**WILL-BURT LIGHT TOWER SPECIFICATIONS**

**Night Scan Powerlite NS 4.5-600-4 WHL Spot/Flood 120 VAC**

**Model Number 721530001**

A Will-Burt Night Scan Powerlite Series shall be provided. The horizontal surface mounted tower shall be raised electrically and pneumatically.

Mounting provisions shall be provided with the assembly. The installation of unit shall be as follows:

**1. Light tower installation location:**

**2. Floodlight and tower control location:**

**Design and Construction**

The tower shall be a series of graduated extruded aluminum tubes that nest one inside another. The tower shall have an extended height of approximately 15 ft. / 4.5 m above the mounting location and a stowed height of approximately 11.9375" / 30.3 cm above the mounting surface. The tower shall be approximately 73.06” / 185.6 cm wide by 44.44” / 112.9 cm in length. The tower shall be designed to sustain the intended top load with a 125 percent safety factor and shall exceed NFPA requirements of a minimum 50 mph (80 kph) wind when in a fully raised and unguyed position. The tower shall be of a compact design with a total weight of approximately 156 pounds (70.8 kilograms). The light tower shall not exceed 180 lbs. / 82 kg.

The tower tubular sections shall be constructed of high strength, heat-treated 6061-T6 aluminum tubes and collars. Each tube shall be protected by low friction synthetic collars for smooth operation and long life. Bumpers shall be designed to reduce shock on extension and retraction. All exterior surfaces shall be anodized for long life and fasteners shall be stainless steel for corrosion resistance.

**Nesting System**

The tower shall have an “auto-stow” function. A double click of the mast down button will stow, retract, and shut power off to the unit. An integrated saddle assembly with synthetic, non-marring rests shall be provided for the tower and flood light assembly in the nested position.

**Floodlight Rotation and Tilt Operation**

The tower shall be equipped with a Will Burt Model RCP (remote control positioner) to control the rotation and direction of the lights in a manner that provides 360° of light coverage. The remote control positioner unit shall be equipped with three (3) gear motors; one for rotation and two for individual positioning of each floodlight bank (one (1) motor for left side tilting and one (1) motor for right side tilting.) This feature shall be designed so that the lighting may be directed in two separate locations *equally* and *simultaneously* for enhanced safety and functionality. The positioner shall also rotate the floodlight assembly from zero to 350 degrees and tilt the floodlight assembly from 0 to 346 degrees.

*Choose controller option(s)*

**Hand-held Remote Control**

A safety yellow in color for high visibility, hand held remote control pendant, connected to a quick-disconnect, 25 ft. (7.62 meter) coiled cord shall be provided to control the tower. All functions of the tower shall be accessible through this remote control including raising with “auto-up” ability, lowering with “auto-stow” ability, rotation and separate buttons for tilting of each floodlight bank and floodlight switching. An auxiliary power button shall also be included to control optional equipment such as strobe lights or a camera that is mounted to the mast. Each button of the controller shall have a corresponding LED light that provides operational feedback. An LED display that includes alphanumeric feedback shall be located in the center of the controller. This display shall provide operational feedback and error codes if they occur.

**Hand-held Wireless Remote Control**

A safety yellow in color for high visibility, wireless hand held remote control with a range of 100 feet (30.5 meters) and unique transmitting and receiving addresses to eliminate interference shall be provided to control the tower. All functions of the tower shall be accessible through this remote control including raising with “auto-up” ability, lowering with “auto-stow” ability, rotation and separate buttons for tilting of each floodlight bank and floodlight switching. An auxiliary power button shall also be included to control optional equipment such as strobe lights or a camera that is mounted to the mast. Each button of the controller shall have a corresponding LED light that provides operational feedback. An LED display that includes alphanumeric feedback shall be located in the center of the controller. This display shall provide operational feedback and error codes if they occur.

**Panel-mount Control**

A panel mount controller for installation on the vehicle shall be provided to control the tower. All functions of the tower shall be accessible through the panel mount controller including raising with “auto-up” ability, lowering with “auto-stow” ability, rotation and separate buttons for tilting of each floodlight bank and floodlight switching. An auxiliary power button shall also be included to control optional equipment such as strobe lights or a camera that is mounted to the mast. Each button of the controller shall have a corresponding LED light that provides operational feedback. An LED display that includes alphanumeric feedback shall be located in the center of the controller. This display shall provide operational feedback and error codes if they occur.

**Pneumatic Controls**

The pneumatic controls to raise and lower the tower shall include an air regulator and solenoid valves. Lights will be operational within approximately 12 seconds from elevation initiation. The tower shall be able to be fully elevated in approximately 60 seconds. In the event of malfunction of the elevating system while the tower is in operation or being deployed, a method of limiting the rate of descent shall be provided to prevent injury to personnel or damage to the equipment.

Two allen keys as well as directions are included under the cover to fold the mast into the saddle if manual stowage of mast is required.

The air supply for pneumatic operation of the tower shall be from an external source with supplied air regulator and dual solenoids. The installer shall provide piping, shut-off valve, pressure protection valve, air compressor, auxiliary air tank(s) and additional required equipment. The complete air system shall be installed in conformance to applicable NFPA and FVMSS brake standards.

**Electrical Installation**

The wiring harness for the floodlights, accessories, and remote control positioner shall be internally routed through telescoping aluminum tubing with a highly flexible coil cord.

Installer supplied 12 or 24 volt electrical wiring shall be provided with electrical connections at the tower assembly in conjunction with appropriate electrical power for the floodlights. The installer as required by manufacturer’s installation guidelines shall provide appropriate wiring from the circuit breaker panel for connection to the tower. The electric power to the tower and light units shall automatically disconnect whenever the tower is in the nested position.

The tower operation area shall be illuminated automatically by a look up light whenever the tower is in operation. Any upward movement of the tower from the nested position shall energize a red warning light in the cab and a secondary light located at the tower control area. In addition, the installer shall provide parking brake interlocks and other equipment as required by applicable NFPA standards.

**Floodlight System**

Four (4) Whelen Pioneer Plus™ Model # PFP2AC shall be provided. The 150 watt +120v AC Pioneer lighthead shall incorporate Super-LED® dual flood light installed in a die-cast white powder coated aluminum housing. The PFP2AC configuration shall consist of 72 white Super-LEDs with a clear optic collimator/reflector assembly and a clear non-optic polycarbonate lens. The Pioneer flood light shall have 15,000 usable lumens for a total of 60,000 lumens. The lens/reflector assembly shall utilize a liquid injected molded silicone gasket to be resistant to water, moisture, dust, and other environmental conditions. The hard coated lens shall provide extended life/luster protection against UV and chemical stresses. The PFP2AC shall be shall be vibration resistant. The Pioneer™ PC boards shall be conformal coated for additional protection. Two breathable membrane patches shall be installed to the bottom of the housing to maintain a consistent internal pressure. The PFP2AC shall have extended LED operation with low current consumption and low operating temperature. The fixture shall measure H=4.125”, W=14”, D=2.50”

**Warranty**

The tower assembly shall carry a two (2) year parts and labor warranty. Exact provisions of such warranty shall be provided with the proposal and at time of delivery of product.

**Labeling and NFPA Compliance**

Essential operating instructions and warning labels shall be provided in compliance to applicable OSHA, SAE, and NFPA standards. Appropriate labels on the "hazards of electrocution" associated with the operation of a light tower shall be installed in the appropriate areas.

A label shall be provided at the operator’s position by the installer with the following information:

1. Extended height of the tower from the ground.

2. Bulb replacement data.

The tower and installation shall be in full compliance to applicable sections of the current NFPA 1901 Standard.

**Testing and Quality Assurance**

The tower manufacturer shall be ISO 9001:2008 certified. In addition, quality control and manufacturer testing shall be completed prior to shipment of the tower. The final installer shall test the operation of the tower for a minimum of 2 hours at full load, with testing documentation provided upon delivery.

**Manuals**

Detailed service, parts, operating, and installation manuals shall be provided by the tower manufacturer. Samples of such manuals shall be provided on request. A CD ROM manual will be provided to the end user.