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**RNT-WCDE-20-HLM65-LED-WSM-SCWP**

# *RENTAL* 77' Hydraulic Megatower™ Trailer Mast for Cold Weather - 33' Trailer, 20KW Genset, Auto Retract

**Product ID: 306744**

**Please see last page for supporting documentation for this product(certificates, CAD files & drawings, IES files, wiring diagrams, etc).**



**Larson Electronics LLC manufactures a wide variety of products, including custom built to spec designs. The pictures displayed for this unit are a general representation of form factor for the product line and may not accurately represent this exact configuration in every detail due to custom builds and changes between similar products in our standard catalog. The specifics for this configuration are listed in the specification table and supporting documentation (CAD files, Dimensional Drawing, Name Plate Diagram, Wiring Diagram, etc.). This means that specific details (receptacles, plugs, wires, connections, mounting brackets, external finishes, etc.) may not be accurately represented in images vs specifications. Please review specifications and do not order based solely on images.**

**RNT-WCDE-20-HLM65-LED-WSM-SCWP Trailer Mounted LED Megatower™**

**Genset Specs**

**Genset:** 20kw
**Engine: Perkins 28.9HP**
**Engine Type: Vertical, liquid-cooled, 4-cycle diesel engine, naturally aspirated**
**Engine Speed: 1800 RPM**
**Engine Oil Type: 0W-40 Diesel Engine Oil**
**No. of Cylinders: 4**
**Generator:** 20KW Stamford Brushless
**Voltage:** 120/240V Single Phase
**Battery:** 12V @ 36aH
**Fuel Cell Capacity: 110 Gallons - External Tank w/ Anti-Splash Baffles**
**Fuel Delivery: Electric**
**Sound Level: 68 dB - Full Load @ 23` away**
**Plug Type: Glow Plugs**
**Cold Weather Package:** Yes - Factory Included

**Quick Summary**

Suitable for Cold Weather/Sub Zero Environments (North Dakota, Alaska and Northern Canada)
20KW Kubota Brushless Genset
110 Gallon External Fuel Cell
Cold Weather Package Factory Installed

33.5` to 77` Light Mast
Hydraulic Aluminum Mast
Steel Construction Trailer
Hydraulic Mast Operation
Powered Boom Deployment

**Mast Specs**

**Tower Length: 30` to 77`**
**Lamp Qty: None**
**Materials:** Carbon Steel
**Finish:** Galvanized
**Operation:** Hydraulic (Upright and Extension)

70% Lumen Retention after 80,000 Hours
Auto Retract

**Safety:** Wind Speed Monitoring System/Auto Retract

All Equipment Mounted on a 33` x 8` Trailer

Steel Trailer w/ Industrial Grade Paint Finish

Towable Height Under 13` w/ Light Heads

6-Point Outrigger System-

7,000 lb Leveling Jacks - auto-leveling

Powered Boom Deployment

External Oil Pump System-Change Oil Every 3,000 Hours

Wind Speed Monitoring System

**Cold Weather System Specs**

**Enclosure Rating: NEMA 4**

**SOOW Cord Rating: -40°C**

**Hydraulic Cord Rating: -40°C**

**Hydraulic Fluid Type: Sub Zero**

**Coolant Type:** Low Temperature

**Heater (Cold Weather Protection):** Control Enclosures, Wind Sensor (Internal), Batteries (Battery Blankets), Diesel Fuel Tank, Engine Block, Fuel Line

**Cable Holder Material:** Metal

**Trailer Specs**

**Materials:** Steel

**Trailer Dimensions:**33`-L x 8`-W trailer bed

**Transportation Dimensions:** 10` 6.31" H x 9`1.81"-W x 41` 10.44" L

**Deployed (Mast Collapsed) Dimensions:** 34` 1.38" H x 18` 2.25" W x 44` 6.69" L

**Deployed (Mast Extended) Dimensions:** 71` 10.44" H x 18` 2.25" W x 44` 6.69" L

**Height (Mast Collapsed):** 33`-H

**Height (Mast Extended):** 77`-H

**Footprint (Outriggers Extended):** 36` x 19`-11"

**Hitch:** Gooseneck (12" I-beam Construction)

**Wiring:** 7-Pin Flat

**Axles:** (2) 10,000 lbs w/ Electric Brakes

**Suspension:** Tandem Dually

**Outriggers:** (6) 12` x 12" x 12" I-Beams Retractable w/ (6) 7,000 lbs Manual Leveling Jacks

**Wheels:** (8) 16" 5x4.5" Steel Rims

**Tires:** (8) P235/80R16

**Special Orders - Special Requirements**

Contact us for special requirements

**Weight:** 18,000 lbs

**Shipping:** Common Freight

**Shipping Weight:**

**Intl:** 1-903-270-1187

**Toll Free:** 1-800-369-6671

**Fax:** 1-903-498-3364

**E-mail:** sales@larsonelectronics.com

**Made in the USA**

**This unit is for rentals**

**The RNT-WCDE-20-HLM65-LED-WSM-SCWP from Larson Electronics is a Trailer Mounted Hydraulic LED Megatower™ Trailer Mast Assembly for cold weather that offers high output illumination and can withstand the extreme abuse found within heavy-duty industrial applications. This trailer mounted fold over 7-stage hydraulic mast provides a safe and effective way for operators to quickly deploy equipment to elevations above 65` (ground to mast head), reaching a total height of 68' with trailer for any heavy-duty industrial application. This mining grade tower system folds over for easy transportation, features a hydraulic ram upright assist, hydraulic mast and high output LED fixtures. Equipment can be powered by an 20KW Kubota diesel generator with a 110 gallon fuel tank. The entire assembly is mounted onto a 33` by 8` tandem axle trailer, allowing operators to transport this fold over boom from location to location. A wind speed monitoring system**

**automatically adjusts the height of the mast, upon sensing the presence of strong winds. This system is equipped with several protective features for safe deployment in sub zero environments, such as North Dakota, Alaska and Northern Canada.**

The RNT-WCDE-20-HLM65-LED-WSM-SCWP LED Light Plant is a self contained, towable, high power mast tower system package for locations that experience freezing temperatures. This unit contains a water cooled diesel engine powering a 20KW Kubota generator, which supplies the current for any equipment mounted to the system. The hydraulic tower is capable of reaching heights up to 68` with the trailer assembly. This mast trailer system features an external oil pump system. Oil must be changed every 3,000 hours. This heavy-duty Megatower has been specifically made for extremely rough applications and can be transported over almost any kind of rough terrain. This mobile floodlight package is ideal for large scale event illumination, construction, mining, industrial operations, and anywhere a mobile full power, durable lighting system capable of extended operation and rough abuse is needed.
This telescoping seven stage hydraulic light mast from Larson Electronics is designed to allow operators to quickly and safely deploy equipment up to heights above 65' for effective coverage. This light mast can be collapsed to 30` for applications where a footprint smaller is required. The tower is constructed of carbon steel tubing with 2` foot of overlap per section. The mast is elevated using an included hydraulic ram and extended to its full height using a second hydraulic system.





Click Images to Enlarge

**Telescoping Boom:** The hydraulic telescoping boom is constructed of carbon steel with a galvanized finish and extends to 65` in height from the ground to the mast head and 68` of total height with the light assembly. This boom is raised from and lowered to the folded position by a single hydraulic ram and extended or retracted by a second hydraulic system.
**Auto Retract:** To prevent damage and shaking from strong winds during operation, this LED light tower is equipped with a robust wind monitoring system. When exposed to strong winds, such as 40 mph, the system automatically retracts the mast for safe operation. In a retracted state, operators must re-adjust the height of the mast back to its original height (or another preferred height). This cutting-edge feature is designed to improve safety at industrial work sites.
**Wiring/Controls:** Varies by equipment installed. A Nema enclosure can be included to accommodate communications or other electrical equipment.



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**Genset:** The RNT-WCDE-20-HLM65-LED-WSM-SCWP mobile hydraulic Megatower™ includes a specialized genset that houses a Perkins diesel engine that powers the 20KW Stamford 120/240V brushless generator. This genset is liquid cooled and features a single phase generator with electric start ignition. The diesel generator runs at 3600 RPM and is equipped with an EPA/CARB Tier 4 emissions system. A 110 gallon fuel cell sits beside the genset and is equipped with an electric fuel delivery system. The fuel cell is constructed of single a heavy gauge steel single wall frame with internal anti-splash baffles. This genset features key operated electric starting, a twelve volt electrical system, liquid cooling, replaceable dry element air cleaner, and a full enclosure for safe operation and protection against the elements. This engine also features cold weather options to improve performance under cold weather conditions.


Click Photo to Enlarge


Click Photo to Enlarge


Click Photo to Enlarge

The above image show a side by side comparison of the RNT-WCDE-20-HLM65-LED-WSM-SCWP next to a 50` Pneumatic Megatower.

**Trailer:** The entire unit is mounted onto a four wheel, dual tandem axle trailer with 12" I-beam construction. Each axle is rated at 10,000 lbs and equipped with P235/80R16 tubeless tires and wheels. The rear axle is equipped with electric brakes. A gooseneck hitch system that extends to the truck bed, above the rear axle and the trailer, is available for secure hauling. Standard heavy duty safety chains are included. Overall length of the trailer is 33`.
Six 7,000 lbs hand crank jacks are used for raising the trailer up off the ground, and four 7,000 lbs hand crank jacks mounted on extending outriggers are used for leveling and stabilizing the trailer assembly. Each of the four jacks are attached to a pivoting outrigger constructed of 6` by 6" by 6.3" steel I-beams. The jacks can be leveled by hand crank or attachment provided for power drills, in addition to auto-leveling functions. These outriggers can be extended 6` out from the side of the trailer for added stability. This light plant can withstand 35 mph winds when fully extended. When lowered to 30`, the mast can withstand 50 mph winds. When lowered to 33`, the mast can withstand wind speeds up to 95 mph with gusts of 125 mph. Custom builds can be provided for higher wind speed resistance when fully raised.

We offer a choice of finishing, equipped light heads, and with or without gensets. These towers can be fitted with Larson Electronics line of high output light heads, or customize the mast head to meet the mounting requirements for your equipment. Optional diesel generators and fuel cells can be equipped from factory, or retrofitted after purchase.

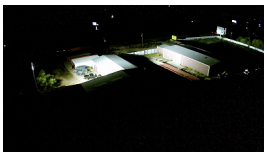




Click Images to enlarge.
The above images show a side by side comparison of the light output between our LED light plant and a traditional four lamp metal halide light plant. The left image shows the metal halide light plant raised to 30` and illuminating a 50,000 sq ft work area with four 1000 watt metal halide light fixtures. The right image shows the RNT-WCDE-20-HLM65-LED-WSM-SCWP light plant raised to 50`, illuminating the same 50,000 square foot work area with twenty 480 watt LED fixtures. Notice how the color and

intensity of the work area is greatly improved when lit up by the LED fixtures.






Click Images to enlarge.

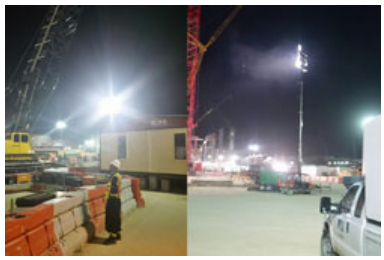
The left image above shows the light mast illuminating a 300,000+ square foot area. The yellow billboard in the image reaches 40 lux, while the fence at the tree line (480`+ away from the tower) reaches 35 lux. This image was taken from 50` behind the mast and at 100` above ground level. The image to the right shows the work space 75` in front of the mast, with the entire area work area reaching over 100 lux. The mast was extended to 35`.

The left image above shows the same 300,000+ square foot area being illuminated. In the background you can see a vehicle with their headlights on, barely able to be seen in comparison to the RNT-WCDE-20-HLM65-LED-WSM-SCWP light plant. This image was taken at 80` to the right of the mast and 175` above ground level. The mast was extended to 35`. The image on the right is a Google Earth export of the physical area being illuminated, for scale purposes.

**Cold Weather Package:** This mast and trailer assembly is designed to withstand extreme cold environments, sub zero temperatures and harsh winters. The hydraulic system is equipped with a de-icing feature to prevent the hydraulic lines and system from freezing (stemming from internal moisture building up). This de-icing system uses an environmentally friendly (non-toxic) fluid. All hydraulic lines are equipped with cold weather rated hydraulic cords rated for -40°C and fitted with metallic hardware. All the hydraulic controls are housed within an insulated and weather tight enclosure. This hydraulic control box features 1/2" thick polystyrene foam insulation and heat trace. The hydraulic system features -40°C cold weather rated rubber hydraulic hoses with metallic fittings and a cold weather rated sub zero hydraulic fluid. All electrical components are wired using cold weather rated SOOW cable (rated at -40°C) and features high flexibility and extreme abrasion, acid, oil and water resistance in sub zero climates.

The genset features a low temperature coolant to keep engine temperatures at optimum levels, as well as an engine block heater and glow plugs. The fuel system is equipped with a diesel fuel tank heater and fuel line heater to prevent gelling in arctic environments. This genset utilizes 0W-40 diesel engine oil. All batteries are equipped with a battery blanket.

Enclosures on the system carry a NEMA 4 rating to prevent ice buildup on the surface. To keep electronics warm, the control enclosures feature internal heaters. The wind sensor is also equipped with an internal heater. Operators may access metal cable holders for reliable cable management during use.



**Click Photos to Enlarge**

**Suggested Applications:** Temporary lighting, construction site illumination, outdoor event lighting, job site lighting and any other application that requires a self-contained source of illumination capable of covering a very large area effectively.

At Larson Electronics, we do more than meet your lighting needs. We also provide replacement, retrofit, and upgrade parts as well as industrial grade power accessories. Our craftsmen can custom build any lighting system and/or accessories to fit the unique demands of your operation. A commitment to honesty, quality, and dependability has made Larson Electronics a leader in the lighting and electronics business since 1973. Contact us today at 800-369-6671 or message sales@larsonelectronics.com for more information about our custom options tailored to meet your specific industry needs.

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# Frequently Asked Questions (FAQ)


MEGATOWER

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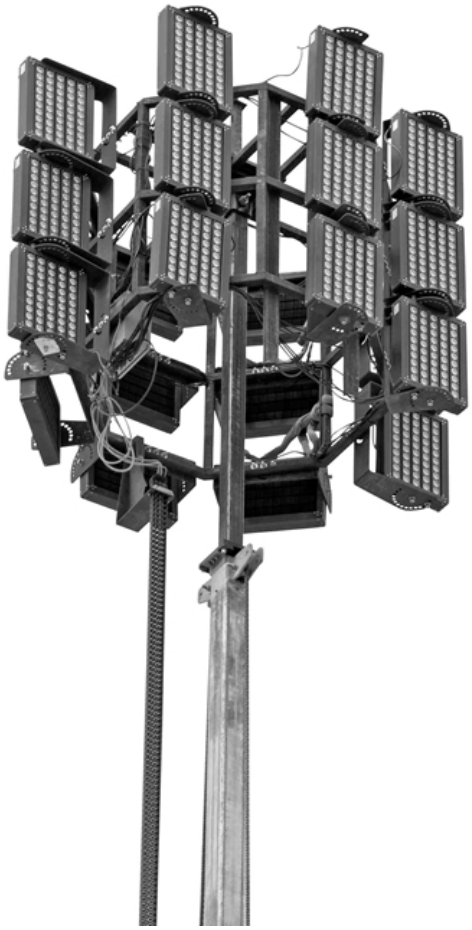
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