Specifications
Hydraulic Truck Crane

HTC-835  35-ton (31.77 metric ton)

General dimensions

<table>
<thead>
<tr>
<th>Description</th>
<th>Feet</th>
<th>Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tailswing of counterweight</td>
<td>10'-11.5&quot;</td>
<td>3.34</td>
</tr>
<tr>
<td>Ground clearance - Standard Tires</td>
<td>9.0&quot;</td>
<td>.23</td>
</tr>
<tr>
<td>Ground clearance - Optional Tires</td>
<td>9.6&quot;</td>
<td>.24</td>
</tr>
<tr>
<td>Turning radius C/L of tire – Std. tires</td>
<td>46&quot;</td>
<td>14.30</td>
</tr>
<tr>
<td>Turning radius - wall to wall (outside front bumper)</td>
<td>50&quot;</td>
<td>15.42</td>
</tr>
</tbody>
</table>
Upperstructure

**Boom**
Link-Belt patented design. 32' 0" - 80' 0" (9.75 m - 24.38 m) three-section boom with two power sections. Boom side plates have diamond shaped impressions for superior strength to weight ratio and are offset welded to carefully machined 100,000 p.s.i. (689.5 MPa) steel angle chords for maximum integrity and strength. Boom telescope sections are supported by wear shoes both vertically and horizontally. Anti-two block device, electronic boom length/angle indicator and function kickout.

**Load Moment Indicator** — Audio-visual warning system with anti-two block and function kickouts. Constant display of boom length and angle, tip height, radius of load, machine configuration, allowed load, actual load and % of allowed load. Presettable alarms for maximum and minimum boom angles, maximum tip height and maximum boom length.

**Optional boom** — 32' 0" - 101' 0" (9.75 m - 30.78 m) four-section boom includes base section, two power sections, and manual fourth section. Fourth section is power pinned by manually activating a cylinder locking system.

**Boom head** — Standard; three 14.5" (0.37 m) root diameter head sheaves with four 14.5" (0.37 m) root diameter head sheaves available to handle up to 8 parts of 5/8" (16 mm) wire rope. Two removable wire rope guards and rope dead end lugs are provided on each side of the boom head. Meets 24:1 ratio European safety code with 5/8" (16 mm) wire rope guards and rope dead end for 5/8" (16 mm) wire rope. Two removable wire rope guards, removable wire rope guards, and rope dead end lugs are provided on each side of the boom head. Meets 24:1 ratio European safety code with 5/8" (16 mm) wire rope. Two removable wire rope guards, rope dead end lugs are provided on each side of the boom head. Meets 24:1 ratio European safety code with 5/8" (16 mm) wire rope. Two removable wire rope guards, rope dead end lugs are provided on each side of the boom head. Meets 24:1 ratio European safety code with 5/8" (16 mm) wire rope. Two removable wire rope guards, rope dead end lugs are provided on each side of the boom head. Meets 24:1 ratio European safety code.

**Auxiliary lifting sheave** — Optional; 14.5" (0.37 m) root diameter head sheave with removable wire rope guards, mounted to boom. For use with one or two parts of line off the optional auxiliary winch. Does not affect erection of jib or use of main head sheaves for multiple reeving.

**Boom elevation** — One Link-Belt designed hydraulic boom hoist cylinder with holding valves. Hand or optional foot controls for boom elevation from -3° to 80°.

**Fly** — 29' 0" (8.84 m) stowable one-piece lattice type, with 2° offset.

**Jib**
Optional — 21' 0" (6.40 m) stowable A-frame. Attaches to fly only. Can be offset 5°, 17.5° and 30°.

**Cab and Controls**
Environmental cab; isolated from sound and vibration by rubber mounts. All tinted and tempered safety glass windows. For maximum visibility and ventilation, sliding right side and rear windows and swing up roof window supported with two gas cylinders. Slide-by-door opens to 3' 0" (0.91 m) width. Six-way adjustable operator’s seat. Control levers for swing, boom telescope, winch and boom hoist, with foot control for swing brake and optional boom hoist. Outrigger controls, sight level bubble.

**Cab instrumentation** — Dash mounted gauges for hydraulic oil temperature, fuel, water temperature, and oil pressure.

**Swing**
Directional hydraulic swing motor mounted to a planetary reducer for 360° continuous smooth swing at 2.05 r.p.m.

**Swing brake** — Standard; Foot operated, spring released disc brake mounted on the speed reducer.

**Swing lock** — Standard; 360° position pin-type controlled from the operator’s cab. Two position house lock for travel and pick and carry modes.

**Counterweight** — Pinned to upperstructure frame.

**Load Hoist System**
Standard — Model 2M main winch with two-speed motor and automatic brake, power up/power down mode of operation. Bi-directional, gear-type hydraulic motor.

Optional — Model 2M auxiliary winch with two-speed motor and automatic brake, power up/power down mode of operation. Bi-directional, gear-type hydraulic motor.

Optional — Model 3M winch with two-speed motor and automatic brake; power up/power down mode and exclusive controlled true gravity free fall. Available on main or both winches.

**Additional Upperstructure Equipment - Optional**
Boom hoist foot control, drum rotation indicators, propane heater, diesel heater, 25 ton (22.70 metric ton) or 35 ton (31.77 metric ton) hook block, roof window windshield wiper, 8-1/2 ton (7.72 metric ton) ball and swivel, flood lights, lifting lug package, hand throttle, windshield washer, amber rotating beacon, cab mounted spotlight, tachometer and engine monitoring system.

**Hydraulic System**
**Main pump** — Three-section gear-type pump. Combined pump capacity of 133 gpm (503.4 lpm). Powered by carrier engine with pump disconnect. Pump disconnect is a jaw-type clutch engaged/disengaged from carrier cab. Maximum pressure at 2900 p.s.i. (200 Bars).

**Reservoir** — Link-Belt, 110 gallon (416 L) capacity. Diffusers for deaeration.

**Filtration** — One six-micron filter located inside the hydraulic reservoir.

**Control valves** — Six separate control valves allow simultaneous operation of all crane functions.
Carrier

**Type**
- Link-Belt 8' 0" (2.44 m) wide, 216" (5.49 m) wheelbase.
- **Standard** — 6 X 4 drive
- **Optional** — 6 X 6 drive

**Frame** — All-welded high strength alloy steel plate construction with box-type design and integral 100,000 p.s.i. (689.5 MPa) steel outrigger boxes.

**Outriggers**
- **Standard** — Power hydraulic, double box, single beam outriggers, front and rear. Vertical jack cylinders, each equipped with integral holding valve. Beams extend to 18' 0" (5.49 m) centerline-to-centerline and retract to within 8' 0" (2.44 m) overall width. Equipped with stowable, 19" (.48 m) square lightweight floats. Controls and sight level bubble located in upperstructure cab.
- **Front bumper outrigger** — Standard; Front center vertical jack mounted under bumper with 19" (.48 m) square lightweight float. Provides 360° lifting capacities.

**Axles**
- **Front** — Standard; Single axle, 81" (2.06 m) track.
- **Optional**; Single drive axle, 79.75" (2.03 m) track.
- **Rear** — Tandem axle, 71.77" (1.82 m) track. 6.14 to 1 ratio with interaxle differential.

**Suspension**
- **Front** — Spring suspension.
- **Rear** — Solid mount 50" (1.27 m) bogie beam.

**Wheels**
- **Front** — Cast six spoke
- **Rear** — Cast six spoke

**Tires**
- **Standard Front** — 16.5 x 22.5 (16 PR) transport type tubeless.
- **Standard Rear** — 10.0 x 20.0 (12 PR) transport type with tube.
- **Optional Rear** — 10.0 X 20.0 (12 PR) or 11.0 x 20.0 (12-PR) lug type.
- **Optional Front** — 425/65R22.5 XZY lug type radials.
- **Optional Rear** — 11R20 XZY lug type radials.

**Brakes**
- **Full air on all wheels.** Air dryer is standard.
- **Front** — Standard; 6 x 4 Cam-type 17-1/4" x 6" (.44 m x .10 m) shoe diameter.
- **Front** — **Optional**; 6 x 6, 15" x 5" (.38 m x .13 m) shoe diameter.
- **Rear** — Cam-type 16-1/2" X 7" (.42 m X .18 m) shoe diameter.
- **Parking & emergency** — One spring set, air released chamber per rear axle end. Parking brake applied with valve mounted on carrier dash. Emergency brakes apply automatically when air pressure drops below 40 p.s.i. in both systems.

**Steering**
- Shaeffer Steering, rack-and-pinion design. Provides wall-to-wall turning radius of 50’ 7" (15.42 m).
- **Optional** Remote steering control system. Operated from upperstructure cab instrumentation includes toggle switch steering control, wheel position indicator, brake and transmission controls and parking brake control.
- **Clutch** — Lipe-Rollway 14" (0.36 m) diameter, spring loaded, single plate dry disc.
- **Universals** — Rockwell or spicer; easy service type.

**Transmission**
- **Standard** — Fuller Roadranger RT-6613; 13 speeds forward, 3 reverse.

**Electrical System**
- **Standard** — Two 12-volt batteries; 1,950 cold cranking amps available, 105 amp alternator.
- **Lights** — Four dual-beam sealed headlights, front and rear directional signals, stop and tail lights, four-way emergency flashers, back-up lights, front, rear and side clearance lights with integral reflectors, and license plate light.

**Carrier Cab**
- One-man cab. Acoustical insulation with vinyl covering. Equipped with electric windshield wiper and washer, horn, four-way adjustable seat with seat belt, dome and dash lights, cigar lighter, ashtray, 22,400 BTU capacity heater, defroster, door and window locks, fire extinguisher, LH/RH rear view mirrors, tilt/telescoping steering wheel and sliding LH/RH and rear tinted windows.
- **Cab instrumentation** — Standard; illuminated instrument panel with speedometer, odometer, tachometer, voltmeter, hourmeter, front and rear air pressure gauges, low air pressure light and warning buzzer, automotive-type ignition (common with upper), engine oil pressure gauge, water temperature gauge, fuel gauge, turn signal indicator, high beam light switch, adjustable defroster vents and circuit breakers.

**Additional Equipment - Standard**
- Front and rear fenders, air dryer, back-up warning alarm, cab steps, access ladder to rear carrier deck with hand grab rails, front/rear tow loops, skid-resistant finish on carrier deck, mud flaps, and 120 volt 1000 watt engine coolant heater.

**Additional Equipment - Optional**
- Propane engine block heater, ether injection starting package, spare tire and rim assemblies, towing shackles and engine monitoring system.

**Travel Speeds and Gradeability ?**
Travel speeds and gradeability

<table>
<thead>
<tr>
<th>Engine</th>
<th>Maximum Speed</th>
<th>Maximum Gradeability at Peak Torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cummins 6CTA8.3</td>
<td>47.3 mph</td>
<td>Manual — 60.4%</td>
</tr>
<tr>
<td></td>
<td>76.12 km/h</td>
<td>Automatic — 70.9% (stall)</td>
</tr>
</tbody>
</table>

Maximum speed based on full load r.p.m. Gradeability is based on peak torque of the engine and machine equipped with standard tires and G.V.W.

Engine specifications

<table>
<thead>
<tr>
<th>Engine</th>
<th>Cummins 6CTA8.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cylinders</td>
<td>6 -- 4</td>
</tr>
<tr>
<td>Bore</td>
<td>4.49&quot; (11.1 m)</td>
</tr>
<tr>
<td>Stroke</td>
<td>5.32&quot; (13 m)</td>
</tr>
<tr>
<td>Displacement</td>
<td>504.5 cu. in. (8 269 cm³)</td>
</tr>
<tr>
<td>Gross engine power</td>
<td>210 hp @ 2,400 rpm</td>
</tr>
<tr>
<td>Peak torque</td>
<td>605 ft. lbs. (820 J)</td>
</tr>
<tr>
<td>Electric system</td>
<td>12 volt negative ground</td>
</tr>
<tr>
<td>Fuel capacity</td>
<td>60 gallons (227 L)</td>
</tr>
<tr>
<td>Alternator</td>
<td>105 amp</td>
</tr>
<tr>
<td>Crankcase capacity</td>
<td>25.2 qts. (23.8 L)</td>
</tr>
<tr>
<td>Air compressor</td>
<td>12 c.f.m. (.34 m³/min)</td>
</tr>
<tr>
<td>Coolant capacity</td>
<td>10.8 gal. (40.9 L)</td>
</tr>
</tbody>
</table>

Axle loads

Base machine with 32' 0" - 80' (9.75 m - 24.38 m) 3-section boom, 450' (137.16 m) of 5/8" (16 mm) wire rope, two-speed main winch, 6x4 carrier with Cummins 6CTA8.3 diesel engine, full fuel, front bumper outrigger, 16.5x22.5 front tires, 10x20 highway rear tires, full hydraulic oil, pontoons stored, 2,700 lbs. (1,224 kg) counterweight and Roadranger transmission

<table>
<thead>
<tr>
<th>Drive</th>
<th>Tire</th>
<th>Maximum Axle Load @ 50 mph (80.45 km/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 x 4</td>
<td>16.5 x 22.5 H</td>
<td>19,700 lbs. (8 935 kg)</td>
</tr>
<tr>
<td>6 x 6</td>
<td>16.5 x 22.5 H</td>
<td>19,700 lbs. (8 935 kg)</td>
</tr>
</tbody>
</table>

* For speeds exceeding 50 mph (80.45 km/h) see Operator’s Manual

G.V.W.

<table>
<thead>
<tr>
<th>Upper facing front</th>
<th>Upper facing rear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front axle</td>
<td>Rear axle</td>
</tr>
<tr>
<td>lbs.</td>
<td>kg.</td>
</tr>
<tr>
<td>1,343</td>
<td>629</td>
</tr>
</tbody>
</table>

1 Adjust gross vehicle weight & axle loading according to component weight. NOTE: All weights are ± 3%.
2 When selecting a tire & drive combination, the front axle load with upper facing front should not exceed the limits in the table below.