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WCDE-20-HLM100-ATM-OBL-WSM

100' Hydraulic Megatower™ Mast - 33' Trailer - 20KW Genset - Auto Retract - Antenna Mount, Ob Light, Cable Storage

Product ID: 324232



Image: WCDE-20-HLM100-ATM-OBL-WSM

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.

WCDE-20-HLM100-ATM-OBL-WSM Trailer Mounted Megatower™

Genset Specs:

Genset: 20kw
Engine: Perkins 28.9HP
Engine Type: Vertical, liquid-cooled, 4-cycle diesel engine, naturally aspirated
Engine Speed: 1800 RPM
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
Cold Weather Package: Yes - Factory Included

Mast Specs

Tower Length: 30` to 100`
Materials: Carbon Steel
Finish: Galvanized
Operation: Hydraulic (Upright and Extension)
Safety: Wind Speed Monitoring System/Auto Retract
Mounting: Antenna Mount for (3) DB Spectra DS8A06F36D-N Antennas w/ Standoffs
Capacity: 3,000 lbs
Obstruction Light: Included, FAA Compliant

Quick Summary

11KW Kubota Brushless Genset
110 Gallon External Fuel Cell
Cold Weather Package Factory Installed
Up to 43 Hour Continuous Operation
30` to 100` Mast
Hydraulic Aluminum Mast
Steel Construction Trailer
Hydraulic Mast Operation
Powered Boom Deployment
Steel Trailer w/ Industrial Grade Paint Finish
Antenna Mount
6-Point Outrigger System
7,000 lb Leveling Jacks
Powered Boom Deployment
External Oil Pump System-Change Oil Every 3,000 Hours
Wind Speed Monitoring System
Auto Retract

Cable Storage: Storge for 500' LMR 400 Coaxial Cable at Trailer

Trailer Specs

Materials: Steel

Trailer Dimensions: 33`-L x 8`-W trailer bed
Height (Mast Collapsed): 33`-H
Height (Mast Extended): 100`-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

Weight:
Shipping: Common Freight
Shipping Weight:

Special Orders - Special Requirements
Contact us for special requirements

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Made in the USA

The WCDE-20-HLM100-ATM-OBL-WSM from Larson Electronics is a Trailer Mounted Hydraulic Megatower™ with heavy-duty industrial applications. This trailer mounted fold over 7-stage hydraulic mast provides a safe and effective way for operators to quickly deploy customer-provided antennas to 100`. This mining grade light tower features a hydraulic ram upright assist and a hydraulic mast. Operators are provided access to a 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.

PLEASE NOTE: ANY FREE SHIPPING OFFERS DO NOT APPLY TO LIGHT MASTS OR LIGHT TOWERS

The WCDE-20-HLM100-ATM-OBL-WSM is a self contained, towable tower package. This unit contains a water cooled diesel engine powering a 20KW Kubota generator, which supplies the current for customer-provided equipment. This unit includes a hydraulic telescoping mast which can elevate customer-provided equipment to heights above 100`. The hydraulic tower features an overall transport height of 8` 6". This light plant 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 telescoping seven stage hydraulic light mast from Larson Electronics is designed to allow operators to quickly and safely deploy customer-provided equipment in locations where devices must be elevated to heights above 100`. This heavy-duty mast can be collapsed to 30` for applications where a smaller footprint 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.

The antenna mounting platform located at the upper section of the mast provides a strong and

stable platform for mounting (3) DB Spectra DS8A06F36D-N customer-provided antennas. The mast features a maximum weight capacity of 3,000 lbs. An obstruction light that is FAA compliant is also available on the mast.



Click Images to Enlarge

Telescoping Boom: The hydraulic telescoping boom is constructed of carbon steel with a galvanized finish and extends to 100`. 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 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: The mast elevation is controlled by a push button switch to operate the hydraulic ram allowing operators to raise the mast to the upright position. The vertical deployment is operated by a second push button switch allowing operators to extend it to its full 100` height or retract it to the collapsed height

Cable storage for 500' of LMR 400 coaxial cable is available on the trailer.



Click Photo to Enlarge

Genset: The WCDE-20-HLM100-ATM-OBL-WSM 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.

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. 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.

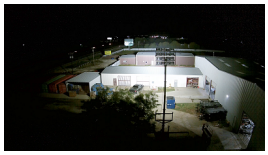
We offer a choice of finishing, equipped light heads, and with or without gensets. These towers can be fitted with Larson Electronics line of high output light heads, or customize the mast head to meet the mounting requirements for your equipment. Optional diesel generators and fuel cells can be equipped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



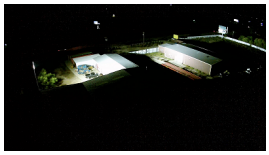


Click Images to enlarge.

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 WCDE-20-HLM100-ATM-OBL-WSM 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`

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 WCDE-20-HLM100-ATM-OBL-WSM light

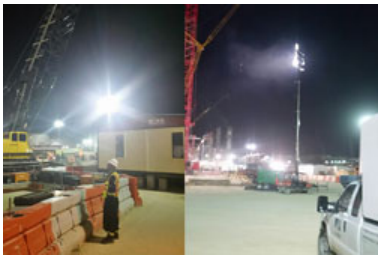
behind the mast and at 100` above ground level. The image to the right shows the work space 75` in front of the mast, with the entire area work area reaching over 100 lux. The mast was extended to 35`.

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: The WCDE-20-HLM100-ATM-OBL-WSM is designed to withstand extreme cold environments and harsh winters. The hydraulic system is equipped with a de-icing system to prevent the hydraulic lines and system from freezing from moisture building within system. This de-icing system uses an environmentally friendly (non-toxic) fluid. All hydraulic lines are equipped with cold weather rated hydraulic hoses rated for -65°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 -65°C cold weather rated rubber hydraulic hoses with metallic fittings and a cold weather rated high viscosity hydraulic fluid. All electrical components are wired using cold weather rated SOOW cable with rated to -50°C that features high flexibility, and extreme abrasion, acid, oil, and water resistance even in sub-zero climates.

The genset is retrofitted with a coolant heater to keep engine temperatures at optimum levels. The fuel system is equipped with an in-tank fuel heater to prevent gelling in arctic environments. The genset is equipped with 0W-40 synthetic oil. The genset`s electric battery is equipped with a battery blanket.


Click Photos to Enlarge

Suggested Applications: Elevated mounting, communication devices, cameras, temporary lighting, construction sites, outdoor events, remote job sites and any other application that requires a self-contained configuration, 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)

There are no Faqs