

## SPECIFICATIONS

### HEADFRAME ASSEMBLY

The headframe 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 headframe base plate. All steel plates shall be laser cut for accuracy. The complete headframe assembly shall be hot dipped galvanized per ASTM A-123 after fabrication.

Hoist cables shall operated over corrosion resistant 5-inch diameter zinc plated 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 headframe 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 headframe 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 luminaries, 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 no horizontal movement of the fixtures which can cause fixture damage is permitted.

Two cast aluminum stabilizing and guide sockets shall be mounted on the underside of the headframe assembly. The 1 3/4" socket opening shall be tapered cone shaped for locking and aligning the 1-1/2" x 12" min. galvanized steel locking pin mounted on the sportlighting service platform up against the headframe. The galvanized steel

locking pin shall insert a minimum of 6" into the cast aluminum guide socket. This will provide both stabilization of the platform and prevent horizontal movement of the service platform when in its latched position, thus relieving any horizontal pressure on the locking system. The minimum height of the aluminum guide socket is (4) inches.

When in the latch position the space between the headframe and the luminaire ring shall be no more than six inches when in the latched position. 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 headframe assembly shall have a copper-free, spun aluminum cover, retained on its 360 degree perimeter by a stainless steel clamp band with stainless steel safety latching pin with self-locking hardware. The dome and clamp band assembly shall provide an air-tight seal against the elements for the headframes roller assemblies.

The headframe shall bolt directly to the high mast pole. The headframe 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 SPORTS-LIGHTING SERVICE PLATFORM ASSEMBLY

The Flood-lighting service platform for more than 12 fixtures, shall be fabricated from two 6" x 2" x #7 gauge spun steel rings per ASTM A-569, with the appropriate length of 2" x 3" rectangular tubing for mounting the sportlighting remote fixture heads, hot dipped galvanized per ASTM A-123 after fabrication. The complete sportlighting lowering platform shall be of a single piece welded construction and shipped to the job-site in one piece. The sportlighting service platform shall have a prewired, weathertight, corrosion resistant aluminum enclosure with 3 conductor, 16 AWG., type SEO 105 degree cable. The prewired distribution box shall be capable of accepting up to 24 fixtures, with 600 volt terminal blocks for each individual fixture wire. Weathertight twist lock test inlets shall be mounted to the terminal box to permit testing of the sportlighting fixtures while the service platform is in the lowered position.

On the underside of the service platform shall mount a quantity of three, roller-contact, spring loaded stainless steel centering arms with polymer rollers to balance and center the ring and prevent shock to the lamps from impact of service platform.

**SPECIFICATIONS**

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

The three hoist cables shall be stainless steel aircraft cord, 1/4" diameter manufactured to meet MIL-W83420C. Winch cable shall be stainless steel 5/16" diameter 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 headframe 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.

**THE WINCH PLATE ASSEMBLY**

A circuit breaker shall be mounted in an aluminum enclosure on the winch sub-plate to act as the disconnecting means for the lowering device. Prewired to the breaker shall be a twist-lock, weathertight 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.

**THE HEAVY DUTY PORTABLE POWER UNIT ASSEMBLY**

The portable power unit 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 240 volt reversing electric drill. The portable power unit shall be provided with a weatherproof, portable enclosed stepdown transformer to operate the 240 volt power unit.