

Technical Specification

Mast System

Mast

- Manufactured from tapered and press folded steel sections (S275 or S355 depending on design loadings) and finished hot dip galvanised to IS01461.
- Welding conforms to BSEN287 and BSEN288.
- Mast systems designed to ILE Technical Report No.7

Head assembly

- The pulley head assembly is manufactured from mild steel finished hot dip galvanised and protected with a spun aluminium cover for additional weather protection.
- Pulley wheel system over which each of the suspension cables operate feature cover guards to ensure the stainless steel suspension cables run correctly in their grooves and cannot be misguided.
- Non-corrosive aluminium pulleys run on self lubricating bearings with stainless steel shafts requiring no maintenance.
- On the underside of the pulley assembly, heavy duty and elongated docking arms ensure that the lantern carriage is always aligned when approaching the dock position. Without the extended docking arms, movement and vibration can be transmitted into the luminaries thus reducing lamp life and applying unnecessary fatigue to the wire rope.
- Docking arms of the system are extended to ensure that excessive movement of the carriage is not permitted during the early period of installation due to the initial stretch of the wire ropes. The extended arms also permit a visual indication of whether or not the lantern carriage is docked correctly.

Lantern Carriage

- Lantern carriage comprises of a heavy duty hot dip galvanised steel ring from 180 X 6mm flat as standard and is pre-assembled in two halves to allow removal from the mast if required.
- Incorporates an IP65 aluminium terminal box with a flexible nylon conduit which distributes the wiring to each of the individual luminaries.
- Suspension ropes terminated on the lantern carriage
- Adjustment and levelling of the carriage via means of clamping arrangements on the single drum winching system and individual drum adjustment on the double drum winching system all carried out in complete safety at ground level.
- Neoprene rollers mounted on the inside of the carriage protect the surface of the mast as the carriage is traversed and ensure positive docking. Rollers also act as a damper when docked which reduces vibration thus prolonging lamp life.

- Holding arms for the luminaries are separate to the carriage and are fixed by bolting the arms to the carriage allowing for ease of installation and transportation.
- All terminal and wiring distribution is pre-wired to the carriage minimising onsite electrical assembly. Only final connection to the luminaries is required.

Winch System

- Single winch systems available for loads up to 300kg or a double drum winch system for loads over 300kg
- Gearbox for both systems feature a ratio of 50:1 to prevent any creep from the system with a gravity catch to latch and lock over the input shaft on the winch acting as a fail safe
- Gearbox of the winch system is “Sealed for Life” eliminating the need for regular oil checks and top-ups, ideal for areas where an acid environment persists.
- Ingress on the Double Drum Winch is limited to the belt drive which is fitted with a protection cover.
- Single Drum Winch is sealed with only the input shaft and gravity catch exposed.
- Safety chain on the single drum winch supplied with D-Shackles to fasten onto a lug in the base of the mast and to the D-Shackles on the wire ropes when in the docked position.
- Certificates are provided with all winches which are fully compliant to the Institute of Lighting Engineers Technical Report No:7. (ILETR7)

Winch Driving Tools

- Power tool to drive the winch consists of a heavy duty multi-speed, reversible drill with a remote hand held non-latching control unit which allows the operator to stand up to 10M away from the mast during the raising and lowering sequence.
- Torque limiting device is used in conjunction with the power tool to ensure the winch and cables are not overloaded.
- Manual winch handle can be supplied for final and delicate adjustment.

Wire Rope Suspension System

- Flexible stainless steel marine grade wire ropes of 7/19 construction are used throughout and all are supplied with certificate of conformity in accordance with ILETR7 and BS 1290:1983.

Maintenance Cage

- For closer inspection of the head pulley assembly, a maintenance cage can be supplied which can be hoisted using the masts winching system. (Available with Double Drum Systems only)

Electrical System

- Incoming mains distribution control box which can be supplied for time or photo-cell switching conveniently located in the base of the mast
- Outlets on the control box provide a supply feed to the luminaries with a separate switched socket to drive the power tool
- Test lead supplied as standard which can be used for all the masts supplied or if required, a double disconnect system can be supplied without the need for a test lead.
- Multi core flexible round sheath power cable rated for the required application is pre-installed to the system along with the wire ropes.
- Terminal distribution weather proof box is supplied fixed to the carriage with suitable cables being distributed around the carriage encased in flexible conduit.
- All wiring conforms to IEE 16th edition standards and amendments.
- Range of additional options for lightning protection are available on request

