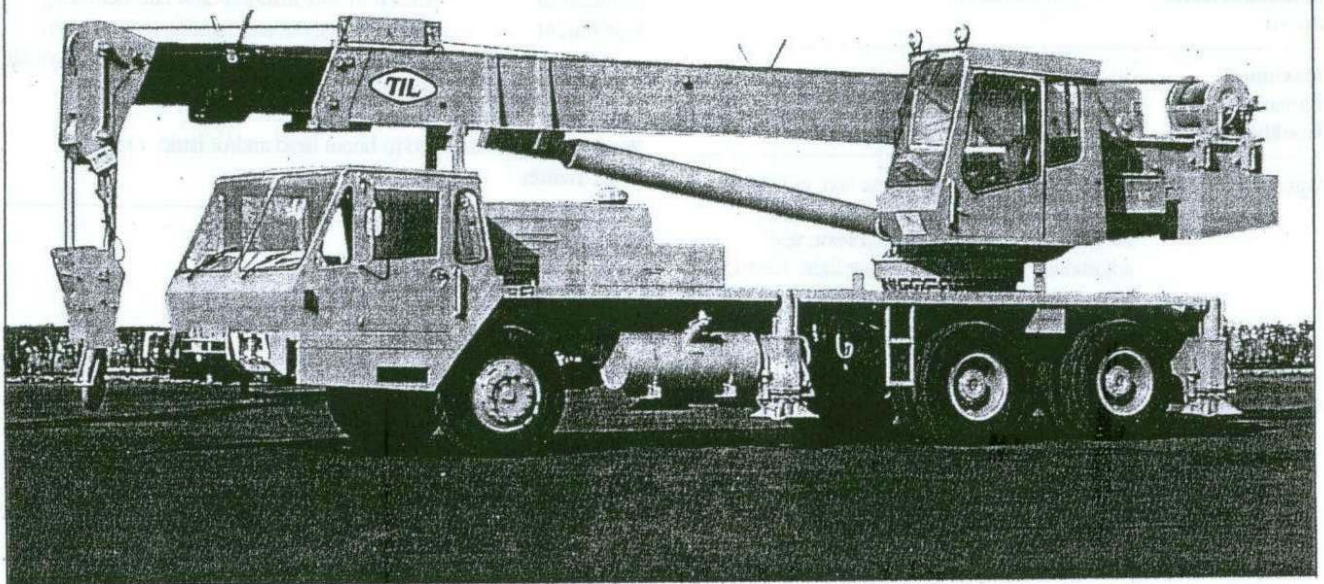




HYDRA 830(I)

TRUCK MOUNTED HYDRAULIC CRANE

- MAXIMUM CAPACITY – 30.00 TONNES
- BOOM – 3 SECTION 8.7M TO 21.2M CENTRES
- MAXIMUM HOOK HEIGHT – 33 M
- MAXIMUM ROAD SPEED – 50 KM/HR
- CARRIER – 6 X 4 WHEEL DRIVE



SUPERSTRUCTURE SPECIFICATION

Superstructure Frame	Fabricated from high tensile steel plates and sections. Mechanical superstructure lock, operated from cab.
Counterweight	Mounted to rear of superstructure 4.0 tonnes.
Boom Derricking System	Single double-acting hydraulic ram mounted on large diameter bushes. Fitted with cartridge type hydraulic lock valve to sustain derrick ram in the event of hydraulic failure. Remotely mounted counterbalance valve to provide positively controlled derricking out.
Boom Angle	Maximum 77°, minimum (-) 2°
Derricking Speed	Maximum to minimum radius 41 seconds (unladen)
Slew System	Hydraulic motor driving a pinion through a double reduction gear unit. The pinion meshes with an internally cut slew ring, 360° smooth and precise continuous rotation.
Slew Brake	Spring applied, hydraulically released multiplate brake.
Slew Speed	Limited to 1.6 revs/min (unladen) for controlled operation.
Slew Ring	Internal rack slew ring grease packed and sealed for long life. Mounted on precision machined surface to prevent distortion of the slew ring bearing.
Hoist System	Hydraulic motor driving grooved hoist barrel via reduction gear unit. Fitted with counterbalance valve for controlled lowering of the load. 14 mm diameter non-spin hoist rope. Limit switch to prevent over lowering.
Hoist Brake	Spring applied, hydraulically released multi-plate brake.
Maximum Hoist Speed	75 m/min (unladen)
Maximum Capacity Hookblock	30 tonne capacity (5 sheave)
Operator's Cab	Totally enclosed, steel construction, full vision type, windows fitted with toughened glass including roof window. Windscreen, seat adjustable on slides, cab interior light, Electric horn and lockable sliding door. Ergonomically designed cab and controlled layout to give maximum fatigue free operator comfort. Cab fan.
Crane Controls	Joystick operating controls for slew, telescoping, hoisting and derricking, with independent or simultaneous operation of crane motions. Engine speed governed by foot pedal control.

Control Valves All control valves located in a module mounted on side of superstructure offering easy accessibility. Spring centered spool valves operated by joystick control levers from operator's compartment.

Instrumentation Electric warning lights for engine oil pressure, alternator.

Boom 3 Section fully synchronised fully telescoping box section boom fabricated from high strength low alloy steel plates with internal and external welding. Fulcrum pivot points bushed for long life. Telescopic sections slide on adjustable and replaceable wear resistant pads.

Telescoping Range 8.70 m to 21.20 m

Telescoping System Single double-acting ram, with lacing chain mechanism provides proportional telescoping of boom sections, with single lever control. Fitted with combined cartridge type hydraulic lock and counterbalance valve to sustain telescoping ram in the event of hydraulic failure, and provide positively controlled boom retraction.

Boom Telescoping Speed 15.0 m/min (Unladen)

Boom Telescoping Capacities Boom telescoping capacities are determined by boom angle and other factors and it is safe to attempt to telescope any load within the limits of the capacity table.

SAFETY SYSTEM

Safe Load Indicator Provides radius, angle and hookload indication giving visual indication of approach to overload and visual and audible indication of overload condition.

Motion Cut Equipment Operated by safe load indicator cuts derricking out, telescoping out and hoisting motion when overload condition is obtained, additional to visual and audible indication in operator's cab.

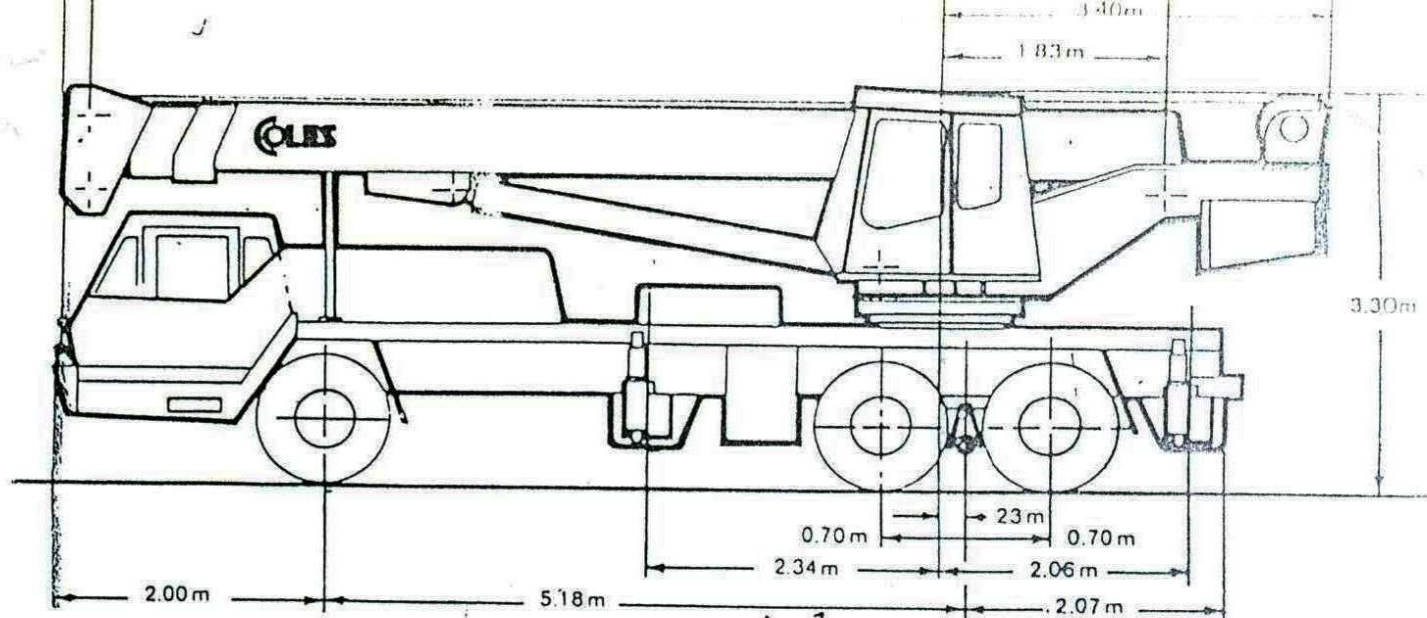
Pendant Overhoist Limit Switch Fitted to boom head and/or lattice extension.

OPTIONAL EQUIPMENT

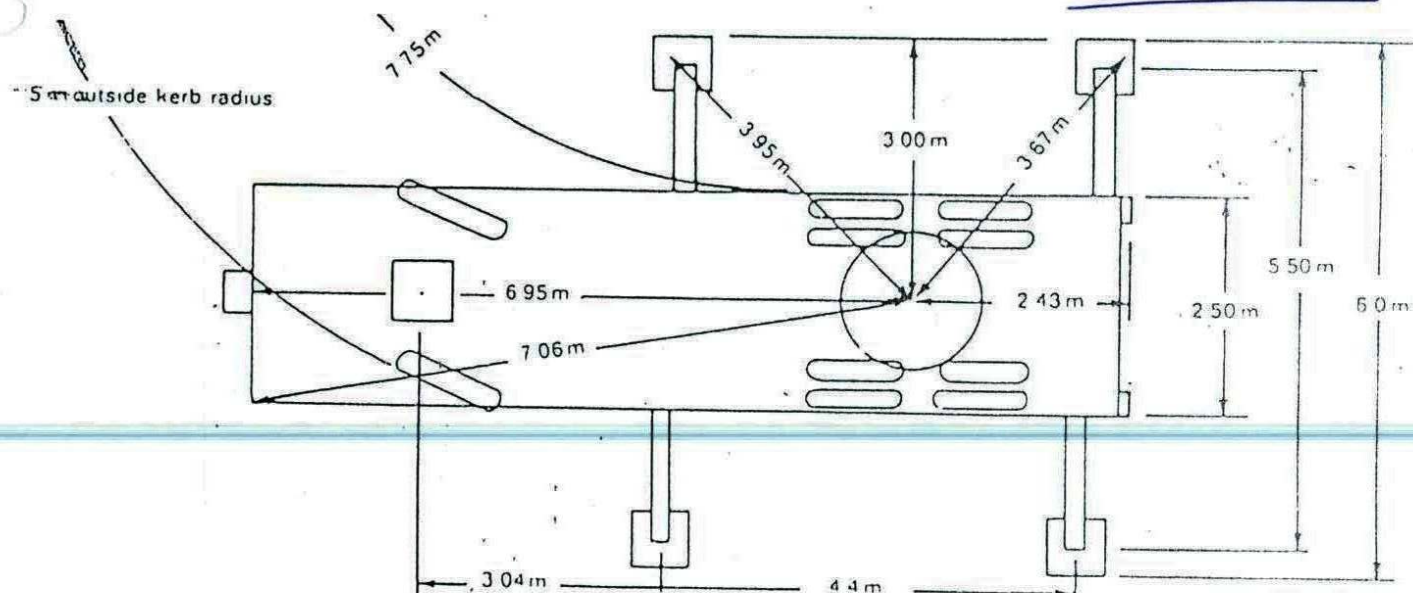
Single Hook and Pearweight 3.35 tonne capacity.

Lattice Boom Extension 7.50m swing round easily erected lattice boom to give full telescoping range of 16.20 m to 28.70 m centres.

Fly Jib 6.0m centres fly jib mounted on lattice boom extension. Incorporating only two tie ropes for fast erection.



wt 27.70 \$



Derricking	Slewing	Hoisting	Telescoping	Travel
Minimum to Maximum 41 Sec's	360 full circle slew 1.6 revs/min	Light line 75m/min	1 sec/min	50km/h



TIL Limited

1, TARATOLLA ROAD, CALCUTTA-700 024

37, ASAL BHAVAN
FORDS GANDHI MARG
DELHI 110001

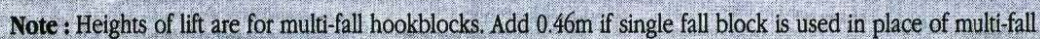
53, NAHIMAN BHAVAN
NAHIMAN POINT
BOMBAY 400021

15, ASHOK MARG
LUCKNOW 226001
U.P.

JIHAVI PLAZA
T.A. NUNGAHAKKAM HIGH ROAD
MADRAS 600014

Signature
R. B. PANDEY
REGIONAL MANAGER
TIL LIMITED, BOMBAY

In accordance with our established policy of constant improvement, we reserve the right to modify the specifications of any crane without prior notice.
Technical Specification TIL/925(I)/03/89

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HYDRA 830 (I)

Lifting Capacities



MAIN BOOM CAPACITIES IN TONNES WITH OUTRIGGERS FULLY EXTENDED

Through full 360° slew

Radius In Metres	Boom Length					
	8.70 m Fully Retracted	8.70 m to 12.50 m	12.50 m to 15.00 m	15.00 m to 17.50 m	17.50 m to 20.00 m	20.00 m to 21.20 m
3.00	30.00	25.00	20.90	16.00		
3.50	27.00	25.00	20.00	15.65	11.75	
4.00	24.50	24.60	19.75	14.85	11.25	10.00
4.50	22.00	22.50	19.25	14.50	11.00	9.50
5.00	19.83	19.83	19.00	14.00	10.70	8.85
6.00	15.00	15.00	15.00	13.00	9.90	7.70
7.00		12.40	12.58	12.00	9.35	6.85
8.00		10.00	10.15	10.27	8.80	6.61
9.00		8.20	8.40	8.53	8.25	5.50
10.00		6.90	7.10	7.22	7.31	4.95
12.00			5.20	5.35	5.40	4.15
14.00				4.05	4.05	3.50
16.00					3.24	3.05
18.00					2.54	2.60

FREE-ON-WHEELS

Radius In Metres	8.70m to 10.00m Boom 11.00 x 20 x 16 PR Tyre upto 2 km/hr
	Over Rear only
3.00	5.90
3.50	5.90
4.00	5.90
4.50	4.90
5.00	3.95
6.00	2.30
7.00	1.35
8.00	0.90

ANGLE BASED CAPACITIES IN TONNES WITH OUTRIGGERS FULLY EXTENDED

Laden Boom Angle	8.7 m to 21.2 m Fully Telescoping Plus 7.5 m Lattice		8.7 m to 21.2 m Fully Telescoping Plus 7.5 m Lattice + 6 m Fly Jib at 20° Offset	
	Capacity	Max. Rad.	Capacity	Max. Rad.
76 1/2°	5.75	6.30m	2.10	11.00m
75°	5.25	7.30m	2.00	12.00m
73°	4.90	8.30m	1.90	13.00m
70°	4.25	9.60m	1.80	14.50m
65°	3.30	11.75m	1.65	17.00m
60°	2.75	13.90m	1.45	19.00m
55°	2.35	16.00m	1.35	20.50m
50°	2.10	17.75m	1.25	23.00m
45°	1.80	19.50m	1.10	25.00m
40°	1.65	21.00m	1.00	26.50m
35°	1.50	22.50m		
30°	1.35	24.00m		

85% RATING

IMPORTANT NOTES

- These capacities are in accordance with American Standard CS90-58 and SAE stability test code J765a and do not exceed 85% of the load which produces tipping, and are the highest permissible ratings.
- 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.
- The weights of hook blocks, slings and all similarly used load handling devices must be added to the weight of the load.
- Capacities quoted are based on freely suspended loads, with telescopic outriggers fully extended to 5.50 m centres and vertical jacks down so that tyres are raised clear of the ground and when operating free-on-wheels with the tyres inflated to correct pressures. In all cases the machine must be accurately leveled on firm and uniformly supported surfaces.
- When the lattice extension is fitted in the operating position, main boom capacities must be reduced by 1.15 tonnes.
- When the combined lattice and fly jib is fitted in the operating position, main hook capacities must be reduced by 1.70 tonnes.
- Angle based capacities are predominantly related to factors other than stability and crane tipping must not be relied upon as a guide to capacity limitation.
- Angle based capacities are determined by laden boom angles given and **not by radius**. Radii quoted refer only to fully extended booms.
- This crane is designed and manufactured for high load derricking capacity. It is safe to attempt to derrick any load.
- Free over rear capacities must only be lifted within a maximum slewing angle of 2 1/2° either side of crane centre line and are valid only at a maximum travel speed of 2 km/hr.
- Capacities shown in the duty chart must not be derricked below 12° boom angle.
- Cover photograph is inclusive of optional equipment and accessories.