



*"...the only port of call you'll ever need..."*

## Inverter Drive Winch System

### Features of the Inverter Drive Winch System



#### Economised Energy

The Inverter Drive System is very efficient and reduces electricity load. It is not necessary to increase the capacity of electricity because the capacity of electricity is decided by system over load (15%, 1 minute)



#### Low Noise & Frequency

The system benefits from smooth control and quiet operation, especially when compared with hydraulic operated systems.



#### Free Maintenance

Unlike a hydraulic system, there is no need for routine maintenance or service - the simple structure and utilisation of a strong and reliable squirrel cage type electric motor means that maintenance and service costs are minimal.



#### No Environmental Pollution

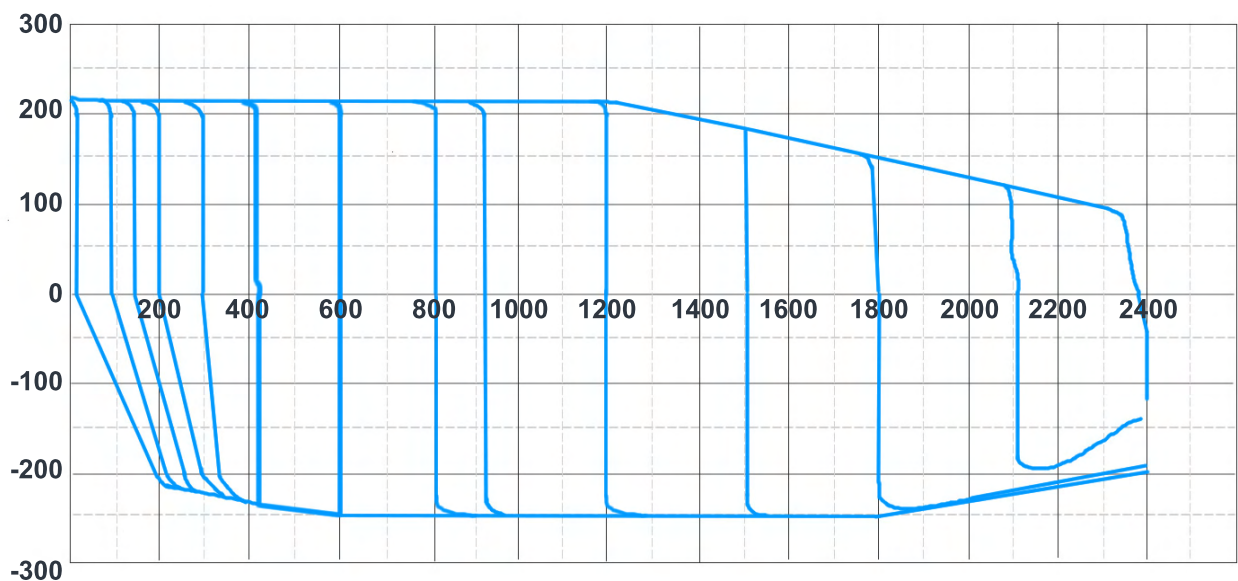
As it is an electric based system, there is no risk of environmental pollution unlike a hydraulic system which can leak oil.



#### Smooth & Wide Speed Control

It is possible to control the system from 0.5Hz to maximum. By vector control with PG Sensor, torque from 100% (continuance) to 150% (short time) can show at 0 r/min. It is possible to wind mooring lines smoothly and work at wharf easily using the speed control.

#### Torque [%]



Example of Torque Characteristics

Speed [min<sup>-1</sup>]



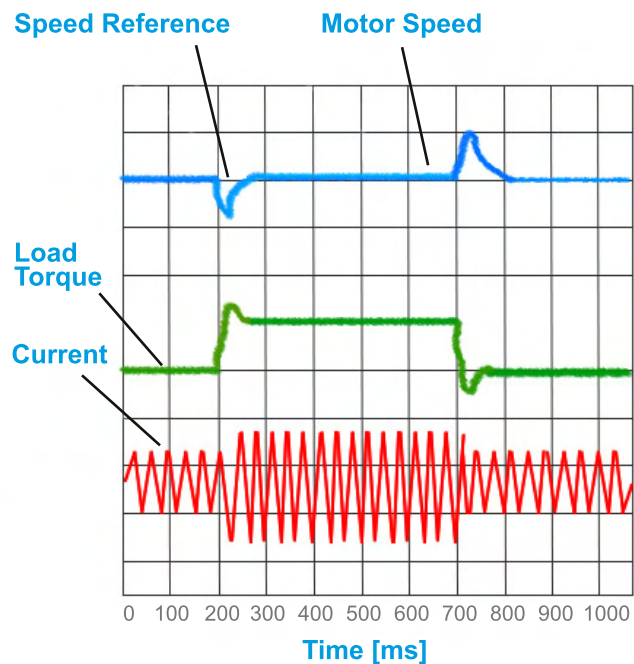
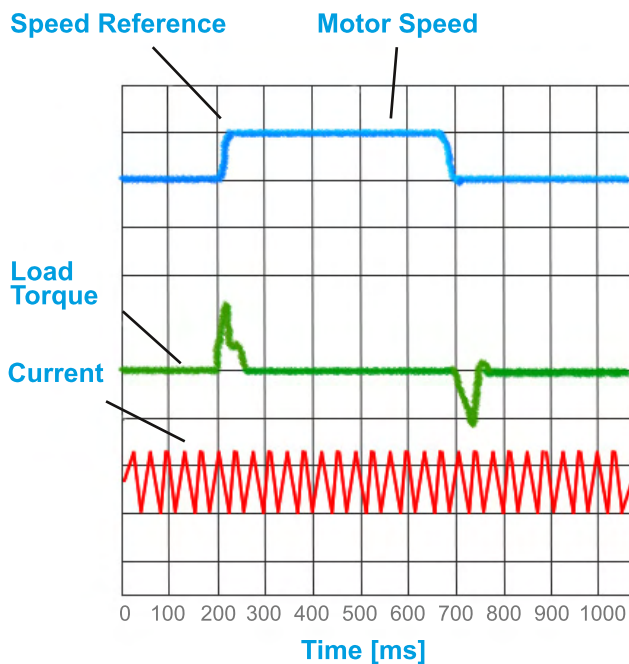
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## Inverter Drive Winch System

Features of the Inverter Drive Winch System (...continued...)

### Adjustable Torque Settings

Restriction and protection of starting torque acceleration - deceleration torque over torque. In a stalling situation, it is possible to control the rope tension at zero speed and prevent over load. Significantly increasing the starting torque of the motor will produce more than 200% torque even at extremely low speeds ( $\leq 0.5$  Hz)



### Reduction of Expenditure on Cable Work Settings

It is possible to change the cable to a smaller size because the electric current that determines the cable size is extremely low compared with other drive systems

### Easy Installation & Reduced Start-Up Cost

### Centralised Control of Inverter by PLC & Comms System

A number of inverters can be controlled easily by means of linkage to a communication system. The system can be a PC, programmable controller or higher order network based.