

# RT 630C

## Product Guide



**ROUGH TERRAIN HYDRAULIC CRANE**

### Features

- MAX. CAPACITY (Outriggers) - 30.0 Tonnes at 3m Radius (85% Rating) 360° Slew
- MAX. CAPACITY (On Tyres) - 13.65 Tonnes at 3m Radius (85% Rating) over front
- BOOM - 4 Sec 8.8m - 29.0m
- MAXIMUM ROAD SPEED - 35 km/hr
- CARRIER - 4 X 4 Wheel Drive with 4 Wheel steer

# Superstructure Specification

## BOOM

8.8m – 29.0m four section, full power, telescopic, fully synchronized boom of rectangular sections slide on adjustable & replaceable low friction wear pads.

## BOOM NOSE

Four nylatron sheaves mounted on heavy duty tapered roller bearings with removable pin-type rope guards.

**Maximum Tip Height:** 31.2m.

## BOOM ELEVATION

One double acting hydraulic cylinder with integral holding valve.

## BOOM ANGLE

Maximum: 76°, Minimum: -3°.

## 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 brake. Spring applied hydraulically released parking brake, mechanical house lock operated from cab.

## SLEW SPEED

Maximum 2.0 RPM (Unladen).

## HOIST SYSTEM

Power up and down equal speed, grooved drum, planetary reduction with automatic spring applied multi-disc brake. Hoist drum fitted with third wrap indicator.

**Non spin hoist Rope:** 16mm dia. & length 138m.

**Line Speed:** Top layer 110 m/min (Max) Unladen.

**Maximum Permissible Line Pull:** 4200 Kg.

## HOOK BLOCK

30.0 Tonnes; 4 Sheaves – 8 falls.

## COUNTERWEIGHT

Bolted on superstructure. Weight - 3810 kg.

## OPERATOR'S CAB

Totally enclosed steel construction, full vision type cab with all crane functions control levers, driving controls, engine instrumentation & automotive type steering wheel. All windows fitted with toughened safety glass, lockable sliding door, cab interior light, circulating air fan, pantograph type electric wiper & electric horn.

## LMI & A2B SYSTEM

Load Moment Indicator and Anti-Two Block system with audio-visual warning and control lever lock-out provides electronic display of boom angle, boom length, radius, relative load moment, maximum permissible load, load indication and warning of impending two-block condition.

## HYDRAULIC SYSTEM

### Pumps

Two Section Gear pump driven through transmission PTO. Single Section Gear pump driven through engine PTO.

### Valves

Precision 4 way double acting pilot operated control valves. Individual valve banks permit simultaneous control of multiple crane functions.

### Filters

Return line filter with replaceable cartridge having full flow with by-pass protection and service indicator.

### Reservoir

372 liters with spin-on breather filter, external sight gauge, oil temperature gauge, clean out access, strap mounted to frame.

### Oil Cooler

Hydraulic cum transmission oil cooler is placed in front of radiator.

## OPTIONAL EQUIPMENT

### Fixed Swingaway Extension

7.9m Swingaway lattice boom extension stows alongside base boom section when not in use. Off settable at 0° or 30°.

**Maximum tip height:** 39.0m

### Telescopic Swingaway Extension

7.9m to 13.7m telescopic swingaway lattice extension offsettable at 0° or 30° stows alongside base boom section when not in use.

**Maximum tip height:** 45.0m

### Auxiliary Hoist

360° Beacon Light

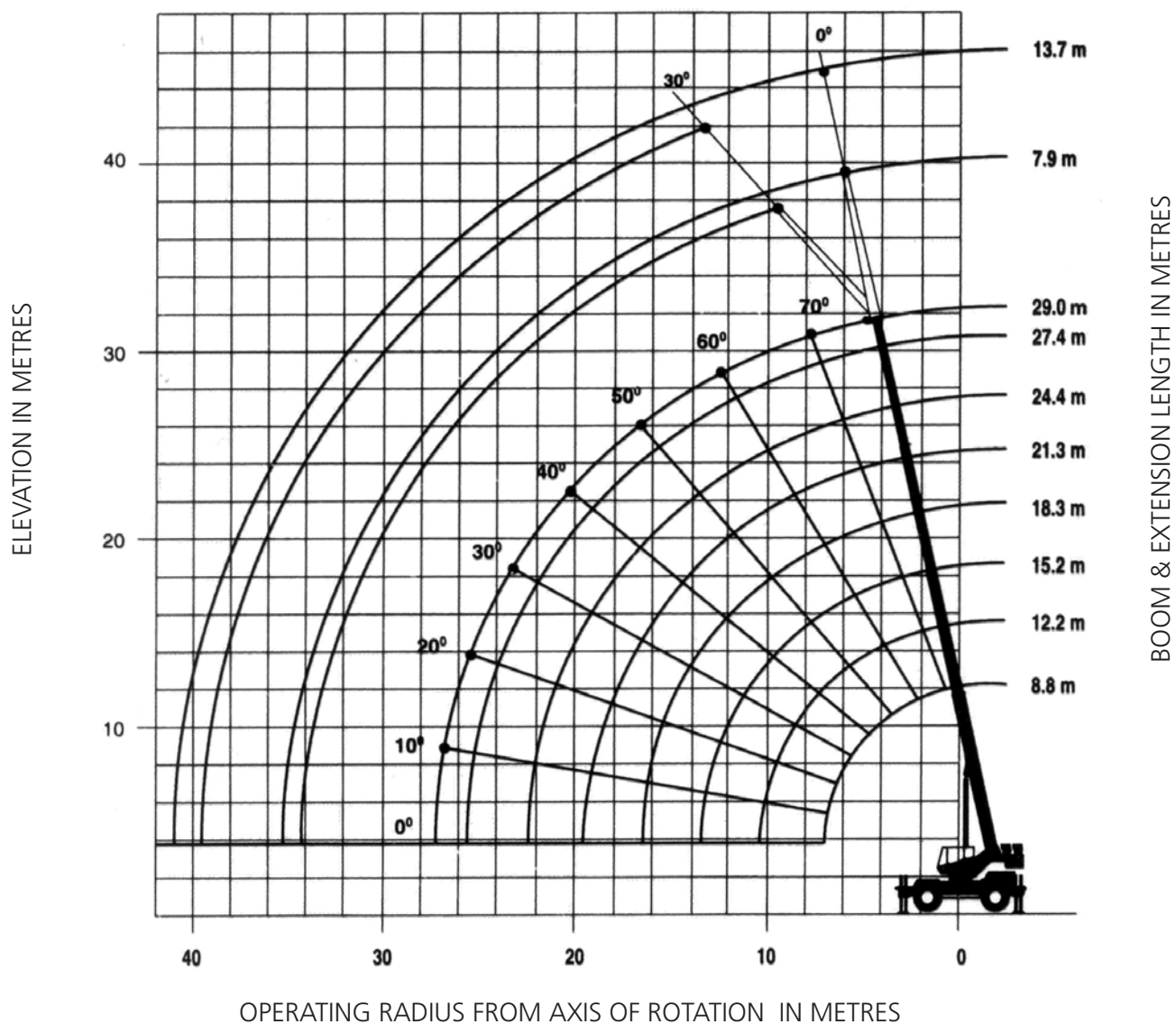
AC Cabin

Protective Super Cab

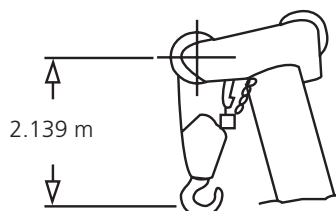
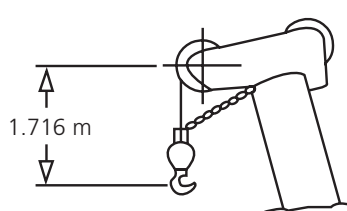
Hook Block – 10Te

# Height of Lift : 8.8m-29.0m Full Power Boom with 7.9m -13.7m Tele Extension

WORKING RANGE DIAGRAM (BOOM DEFLECTION NOT SHOWN)



Note : The above HOL and boom angle are based on a straight (unladen) boom and allowances should be made for boom deflection obtained under laden condition.



Dimensions are for largest furnished Hookblock and Headache ball, with Anti - Two Block activated.

## Load Lifting Guide

Load (Te)	30.0	28.0	24.5	20.5	17.0	12.7	8.7	4.2
No. of fall	8	7	6	5	4	3	2	1

RT 630C

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

## Main Boom Duties on Outriggers Fully Extended Through Full 360° Slew

Radius (in Meters)	Main Boom Length in Meters							
	8.8	12.2	15.2	18.3	21.3	24.4	27.4	29.0
3	30,000 (61)	22,700 (70)	21,275 (74.5)					
3.5	25,650 (57)	22,700 (67.5)	20,625 (72.5)					
4	22,775 (53)	21,050 (64.5)	19,725 (70.5)	*17,600 (76)				
4.5	19,850 (48.5)	20,000 (62)	18,750 (68.5)	16,350 (72.5)	*13,350 (76)			
5	17,875 (43.5)	18,300 (59)	17,125 (66)	15,500 (71)	13,100 (74)	*10,175 (76)		
6	14,250 (31.5)	14,700 (53.5)	14,775 (62)	13,550 (67.5)	12,425 (71)	10,175 (74)	*8,410 (76)	
7		12,300 (47)	12,500 (57.5)	11,900 (64)	11,250 (68)	9,330 (71.5)	7,870 (74)	*7,030 (76)
8		10,300 (39.5)	10,500 (52.5)	10,375 (60)	10,075 (65)	8,465 (69)	7,245 (72)	6,700 (73)
9		8,750 (30.5)	8,955 (47.5)	9,055 (56.5)	9,040 (62)	7,755 (66)	6,630 (69.5)	6,075 (71)
10		7,530 (17)	7,785 (42)	7,925 (52.5)	7,970 (59)	7,145 (63.5)	6,100 (67.5)	5,555 (69)
12			5,960 (27.5)	6,065 (43.5)	6,075 (52)	6,095 (58)	5,085 (62.5)	4,620 (64.5)
14				4,580 (32.5)	4,590 (44.5)	4,610 (52)	4,295 (57.5)	4,020 (60)
16				3,545 (15)	3,565 (36)	3,580 (45.5)	3,605 (52.5)	3,420 (55)
18					2,815 (24)	2,830 (38)	2,850 (46.5)	2,865 (50)
20						2,255 (29)	2,265 (40)	2,290 (44)
22						1,795 (14.5)	1,820 (32.5)	1,830 (37.5)
24							1,455 (22.5)	1,465 (30)
26								1,160 (19)

Note : ( ) Boom angles are in degrees. \* This capacity is based upon the maximum boom angle.

### 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 & understood prior to operating the crane.

- 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 outriggers (85% of the tipping load on rubber) as determined by SAE J765 OCT80 Crane Stability Test Code.
- 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.
- Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
- All capacities are for crane on firm, level surface. It may be necessary to have structural supports under the outrigger floats or tyres to spread the load, to a larger bearing surface.
- 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.
- For outrigger operation, all outriggers shall be extended fully & tires raised free of the ground before raising boom or lifting loads.
- On rubber, lifting with boom extensions is not permitted.

## 7.9m – 13.7m Tele. Swingaway Boom Extension On Outriggers Fully Extended - 360°

Radius (in Meters)	**7.9m Length		13.7m Length	
	0° offset	30° offset	0° offset	30° offset
9	*3,715 (76)			
10	3,715 (75)		*2,380 (76)	
12	3,715 (71.5)	*2,620 (76)	2,380 (75.5)	
14	3,615 (68)	2,585 (73)	2,205 (72.5)	
16	3,110 (64.5)	2,290 (69.5)	1,970 (69.5)	*1,235 (76)
18	2,630 (61)	1,985 (65.5)	1,785 (66.5)	1,235 (75)
20	2,150 (57)	1,735 (62)	1,685 (63.5)	1,230 (71.5)
22	1,800 (53.5)	1,540 (58)	1,605 (60.5)	1,155 (68.5)
24	1,465 (49)	1,385 (53.5)	1,495 (57)	1,120 (65)
26	1,130 (44.5)	1,250 (48.5)	1,375 (54)	1,095 (61.5)
28	865 (39.5)	1,015 (43.5)	1,225 (50)	1,080 (57.5)
30	660 (34)	770 (37.5)	1,000 (46.5)	1,055 (53.5)
32			790 (42)	905 (49)
34			610 (37.5)	670 (43.5)

Note : ( ) Boom angles are in degrees.

\* This capacity is based upon the maximum boom angle.

\*\*7.9m capacities also applicable to fixed length off settable swingaway

8. Tyres shall be inflated to the recommended pressure before lifting on rubber. Capacities must be reduced for lower tyre inflation. Damaged tyre is hazardous for safe operation of crane.
9. Unless otherwise stated, capacities are with powered boom sections, extended equally at all times.
10. Defined Arc  $\pm 6^\circ$  on either side of longitudinal centerline of machine.
11. For Pick & Carry operation, boom must be centered over front of machine, mechanical swing lock engaged and load restrained from swinging. When handling loads in the structural range with capacities close to maximum rating, travel should be reduced to creep speeds (not over 61m of movement in 30 min, not exceeding 1.6 KPH).
12. Axle lockouts must be functioning before lifting on rubber.
13. 7.9m & 13.7m boom extension lengths may be used for single line lifting service.
14. Radii listed are for a fully extended boom with the boom extension erected. For main boom lengths less than fully extended, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is configured. For boom angles not shown, use the rating of the next lower boom angle.
15. With tele boom extension in working position and main boom length greater than 18.3m, the boom angle must not be less than 30°, since loss of stability will occur causing a tipping condition.

**WARNING: Operation of this machine with heavier load than the capacities listed is strictly prohibited. Machine tipping occurs rapidly without any advance warning.**



# Lifting Capacities (Metric) 85% Rating Rubber Duties (in Kilograms)

## 20.5x25-24PR (Stationary–Defined Arc Over Front)

Radius (in Meters)	Main Boom Length in Meters			
	Tyre Pressure – 5.27kg/cm <sup>2</sup>			
	8.8	12.2	15.2	18.3
3	13,650 (61)	12,025 (70)	7,460 (74.5)	
3.5	12,425 (57)	10,025 (67.5)	7,460 (72.5)	
4	11,225 (53)	10,025 (64.5)	7,460 (70.5)	
4.5	10,175 (48.5)	10,025 (62)	7,460 (68.5)	7,460 (72.5)
5	9,225 (43.5)	9,225 (59)	7,460 (66)	7,460 (71)
6	7,610 (31.5)	7,610 (53.5)	7,460 (62)	7,460 (67.5)
7		6,005 (47)	6,005 (57.5)	6,005 (64)
8		5,125 (39.5)	5,125 (52.5)	5,125 (60)
9		4,260 (30.5)	4,260 (47.5)	4,260 (56.5)
10		3,535 (17)	3,535 (42)	3,535 (52.5)
12			2,505 (27.5)	2,505 (43.5)
14				1,705 (32.5)
16				1,210 (15)

Note : ( ) Boom angles are in degrees.

## Stationary Capacities - 360°

Radius (in Meters)	Main Boom Length in Meters			
	Tyre Pressure – 5.27kg/cm <sup>2</sup>			
	8.8	12.2	15.2	18.3
3	11,575 (61)	11,575 (70)	7,460 (76)	
3.5	10,175 (57)	10,025 (67.5)	7,460 (72.5)	
4	8,850 (53)	8,850 (64.5)	7,460 (70.5)	
4.5	7,590 (48.5)	7,590 (62)	7,460 (68.5)	7,460 (72.5)
5	6,305 (43.5)	6,305 (59)	6,305 (66)	6,305 (71)
6	4,405 (31.5)	4,405 (53.5)	4,405 (62)	4,405 (67.5)
7		3,240 (47)	3,240 (57.5)	3,240 (64)
8		2,485 (39.5)	2,485 (52.5)	2,485 (60)
9		1,930 (30.5)	1,930 (47.5)	1,930 (56.5)
10		1,510 (17)	1,510 (42)	1,510 (52.5)
12			915 (27.5)	915 (43.5)
14				510 (32.5)

Note : ( ) Boom angles are in degrees.

## (Pick & Carry Duties – 4.0 km/hr Over Front)

Radius (in Meters)	Main Boom Length in Meters			
	Tyre Pressure – 5.27kg/cm <sup>2</sup>			
	8.8	12.2	15.2	18.3
3	11,725 (61)	11,725 (70)	8,275 (74.5)	
3.5	10,500 (57)	10,500 (67.5)	8,275 (72.5)	
4	9,385 (53)	9,385 (64.5)	8,275 (70.5)	
4.5	8,415 (48.5)	8,415 (62)	8,275 (68.5)	6,050 (72.5)
5	7,565 (43.5)	7,565 (59)	7,565 (66)	6,050 (71)
6	6,190 (31.5)	6,190 (53.5)	6,190 (62)	6,050 (67.5)
7		5,180 (47)	5,180 (57.5)	5,180 (64)
8		4,430 (39.5)	4,430 (52.5)	4,430 (60)
9		3,820 (30.5)	3,820 (47.5)	3,820 (56.5)
10		3,315 (17)	3,315 (42)	3,315 (52.5)
12			2,505 (27.5)	2,505 (43.5)
14				1,265 (32.5)
16				885 (15)

Note : ( ) Boom angles are in degrees.

## Weight Reduction (approx.) For Load Handling Devices

7.9m – 13.7m Tele Extension with 8.8m – 29.0 m Boom	
* Erected (Retracted)	1,914 kg.
* Erected (Extended)	2,622 kg.
7.9m Boom Extension with 8.8m – 29.0m Boom	
* Erected	1,343 kg.

\*Reduction of main boom capacities

## Hookblock & Headache ball

30.0MT 4 sheaves	400 kg.
6.8MT Headache ball	153 kg.

Note: MT refers to Metric Tonne

# Carrier Specification

## FRAME

High strength alloy steel welded box section with integral outrigger housings and front/rear lifting, towing and tie down lugs.

## OUTRIGGER SYSTEM

Four hydraulically telescoping beams with 'Inverted' jacks with integral holding valves positioned 2 nos. in each outrigger housing. Provides steel fabricated quick release type outrigger float for each jack.

## OUTRIGGER CONTROLS

Independent control of each outrigger beam located in cab on front dash panel along with level indicator.

## ENGINE

Ashok Leyland H6 Series  
160 HP @ 2300 RPM  
Max torque - 590 Nm @ 1700 - 1900 RPM  
Emission - BSIII CEV

## FUEL TANK

Capacity 220 liters.

## ELECTRICAL SYSTEM

Two 12 Volt-batteries, 12Volt lighting equipment including two headlights, side, tail and stop lights and flashing direction indicators.

## DRIVE

4x4 / 4x2

## STEERING

Fully independent power steering :  
Front : Full hydraulic controlled by steering wheel.  
Rear : Full hydraulic selector switch controlled.  
Provides infinite variations of 4 main steering modes – front only, rear only, crab and coordinated.  
Provides rear wheel steer indicator.

## TRANSMISSION

Engine mounted full power shift with 6 forward and 6 reverse speeds. Provides front axle disconnect for 4 x 2 travel.

## AXLES

**Front:** Drive-steer with differential and planetary reduction hubs rigidly mounted to the chassis frame.  
**Rear:** Drive-steer with differential and planetary reduction hubs, pivot mounted at centre of the chassis frame.

## OSCILLATION LOCKOUTS

Automatic full hydraulic lockouts on rear axle permit oscillation only with boom centered over front.

## TYRES

20.5 X 25 - 24 PR earthmover tyres.

## BRAKES

**Service:** Fully hydraulic, split circuit operating on all wheels.

**Parking:** Spring applied, hydraulically released transmission mounted parking brake.

## MAXIMUM SPEED

35 km/hr.

## GRADEABILITY

50% ( Maximum ) Unladen

## GROSS VEHICLE WEIGHT AND AXLE LOADS (approx)

Front : 12,090 kg  
Rear : 13,260 kg  
GVW : 25,350 kg

## Optional Weights (approx.)

Fixed Lattice : 800 kg  
Tele lattice : 1000 kg  
Auxiliary Hoist : 700 kg  
Man Carrying Basket : 550 kg

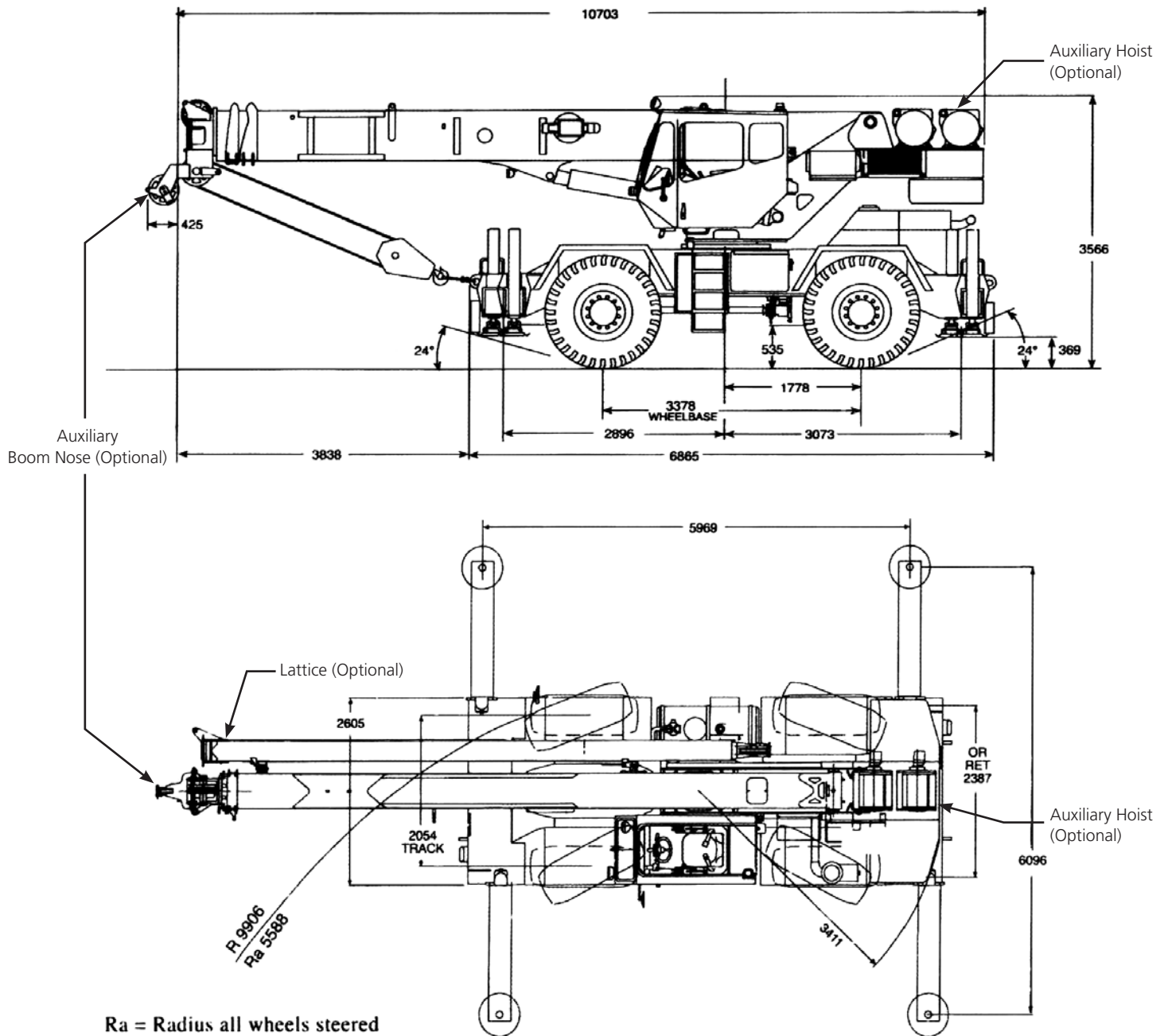
## MISCELLANEOUS STANDARD EQUIPMENT

Full width steel fenders, rear view mirror, back-up alarm, front stowage well, tool kit, tachometer.

## OPTIONAL EQUIPMENT

Man Carrying Basket  
Fire Suppression System  
Centralized Lubrication System  
Fire Extinguisher  
Tow Hook - Chassis

# GA Drawing



Dimensions in mm

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.

RT 630C

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**TIL has a pan-India network of offices with service engineers located in the close proximity of jobsites.**

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Technical Specification TIL/RT630C/0818. This cancels Technical Specification TIL/RT630C/1117