PIXEF™

Pick'n'Carry is now Safe'n'Easy

TTL Tractors India

# PIXEF 215

## Product Guide


PICK'N'CARRY CRANE

## Features

- CAPACITY - 85% Rating
- OUTRIGGERS - (80° Slew) - 15 Tonne at 2.5m radius
- PICK N CARRY - 10 Tonne at 3.0m radius
- BOOM - 3 SECTION – 6.0m to 13.0m
- CARRIER - 4X2 drive
- MAXIMUM ROAD SPEED - 35 km/hr

# Superstructure Specification

**SUPERSTRUCTURE FRAME**

Fabricated from high tensile steel plates and sections. Mechanical lock on superstructure can be operated from cab.

**BOOM**

6.0m - 13.0m three section, full power, fully synchronized telescopic boom operated through single double acting ram with lacing chain to ensure proportional telescoping under single lever operating control.

Maximum tip height : 15m

**BOOM ELEVATION**

Two double acting hydraulic cylinders mounted on large diameter bushes, fitted with combined cartridge type hydraulic lock and counter-balance valve to prevent ram collapse in the event of hydraulic failure.

Boom Angle : Max 72°, Min -3°

**SLEW SYSTEM**

Hydraulic motor, driving a pinion through double reduction gear unit. The pinion meshes with internally cut slew ring gear for 360° smooth and precise non-continuous rotation controlled through electronic / mechanical dual safety system.

Slew Speed : 2.5 rev/min (unladen).

**HOIST SYSTEM**

Hydraulic motor driving hoist barrel via reduction gear unit, fitted with counterbalance valve for controlled lowering of the load. Spring actuated hydraulically released multi plate brake.

Warning signal from 3rd wrap indicator provided.

Non spin hoist Rope : 13 mm dia. and length 80m

Permissible Line Pull : 30 kN

**HOOK BLOCK**

12.5 Tonne capacity : 2 sheave hook block from boom head.

16 Tonne capacity : Fixed hook on base boom.

**COUNTERWEIGHT**

Dual counter weights mounted on rear of carrier frame and on superstructure.

**LOAD MOMENT INDICATOR**

LMI indicates the crane operating radius, permissible lifting load, actual hook load, length and angle of boom through display panel provided in the cab. Motion cut functions activated through signals from LMI. It cuts - derricking out, telescoping out and hoisting motion when overload condition is reached.

**HYDRAULIC SYSTEMS**

Pump Type : Two-section hydraulic vane pump driven through transmission PTO.

Control Valve : Double acting single spool lever control valve with relief pressure setting on O/R valve bank, slew valve bank and tele, derrick and hoist valve bank in operator's cab.

Filter: Return line filter with mechanical service indicator.

**HYDRAULIC TANK**

Capacity - 160 L

**REAR VIEW CAMERA**

Display unit of 4.5" TFT LCD screen mounted on dashboard inside the cab. Night vision camera fitted at the rear of cab.

**CARRY-DECK**

Max. 4Te load can be placed within 6m2 deck space for transportation with a speed of 15 kmph (max.).

**ANTI-COLLISION WARNING**

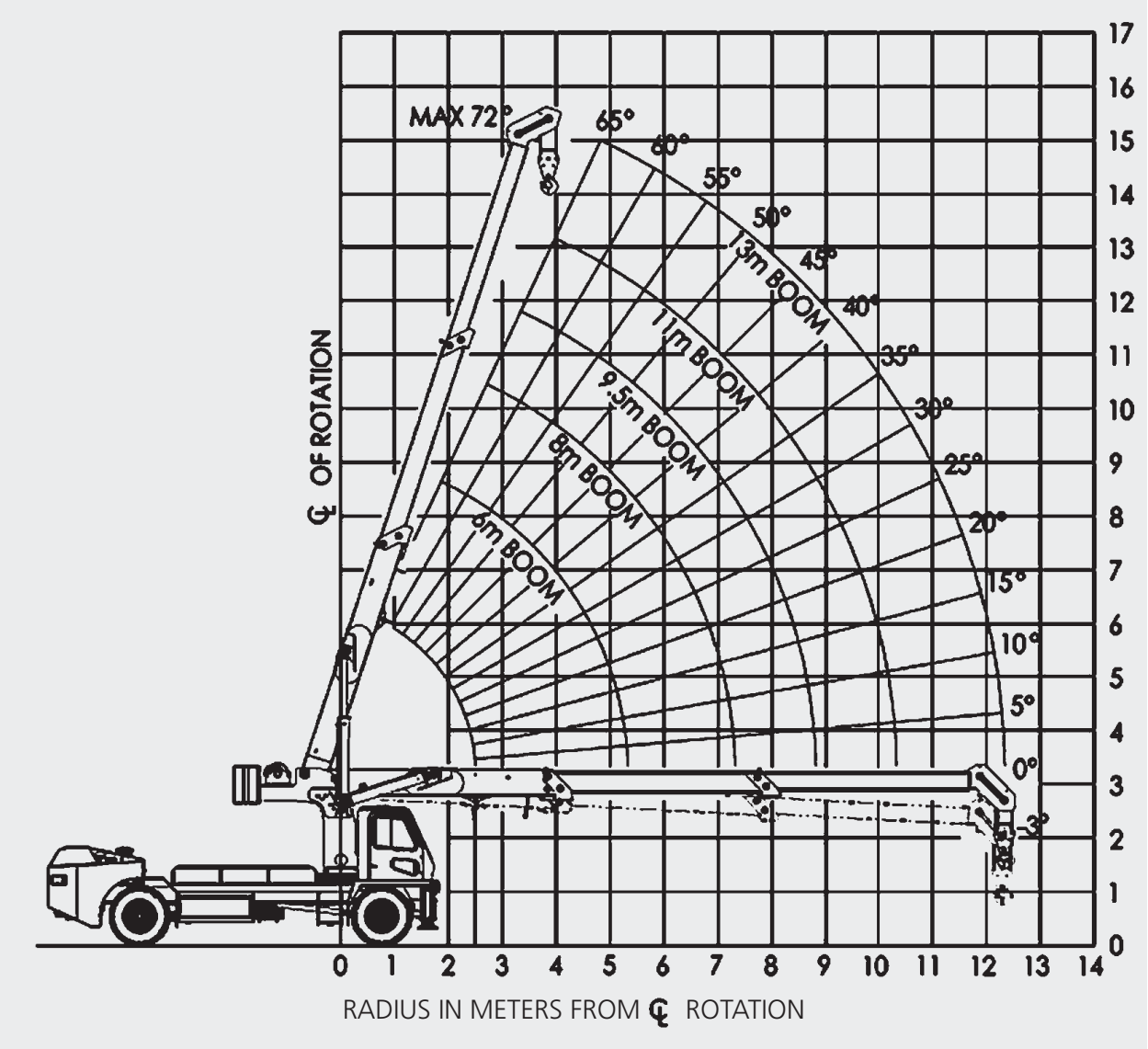
Four nos. proximity sensor positioned on the cab provides warning to the operator for protecting against collision.

**OPTIONAL EQUIPMENT**

- Towing hook, 5Te capacity (front)
- Fire extinguisher

# Height of Lift: 6.0m – 13.0m Boom

3-SECTION BOOM - WORKING RANGE DIAGRAM
(BOOM DEFLECTION NOT SHOWN)




(Note: Limits shown are for outriggers fully extended - 180° only)

**Hookblock Capacities - Tonnes**

| No of Falls | 4 | 3 | 2 | 1 |
|---|---|---|---|---|
| Permissible Load | 10.0 | 7.5 | 5.0 | 2.5 |
| Weight of Hookblock | 0.15 | 0.15 | 0.15 | 0.15 |

# Lifting Capacities (Tonne)

## RUBBER DUTY

### Pick & Carry - Boom over front - 5 km/hr

| Radius (in Meters) | Main Boom Length (in Meters) | | |
|---|---|---|---|
| | 6.0 | 6.0 - 9.5 | 9.5 - 13.0 |
| 3.0 | 10.0* | | |
| 3.5 | 7.7 | 7.5 a | |
| 4.0 | 6.5 | 6.0 | 6.0 b |
| 4.5 | 5.5 | 5.0 | 5.0 |
| 5.0 | 4.5 | 4.3 | 4.3 |
| 6.0 | | 3.5 | 3.5 |
| 7.0 | | 2.9 | 2.9 |
| 8.0 | | 2.4 | 2.4 |
| 9.0 | | | 2.0 |
| 10.0 | | | 1.7 |
| 11.0 | | | 1.4 |
| 12.0 | | | 1.2 |

a=7.3m, b=10.0m

* Marked duties to be performed with fixed hook on boom base.

### Stationary - 80° slew over front

| Radius (in Meters) | Main Boom Length (in Meters) | | |
|---|---|---|---|
| | 6.0 | 6.0 - 9.5 | 9.5 - 13.0 |
| 3.0 | 7.5 | | |
| 3.5 | 5.5 | 5.5 a | |
| 4.0 | 4.6 | 4.5 | 4.3 b |
| 4.5 | 4.0 | 3.7 | 3.7 |
| 5.0 | 3.4 | 3.2 | 3.2 |
| 6.0 | | 2.5 | 2.5 |
| 7.0 | | 2.0 | 2.0 |
| 8.0 | | 1.6 | 1.6 |
| 9.0 | | | 1.3 |
| 10.0 | | | 1.1 |
| 11.0 | | | 0.9 |
| 12.0 | | | 0.7 |

a=7.3m, b=10.0m

## CARRY-ON-DECK DUTY

### Fully Extended Outrigger with Jack Down

| Radius (in Meters) | Main Boom Length (in Meters) |
|---|---|
| | 6.0 - 13.0 |
| 4.0 | 4.0 |

Note :

1. Loading for carry-on-deck, superstructure can be slewed max. up to 360° keeping outriggers extended and jack down.
2. For carry-on-deck operation, the boom should be positioned in a manner so as to place the load and position it closer to the front of the deck.
3. With any load placed on deck (up to max. 4Te), no other lifting duties of boom is allowed apart from the carry-on-deck duty conditions.
4. Speed of travelling with load on deck is limited within 15 kmph.
5. Recommended tyre pressure, 8.08 kg/cm2 (115 psi) for rubber duties. Damaged tyres are hazardous to safe operation of crane.

### Fully Extended Outriggers and Jack Down - 80° slew over front

| Radius (in Meters) | Main Boom Length (in Meters) |
|---|---|
| | 6.0 |
| 2.5 | 15.0* |
| 3.0 | 12.5* |

* marked duties to be performed with fixed hook on boom base

### Retracted Outriggers and Jack Down - 80° slew over front

| Radius (in Meters) | Main Boom Length (in Meters) | | |
|---|---|---|---|
| | 6.0 | 6.0 - 9.5 | 9.5 - 13.0 |
| 3.0 | 10.0 | | |
| 3.5 | 7.5 | 7.0 a | |
| 4.0 | 6.0 | 5.5 | 5.5 b |
| 4.5 | 4.8 | 4.5 | 4.5 |
| 5.0 | 3.8 | 3.5 | 3.5 |
| 6.0 | | 2.6 | 2.6 |
| 7.0 | | 2.0 | 2.0 |
| 8.0 | | 1.5 | 1.5 |
| 9.0 | | | 1.2 |
| 10.0 | | | 1.0 |
| 11.0 | | | 0.8 |
| 12.0 | | | 0.7 |

a=7.3m, b=10.0m

# Lifting Capacities (Tonne)

## OUTRIGGER DUTY

### Fully Extended Outriggers with Jack Down - 180° slew over front

| Radius (in Meters) | Main Boom Length (in Meters) | | |
|---|---|---|---|
| | 6.0 | 6.0 - 9.5 | 9.5 - 13.0 |
| 3.0 | 8.0 | | |
| 3.5 | 6.3 | 6.0 a | |
| 4.0 | 5.2 | 5.2 | 5.0 b |
| 4.5 | 4.3 | 4.0 | 4.0 |
| 5.0 | 3.8 | 3.6 | 3.6 |
| 6.0 | | 2.7 | 2.7 |
| 7.0 | | 2.0 | 2.0 |
| 8.0 | | 1.6 | 1.6 |
| 9.0 | | | 1.3 |
| 10.0 | | | 1.0 |
| 11.0 | | | 0.8 |
| 12.0 | | | 0.7 |

a=7.3m, b=10.0m

### Fully Extended Outriggers with Jack Down - 100° slew over front

| Radius (in Meters) | Main Boom Length (in Meters) | | |
|---|---|---|---|
| | 6.0 | 6.0 - 9.5 | 9.5 - 13.0 |
| 3.0 | 10.0 | | |
| 3.5 | 8.0 | 7.5 a | |
| 4.0 | 6.5 | 6.0 | 6.0 b |
| 4.5 | 5.5 | 5.2 | 5.2 |
| 5.0 | 4.5 | 4.3 | 4.2 |
| 6.0 | | 3.3 | 3.3 |
| 7.0 | | 2.7 | 2.7 |
| 8.0 | | 2.3 | 2.3 |
| 9.0 | | | 2.0 |
| 10.0 | | | 1.7 |
| 11.0 | | | 1.4 |
| 12.0 | | | 1.1 |

a=7.3m, b=10.0m

### NOTES FOR LIFTING CAPACITIES

**WARNING: THIS CHART IS ONLY A GUIDE.** The notes below are illustrations only and should not be relied upon to operate the crane. The individual crane's load chart, operating instructions and other instruction plates must be read and understood prior to operating the crane.

1. All rated loads have been tested to meet minimum requirements of IS: 4573-1982. Specification for Power Driven Mobile Crane and do not exceed 85% of the tipping load as specified in the duty chart.
2. Capacities above the thick line are based on factors other than stability. Hence crane tipping must not be relied upon as a guide to the capacity limitation.
3. The rated load includes weights of hook block, slings and all similarly used load handling devices.
4. Capacities quoted are based on freely suspended loads and practically safe working loads are dependent on the crane supporting surface, wind and other factors affecting stability, hazardous surroundings, experience of personnel for proper handling of the loads all of which must be taken into account by the operator.
5. When either boom length or radius or both are between the values listed, the smallest load shown at either the next larger radius or boom length shall be used.
6. For outrigger operation with 180° slew (90° on either side) and 100° slew (50° on either side), front outriggers shall be extended with jack down to raise tyres (front) from the ground, before operating the boom or lifting the load.
7. For outrigger operation with 80° slew (40° on either side), on retracted outrigger with jack down to raise tyres (front) from the ground, before operating the boom or lifting the load.

### FREE ON WHEELS

1. Capacities quoted are based on freely suspended loads with the machine standing on a firm, level and uniformly supporting surface and tyres inflated to their correct pressures. It may be necessary to have structural supports under the tyres to spread the load, to a larger bearing surface.
2. For pick and carry operation boom must be centered over front (slewing angle within 2.5° on either side) with mechanical slew lock engaged and all lockouts must be functioned before lifting on rubber and max. travel speed is limited within 5 Kmph.
3. Static rubber duties over front are limited within 80° slew (40° on either side).
4. Max. travel speed of crane carrying load of 4 Tonne on deck is limited within 15 Kmph.

WARNING – Operation of the machine with heavier load than the capacities listed is strictly prohibited. Machine tipping occurs without advance warning.

# Carrier Specification

**CHASSIS**
High-strength steel frame with integrated front outrigger housing with carry deck space of 6m² for carrying up to 4 tonne load on deck.

**OUTRIGGERS**
2 nos. front outriggers - hydraulically operated, independently controlled, telescopic horizontal beams integral with vertical jacks with lock valves. Independent O/R control levers are placed inside the cabin.

**OPERATOR'S CAB**
Totally enclosed steel construction, full width with excellent visibility for crane operation through front and overhead screen. Adjustable seat on slides, cab interior light, electric fan, electric horn and lockable hinged doors. Ergonomically designed seat and controller layout to provide fatigue free operator comfort.

**CRANE CONTROLS**
Lever operating controls for outrigger, slew, telescoping, hoisting and derricking with independent or simultaneous operation of crane motions.

**TRAVEL CONTROLS**
Normal automotive controls including steering wheel, brake and accelerator pedals, gear shift knob mounted on the steering column.

**INSTRUMENTATION**
Integrated dash panel for visual interface with tilt adjustable steering column. Gauges for engine oil pressure, engine coolant temperature, transmission oil temperature, engine hour-meter, tachometer and voltmeter. Warning lights for alternator, parking brake, slew lock indication and direction indicator.

**ENGINE**
Heavy duty water cooled, turbocharged, intercooler 4 cylinder diesel engine of emission compliance to BSIII (CEV).
Power – 74.3 kW @ 2200 RPM
Torque – 390 Nm @ 1400 -1700 RPM

**TRANSMISSION**
Power shift TC Transmission with four forward and three reverse speeds with the shifter mounted on steering column.

**FUEL TANK**
Capacity - 100 liters

**DRIVE**
Two wheel front axle drive (4X2).

**STEERING**
Fully independent power steering : Rear axle steered through hydraulic power controlled orbitrol steering unit operated by automotive type steering wheel.
Turning Radius : 8.5m

**AXLES**
Front : Driving planetary axle with differential and planetary hub reduction solidly mounted to the chassis frame.
Rear : Steer non-drive axle, pivot mounted at centre of the chassis frame. Oscillation lock hydraulically operated from cab.

**BRAKES**
Service Brake : Foot operated dual line compressed air brake on all wheels.
Parking Brake : Spring actuated, air released fail-safe brake on all wheels.

**TYRES**
11.00 X 20 –16 PR tyres. 4nos. on the front axle and 2 nos. on the rear axle.

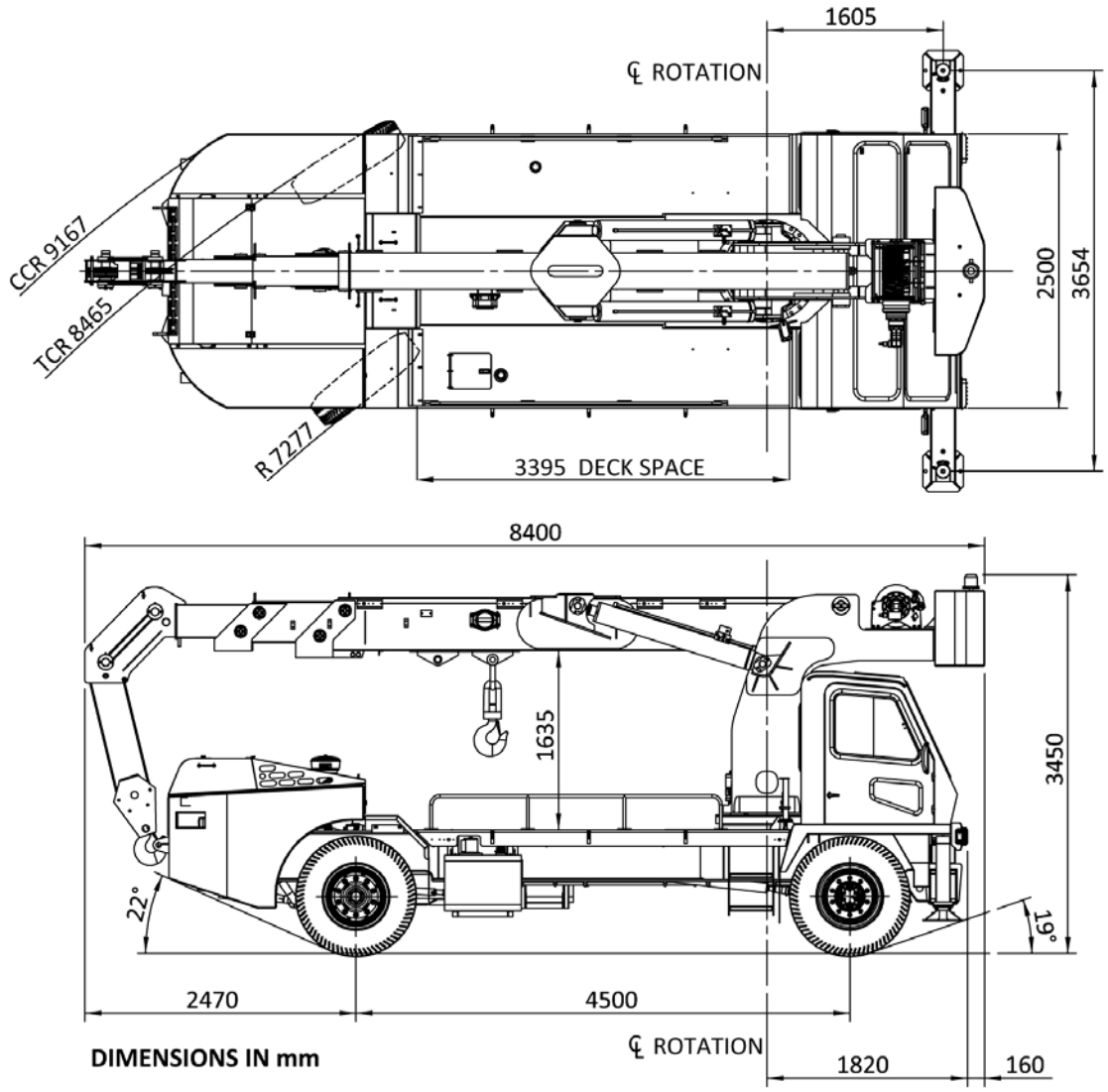
**ELECTRICAL SYSTEM**
12 V starting and lighting equipment.

**SPEEDS**
35 kmph (unladen); 15 kmph (carry deck speed)
5 kmph (pick and carry)

**GRADEABILITY**
25 % (Un-laden)

**AXLE LOAD DISTRIBUTION (approx., unladen)**
Front : 9.4 Tonne
Rear : 6.7 Tonne
GVW : 16.10 Tonne

# G.A Drawing




Constant improvement and engineering progress make it necessary that we reserve the right to make specification, equipment and price changes without notice. Illustration shown may include optional equipment, accessories and may not include all standard equipment.

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