

### **EVERDIGM** TOWER CRANE

# ED-F series Flat top



Conquer the ground

# Why customers prefer Flat top?

- Minimize interference between the cranes especially in the congested working area and also minimize blind spot.
- Easy installation and simple dismantle procedure enable itself to be done within a single day.
- Jib assembly in the air requires minimum space for the installation.
- Improve service life much more than conventional T-type cranes as there is no tie-bar and therefore, minimize alternating load.
- Enables Jib length adjustment easily in the air depending on the progress of construction.

### Advantage of Flat top

### Advantage acquired from the minimization of interferences between the cranes

- Removing the Jib tie-bar and top-tower which are major cause of interference minimize distances between the cranes and blind spots.
- Minimize the quantity of Mast and the cost of elevating operation as it does not need superfluous installation height required for T-type crane.
- Having no element of interference between the cranes provides optimum space for the longer Jib.

### Convenience of Installation and Dismantlement

- Optimum components enable installation or dismantlement to be done within a single day.
- Minimize space for the installation or dismantlement as Jib assembly in the air can be done for its sub-parts separately.
- Enables Jib length adjustment easily in the air depending on the progress of construction.

## High-performance, precise-control, very-reliable, energy-saving drive system

### Frequency-converter Hoist Drive system

- Most reliable German made hoist drive system consists of;
  - √ SIEMENS Electric Motor with dust & water protection rating IP55.
  - ✓ Durable SIEMENS gear unit.
  - √ Trouble free SIEMENS Vector Frequency Converter.
- Hoist speed is being continually adjusted and optimized responding to the load actually being lifted.
- Smooth and step-less speed changes, micro speed controls from zero speed.







### Frequency-converter Slewing Drive system

- Powerful, and Jerk-Free slewing drive system consists of;
  - √ 2 sets of SIEMENS Electric Motor with dust & water protection rating IP55 accompanied by most reliable gear unit.
  - √ Trouble-free SIEMENS Vector Frequency Converter.
- Jerk-free slewing at any speeds, continuously variable speed control by step-less controller.
- Enabling to place a jib at any desired position without sway.









### • Frequency-converter Trolley Travel system

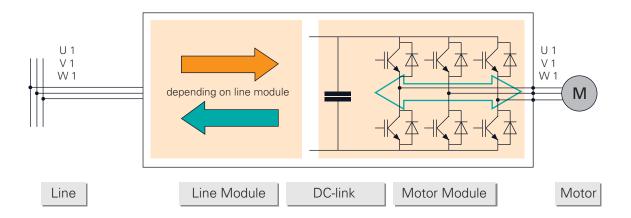
- Travelling with continuously variable speed control by step-less controller.
- Trouble-free TELEMECANIQUE frequency converter.
- Enabling to place a lifting hook at any desired position at micro speed.
- A reservoir drum is provided for storing a trolley rope that is in excess in case shorter jib installed.





### **Energy Savings of 49% - REGEN Braking System**

- Thanks to the Regenerative Braking technology of SIEMENS Frequency Converter, electric energy generated when braking is fed back into the power line instead of being wasted as heat into the air.
- 49% energy saving enhanced; tested at the condition of mast height 53m.



Supply energy from power station to motor through Line module



### **Durable Slewing Bearing**

- High quality, France ROLLIX-made slewing bearing as standard.
- Ultra-hardened, precisely machined components such as bearings, run-way, and teeth guarantee a longer life.
- Four-point greasing ports as standard.
- Motorized greasing system as option.







### **Electronic Load Moment Limiter**

Load moment is measured by a load cell and potentiometer, and transmitted to frequency converter to optimize the hoisting speed.

When a load limit is reached, a warning is signaled to the operator. An additional increment of load causes the hoist motor to stop.

Fine and easy setting by key-pad input system.





## Robust Tower Mast Sections for long life, easy connection, higher freestanding

- High tensile structural steel EN 10025 S355J2 G3.
- Tight-welded angle-shape posts and diagonal elements.(ED130F-8)
- Tight-welded square-tube-shape posts and diagonal elements.(ED150F-10)
- High strength bolts having ISO tensile strength grade 12.9.
- Forged flange with 2 bolts at each corner post Zero clearance joint.
- Bolt holder for easy keeping.
- 2 different lengths (5.9-, 11.8-meter) provided for desirable height.









### Easy and fast 2/4-fall change done by 1 operator

- Mechanism of easy connecting or releasing intermediate hook block enables a rapid 2/4-fall change.
- Quickly done with very little effort by only 1 mechanic or operator.





### Fast, trouble-free and safety climbing

- One hydraulic ram raises the upper portion of the crane in a perfect balance.
- Three climbing stages permits the insertion of a 5.9-meter mast section.
- Pivoting hook and mobile beam are easily maneuvered by one operator at a fixed place, hence fast, trouble-free and safe climbing is guaranteed.







### Ergonomic controls in comfortable and full-view cabin

- Full view of the lifting load and work site.
- Electronic monitoring system displaying all driving information at once.
- Noise-, dust-, rust-, heat-, and rain-insulated cabin.
- Joystick lever controls with dead-man switch.
- Air-conditioning for heat and cool as standard.
- Full suspension seat with wide range of adjustment.
- FM/AM radio and cassette as standard.
- Windshield wiper system.
- Hi-Lo adjustable sun-shade.
- 220Vac power socket inside cabin.









### Silent trolley travel with safety stopper

- Durable MC Nylon wheels with self-lubrication provide smooth and noise-less travel.
- A special designed stopper prevents trolley from free coasting even in case travel rope is cut.
- A hook block with adequate weight and lower center of gravity moves stable even when unloaded.





### Anemometer and aircraft warning light as standard

- Real-time wind speed measured by anemometer is displayed for operator in the cabin.
- Air-craft warning LED light with solar sensor.



### **Protected Connectors inside stainless steel cage**

All cable connectors to controller placed inside the stainless cage provide complete protection for electronic system from water and dust.



### Hot-dip galvanized steel for anti-rust

Parts, otherwise likely to be rusted, are fabricated of "Hot-dip galvanized" steel; ladders, hand rails, cable ducts, tie bars, platforms and etc.













### Easy and quick assembly in total safety

• Minimized "assembly-in-the-air" :

Only 4 complete units pre-assembled on the ground or in the factory enables to lessen lifting work at job site.

### ① Slewing Platform Assembly

- Consisting of slewing table, cabin, top head and control panels.
- Pre-assembled at the factory and transported to the job site.
- Job done with a single lift at the job site.









### 2 Climbing Cage Assembly

- Consisting of with climbing frame, service platform, hydraulic power pack and rams.
- Pre-assembled at the factory and transported to the job site. No additional assembly work at the job site.
- With just a single lift, easily slide into the tower as forming a sleeve around the tower.



### **3 Counter Jib Assembly**

- Consisting of counter jib, tie bars, hoist winch drive and hand rails.
- All parts such as tie bars, hoist winch drive and foldable hand rails are pre-assembled at the factory and transported to the site. Foldable hand rails are simply erected upright after installation.
- Counter jib comes with 2 parts, base jib and end jib, when transported. Both base jib and end can be quickly connected on the ground with simply using two pins.
- Complete counter jib is connected to the turn table with quick-attach fasteners with very little effort.







#### 4 Main Jib Assembly

- Jib sections are easily aligned and connected by precisely fabricated "pin-and-socket" joint.
- Another advantage of the pin-and socket joint is "zero-bump" on the path that trolley travels.
   It makes the trolley travel smoothly without noise.

• Complete main jib is connected to the turn table with "quick-tech" fasteners.











### Self-alignment of counter-weight

Once each ballast block is just simply inserted in the compartment in sequence, then they are self-positioned and automatically aligned in place, thanks to special-designed compartment.

Zero space and tight-contact between counterweight blocks.

### Plug-in Connection

Plug-in connections to drive units and safety devices make job done easily and quickly.







### Possible Options and more.....

### Work Area Protection (Zoning) System

The system protects tower crane from sailing over restricted zones three-dimensionally, such as adjacent buildings, power lines, and actual boundry limit of site.

When such restricted zones are reached, the system provides operator with informative warning in advance, if neglected, stops the movement.

The system is desiged for user-friendly setting with informative LCD display.

### Black Box for operation history

Operation dats such as time, load actually lifted, safety working load, load rating, working radius, wind speed, and work cycles are recorded in the system.

#### Wireless Remote Control

Makes it possible to operate crane by the operator on the ground, not in the cabin.

It comes with Germany HBC remote control system.









#### ED-F series

Model	Max Lift Load	Max Jib Length	Load at Jib end	Free-standing Height under hook	Max. Height under hook
ED130F-8	8 ton	60 m	1.6 ton	53.5 m	224 m
ED150F-10	10 ton	65 m	1.8 ton	54 m	225 m

# EVERDIGM TOWER CRANE ED-F series

- Specifications contained in the catalogue may be changed without prior notice for improvement of quality and performance.

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