

SPECIFICATIONS

HEADFRAME ASSEMBLY

The head frame assembly shall consist of a 1/4" thick minimum top plate, with sheave support plates fabricated from a minimum 11 gauge steel sheet. The sheave support plate shall be welded to the head frame base plate. All steel plates shall be laser cut for accuracy. The complete head frame assembly shall be hot dipped galvanized per ASTM A-123 after fabrication.

Hoist cables shall operate over corrosion resistant 5-inch diameter aluminum steel sheaves. The entire cable groove surface shall be machined to eliminate any rough surface on which the cable shall ride.

The main power cord shall be supported by a minimum of two large 6-inch non-conductive thermoplastic polymer cord sheaves grooved to provide for a non-abrasive smooth operation. A two piece threaded male and female thermoplastic polymer insulating bushing assembly shall be installed on the head frame opening to prevent wear on the power cord as it travels up and down the pole.

All sheaves shall have sintered bronze oilite bearings and run on a stainless steel axle secured with self-locking stainless steel hardware. Keeper bars shall be positioned at both ends of the sheave assemblies to keep the cord in its track during pole erection and during normal operation.

The top latching assembly shall contain three (3) symmetrically located, extremely stout, precision cast matching stainless steel latch pin and enclosed cam mechanism to assure corrosion resistant, trouble-free operation for years to come. All moving latch parts are bolted to the ring for servicing from the ground. The complete two-part latch pin and cam assembly shall be made of stainless steel (type 316) material. There shall be no moving latch parts or springs attached to the head frame assembly. All motion required to achieve latching or unlatching shall be internal to the latch cam, this will help prevent shock and vibration damage to the lamps and luminaires, as well as preventing the formation of ice build-up on the latching mechanism.

Latching occurs by the alternate raising and lowering of the luminaire ring. When latching of the ring occurs, there will be no horizontal movement of the fixtures which could cause damage to the fixtures.

When in the latched position, the space between the head frame and the luminaire ring shall be no more than six inches. The use of "Z" type top latching system is not an acceptable alternate to the stainless steel latch cam.

All hardware is corrosion resistant stainless steel.

The head frame assembly shall have a copper-free, spun aluminum cover, retained on its 360 degree perimeter with self-locking stainless steel hardware. The dome assembly shall provide an air-tight seal against the elements for the head frame roller assemblies.

The head frame cover shall bolt directly to the high mast pole. The head frame base plate and pole top plate shall have four 9/16" by 3" slotted holes to accommodate 1/2" type 18-8 stainless steel hardware.

THE LUMINAIRE RING ASSEMBLY

The luminaire ring shall be fabricated to 6" x 2" x #7 gauge spun steel per ASTM A-569, with the appropriate number of luminaire mounting tenons, hot dipped galvanized per ASTM A-123 after fabrication. The luminaire ring shall have a pre-wired, weather-tight, corrosion resistant aluminum enclosure with 3 conductor, 16 AWG., type SEO 105 degree cable. The pre-wired distribution box shall be capable of accepting up to 16 fixtures, with 600 volt terminal blocks for each individual fixture wire. A weather-tight twist lock test inlet shall be mounted to the terminal box to permit testing of the luminaires while the ring is in the lowered position.

The luminaire ring shall contain a quantity of three, roller-contact, spring-loaded stainless steel centering arms with polymer rollers to center the ring and prevent shock to the lamps from impact of ring with the pole.

Highly visible 6" minimum retro-reflective position indicator flags make for easy day or night operation.

The three hoist cables shall be stainless steel wound anti-rotational aircraft cord, 3/16" diameter manufactured to meet MIL-W83420C. Winch cable shall be stainless steel 1/4" diameter anti-rotational cable, manufactured to meet MIL-W83420C. These special cables are specifically designed for lowering device applications and virtually make "twistings" a thing of the past. Swivel bearings may be used in the transition assembly but they shall not take the place of the anti-rotational cable.

A transition assembly shall be supplied to attach the winch cable to the three hoist cables and the main power cord.

The three hoist cables shall pass up through the pole shaft, over the head frame hoist cable sheaves, to the luminaire ring, where they travel through the stainless steel latch pin and stainless steel guides and compression spring assembly and terminate with a collet-type strand-wise device.

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THE WINCH PLATE ASSEMBLY

One 30 amp, Square D circuit breaker shall be mounted inside the base of the pole to act as the disconnecting means for the lowering device. Pre-wired to the breaker shall be a twist-lock, weather-tight connector matching those used in the system, mounted to a 8' tail of power cord of the same type, gauge and number of conductors as the power cord. This cord and connector shall be used to alternately supply power to the lowering device system, the test inlet and the portable power unit assembly.

The winch shall be an enclosed oil-bath worm gear winch, set with a reduction ratio of 30 to 1. The Self-locking precision winch guards against ring runaway in the event of power failure.

INTERNAL MOTOR SYSTEM (C428GXXXX)

The internal motorized winch assembly shall incorporate the heavy-duty, reversing type drive motor, torque limiter, drive shaft and electrical controls. The Torque limiter is factory set to provide safe reliable operation. Twenty-five foot long cord on the remote electrical control box provides for remote operation of the portable power unit. The drive motor is a heavy duty 120 volt reversing electric drill.