

# ASSOMULTITRENCHER

The concept behind AssoMultiTrencher was to produce a low weight-to-volume ratio vehicle that can operate in two different operational modes, not only in terms of tooling selection (Jetting or Trenching) but also in terms of surface support. To that respect, AssoMultiTrencher can be operated as following:

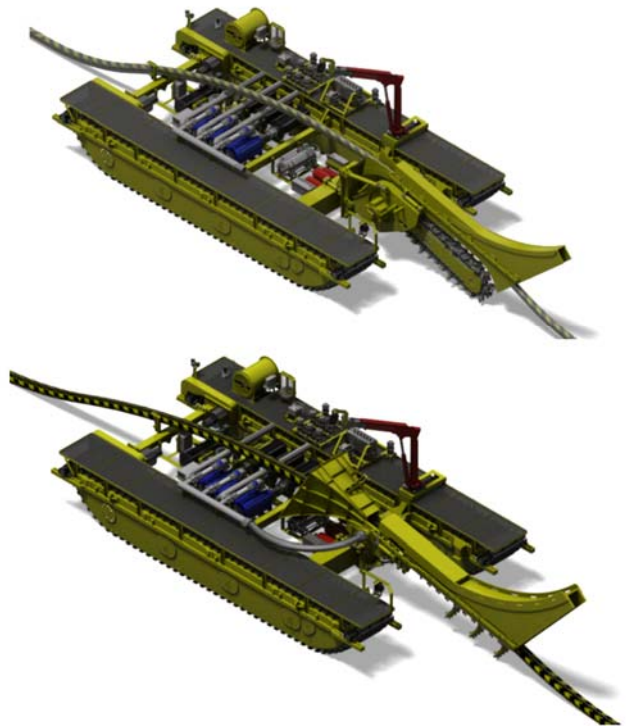
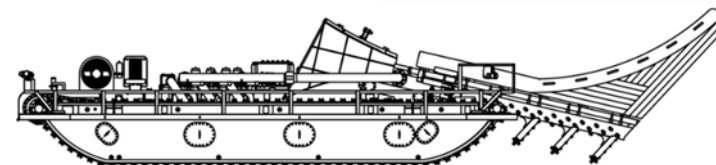
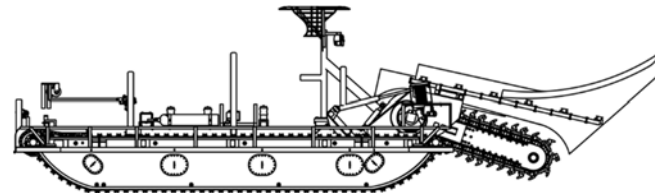
- a) The vehicle has the ability to work in tandem with a Cable-Laying vessel or any other DP Class vessel. In this configuration, AssoMultiTrencher operates as a traditional Plow being towed during Simultaneous Lay and Burial Operations, but can also move and maneuver independently if needed. During Jetting in SLB, the vehicle's tool can be surface fed utilizing a hydro-electric umbilical with appropriate High Pressure water hose.
- b) Alternatively, by using a traditional HV Fiber Optic Umbilical, the vehicle can be operated as a trencher (Jetting or Cutting Chain) by utilizing its integrated electrical motors and onboard water pumps.

In addition to the above, AssoMultiTrencher has a successful record of working in tandem with non DP Class support barges during very shallow Post Lay Burial Operations. A compact support barge would accommodate the Power Unit, the HPU and the Water Pump, all being fed to the vehicle from surface. The Control Cabin is also positioned at the support barge.

In trenching mode the vehicle can be equipped with a cutting chain producing a narrow trench in the seabed. Cable is top-loaded along a slipway and is then guided into the depressor at the aft of the vehicle. The depressor is equipped with a hydraulically controlled cover for easy Cable loading/unloading. The Cable depressor is used both in Trenching or Jetting mode and ensures the correct Depth of Burial.

In jetting mode a powerful jetting tool is mounted at the aft of the vehicle. The jetting tool is equipped with specially designed nozzles and cable depressor with remotely operated cover. The principle is to cause fluidization of the seabed materials along a specific path and up to a fixed depth with minimum disturbance of the surrounding waters. Similarly to Trenching mode, a slipway along the top of the vehicle and the depressor guide the cable in the trench ensuring correct Depth of Burial.

This method can be successfully applied in order to install various types of cables (e.g. power, F.O, bundles of cables etc.) at specific and consistent depths in all soft seabed conditions.



## VARIOUS SOIL/MECHANICAL TRENCHER

*AssoMultiTrencher is the latest innovation of a series of successful underwater vehicles designed and manufactured by Assodivers Ltd.*

*The vehicle meets the requirements of excavating deep in soft seabed soils by means of trenching or jetting even at very shallow water depths.*

# ASSOMULTITRENCHER

## SPECIFICATIONS

### Dimensions

Length (Body):	10.0 m
Length (w Tool):	14.0 m
Width:	5.0 m
Height:	3.5 m (adjacent to burial needs)
Weight:	Approximately 12 tons
Burial depth:	Depending on burial tool up to 2.0 m

### Power Supply

When operated from a Cable laying vessel, the AssoMultiTrencher can be supplied either from surface or by using its onboard water pumps and motors. In the second case, a suitable generator, and transformers provide power to the vehicle's onboard motors via a High Voltage Fiber Optic Umbilical. The onboard HV electric motors provide motion to hydraulic pumps which in turn are responsible for all hydraulic functions of the vehicle, including Cutting chain, Caterpillar motion.

When operated by a small support barge in very shallow post laying burial operations, both Hydraulic oil and Water pressure are being supplied via a Hydro-Electric umbilical positioned at the barge. Power supply required only for the electronics and telemetry of the vehicle is also being supplied via the umbilical which is consistent of a bundle. In both cases, communications and telemetry are utilizing Single Mode Fiber Optics.

### Control Cabin

AssoMultiTrencher Control Cabin is normally accommodated in a modified 10" Container. Its compact size allows the Control Cabin to be installed either on vessel's deck or at smaller support barges during very shallow operations. Due to the universal design of the vehicle's components, any of the available Control Cabins from Assodivers' Trencher range can be used to operate the vehicle. stations on the support vessel. The Control Cabin is equipped with all necessary equipment for the operation, monitoring and data

logging during Cable burial operations. Additionally the operators are able to provide uplink outputs (via serial, Ethernet or Wi-Fi) for the connection of the Control Cabin to remote viewing

### Instrumentation

As with most Assodivers Trenchers, the AssoMultiTrencher is fitted with high spec underwater equipment to ensure successful and reliable operations at any condition. Low light cameras, LED lights, Imaging & Profiling Sonars, Altimeter, Transponders and numerous other sensors ensure that the operator has all available information in real time. Dual PLCs and a sophisticated SCADA system ensure reliable controls, feedback and accurate data logging and video recording at all times. Additional equipment such as MultiBeam sonars and/or Cable Tracking systems can be fitted to aid in the operation of the vehicle.

A list of standard instrumentation fitted in AssoMultiTrencher includes:

- 8 x low light underwater cameras
- 8 x Underwater LED lights
- 2 electric Pan-Tilt Units
- Kongsberg / Mesotech Profiling sonar
- Kongsberg / Mesotech Imaging sonar
- Kongsberg Transponder/Responder
- Compass/Attitude sensors
- Pressure monitoring system
- TSS 350/440 Cable Tracker (Optional)
- Blue View MultiBeam Sonar (Optional)



*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



### Assodivers Ltd

69 Okeanidon str. & 38  
Charilaou Trikoupi str.  
Elefsina, GR 19200,  
Greece

Tel: (+30) 210 4527050  
Fax: (+30) 210 4527053

central@assodivers.gr

www.assodivers.gr