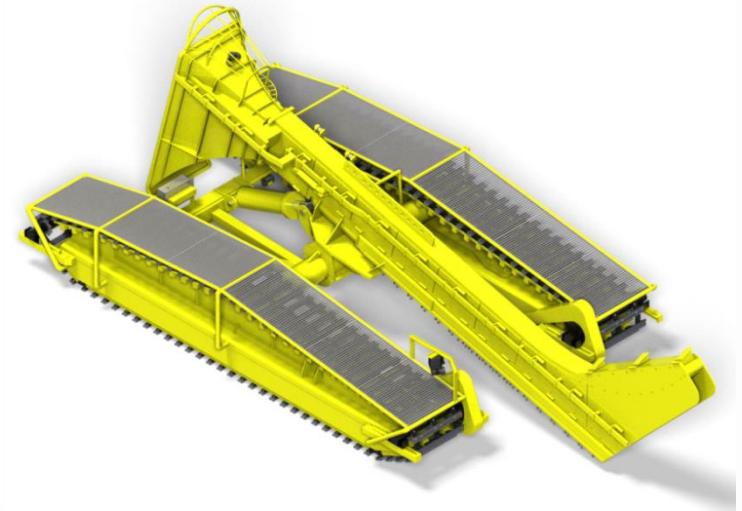
ASSOPLow MK-II

AssoPlow is the latest innovation of a series of successful underwater vehicles designs by Assodivers Ltd.

The vehicle meets the requirements of excavating deep in soft seabed soils by means of a jet assisted plow even at very shallow water depths.

The basis of the design is to produce a compact vehicle that can operate in two different operational modes.

1. The vehicle has the ability to work in tandem with a cable-laying vessel or any other DP support barge or vessel while in towing mode during Simultaneous Laying & Burial Operations.
2. The vehicle has the ability to work while in semi-autonomous mode providing Post Lay Burial Services in a wide range of soil composition operation areas.

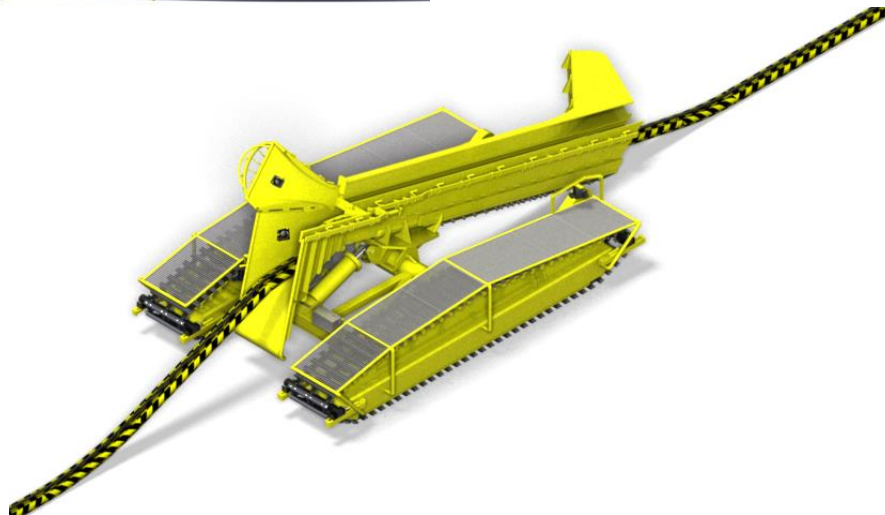
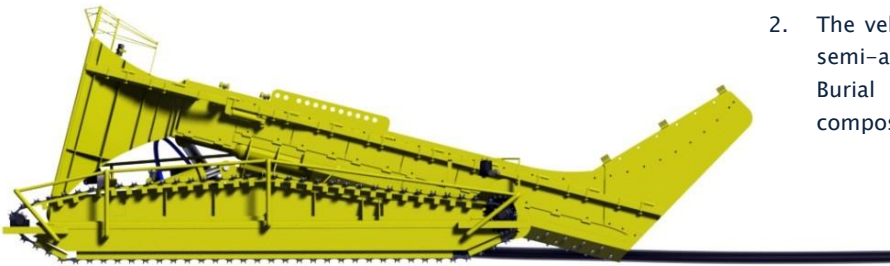


SOFT SOIL TRENCHER

A powerful jetting system is mounted at the front side of its stinger. The working principle is to cause fluidization of the seabed materials thus minimizing the shear force of the plow's stinger along a specific path and up to a fixed depth with minimum disturbance of the surrounding waters.

This vehicle is designed to bury almost all kinds of flexible products including umbilicals, power & telecommunication cables, flow lines and various flexible pipelines.

The AssoPlow is designed in such way so as cable loading and unloading to be executed without the need of divers. The benefit of this system is that cable loading and unloading is independent, up to a certain limit, of weather conditions and can be established at high water depths. Loading and unloading operation of the cable in deep water operations is always monitored from surveillance ROV to ensure that the cable is positioned safely and secured in the stinger.



ASSOFLOW MK-II

MAIN DATA

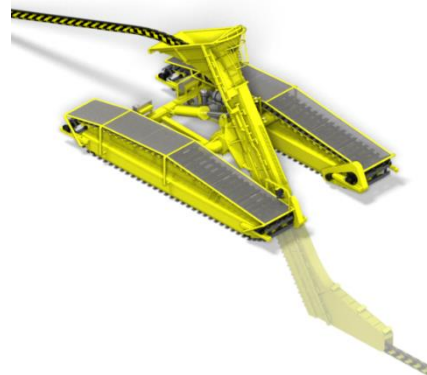
Length:	7.4m (<i>Body</i>)
	9.4 m with stinger tool retracted
Width:	4.4m
Height:	2.5m with stinger tool retracted
Weight:	Approximately 13 tons
Burial depth:	Depending on burial tool up to 3.0m
Trench width:	0.40m

CONTROL ROOM

Various options are available regarding size and installation of the control cabin. The vehicle can be operated either from a fixed control cabin onboard the vessel, or by a portable control unit. The portable control cabin is located on the support barge and is used during PLB operations.

Inside this control room all the necessary controls, monitors, GPS (video and VGA), recording devices and powering arrangements are installed, while uplink outputs are available for the connection of the control room to the remote viewing stations on the support vessel (SLB Only).

Monitoring of the vehicle and recording is done from PC-based software with graphic user-friendly display. Back-up systems are also installed for handling emergency situations.



INSTRUMENT

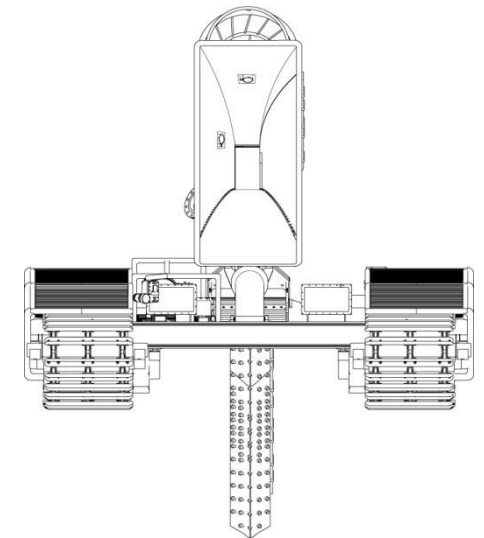
The vehicle is fitted with low light cameras, lights and sonars depending on the configuration of the protection activity. On the basic configuration, heading, pitch roll water temperature, Stinger position sensors, pressure and electronic readouts of key components of the vehicle are fitted.

A basic feature of AssoFlow is the option of depressor covers which can be remotely opened and closed to load or unload the cable. The covers are securely locked by safety pins. Indication signal is shown on the operators monitor in occasions in which pins are fully opened.

All information from the various sensors and instruments such as but not limited to vehicle attitude and excavating tool positioning, are analyzed by the computers of the vehicle and represented to the operators in the control room in the various display screens.

A list of sensors fitted in AssoFlow is:

- 4 low light underwater cameras
- 2 Pan-Tilt camera modules
- 4 Underwater lights
- Simrad/Mesotech profiling sonar
- Simrad/Mesotech scanning sonar
- Optional Multibeam Sonar
- Simrad Transponder/Responder
- Compass/Attitude sensors
- Pressure monitoring system



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.

Memberships & Accreditations



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