

TMS 875MKII

MAX. CAPACITY (Outriggers) - 75 Tonnes at 3m Radius (85% Rating) 360° Slew

BOOM - 4 Section Trapezoidal 12.2m to 38.6m

MAXIMUM ROAD SPEED - 50 km/hr

CARRIER - 10 X 4 drive



HYDRAULIC TRUCK CRANE

BOOM

12.2m – 38.6m, four section, full powered, sequence synchronized trapezoidal boom. Telescopic sections slide on adjustable and replaceable low friction wear pads.

Maximum Tip Height: 41 m

BOOM NOSE

Six sheave mounted on heavy duty tapered roller bearing with removable pin type rope guards. Removable auxiliary boom nose with removable pin type rope guards.

BOOM ELEVATION

Two double acting hydraulic cylinders with integral holding valves.

BOOM ANGLE

Maximum 80°, Minimum -4°.

SUPERSTRUCTURE FRAME

Fabricated from high tensile steel plates and sections.

SLEW SYSTEM

Ball bearing swing circle with 360° continuous rotation. Planetary glide swing with foot applied multi-disc wet brake. Spring applied hydraulically released parking brake, mechanical house lock operated from cab.

SLEW SPEED

Maximum 1.5 RPM (Unladen)

HOIST SYSTEM

Power up and down, equal speed, grooved drum, planetary reduction with integral automatic brake.

Non spin hoist Rope: 19 mm dia. & length 229 m

Maximum Rope Stowage: 223m (6th Layer)

Line Speed: 110m/min (Unladen)

Maximum Permissible Line Pull: 5860kg

Maximum Fall Hook Block: 75.0 Tonnes; 6 Sheaves.

HOOK BLOCK

75 MT, 6 Sheave

COUNTERWEIGHT

Fixed Part: 2000 Kg

Removable Part: 4000 Kg

OPERATOR'S CAB

Totally enclosed steel construction, full vision type, joystick control for all crane functions. All windows fitted with toughened safety glass, lockable sliding door, cab interior light, circulating air fan, pantograph type electric wiper. Adjustable operator's seat with ergonomically designed cab and controller layout to give fatigue free operator's comfort.

LOAD MOMENT INDICATOR & ANTI TWO BLOCK SYSTEM

Standard load moment and anti two block system with audio – visual warning and control lever lock out. This system provides electronic display of boom angle, length, radius, relative load moment, max. permissible load, load indicator and warning of impending two block condition. Motion cut off to ensure the safe operation with load for tele, derrick & hoist motion.

HYDRAULIC SYSTEM

Pump

3 section gear pump driven through transmission PTO.

Valves

Precision four way double acting control valves, four individual valve banks permit simultaneous control of multiple crane functions.

Filters

Return line type, full flow with by-pass protection and service indicator. Replaceable cartridge.

Reservoir

800 liters capacity fitted with filter, external sight gauge, clean out access, strap mounted to frame.

Oil Cooler

Remote mounted with thermostatically controlled electric motor driven fan.

Pressure Check Panel

System pressure test panel permits easy verification of circuit pressures.

OPTIONAL ITEMS

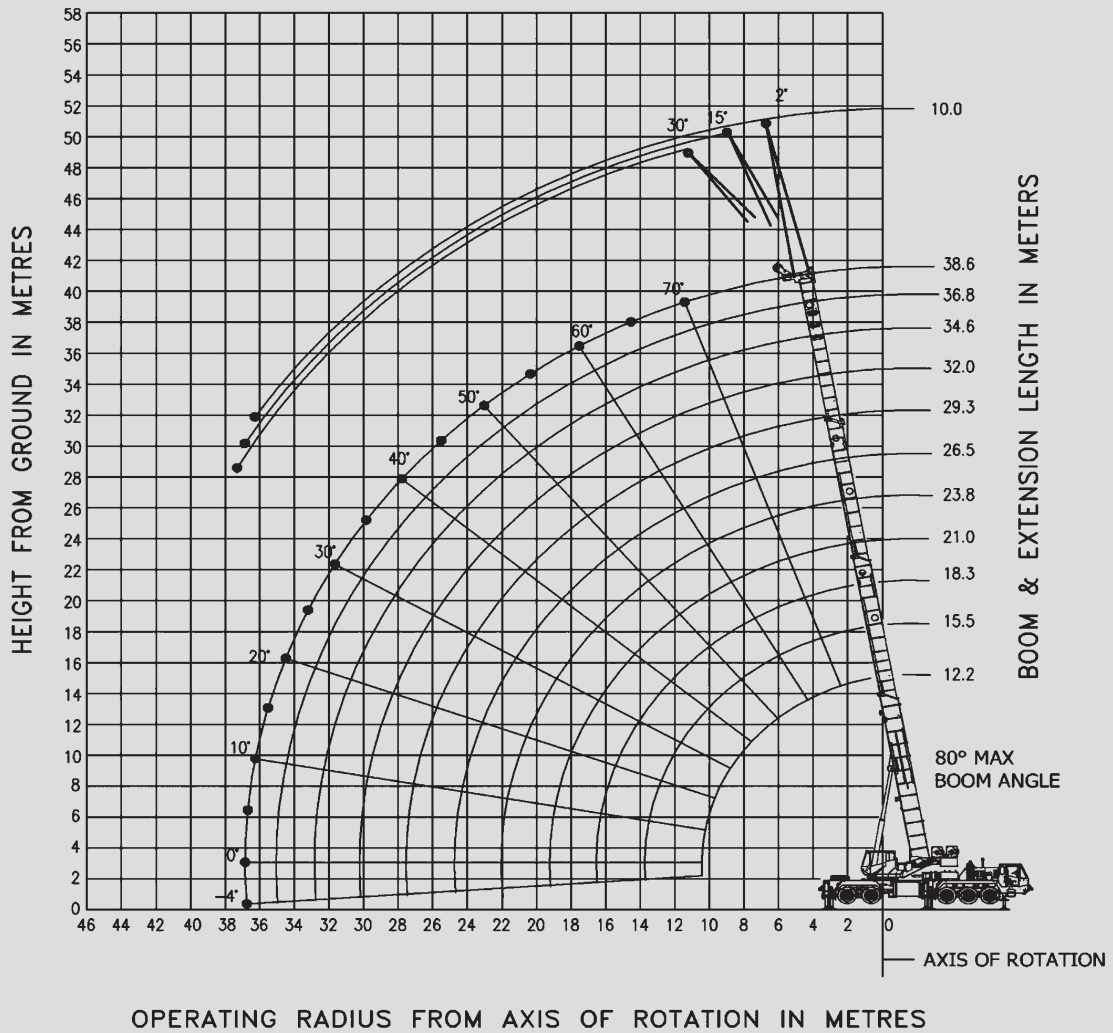
Fixed Swingaway Extension

10.0m Swingaway lattice boom extension, off-settable at 2°, 15° or 30° stows alongside base boom section when not in use

- Auxiliary Hoist Unit
- Single Sheave Hook Block – 15 MT
- Headache Ball – 10 MT

HEIGHT OF LIFT 12.2m-38.6m (40'-126.6') FULL POWER BOOM

WORKING RANGE DIAGRAM
(BOOM DEFLECTION NOT SHOWN)



Lifting Capacities (Metric) 85% Rating 4 Section Boom Duties (in Tonnes)

TMS875MKII

Main Boom Duties on Outriggers Fully Extended – Full 360° Slew

Radius in Meters (m)	Main Boom Length in Meters										
	12.2	15.5	18.3	21.0	23.8	26.5	29.3	32.0	34.6	36.8	38.6
3.0	75.00* (69.42)	45.48 (73.69)	44.763 (76.48)								
3.5	60.00 (66.85)	45.48 (72.01)	44.315 (74.86)	28.12 (76.87)	22.85 (78.44)						
4.0	51.365 (64.15)	45.085 (70.03)	42.025 (73.22)	28.12 (75.45)	22.85 (77.2)						
4.5	47.445 (61.46)	43.475 (68.00)	38.94 (71.56)	28.50 (74.03)	22.85 (75.96)	22.85 (77.42)					
5.0	43.815 (58.68)	41.455 (65.97)	36.215 (69.86)	28.50 (72.56)	22.85 (74.68)	22.85 (76.28)					
6.0	37.145 (52.84)	37.08 (61.78)	32.295 (66.45)	29.55 (69.66)	22.85 (72.15)	22.85 (74.03)	22.85 (75.60)	21.975 (76.84)	17.515 (77.85)		
7.0	31.455 (46.46)	31.455 (57.42)	29.21 (62.94)	26.08 (66.69)	22.85 (69.59)	22.29 (71.76)	21.135 (73.56)	20.00 (74.99)	16.235 (76.15)		
8.0	26.535 (39.25)	26.535 (52.81)	25.965 (59.32)	23.605 (63.65)	21.475 (66.97)	19.82 (69.45)	19.095 (71.50)	17.98 (73.12)	14.945 (74.43)	11.675 (75.38)	9.975 (76.08)
9.0	22.475 (30.53)	22.475 (47.88)	22.475 (55.54)	21.475 (60.52)	19.615 (64.31)	17.98 (67.11)	17.62 (69.42)	16.26 (71.23)	13.875 (72.69)	11.675 (73.76)	9.975 (74.54)
10.0		19.23 (42.50)	18.86 (51.57)	18.69 (57.29)	17.96 (61.57)	16.42 (64.72)	15.92 (67.30)	14.76 (69.32)	12.925 (70.94)	11.675 (72.13)	9.975 (72.99)
12.0		13.38 (29.30)	13.10 (42.81)	12.96 (50.42)	13.50 (55.87)	13.605 (59.78)	13.265 (62.95)	12.425 (65.41)	11.335 (67.38)	10.925 (68.81)	9.975 (69.84)
14.0			9.30 (32.13)	9.30 (42.73)	9.75 (49.73)	10.2 (54.58)	10.50 (58.42)	10.61 (61.38)	10.09 (63.72)	9.53 (65.41)	9.17 (66.63)
16.0			6.80 (15.63)	6.75 (33.63)	7.25 (42.93)	7.50 (48.99)	8.00 (53.65)	8.25 (57.17)	8.40 (59.93)	8.21 (61.91)	7.88 (63.34)
18.0				4.90 (21.20)	5.40 (35.08)	5.75 (42.86)	6.00 (48.56)	6.25 (52.75)	6.50 (55.99)	6.50 (58.29)	6.50 (59.94)
20.0					4.00 (25.12)	4.25 (35.88)	4.50 (43.01)	4.85 (48.04)	5.00 (51.85)	5.25 (54.52)	5.25 (56.42)
22.0						3.00 (27.38)	3.25 (36.79)	3.75 (42.94)	3.75 (47.45)	3.75 (50.55)	3.75 (52.74)
24.0							2.50 (29.44)	2.75 (37.28)	2.75 (42.70)	2.75 (46.34)	2.75 (48.87)
26.0							1.60 (19.67)	1.75 (30.73)	2.00 (37.47)	2.00 (41.80)	2.00 (44.75)
28.0								1.25 (22.48)	1.50 (31.50)	1.50 (36.81)	1.50 (40.29)
30.0									1.00 (24.22)	1.00 (31.12)	1.00 (35.37)
32.0									0.65 (13.53)	0.65 (24.24)	0.65 (29.75)
34.0										0.50 (14.47)	0.50 (22.87)

Note: () Boom angles are in degrees.

* 13 parts of line required to lift this capacity (using aux. boom nose). Refer to Operators and Safety Handbook for reeving diagram.

Hookblock Capacities and Weights – Tonnes

No of Falls	13	12	11	10	9	8	7	6	5	4	3	2	1
Permissible Load	75	70	65	60	55	49	43	37	31	25	19	12.5	6
Weight of Hookblock	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	0.418	0.227

NOTES FOR LIFTING CAPACITIES:

WARNING: THIS CHART IS ONLY A GUIDE. The Notes below are for illustration 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 and meet minimum requirements of IS:4573-1982. Specification for Power Driven Mobile Cranes, and do not exceed (85% of the tipping load on outrigger) as determined by SAE J765 OCT80 Crane Stability Test Code.
2. The weight of hookblock, slings and all similarly used load handling devices must be added to the weight of the load. When more than minimum required reeving is used, the additional rope weight shall be considered part of the load.
3. Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as capacity limitation.
4. All capacities are for crane on firm, level surface. It may be necessary to have structural supports under the outrigger floats or tires to spread the load to a larger bearing surface.
5. When either boom length or radius or both are between values listed, the smallest load shown at either the next larger radius or boom length shall be used.
6. For outrigger operation, all outriggers shall be fully extended with tires raised free off the ground & the slew plinth becomes horizontal before raising the boom or lifting loads.
7. Outrigger beams must be fully extended and stabilizers properly set while rotating superstructure over the side. Do not rotate superstructure over the side while on rubber.
8. Do not move the crane with boom extension or jib erected.
9. Load ratings are based on freely suspended loads. No attempt shall be made to move a load horizontally on the ground in any direction.
10. Handling of other equipment with the boom is not authorized except the equipment furnished and installed by TIL Ltd.
11. Operation of the machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advanced warning.
12. 10.0m fixed length boom extension may be used for double or single line lifting service.
13. Rated load is based on loaded main boom angle with reference to horizontal, regardless of the main boom length (Reference radius is for fully extended boom length only).
14. Capacities listed are with fully extended outriggers only.
15. For main boom length greater than 29.3m with 10m fixed length boom extension in working position the boom angle must not be less than 30° since loss of stability will occur causing a tipping condition. The boom angle is not restricted for main boom length equal to or less than 29.3m. This warning applies for boom extension, erection purposes only.

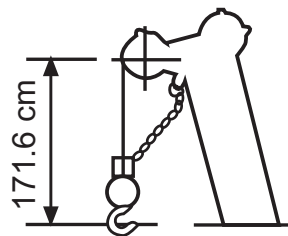
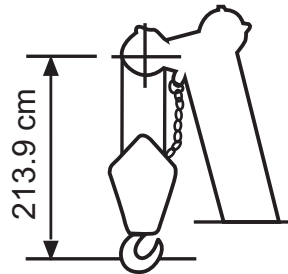
Lifting Capacities (Metric) 85% Rating Boom Extension Duties (in Tonnes)

TMS875MKII

10.0m Fixed Offsettable Boom Extension on Outriggers Fully Extended - 360° Slew

Radius in Meters (m)	10.0 m Length		
	2° Offset	15° Offset	30° Offset
8.00	9.15*		
9.00	8.375	6.40*	
10.00	7.75	6.10	4.80*
12.00	6.25	5.50	4.80
14.00	6.25	4.85	4.30
16.00	5.50	4.30	3.80
18.00	5.00	3.85	3.45
20.00	4.50	3.45	3.125
22.00	3.85	3.06	2.85
24.00	2.97	2.77	2.60
26.00	2.10	1.90	1.65
28.00	1.65	1.40	1.15
30.00	1.15	1.00	0.65
32.00	0.65	0.50	0.50

NOTE:* These capacities are based upon the maximum boom angle.



Dimensions are for largest furnished Hookblock and Headache Ball, with Anti two block activated.

Weight Reduction for Load Handling Devices (approx.)

Hookblocks and Headache Ball	
Auxilliary Boom Head	142 kg
75 MT, 6 Sheaves	**1010 kg
15 MT, 1 Sheave	**418 kg
10 MT Headache Ball	**227 kg
10.0 m Boom Extension	
* Stowed (Boom extension)	356 kg
* Erected (Boom extension)	2,843 kg

NOTE: MT refers to metric tonne
*Reduction of main boom capacities
**Please Refer to the Rating Plate for actual weight

FRAME

10 X 4 wheel right hand drive purpose built heavy duty frame of torsion box construction with integral outrigger housing and fabricated from high strength steel plates and sections.

OUTRIGGER SYSTEM

Hydraulically operated outrigger system comprising four independently controlled hydraulic, telescopic horizontal beams for over side and over rear operations.

Plus one vertical hydraulic jack mounted under front of carrier to permit full 360° lifting duties. Vertical jacks are fitted with positive lock valves and easy fit outrigger feet which have separate stowage facilities on carrier frame. Independent control of each outrigger located inside operator's cab along with level indicator.

ENGINE

Heavy duty, water cooled diesel engine of adequate horsepower.

FUEL TANK

Capacity 165 liters.

CLUTCH

Dry single-plate air assisted, hydraulically operated.

GEAR BOX

Synchromesh, nine forward and one reverse speed obtained via single lever control.

AXLES

3 nos. Steered non-drive front axles.

Front Axle Track: 2021mm

Rear tandem drive axle

Rear Axle Track: 1858mm

STEERING

Hydraulic power assisted 3 nos. steerable front axles, controlled by steering wheel.

BRAKES

Service – Air operated service brake on all wheels by means of foot pedal, provided in the driver's cab.

Parking – Flick valve operated pneumatic hand brake on rear axles wheel only.

SUSPENSION

Front: Spring mounted tridem (Axle 1,2 & 3)

Rear: Solid mount tandem with equalizing beam (Axle 4 & 5)

TYRES & WHEELS

Tyre Size: 11.00 X 20 – 16PR

Single in front axles and twin in rear axles.

DRIVER'S CAB

Steel construction full width cab with electric fan, cab with interior light, opening window fitted with toughened glass. Two lockable doors, electric wind screen wiper to front of wind screen, upholstered and adjustable operator's seat. Automotive controls including steering wheel, pedals for clutch, brake and accelerator.

INSTRUMENTATION

Air pressure gauge, engine oil pressure gauge, voltmeter, water temperature gauge, speedometer, warning light and alternator.

ELECTRICAL SYSTEM

24V starting and lighting system includes two combined dipping head lamps, side, rear and stop lamp, flashing direction indicators.

TOOL BOX

Tool kit for normal maintenance.

MAXIMUM SPEED

50 km/hr

GRADEABILITY

28% (Unladen)

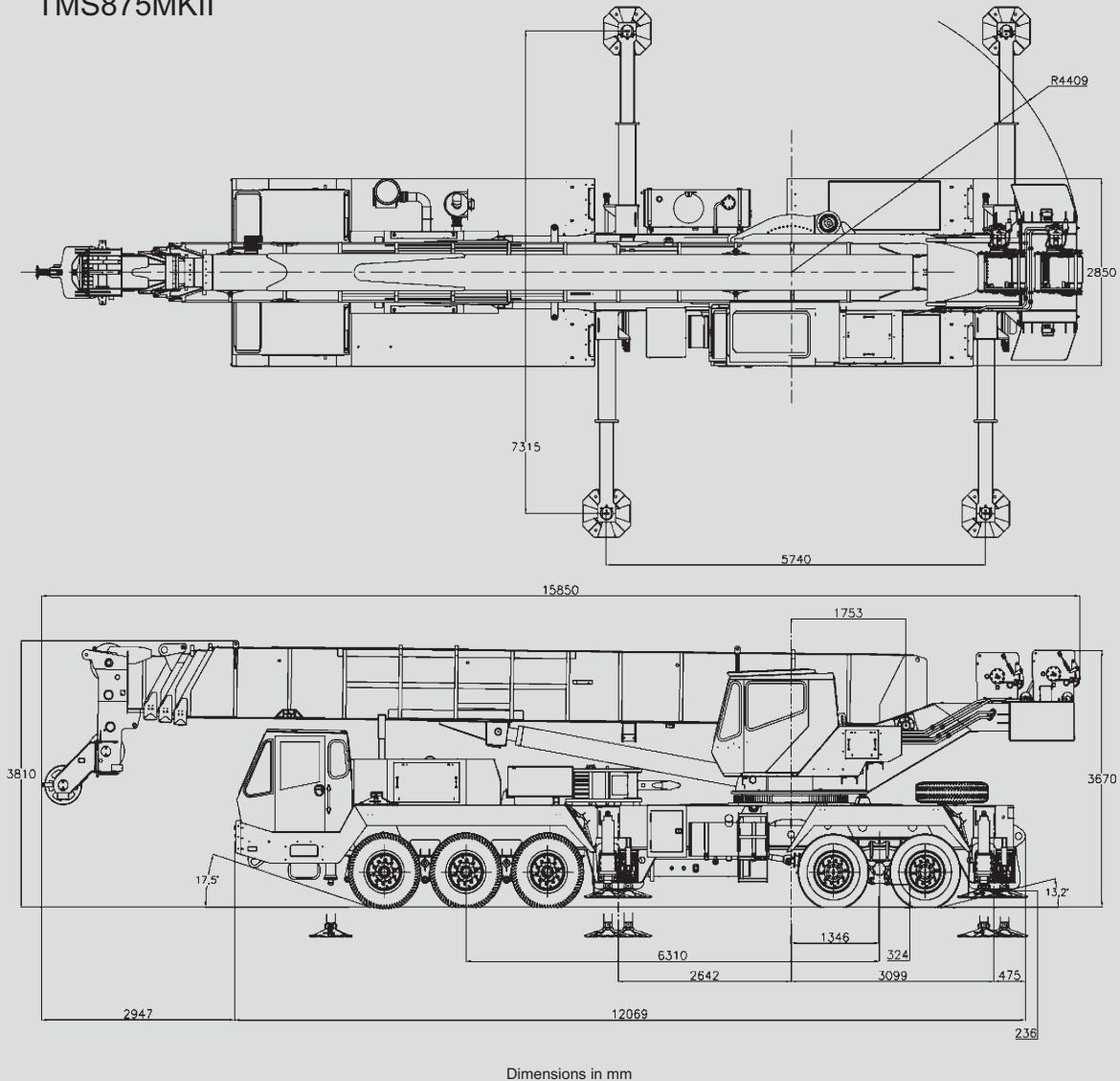
GROSS VEHICLE WEIGHT AND AXLE LOADS (approx)

GVW : 50,360 kg

OPTIONAL ITEMS

- 360° Beacon lights
- Cab Spot light
- Work light

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Constant improvement and engineering progress make it necessary that we reserve the right to make specification, equipment and price changes without notice. The photographs/drawings in this document are just for illustrative purpose which may include optional items and accessories, which can be provided at an additional cost on request.



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