



TOWER 500

*Compact Self-Erecting
Trailer-Mounted Mini
Tower Crane
(230 V Electro-Hydraulic Drive)*

Tower 500 is a compact self-erecting trailer-mounted mini tower crane with an electro-hydraulic drive, designed for lifting and handling materials in confined and hard-to-access locations where conventional cranes are impractical or uneconomical.

The crane operates on an electro-hydraulic principle: a single-phase 230 V power supply feeds a frequency inverter, which drives the hydraulic power unit, while an integrated control and remote-control system manages all crane movements and safety functions.

Maximum lifting capacity	500 kg
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Maximum working radius	16 m
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Maximum lifting height	9 m
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Power supply	1×230 V AC, 50 Hz; selectable 16 A / 32 A operating profiles
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Principle of operation	Electro-hydraulic system with frequency-controlled hydraulic power unit and integrated remote control
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Typical Applications

- Residential and small commercial construction (private houses, extensions, small industrial units)
- Roofing, façade and cladding installation (windows, balcony elements, curtain walls)
- Rooftop lifting works: HVAC units, compact equipment, solar panels and skylights
- Renovation and retrofitting in dense urban areas with restricted access (courtyards, backyards, inner yards)
- Industrial and maintenance tasks: placing compact machinery, platforms and components on mezzanines and roofs
- Work on unprepared or remote sites using a single-phase 230 V power supply or a portable generator
- Low-emission / low-noise environments where combustion-engine equipment is undesirable

Technical Specifications

Lifting Performance

Maximum lifting capacity	500 kg
Maximum working radius	16 m
Maximum lifting height	9 m
Winch	Hydraulic winch with factory-fitted over-center valve block
Slewing range	360° around vertical axis

Parameters in transport position

Stowed dimensions (W × H × L)	2.3 m * 3.3 m * 9 m
Crane weight	2200 kg

Working Geometry

Maximum hook height, working radius and working sector depend on the crane configuration and installation setup. Refer to the dimensional drawing (side and top view) and the load chart for exact values.

Key Features & Benefits

- Fully electric drive – no combustion engine: low noise, zero local emissions, suitable for low-emission and noise-sensitive job sites.
- 230 V single-phase supply with Eco (16 A) and Performance (32 A) profiles: can run from standard sockets or dedicated feeds / generators.
- Integrated load-holding valves on the winch, slewing and luffing functions: safe load holding and controlled lowering, even in case of hose or line failure.
- Integrated control and safety logic: outrigger interlocks, tilt and overload monitoring, height and motion limits, emergency stop via safety relay and VFD STO.
- Wireless radio remote with precision mode: safe operating distance and fine positioning of loads in confined and hard-to-access areas.
- Compact trailer-mounted design: quick to position, set up and relocate around the site using a light vehicle.



Hydraulic System

Power pack	3 kW electro-hydraulic unit, pump flow approx. 9 L/min, max. system pressure 175 bar
Valve bank	3-section open-centre valve bank (Z50 series) for winch, slewing and luffing functions
Tank volume	12 L usable hydraulic oil volume
Cooling & filtration	Oil-air cooler in the return line + 10 µm return filter with clogging indicator
Load-holding valves	Integrated overcenter (load-holding) valves on the winch, slewing and luffing functions for safe load holding and controlled lowering
Monitoring system	Pressure and oil temperature monitored via sensors and the control system

TOWER 500

Electrical Supply & Control

Supply	1×230 V AC, 50 Hz; selectable 16 A (Eco) / 32 A (Performance) operating profiles
Drive	1→3 phase frequency inverter (VFD), 4 kW rating, heavy-duty mode
Control system	24 V DC control architecture with integrated safety relay (PL e, Cat. 4) and VFD STO
Remote control	Wireless radio remote with E-STOP and precision (slow) movement mode

Safety & Standards

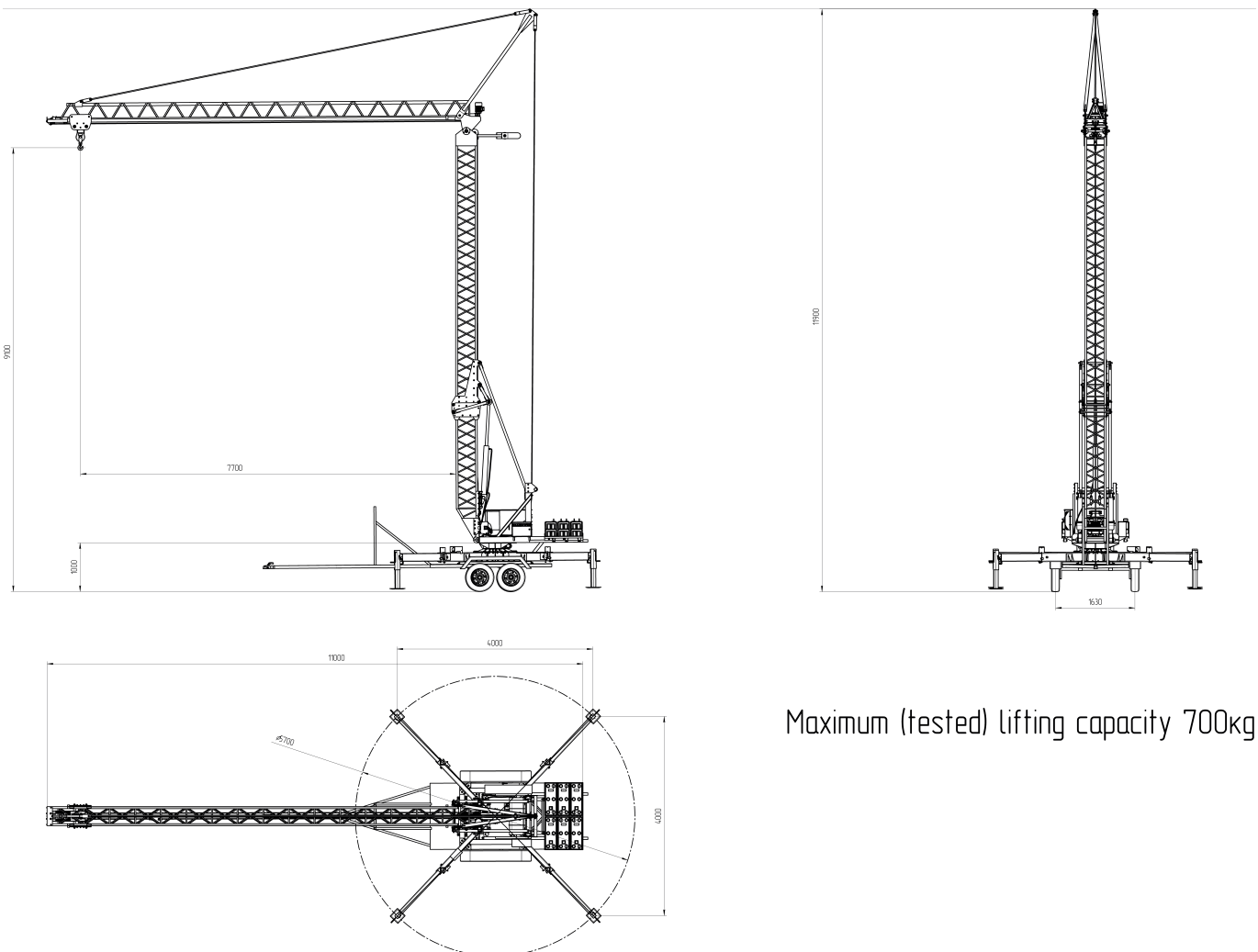
Tower 500 incorporates multi-level safety functions, including outrigger interlocks, tilt and overload monitoring, height limit switches, and an emergency stop circuit with a safety relay (PL e, Cat. 4) acting on the VFD STO inputs. The crane is designed in accordance with applicable EU machinery safety requirements, including EN ISO 12100, EN ISO 13849-1 and EN 60204-1/-32, and is supplied with an EU Declaration of Conformity.

Power Supply & Generator Requirements

Tower 500 is designed to operate from a standard 1×230 V AC, 50 Hz single-phase supply or from a suitable single-phase generator. Two operating profiles – Eco (16 A) and Performance (32 A) – allow the crane to run from common 16 A sockets or from dedicated 32 A feeds with full performance. For generator operation, CranexPro recommends a minimum continuous rating of approx. 4 kVA in Eco mode and 7–8 kVA in Performance mode, using an AVR or inverter-type generator with low voltage distortion.

Figure 1

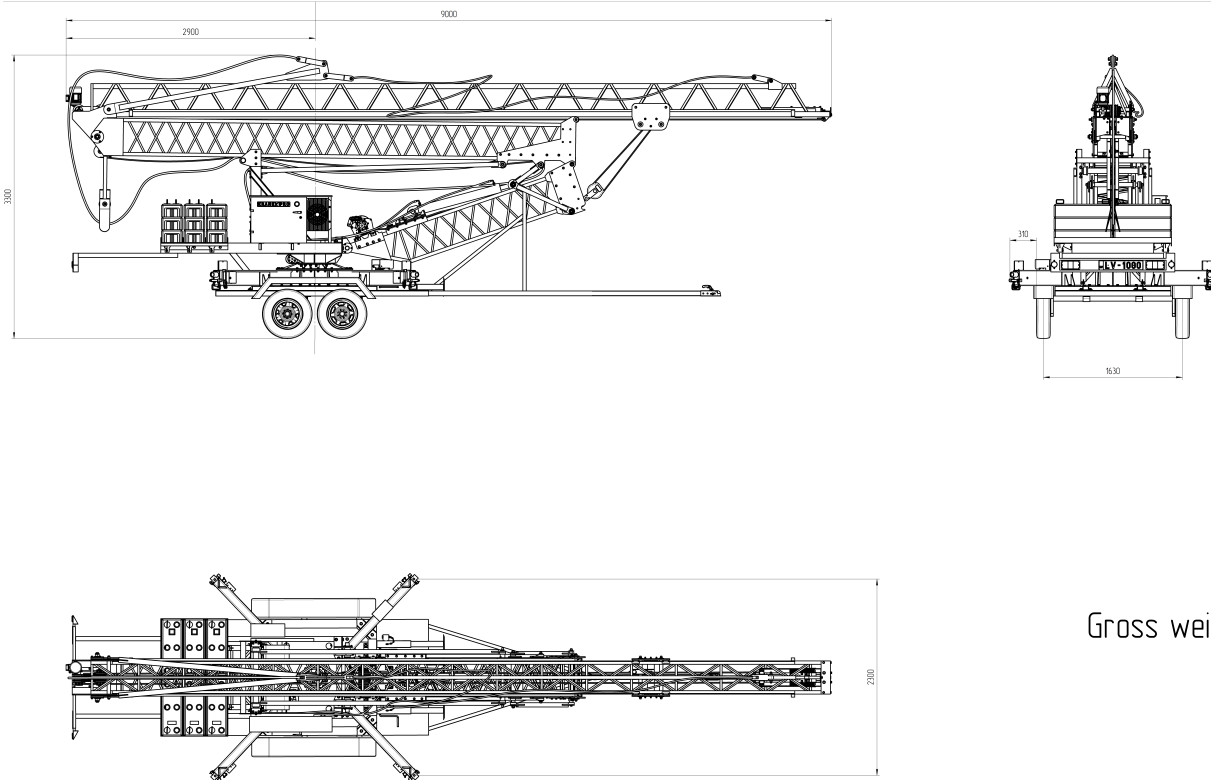
Working geometry and load chart reference



Maximum (tested) lifting capacity 700kg

Figure 2

Overall dimensions in transport position



Gross weight 2200 kg

Options & Accessories

A range of options and accessories is available to adapt Tower 500 to specific jobs and site conditions, including:

- **Lifting accessories:** optional winch rope lengths and reeving, fixed or adjustable spreader beams, hooks and shackles, interfaces for glass vacuum lifters and other specialist lifting devices
- **Mounting & support:** custom trailer or base-frame adaptations, additional outrigger pads, support mats and levelling wedges for soft or uneven ground
- **Power & control:** extended power and control cable sets, alternative plug / inlet configurations, additional or backup radio remote, extended HMI / status indication
- **Lighting & signalling:** LED work lights on the jib or chassis, amber warning beacon, acoustic alarm (buzzer) for crane movements, optional wind indicator depending on configuration

Availability of specific options may vary by configuration and market; detailed option lists are available on request.