

GENERAL DATA

CRANE CAPACITY	35t at 3.0m
BOOM	3-section, 10.9 m – 27.2 m
DIMENSION	
Overall Length	13.2 m
Overall Width (tracks extended)	4.8 m
Overall Width (tracks retracted)	3.0 m
Overall Width (tracks removed)	2.8 m
Overall Height (working)	2.5m
MASS	
Gross Vehicle Mass (Standard Equipment Package)	32,432 kg
Counterweight	5,681 kg
PERFORMANCE	
Travel Speed	1.9 km/hr 3.1 km/hr
Gradeability	66%

CRANE SPECIFICATION

MODEL	CAPACITY
GTC-350	35t at 3.0m

BOOM

3-section full power telescoping boom. System consists of one double acting hydraulic cylinder with load holding valves and extension and retraction cables.

- Retracted Length: 10.9 m
- Extended Length: 27.2 m • Extension Time: 82 s
- Elevating Angles: -1.5° to 80.0° • Elevating Time: 56 s
- Max Lifting Height: 26.4 m
- Boom Head: Five cast nylon and One steel 373 mm diameter main sheaves on heavy-duty roller bearings.

AUXILIARY BOOM HEAD

Quick reeve, single 373 mm diameter high-strength, cast nylon sheave mounted on a heavy-duty roller bearing. Allows single part reeving.

COUNTERWEIGHT

1 piece integrated counterweight design.

- Fixed Configuration = 5,681 kg

WINCHES

Planetary geared one-speed winch includes a hydraulic motor, multidisc internal brake and counterbalance valve. Drum rotation indicator is included (complete winch performance specs on Page 3)

- Main Winch
 - o Rope Diameter and Length: 16 mm x 152 m
 - o Single line pull: 59.2 kN (first layer)
 - o Single line speed: 78.1 m/min (fourth layer)
- Auxiliary Winch
 - o Rope Diameter and Length: 16 mm x 91.4 m
 - o Single line pull: 59.2 kN (first layer)
 - o Single line speed: 78.1 m/min (fourth layer)

TRAVEL

Each side frame contains a pilot controlled, two-speed track drive with hydraulic axial piston motor and parking brake. Travel system provides skid steering and counter rotation.

- Travel speed - 1.9 km/hr / 3.1 km/hr
- Gradeability (unladen): 66%
- Unladen Ground Pressure: 0.53 kg/cm2

SWING

Gear motor driving a planetary gear reducer with a shaft mounted pinion, external gear shear ball slew bearing bolted to the superstructure and the carbody allows the superstructure to rotate 360°

- Swing Speed: 0 - 2.2 rpm
- Swing Parking Brake: Spring applied failsafe brake with hydraulic release that is controlled from the operators cab
- Swing Service Brake: Hydraulically applied, controlled through foot actuated pedal
- House Lock System
 - o 2-position house lock (boom over front or rear). Actuated from the operator's cab.

LOAD MOMENT INDICATOR

TADANO AML-C Rated Capacity Limiter and Anti-Two Block system

- OPTI-WIDTH™ - OPTIMAL lifting performance at any track WIDTH
- Control function shutdown. Audible and visual warnings
- LCD screen provides a continuous display of working boom length, boom angle, working load radius, tip height, swing position, partsof-line (operator set), machine track configuration, relative load moment, maximum permissible load and actual load.
- Anti-two block weight allows quick reeving of hook block
- Operator configurable working range limits with automatic soft stop.

FRAME

The frame is an all-steel, welded structure, precision machined to accept attachment of the boom and swing components.

OPERATORS CAB

Fully-enclosed, air conditioned all-steel modular cab with lockable sliding door, acoustical lining, anti-slip floor and tinted safety glass.

- Rear view, winch view and right side view video cameras
- Three remote control work lights.
- Vent window in the rear of the cab.
- Grab bars and steps are located for easy access to the cab.
- Defroster, heater, circulating fan
- 2-speed windshield wiper, top glass wiper
- Six-way adjustable fabric seat with headrest, seat belt
- Dome light
- Dry-chemical fire extinguisher
- Four-way electronic armrest mounted joysticks control swing, main winch, auxiliary winch, boom hoist and boom extend. Foot pedals control the travel and swing service brake functions. Swing brake pedal is hydraulic.
- Selectable modes for Fine Control and Travel. Travel function can be operated by foot pedals or joystick.
- Seat termination switch immediately disable all hydraulic functions as the operator rises from the seat. Functions can also be disabled by switch on console.
- Dash instrumentation: tachometer, hour meter, fuel gauge, and DEF level gauge. Indicators are provided for crane level, swing position, load moment, drum rotation, air filter restriction, engine oil temperature and pressure, hydraulic oil temperature and level, and hydraulic and air filter restriction, and low voltage.

ENGINE

- Make/ Model: Cummins QSB4.5
- Type: 4 Cylinder, Water cooled, 4 Cycle
- Aspiration: Turbocharged and Aftercooled
- Max.Output: 129 kW @ 2200 RPM
- Max Torque: 705 Nm @ 1500 RPM
- Piston Disp: 4.5 L
- Emission Cert: U.S. EPA Tier 4f, Euromot Stage IV

ELECTRICAL SYSTEM

24 VDC

FUEL SYSTEM

- Capacity: 284 liter
- Filtration: Inline fuel/water separator and engine mounted fuel filter

SIDE FRAMES

Two welded steel side frames are paired with a track group. The side frames extend and retract hydraulically and are controlled from the cab.

- Track Rollers: Three top and ten bottom sealed rollers on each track frame Idler: Oil filled, self lubricating with nitrogen type tensioner
- Track Shoes: 750 mm, 3-bar semi grouser

HYDRAULIC SYSTEM

- Hydraulic Pumps: One high pressure, variable axial piston pump with load sense and power limiting control for crane functions. One gear pump for cooling function.
- Directional Valves: Multiple pressure and flow compensated valves with integrated relief valves controlled by electrical signals.
- Pump output: 418 l/min @ 2200 RPM engine speed. 345 bar maximum pressure
- Reservoir: 450 liter capacity, spin-on filler/ breather, sight gauge, cleanout, and sump drain.
- Filtration: Three 5-micron, full flow, tank-mounted return filters with electrical clogging indicator. 3-micron pilot oil in-line pressure filter
- Diagnostic Ports: Provided for system, load sense, and pilot pressure

EXTENDABLE JIB

- o Main jib
 - Total Length: 7.2 m • Offset Angles: 5°, 25° & 45°
 - Max. Lifting Height: 33.4 m
- o Fly jib
 - Total Length: 12.8m • Offset Angles: 5°, 25° & 45°
 - Max. Lifting Height: 38.9m

HOOK BLOCK

- 35t block, four sheaves, lockable swivel hook and safety latch

TELEMATICS

- Machine data logging and monitoring system with HELLO-NET via Internet.

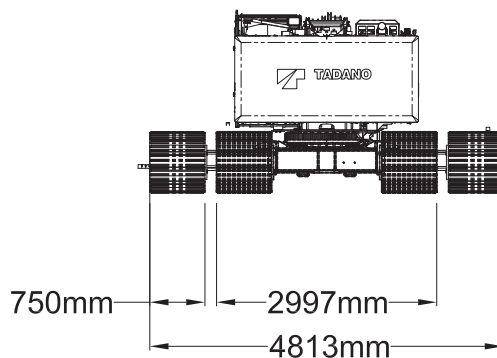
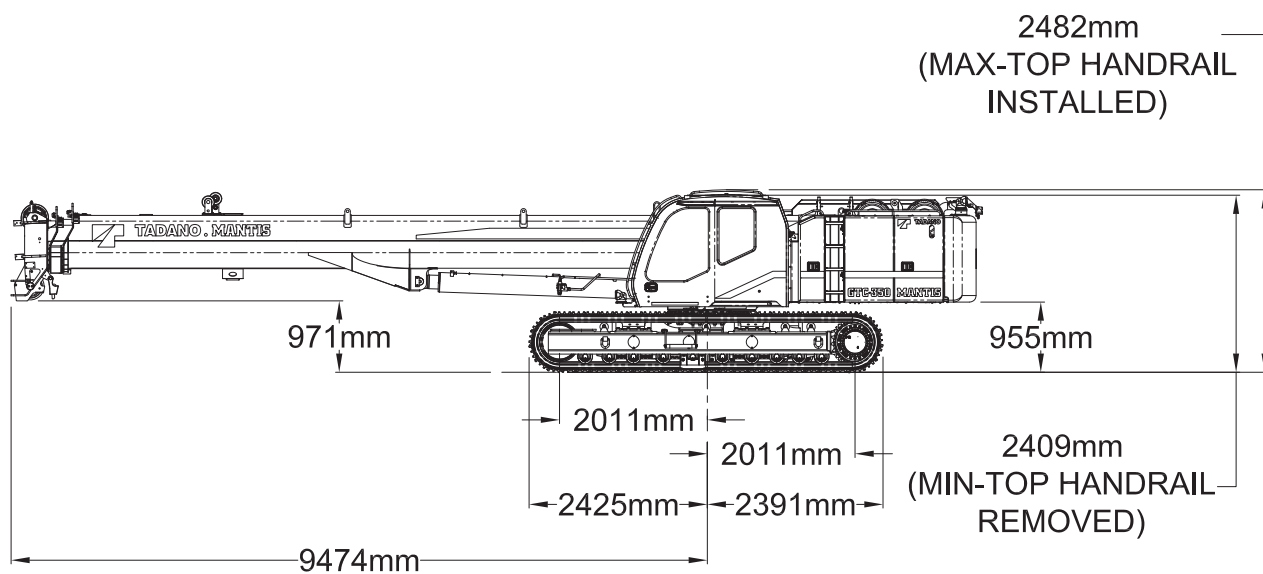
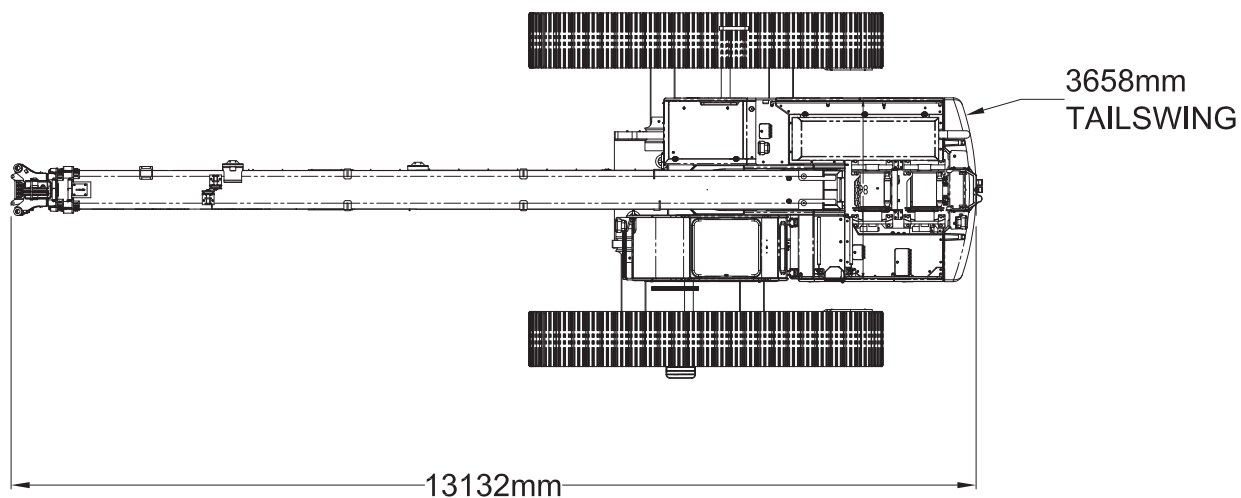
OPTIONAL EQUIPMENT

- Overhaul ball – 4t with swivel hook & safety latch
- 360 degree house lock. Actuated from the operator's cab.
- Track Shoes: 460 mm, 3-bar semi grouser
- Auger: Hydraulic auger boom package includes auger motor, hoses, fasteners, and stowage bracket assembly mounted to the 2nd stage section of boom for variable radius drilling.
- Tool Circuit: Provides 23 l/min and 45 l/min at 176 bar through a 15.2m twin hose reel with quick disconnect fittings to operate open center tools.
- High Flow Tool Circuit: Provides 170 l/min at 330 bar
- Controlled Free Fall Hoists: Winches are available in controlled free fall configurations.
- Cold Weather Packages: Cold weather options are available for operation to -40°C (Consult factory for application support)
- Work Platform: Model WP750 – 0.9m x 1.8m, all steel, welded, two person platform with maximum capacity of 340 kg in approved markets.
- Radio control package in approved markets.
- Anemometer: boom mounted wireless anemometer with cab display.
- Central lubrication system.

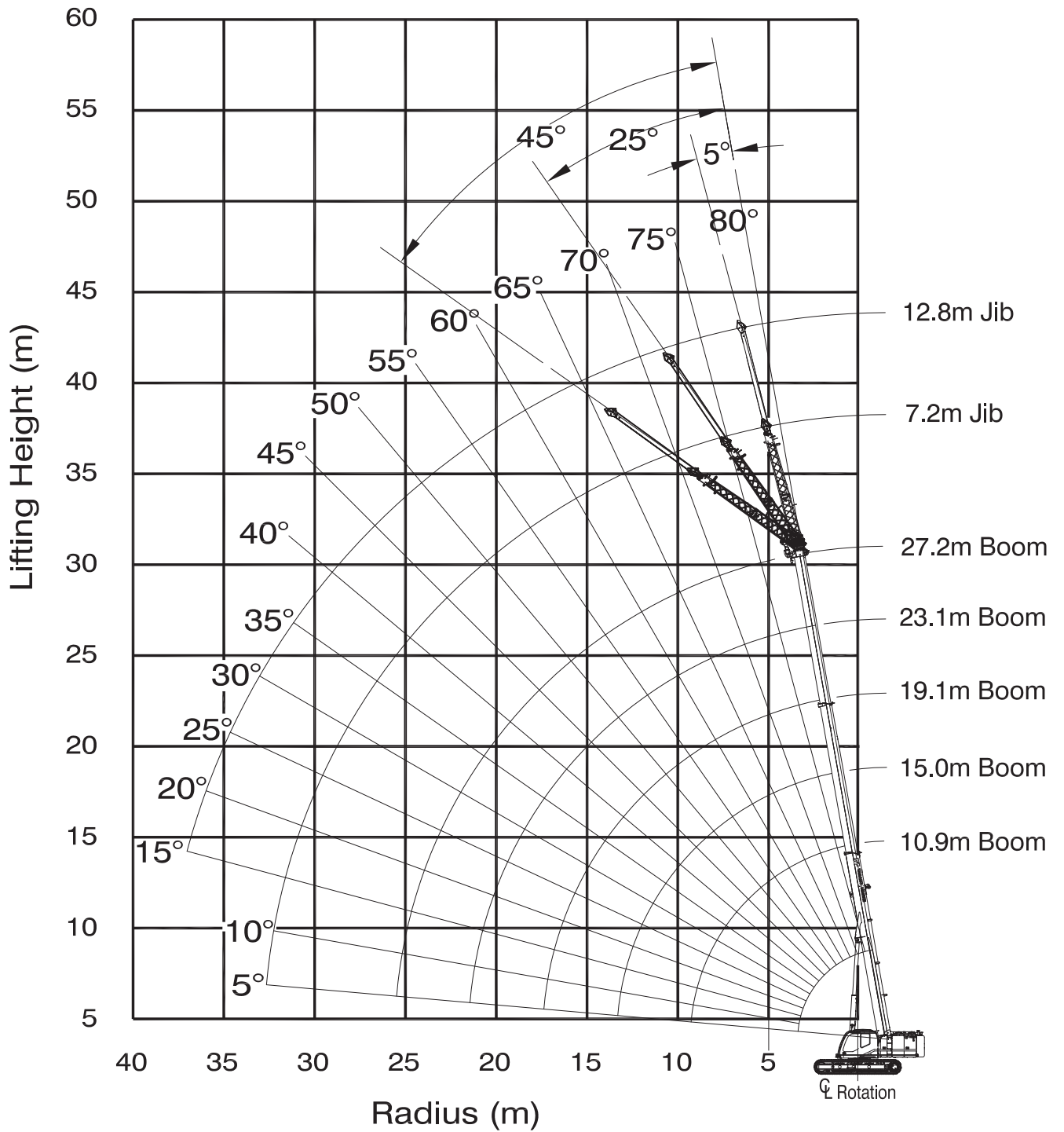
MAIN WINCH AND AUXILIARY WINCH PERFORMANCE					
Wire Rope: 16mm diameter rotation resistant. Line pulls are not based on wire rope strength.					
Rope Layer	Maximum Line Pull (kN)	Line Speed (m/min)	Pitch Diameter (mm)	Layer (m)	Total (m)
1	59	62	337	30	30
2	55	67	370	33	63
3	51	73	404	35	98
4	47	78	437	38	136
5	44	83	471	40	177
6	42	89	504	43	220

MACHINE WEIGHTS	KG
Standard Crane with 3 section - 27.2m boom, 5,670kg counterweight, 1 winch with wire rope, bi-fold jib and 750mm 3-bar semi grouser track shoes	32,432
OPTIONAL EQUIPMENT	KG
Extendable jib - 7.2m to 12.8m	630
Auxiliary Nose Sheave	44
Auxiliary Winch with 91.4m wire rope	521
35t hook block - four sheave	353
4t Overhaul Ball	113
Auger Ready Package	200
Complete Auger Package	680

DIMENSIONS



WORKING RANGE DIAGRAM



LOAD CHARTS

LOADS IN kg x 1000

MAIN BOOM with TRACKS FULLY EXTENDED - 360°						
Up to 1.5° SLOPE						
5.7t COUNTERWEIGHT						
RADIUS (m)	Main Boom Length (m)					Radius (m)
	10.9	15.0	19.1	23.1	27.2	
2.5	35.0	22.1	22.1			2.5
3	35.0	22.1	22.1			3
4	25.0	21.9	19.5	14.7		4
5	18.7	16.8	15.2	13.6	10.7	5
6	14.1	13.5	12.4	11.5	10.1	6
7	11.1	11.0	10.4	9.7	9.1	7
8	9.1	9.0	8.8	8.4	7.9	8
9	7.6	7.5	7.4	7.3	6.9	9
10		6.4	6.3	6.3	6.1	10
12		4.9	4.8	4.8	4.7	12
14			3.8	3.8	3.7	14
16			3.0	3.0	3.0	16
18				2.5	2.4	18
20				2.0	2.0	20
22					1.6	22
24					1.4	24
Parts of Line	8	6	6	4	4	Parts of Line

Load chart data is for reference, load charts supplied in the crane cab shall be used for lift planning.

LOAD CHARTS

LOADS IN kg x 1000

MAIN BOOM with TRACKS FULLY EXTENDED - 360°						
Up to 4° SLOPE						
5.7t COUNTERWEIGHT						
RADIUS (m)	Main Boom Length (m)					Radius (m)
	10.9	15.0	19.1	23.1	27.2	
2.5	29.1	20.0	16.3			2.5
3	28.9	20.0	16.3			3
4	20.9	17.6	15.3	11.2		4
5	16.1	14.0	12.4	11.1	9.2	5
6	12.5	11.6	10.4	9.4	8.6	6
7	10.1	9.5	8.9	8.1	7.5	7
8	8.4	7.9	7.5	7.1	6.6	8
9	7.3	6.8	6.4	6.2	5.8	9
10		5.8	5.6	5.4	5.2	10
12		4.6	4.3	4.2	4.0	12
14			3.5	3.3	3.2	14
16			2.8	2.7	2.6	16
18				2.2	2.1	18
20				1.9	1.8	20
22					1.5	22
24					1.3	24
Parts of Line	8	6	6	4	4	Parts of Line

Load chart data is for reference, load charts supplied in the crane cab shall be used for lift planning.

LOAD CHARTS

LOADS IN kg x 1000

MAIN BOOM with TRACKS FULLY RETRACTED - OVER FRONT/REAR						
Up to 1.5° SLOPE						
5.7t COUNTERWEIGHT						
RADIUS (m)	Main Boom Length (m)					Radius (m)
	10.9	15.0	19.1	23.1	27.2	
2.5	35.0	22.1	22.1			2.5
3	35.0	22.1	22.1			3
4	25.0	21.9	19.5	14.7		4
5	18.7	16.8	15.2	13.6	10.7	5
6	14.1	13.5	12.4	11.5	10.1	6
7	11.1	11.0	10.4	9.7	9.1	7
8	9.1	9.0	8.8	8.4	7.9	8
9	7.6	7.5	7.4	7.3	6.9	9
10		6.4	6.3	6.3	6.1	10
12		4.9	4.8	4.8	4.7	12
14			3.8	3.8	3.7	14
16			3.0	3.0	3.0	16
18				2.5	2.4	18
20				2.0	2.0	20
22					1.6	22
24					1.4	24
Parts of Line	8	6	6	4	4	Parts of Line

Load chart data is for reference, load charts supplied in the crane cab shall be used for lift planning.

LOAD CHARTS

LOADS IN kg x 1000

MAIN BOOM with TRACKS FULLY RETRACTED - OVER SIDE						
Up to 1.5° SLOPE						
5.7t COUNTERWEIGHT						
RADIUS (m)	Main Boom Length (m)					Radius (m)
	10.9	15.0	19.1	23.1	27.2	
2.5	*	*	*			2.5
3	*	*	*			3
4	*	*	*	*		4
5	*	*	*	*	*	5
6	7.0	6.9	*	*	*	6
7	5.6	5.6	5.4	5.0	4.7	7
8	4.6	4.6	4.5	4.3	4.1	8
9	3.8	3.8	3.8	3.7	3.5	9
10		3.2	3.2	3.2	3.1	10
12		2.4	2.3	2.3	2.3	12
14			1.7	1.7	1.7	14
16			1.3	1.3	1.3	16
18				1.0	0.9	18
20				0.7	0.7	20
22					0.5	22
24					*	24
Parts of Line	8	6	6	4	4	Parts of Line

Load chart data is for reference, load charts supplied in the crane cab shall be used for lift planning.

LOAD CHARTS

LOADS IN kg x 1000

7.2m JIB with TRACKS FULLY EXTENDED - 360°																
5.7t COUNTERWEIGHT																
RADIUS (m)	MAIN BOOM LENGTH (m)															RADIUS (m)
	10.9			15.0			19.1			23.1			27.2			
	5°	25°	45°	5°	25°	45°	5°	25°	45°	5°	25°	45°	5°	25°	45°	
2.5	4.0															2.5
3	4.0			4.0												3
4	4.0			4.0			4.0									4
5	4.0	3.1		4.0			4.0			4.0						5
6	4.0	2.9		4.0	3.0		4.0	3.0		4.0			4.0			6
7	3.8	2.6	2.0	4.0	2.8	2.0	4.0	2.8		4.0	2.7		4.0			7
8	3.4	2.5	1.9	3.9	2.6	2.0	4.0	2.6	2.0	4.0	2.6		3.8	2.5		8
9	3.1	2.3	1.8	3.5	2.5	1.9	3.7	2.5	1.9	3.7	2.5	1.8	3.5	2.4		9
10	2.9	2.2	1.8	3.3	2.3	1.8	3.5	2.4	1.8	3.5	2.4	1.8	3.3	2.3	1.7	10
12	2.5	2.0	1.7	2.8	2.1	1.7	3.0	2.2	1.7	3.1	2.2	1.7	2.9	2.1	1.6	12
14	2.2	1.8		2.5	2.0	1.6	2.7	2.0	1.6	2.7	2.0	1.6	2.7	1.9	1.5	14
16	2.0			2.3	1.8	1.6	2.4	1.9	1.6	2.5	1.9	1.5	2.4	1.8	1.5	16
18				2.1	1.8		2.2	1.8	1.6	2.3	1.8	1.5	2.3	1.7	1.4	18
20				1.9			2.0	1.7		1.9	1.7	1.5	1.8	1.6	1.4	20
22							1.6	1.7		1.5	1.6	1.5	1.5	1.6	1.4	22
24							1.4			1.3	1.3		1.2	1.3	1.3	24
26										1.0	1.1		0.9	1.0		26
28										0.8			0.7	0.8		28
30													0.5	0.6		30
32													0.4			32
PARTS OF LINE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	PARTS OF LINE

Load chart data is for reference, load charts supplied in the crane cab shall be used for lift planning.

LOAD CHARTS

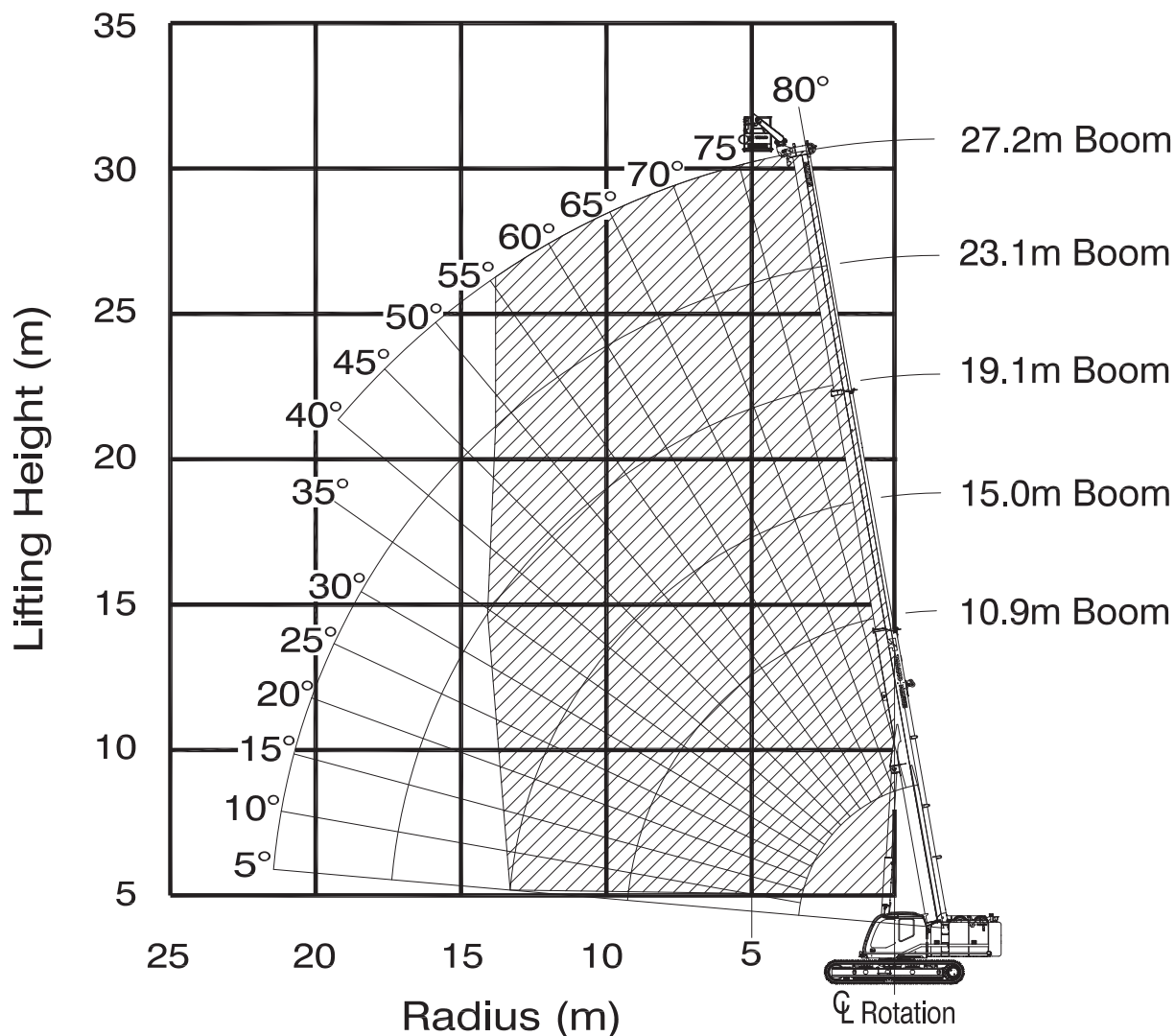
LOADS IN kg x 1000

12.8m JIB with TRACKS FULLY EXTENDED - 360°																
5.7t COUNTERWEIGHT																
RADIUS (m)	MAIN BOOM LENGTH (m)															RADIUS (m)
	10.9			15.0			19.1			23.1			27.2			
	5°	25°	45°	5°	25°	45°	5°	25°	45°	5°	25°	45°	5°	25°	45°	
3																3
4	2.4															4
5	2.1			2.3			2.2									5
6	1.9			2.0			2.2			2.0						6
7	1.7			1.8			1.9			2.0			1.8			7
8	1.5	1.1		1.7			1.8			1.9			1.8			8
9	1.4	1.0		1.5	1.1		1.6			1.7			1.8			9
10	1.2	1.0		1.4	1.0		1.5	1.0		1.6	1.1		1.7			10
12	1.1	0.9	0.7	1.2	0.9	0.8	1.3	0.9		1.4	1.0		1.5	1.0		12
14	0.9	0.8	0.7	1.1	0.8	0.7	1.2	0.9	0.7	1.3	0.9	0.7	1.3	0.9	0.7	14
16	0.8	0.7	0.7	0.9	0.8	0.7	1.0	0.8	0.7	1.1	0.8	0.7	1.2	0.9	0.7	16
18	0.7	0.7	0.6	0.9	0.7	0.6	0.9	0.8	0.7	1.0	0.8	0.7	1.1	0.8	0.7	18
20	0.7	0.6		0.8	0.7	0.6	0.9	0.7	0.6	0.9	0.7	0.6	1.0	0.8	0.6	20
22	0.6			0.7	0.6	0.6	0.8	0.7	0.6	0.9	0.7	0.6	0.9	0.7	0.6	22
24				0.7	0.6		0.7	0.6	0.6	0.8	0.7	0.6	0.9	0.7	0.6	24
26				0.6			0.7	0.6		0.8	0.6	0.6	0.8	0.7	0.6	26
28							0.7	0.6		0.7	0.6	0.6	0.8	0.6	0.6	28
30							0.6			0.7	0.6		0.7	0.6	0.6	30
32										0.6	0.6		0.6	0.6		32
34										0.6			0.5	0.5		34
36													0.4	0.4		36
38													0.3			38
PARTS OF LINE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	PARTS OF LINE

Load chart data is for reference, load charts supplied in the crane cab shall be used for lift planning.

WP750 WORK PLATFORM ON MAIN BOOM RANGE CHART FOR MANTIS MODEL GTC-350

as originally manufactured and equipped by Tadano Mantis Corporation



Notes:

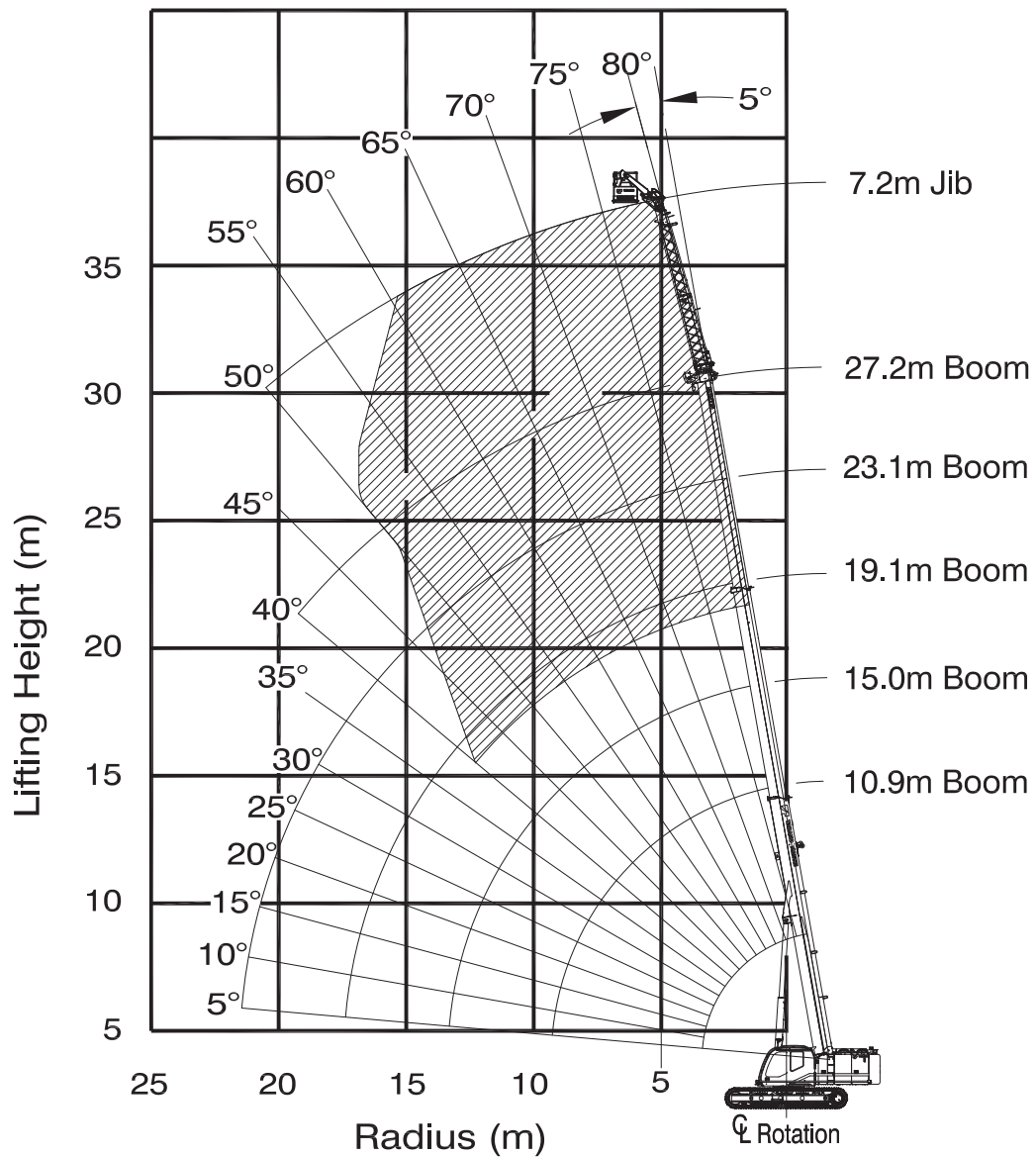
1. It is permissible to leave the jibs stowed on the boom while operating with Work Platform mounted to the main boom.
2. The hook block(s) must be removed when using the Work Platform

WARNING: Lifting a load during Work Platform operation is not allowed.

WARNING: Travelling the crane with person(s) in the Work Platform is not allowed.

WP750 WORK PLATFORM ON 7.2 M EXTENSION RANGE CHART FOR MANTIS MODEL GTC-350

as originally manufactured and equipped by Tadano Mantis Corporation



Shaded Area is Allowable Operating Range

Limits of operation:

Maximum load capacity = 340 kg

Maximum occupancy = 2 persons

Notes:

1. It is permissible to leave the jib section stowed on the boom while operating with Work Platform mounted to the 7.2 M jib.
2. The hook block(s) must be removed when using the Work Platform

WARNING: Lifting a load during Work Platform operation is not allowed.

WARNING: Travelling the crane with person(s) in the Work Platform is not allowed.

PLEASE READ, UNDERSTAND, AND FOLLOW THE MANUALS FURNISHED WITH THE CRANE AS WELL AS THE CAPACITY LIMITATIONS AND GENERAL CONDITIONS LISTED BELOW PRIOR TO OPERATION OF THE CRANE. FAILURE TO DO SO MAY RESULT IN AN ACCIDENT.

Performance of this TADANO crane as manufactured by Tadano Mantis Corporation applies only to machines as originally equipped by the manufacturer and in a properly maintained condition. Capacities given are maximum covered by the manufacturer's warranty and are based on a freely suspended load with NO allowance for factors as out-of-level operation (beyond the limits specified on the charts), supporting surface conditions, hazardous surroundings, experience of personnel, etc. The operator shall establish practical working loads based on prevailing operating conditions, such as, but not limited to the above.

The crane meets the requirements of ASME B30.5. Structure and Stability have been tested in accordance with SAE J1063 and SAE J765, respectively.

Maximum admissible wind velocity for working with telescopic boom and jibs is 32 km/hr. Consult TADANO for ratings at higher wind speeds.

Side pull on boom is extremely dangerous and must be avoided.

DO NOT exceed manufacturers maximum specified reeving.

Boom angle/boom length relationships given are an approximation of the resulted load radius, which should be an accurate measurement. Boom height dimensions are measured from ground to center of lower boom head sheave.

It is permissible to attempt to telescope boom with a load within the limits of rated capacities. However, boom angle system hydraulic pressure, and/or boom lubrication may affect operation.

It is permissible to travel with loads within the rated capacity of the crane. Travel speeds should be greatly reduced to reflect terrain limitations and minimize dynamic loads applied to the crane structure.

Lifting capacities are shown in kgs x 1000.

The weight of load handling devices such as hook blocks, slings, etc., must be considered as part of the load and must be deducted from the lifting capacities.

The lifting capacities for the telescopic boom apply to a crane with no jibs or other optional equipment stowed or mounted on the crane.

The working radius is the horizontal distance from the center of rotation to the center of the freely suspended, non-oscillating load.

The lifting capacities are subject to change without prior notice.

The above remarks are for basic information only and the operator's manual must be consulted before operating this crane. All data and performances refer to the standard crane. The addition of optional and other non-standard equipment may affect the performance of the crane.

Load moment indicating and anti-two block systems are operator aids and must never be used in lieu of job site lift planning calculations by the operator which must take into account ground conditions, weather and all other environmental factors prevailing at the time of the lift. Specifications are subject to change at any time without prior notice. Illustrations and photographs may show optional equipment. Supersedes all previous issues.

35 Ton Telescopic Boom Crawler Crane

SPECIFICATION SHEET NO. TMC-DI-734-19 06/18

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SPECIFICATION SHEET NO. TMC-DI-734-22 06/18