Self-propelled Carriage for Cable Crane Systems

General Description

The Cable Fox Model (CFX) is HyQuest Solutions latest towing system for temporarily measuring water flow or discharge with an ADCP or radar device. The electric motorized vehicle can be easily installed on existing cable cranes by using their cables. Via a radio remote control, the user controls the vehicle forward and backward across the cable transversely to the flow axis.

Thanks to the powerful motorization and the optional cable winch, the Cable Fox can also pull large or heavy measuring boats or equipment through the water and position it at the measuring points. Another benefit of the Cable Fox is its ability to adapt to different cable strengths.

The mobile Cable Fox is mainly used temporarily at several measuring points for manual measurements. Above that it can be used for fixed installation. Cable cranes equipped with the Cable Fox as a carriage do not need a permanently installed motor, because the Cable Fox brings its own motor.

The large range of the remote control (up to 1300 ft (400 m)) allows operation even at very wide valleys and riverbeds.

Applications

The Cable Fox is especially suitable for towing and positioning of ADCP boats or velocity radar devices for flow and discharge measurement.

Features

- Variable traversing speed
- Model versions for different cable strengths
- Hoist attachment to adjust tether line to raise and lower ADCP trimaran/board
- Encoder for distance measurement across stream section
- Low power consumption
- Frequency band: license-free ISM band
- Auto retrieval feature brings the carriage back to the user/river bank, if the radio connection breaks.
## Technical Specification

### Motor
- Geared motor 320 W
- Speed drives carriage up to 2.00 ft/s (0.6 m/s)
- Distance measurement 0.01 ft (0.01 m) resolution
- Power requirement 12V DC 18Ah battery internal 30A auto reset fuse

### Hoist
- Lifting capacity 220 lbs (100 kg)
- Power requirements: uses the above Cable Fox power (12V 18Ah), separate internal 30A auto reset fuse
- Rope: synthetic, up to 40 ft (12.2 m)

### Wireless Remote Control
- Frequency: license-free 868 MHz band, ISM band for short-range devices
- Operating range 1300 ft (400 m) line of sight
- Controls: Raise / lower, Direction (forward / reverse), Speed control
- LCD: 16 chars x 2 lines with back-lighting
- Indicators: LEDs for comms. and fault indication, Battery voltage (sounder for low battery), Horizontal distance
- Power Source: 3 x NiMh 2.5Ah AA batteries with built in charger (3 x AA Alkaline batteries in an emergency)

### Versions
- CFX/1014: for cables with diameter 5/8” to 11/4” (10-14 mm)
- CFX/1632: for cables with diameter 3/8” to 9/16” (16-32 mm)

### Packed Dimensions
- Cable Fox: 66 x 54 x 27 cm, 35 kg
- Hoist: 55 x 48 x 27 cm, 15 kg

### Scope of delivery
- Vehicle with electric motor, remote control, transport case, charger; Optional: hoist and rope
- Not included: batteries, measuring instruments, ADCP boats

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