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# Aacess Equipments

*Total Material Handling Equipments*

(An ISO 9001 : 2008 Certified Company)

An ISO 9001:2015, ISO 14001:2015
& ISO 45001:2018 Certified

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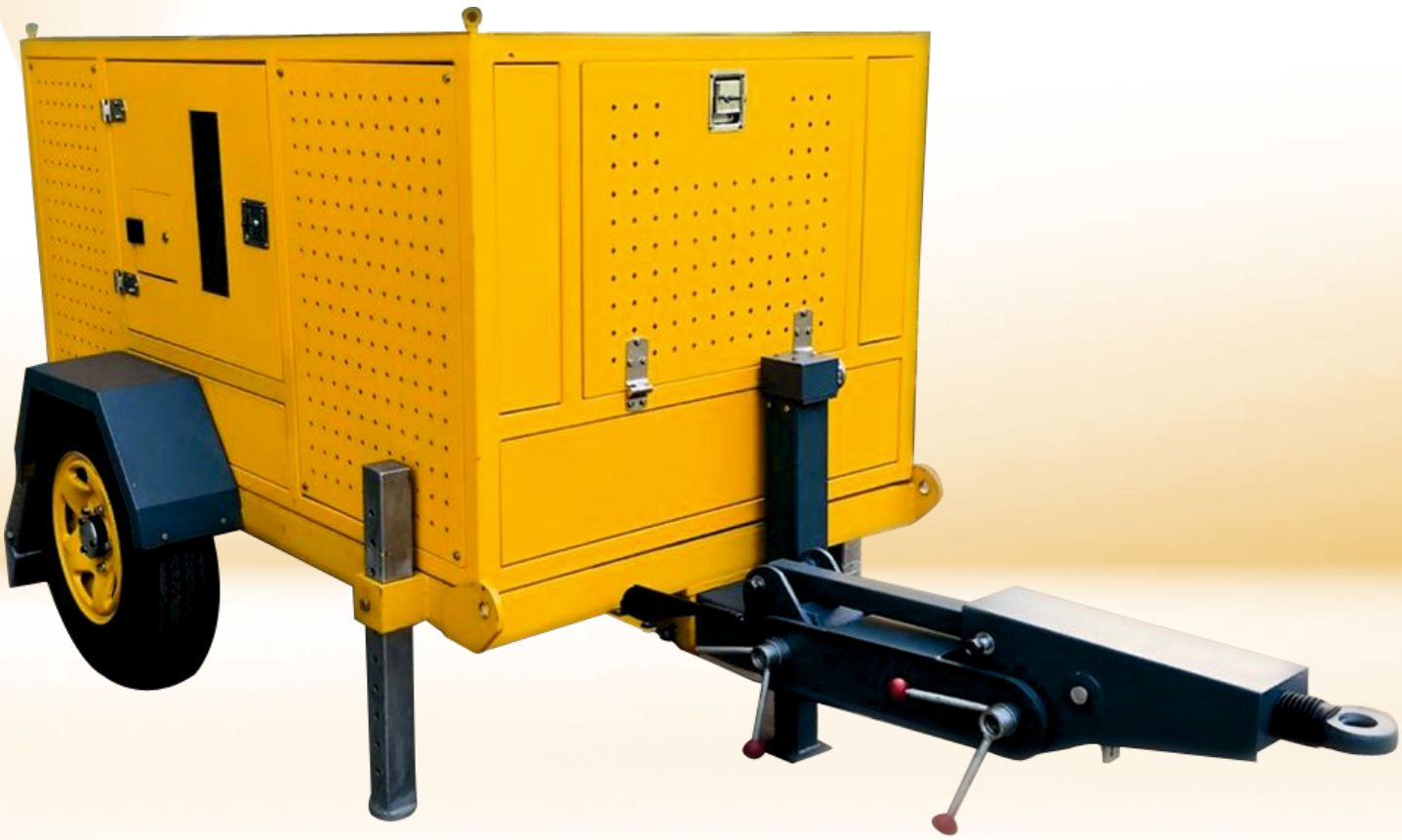
# Cable Pulling Capstan Winch

## 5 Ton Cap Hydraulic Operated



# Technical Specifications and Details about the Machine

## General Details

Cable Pulling Capstan Winch – is an equipment primarily used for laying of underground cables, by transferring the cable from the cable drum to the trench by way of pulling the cable. The unit is a self powered unit which is powered by a High Speed Diesel Engine which runs the Hydraulic pump and the motor. The unit has a pulling capability of 5 tons and is designed to a pull any length ranging from 250 mtrs to 1000 mtrs.

## Basic Working Principle of the Equipment

The unit is a Cable Pulling Capstan Winch which has a Rope Drum having designated length and diameter wire rope on it and this rope is taken out through double capstan unit and is guided out to the target through pulleys. This unit is powered by Diesel Engine which drives a Closed Loop Hydraulic Pump, which in turn develops oil pressure and supplies this oil to the Hydro Motor which drives the Double Capstan via a Gear Box, thereby pulling wire rope.

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## Performance Details

| | |
|---|---|
| Cap. of the Unit in terms of Pulling Load | 5 tons |
| Cap. of the Unit in terms of Pulling Length | 250-1000 mts |
| Maximum Speed on Full Load | 18 mts/min |
| Maximum Speed on No Load | 50 mts/min |
| Wire Rope Diameter | 12 mm |

## Silent Features of the Equipment

| | |
|---|---|
| Engine Used in the unit | Yanmar – Japan |
| Hydraulic Pump used in the unit | Bondioli Pavesi – Itlay |
| Hydraulic Motor Used | Intermolt – Italy |
| Hydraulic Oil Cooler Used | Bondioli Pavesi - Italy |
| Gear Box Used | Bonfiglioli – Italy |
| Load Cell Used | I P A – Bangalore |
| PLC Cum HMI | Horner - USA |

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## Operational Features

- Hand Operated Servo Control System for Varying the Speed during Pay In and Pay Out.
- Continues Display of the Length of the Cable being pulled.
- Facility to record the name of the Project, Cable Details and Cable Size.
- Facility to take a print out of the load and speed of pulling as per your convenience.
- Ease of setting the cut off Load Value in Kgs and Speed Value in Mts/min using a user friendly Human Machine Interface unit.
- User Friendly Control Panel with all functions like Reset, Emergency Stop, Engine Start & Stop and Engine Performance Details displayed.

## Broad Technical Specifications

| | |
|---|---|
| Dimensions of the Unit | 3.75 mtr(L)x1.75mtr(W)x1.5 mtr.(H) |
| Type of Power Source | Three Cylinder Turbo Charged Diesel Engine |
| Power of the Diesel Engine | 36 hp |
| Make of the Diesel Engine | Yanmar/ Mitshibushi |
| Type of Cooling | Water Cooled |
| Rated Fuel Consumption | 3.3 lit/hr |
| Min Fuel Consumption | 2.5 lit/hr |
| Electrical Control Voltage | 12 V |
| Method of Oil Cooling | Sp. Heat Exchanger Provided |
| No. of Wheels Provided | 2 nos |
| Canopy for the Total Unit | Provided |
| Rope Guide Unit for Drum | Provided |
| Working Pressure of Hydraulic | Max 210 Bar |
| Type of Hydraulic Pump used | Closed Loop Unit with Servo Control |
| Capstan Diameter | 210 mm |
| Type of Capstan | Double |

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# Safety
# Devices Incorporated

- Emergency Stop Button on the Control Panel with a Possibility to By-Pass the Hydraulic Circuit in order to release the line pull in case of emergency.
- Emergency Stop Button.
- Auto Cut off of the Hydraulic Unit when the load on the machine exceeds the set load on the HMI
- Auto Cut off of the Hydraulic Unit when the speed of the wire rope exceeds the set speed on the HMI
- Resetting Button can only be operated as per the designated procedure.
- Two Sets of Anchoring Jacks are Provided on the side of the machine
- Complete Rope Guiding Mechanism Provided between Rope Drum and the Output Guide
- The Unit is Totally Covered for Safety Purpose
- Guiding Rollers Provided in front of the Pull Line to avoid higher angular Pull

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