

Jet sledge OJ200

Simultaneous laying and burial tool



ABB's OJ200 is a jet sledge for simultaneous laying and burial of high-voltage cables

Dimensions

Length	10.9m
Width	5.0 m
Height (stinger up)	3.3 m
Weight in air	16,7 t
Maximum product diameter	250 mm

Burial

Burial speed	2-5m/min (100-300 m/operational hour) depending on soil conditions
Max depth of burial	3.0 m (to top of cable)
Seabed type	Sand, gravel, silt and soft clays (20kPa at 3 meters sword depth)
Water jetting system	Submersible water supply by a 260 kW pump
Water depth	8 - 40 meter

Towing

Maximum towing load	20 t
Average towing load	5-10 t (depending on soil and depth of burial)

ABB's OJ200 is a jet sledge intended for simultaneous laying and burial of high voltage cables with the capability to bury cables up to 3 meters in non cohesive soils. It is designed and manufactured by Engineering Technology Applications Ltd (ETA) who have an extensive track record of producing high quality jet sledges similar to the OJ200.

The jetting sledge is towed by the Cable Laying Vessel (CLV) and the cable, or multiple cables, are fed from the cable laying vessel into the bellmouth located at the top of the OJ200. From the bellmouth the cable(s) are safely guided through the stinger to exit at the required burial depth which is set in real time during the cable laying operations.

The stinger is equipped with jet water nozzles through which water is injected into the soil to loosen and to fluidize the sediments in front of, and around, the stinger which then passes through the fluidized soil, leaving the cable at the set burial depth. Behind the jet sledge the soil re-sediments, immediately providing protection to the cable and ensuring minimum disturbance to the seabed. The turbidity caused by the jet sledge OJ200 is kept as low as practically possible.

The OJ200 is equipped with a submersible water pump to both increase efficiency by eliminating pressure losses created in the hoses and to remove the need to handle the hoses between the CLV and the Jet Sledge.

ABB's OJ200 spread is equipped with cameras, lights and a range of sensors in order to allow real time monitoring of the cable catenary, tow force, pitch, roll, stinger depth, water depth etc., to ensure the integrity of the cable(s) and the correct measurement of the burial depth during installation.

Main advantages of using ABB's OJ200 for high voltage cable installations are:

- Simultaneous laying and burial of cables creating immediate protection of the cables thus eliminating the risks with exposed cables on the sea bed and the need of guard vessels.
- Real time, physical and thus very accurate measurement of the actual achieved burial depth.
- Cable detection system at the bellmouth and cameras and lights to detect cable catenary forward to ensure safe installation of the cable.
- Minimum environmental impact compared to other trenching methods.
- The submersible pump provides an increased efficiency and effectiveness of the OJ200 spread.

The OJ200 is owned, operated and maintained directly by ABB for the sole purpose of high voltage power cable installation projects. This ensures a high level of tool operating knowledge and experience is available to safeguard the cable during operations.

General

- Generally constructed from carbon steel and corrosion protected by painting.
- 300 meter umbilical cable

Surveillance

Sensors

- (Minimum) cable burial depth
- Pitch
- Roll
- Water depth
- Jett water pressure
- Water pump motor temperature
- Hydraulic system pressure
- Hydraulic reservoir volume
- Hydraulic pump motor temperature
- Cable entry in bellmouth position
- Tow tension

Camera systems

- 2 x mini color cameras
- 2 x 24 v light

Control system

On the OJ200:

- Hydraulic cylinders for stinger up/down

On the cable laying vessel

- 20 feet control cabin with desktop based control system
- The desktop based system communicates with the subsea analogue input device via an RS485 link.

For more information please contact:

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