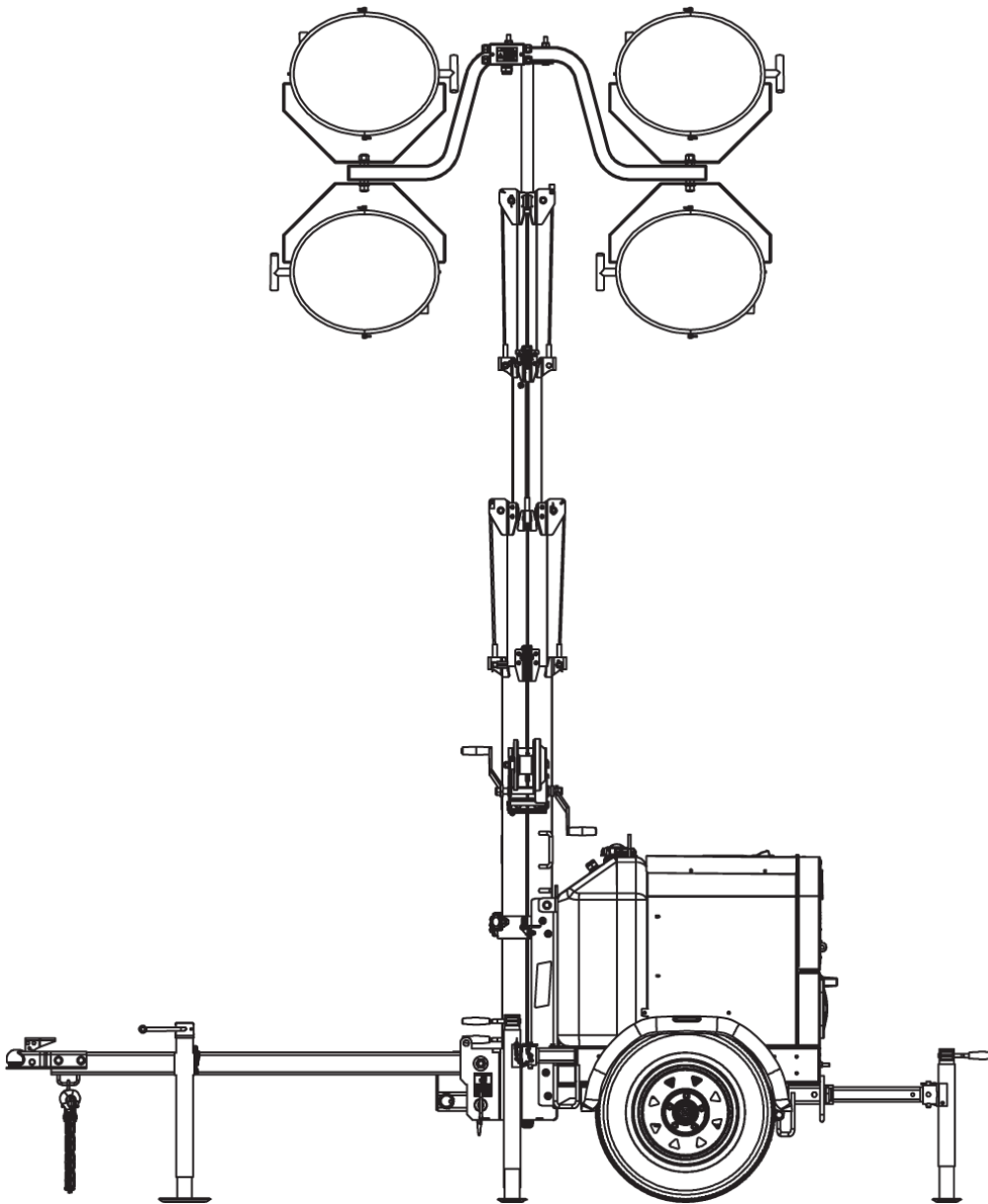




WSD-1028  
1 2019

## COMPACT LIGHT TOWERS

MODEL WLTT  
PRODUCT SPECIFICATIONS | JANUARY 2019



## 1. SYSTEM

- 1.1. Description      Wanco Compact Light Towers provide wide-area lighting on a compact, portable trailer. Four ultra-bright light fixtures atop a telescoping mast can be aimed individually. The mast rotates nearly 360 degrees and the lights operate at any height. A winch and cables raise and lower the tower smoothly and easily.
- Switches on the control panel turn lights on and off individually. A power receptacle (“convenience outlet”) with its own switch is included for powering external equipment.
- Power is provided by a diesel engine. Energy-efficient operation and a large fuel tank ensure long run times. A weather-resistant enclosure houses the power system, controls, and electronics. A hinged door panel provides easy access. A latch keeps the door closed and accepts a user-supplied padlock.
- 1.2. Model
- 1.2.1. Base model      WLTT compact light tower
- 1.2.2. Model choices
- |        |  |
|--------|--|
| Lights | Four 1000-watt metal halide lamps in reflective fixtures<br>Four 480-watt LED fixtures, 50,000-hour lifespan |
| Engine | Kubota®<br>Mitsubishi®   |

## 2. FEATURES

- 2.1. Transport and storage
- Compact design takes up less space when shipped or stored
  - Fold-up tow bar reduces footprint when stored
  - Up to 18 units fit on a single 53-foot flatbed trailer
  - Balanced design and short height ensure the best towing experience of any light tower
  - Two units can be tandem towed (when allowed; towing regulations vary by region)
- 2.2. Setup
- Compact design is easy to maneuver and deploy
  - Low tongue weight makes it easy to move the trailer by hand with just one person
  - Three outriggers and four leveling jacks provide stability when deployed
  - Lights can be safely adjusted from the ground, with no need to climb on equipment
  - Lights are aimed independently and hold their position without tools
  - Single winch raises and lowers the tower smoothly and easily
  - Dual-pulley system lifts each tower section from below, reducing the cable load by 50% and balancing the load for smooth transition up and down while using the winch
  - Tower rotates nearly 360 degrees, reducing the need to frequently move the trailer
  - Tower is the tallest available on a compact light tower
  - Lights operate at any height
  - LED lights are the brightest available on a compact light tower

- 2.3. Operation
- All-steel, weather-resistant equipment cabinet protects controls, engine, and other components from the elements
  - Hinged door panel with latch provides access to controls, engine, and electronics
  - Lockable door latch protect components from unauthorized access
  - Control panel includes circuit breakers for lights and convenience outlet
  - Control panel features engine hour meter and LED status indicators
  - Convenience outlet with dedicated circuit breaker powers auxiliary equipment
  - Main power circuit breaker provides added protection and instant-off to prevent engine damage
  - Optional auto-start/stop system provides dusk-to-dawn or programmable schedule operation
- 2.4. Power system
- Rugged industrial diesel engine paired with a premium four-pole generator
  - Large fuel tank extends run time between refueling
  - Fuel tank is the largest available on a compact light tower
  - Glow-plug preheat system improves cold-weather starting
  - Optional cold-weather package ensures starting in severe cold
  - Automatic engine-shutdown system protects engine from damage due to low oil pressure and high coolant temperature
- 2.5. Maintenance
- Removable top panel and door, and fold-down rear panel, provide unimpeded access to engine, generator, and electrical components
  - All-welded structural steel frame ensures durability and long life
  - Durable powder-coat finish resists the elements
  - Standard trailer tires
  - Bolt-on fenders can be replaced if damaged
- 2.6. Application
- Common applications include:
- Construction sites
  - Public and private events
  - Parking lots
  - Roadwork zones

### 3. LIGHTS

#### 3.1. Metal halide models

- 3.1.1. Lamps Four metal halide light lamps
- 3.1.2. Wattage 1000 W per fixture  
4000 W total
- 3.1.3. Illumination 110,000 lm per lamp, initial intensity  
440,000 lm total, initial intensity
- 3.1.4. Fixtures Elliptical housing with reflective interior, retention clip for supporting lamp, and protective glass cover with gasket

- 3.2. LED models
  - 3.2.1. Lights Four LED fixtures
  - 3.2.2. Wattage 480 W per fixture  
1920 W total
  - 3.2.3. Illumination 57,800 lm per fixture, continuous intensity  
231,200 lm total, continuous intensity
  - 3.2.4. Fixtures Heavy-duty housing with glass lenses and integral heat sink
- 3.3. Swivel brackets Four swivel brackets, one attached to each light fixture, allow lights to be rotated and tilted; lights can be aimed without tools; friction and tensioning clamps hold lights in place

#### 4. OUTPUT POWER

See "Options and Optional Equipment" for output power options

- 4.1. Output 6 kW
- 4.2. Voltage 120 Vac
- 4.3. Current 50 A
- 4.4. Frequency 60 Hz
- 4.5. Voltage regulation  $\pm 6\%$  no load to full load
- 4.6. Power outlet 120 Vac 20 A GFCI duplex receptacle

#### 5. CONTROL PANEL

- 5.1. Function Allows the operator to start and stop the engine, and switch power on and off
- 5.2. Control box
  - 5.2.1. Location Inside equipment cabinet, accessed at rear of trailer
  - 5.2.2. Enclosure Sheet steel construction, powder-coated for durability
  - 5.2.3. Serviceability Hinged control panel with single fastener provides access to interior of control box  
Entire control box is removable for servicing
- 5.3. Control panel
  - 5.3.1. Power switches
    - Main power One dual-pole circuit breaker toggles power to all circuits on and off
    - Lights
      - Single-pole circuit breakers toggle power to lights on and off
      - Metal halide models have four breakers, one for each light fixture
      - LED models have two breakers, one for each pair of light fixtures

	Power outlet	One single-pole circuit breaker toggles power to receptacle (“convenience outlet”) on and off
5.3.2.	LED indicators	Engine status conditions Three LED indicators for: High-temperature shutdown Low oil pressure shutdown Engine preheat (glow-plug), 30-second duration  Custom One LED (red) can be assigned a customer-specified purpose when specified at time of order
5.3.3.	Key switch	Key switch turns engine on and off; key tied to control panel with plastic lanyard
5.3.4.	Hour meter	Displays cumulative engine operating hours for routine maintenance
5.4.	Power outlet	Right side of control box; accessible for servicing by removing four nuts

## 6. TRAILER

6.1.	Frame	All welded structural steel
6.2.	Fenders	Round, full wheel coverage, bolted to trailer frame Material: impact-resistant polypropylene, injection molded
6.3.	Tie-downs	Three tie-down loops and four forklift guides for securing trailer during transport or for theft prevention during operation
6.4.	Finish	Frame is coated with oven-baked, black powder-coat finish to ensure durability and corrosion protection prior to assembly. Assemblies are run through a five-stage, high-pressure phosphate wash prior to application of the finish coat.  See “Options and Optional Equipment” for color options.
6.5.	Axle assembly	Tubular, 2000 lb (907.2kg) capacity, 5 on 4.5" B.C. idler hub  See “Options and Optional Equipment” for axle options
6.6.	Springs	Double-eye leaf springs, 1200 lb (544.3kg) capacity for each spring
6.7.	Tires	ST225/75D13 steel-belted trailer tires, load rating B
6.8.	Drawbar	
6.8.1.	Construction	Hinged on bracket welded under trailer frame. Folds up for shipping and storage when needed. Secures up or down with a single locking pin.
6.8.2.	Material	3" (7.62cm) square steel tubing, 3/16" (0.476cm) wall
6.8.3.	Tow hitch	Standard 2-inch ball coupler tow-hitch, SAE Class 2, 3500-lb (1588kg) capacity. Bolts to drawbar, removable and replaceable.  See “Options and Optional Equipment” for tow-hitch options.

- 6.8.4. Tow chains Two high-test proof coil chain assemblies with clevis slip hooks for towing. Chains attached to drawbar with quick connectors.
- Material diameter 0.406" (10.3mm)
- Working load limit 5400 lbs. (2450kg)
- Breaking force 16,200 lbs. (72kN)
- 6.9. Leveling jacks Four removable swivel jacks, each with 2000-lb (907kg) capacity, steel footpad; two jacks mounting to outriggers on front of trailer, one jack on outrigger at rear of trailer, and one jack on drawbar
- 6.10. Outriggers Three telescoping outriggers (jack extensions) expand trailer footprint and add stability when deployed. Two outriggers located at front corners of trailer and one at rear center.
- 6.11. Taillights Two oval, sealed, combination stop, turn and taillights in back panel of equipment cabinet; each light held in place and sealed externally with snap-in rubber grommet
- See "Options and Optional Equipment" for LED taillights
- 6.12. License plate License plate holder with light is mounted on rear panel of equipment cabinet
- 6.12.1. Wiring
- 6.12.2. Trailer plug A sealed, molded, 4-square connector plugs into harness under trailer
- 6.12.3. Tow-vehicle plug Two-piece assembly with 4-flat molded connector on harness plugs into tow vehicle
- Meets SAE J1239
- See "Options and Optional Equipment" for tow-vehicle plug options
- 6.12.4. Protection All trailer wiring encased in protective sheathing, attached with P-clamps riveted to trailer frame; no exposed wires
- 6.13. Tower assembly
- 6.13.1. Function Lights are raised and lowered on a telescoping vertical tower
- 6.13.2. Tower construction Five sections, four square steel tubing and one round section, each with a successively smaller circumference, telescopes inside the adjacent section below it. Each section is supported by a single cable that loops under it inside the next larger tower section.
- Nylon guide blocks keep the sections tight, eliminating the need for greasing the tower and preventing dirt from building up on the inner tower section. Dirt would cause performance problems and maintenance issues.
- 6.13.3. Swivel base A steel tubular weldment is bolted to the trailer frame. The bottom tower section rotates on a thrust bearing and washers inside the swivel base, reducing rotating friction.
- 6.13.4. Lights crossbar Crossbar supports four light fixtures on swivel brackets during operation and transport
- 6.13.5. Finish All tower sections are treated for corrosion resistance



## 7. POWER SYSTEM

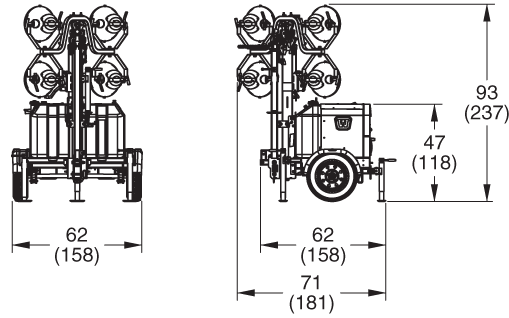
7.1.	Description	Engine and generator produce system power	
7.2.	Engine		
7.2.1.	Type	Tier 4 Final diesel, 3-cylinder, 4-cycle, liquid-cooled	
7.2.2.	Speed	1800 rpm	
7.2.3.	Kubota light tower models	Engine model	Kubota D1005-BG
		Max. power output	13.1 hp (9.8 kW)
		Displacement	61.08 in <sup>3</sup> (1001cm <sup>3</sup> )
7.2.4.	Mitsubishi light tower models	Engine model	Mitsubishi L3E
		Max. power output	12.2 hp (9.1 kW)
		Displacement	58.09 in <sup>3</sup> (952cm <sup>3</sup> )
7.3.	Generator		
7.3.1.	Model	Mecc Alte LT3N-100/4	
7.3.2.	Type	Brushless	
7.3.3.	Insulation	Grade H	
7.4.	Start battery	Maintenance-free AGM 12 Vdc, 550 CCA	
7.5.	Sound level	68 dB @ 23 ft (7m) at max. load	
7.6.	Fuel tank capacity	60 gal (227 L)	
7.7.	Fuel consumption		
7.7.1.	Metal halide lights	0.49 gal/hr (1.86 L/h)	
7.7.2.	LED lights	0.31 gal/hr (1.17 L/h)	
7.8.	Run time		
7.8.1.	Metal halide lights	Approx. 123 hrs	
7.8.2.	LED lights	Approx. 194 hrs	



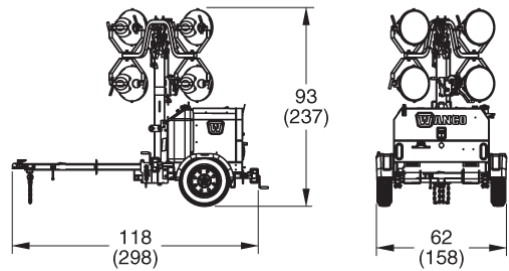
7.9. Dimensions & Weight

7.9.1. Dimensions *inches (cm)*

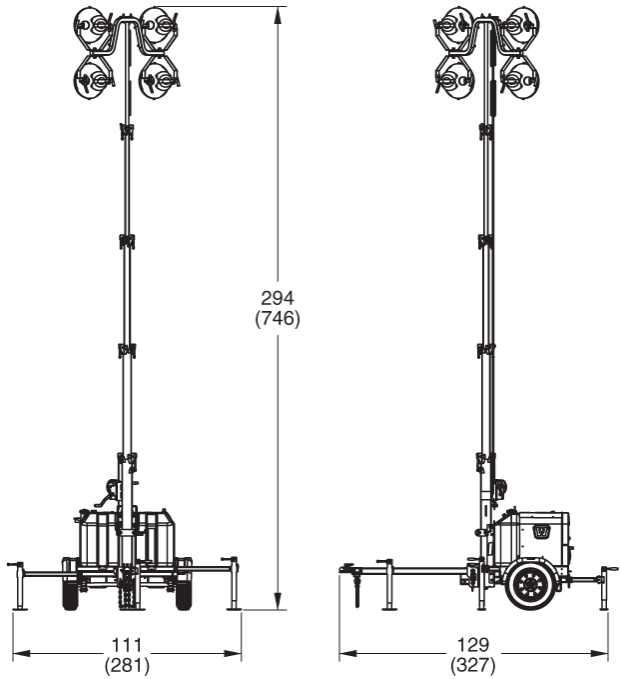
**Storage Position**



**Travel Position**



**Deployed**



7.9.2. Operating weight    Approx. 1965 lb (891kg)

7.9.3. Shipping weight    Approx. 1580 lb (717kg)

## 8. OPTIONS AND OPTIONAL EQUIPMENT

### 8.1. Transport options

- 8.1.1. Axle                                      Replace standard axle with heavy-duty axle
- Options    Heavy axle, tubular, 3500 lb (1587.6kg) capacity, 5 on 4.5" B.C. idler hub  
                 Torsion axle, tubular, 2800 lb (1270kg) capacity, 5 on 4.5" B.C. idler hub
- 8.1.2. Tow hitch                                Replace standard tow hitch with optional hitch
- Options    Combo-hitch with 2-inch ball and standard lunette ring for pintle hook,  
                 2½" ID x 1" cross-section  
                 Standard lunette ring for pintle hook, 2½" ID x 1" cross-section
- 8.1.3. Tow-vehicle plug                        Many types of plugs available, prewired at the factory; contact factory for details
- 8.1.4. LED taillights                            Two sealed LED taillights replace standard taillights

### 8.2. Functional options

- 8.2.1. Low-power LED light fixtures                        Replace standard lights with lower-wattage LED light fixtures
- Lights    Four LED fixtures
- Wattage    350 W per fixture  
    1400 W total
- Illumination                                    46,000 lm per fixture, continuous intensity  
    184,000 lm total, continuous intensity
- Fixtures    Heavy-duty housing with glass lenses and integral heat sink
- 8.2.2. Balloon lights                            Replace standard lights with balloon light fixtures
- Lights    Two LED balloon fixtures, removable for transport and storage
- Light source power                            600 W per fixture  
    1200 W total
- Light beam angle                                360 degrees
- Illumination                                    65,000 lm per fixture, continuous intensity  
    130,000 lm total, continuous intensity
- Fan power                                        53 W @ 60 Hz  
    61 W @ 50 Hz
- Balloon material                                Nylon 66

Temperature limits	Operating	-22 to 104°F (-30 to 40°C)
	Storage	-40 to 140°F (-40 to 60°C)
Fixture size, W x H	39.4" x 31.5" (100 x 80cm), inflated balloon on mounting bracket	
Weight	22 lb (10kg)	

8.2.3. Power winch Power-operated winch replaces manual winch for raising and lowering tower. Adds toggle switch to control panel for up/down operation. Includes manual winch handle for use in the event of system power failure.

**8.3. Power system**

8.3.1. 8kW 60Hz option

	Replace standard engine and generator	
Engine model	Kubota D1105-BG, replaces standard engine	
Max. power output	15.4 hp (11.5 kW)	
Displacement	68.53 in <sup>3</sup> (1123cm <sup>3</sup> )	
Generator model	Mecc Alte LT3N-130/4, replaces standard generator	
Output power	7.5 kW	
Output voltage	120/240 Vac	
Output current	50 A @ 120V 25 A @ 240V	
Output frequency	60 Hz	
Voltage regulation	±6% no load to full load	
Power outlet	Options	120 Vac 20 A GFCI duplex receptacle 240 Vac 30 A locking receptacle

8.3.2. 6kW 50Hz option

	Replace standard generator and standard receptacle, reduce engine speed	
Generator model	Mecc Alte LT3N-130/4, replaces standard generator	
Engine speed	1500 rpm	
Output power	6.0 kW	
Output voltage	115/230 Vac	
Output current	50 A @ 115V 25 A @ 230V	
Output frequency	50 Hz	

	Voltage regulation	±6% no load to full load
	Power outlet	Options    Schuko connector Weipu connector
8.3.3.    8kW 50Hz option	Replace standard engine, generator, and receptacle	
	Engine model	Kubota D1105-BG, replaces standard engine
	Max. power output	15.4 hp (11.5 kW)
	Displacement	68.53 in <sup>3</sup> (1123cm <sup>3</sup> )
	Engine speed	1500 rpm
	Generator model	Mecc Alte LT3N-160/4
	Output power	7.5 kW
	Output voltage	115/230 Vac
	Output current	50 A @ 115V 25 A @ 230V
	Output frequency	50 Hz
	Voltage regulation	±6% no load to full load
	Power outlet	Options    Schuko connector Weipu connector
8.3.4.    Odyssey® battery	Replace standard start battery with high-power Odyssey battery	
	Features	100% maintenance-free Sealed and spill-proof Massive starting power in excess of 2250 amps for 5 seconds Service life up to 10 years, storage life up to 2 years before recharge Fast recharge, up to 100% in 4 to 6 hours Contains less lead than conventional batteries
	Type	Absorbed glass mat (AGM)
	Voltage	12 Vdc
	Pulse current	950 PHCA, 5-second pulse
	Weight	Approx. 20 lb (9kg)

- 8.3.5. Cold weather package  
Extends low operating temperature to  $-20^{\circ}\text{F}$  ( $-29^{\circ}\text{C}$ ).  
Includes oil pan heater, block heater, and battery blanket for improved starting in cold climates.
- 8.3.6. Emergency shutdown  
Large emergency-stop button on exterior of equipment bay for quick, manual engine shutdown
- 8.3.7. Air shutoff kit  
Air-intake shutoff valve for manually engine shut down, useful in environments where combustible gas may be present
- 8.3.8. Locking fuel cap  
Locking cap for fuel tank replaces standard cap
- 8.4. Auto-start/stop controller**  
Automated controller allows for dusk-to-dawn light tower operation or user-programmed schedule operation. Replaces status LEDs and hour meter on control panel.
- 8.4.1. Model  
Deep Sea Electronics DSEL401 MKII
- 8.4.2. Features  
Large back-lit icon LCD screen  
Automatic and manual control of lights and output power  
Power system status monitoring and displayed alarms  
Information displayed in a clear and concise format  
Generator/load power monitoring (kW, kV A, kV Ar, pf)  
Generator/load current monitoring and protection