



GTC-350

35 Ton Telescopic Boom Crawler Crane

SPECIFICATION SHEET NO. TMC-DI-734-19 06/20

GENERAL DATA

CRANE CAPACITY	35 ton at 10 feet (35t at 3.0m)
ВООМ	3-section,
	35' 10" – 89' 3" (10.9 m – 27.2 m)
DIMENSION	,
Overall Length	43' 1" (13.1m)
Overall Width (tracks extended)	15' 9" (4.8 m)
Overall Width (tracks retracted)	9' 10" (3.0 m)
Overall Height (working)	8' 2" (2.5m)
MASS	
Gross Vehicle Mass (Standard Equipment Package)	71,500 lb (32,432 kg)
Counterweight	Fixed = 12,500 lb (5,670 kg)
PERFORMANCE	
Travel Speed	1.4 mph (2.2 km/hr) 2.4 mph (3.8 km/hr)
Gradeability	74%

CRANE SPECIFICATION

MODEL CAPACITY

GTC-350 35 ton at 10 feet (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: 35' 10" (10.9 m)
- Extended Length: 89' 3" (27.2 m) Extension Time: 82 s
- Elevating Angles: -1.5° to 80.0° Elevating Time: 56 s
- Max Lifting Height: 86' 9" (26.4 m)
- Boom Head: Five cast nylon and One steel 14.7 inch (373 mm) diameter main sheaves on heavy-duty roller bearings

AUXILIARY BOOM HEAD

Quick reeve, single 14.7 inch (373 mm) diameter high-strength, cast sheave mounted on a heavy-duty roller bearing. Allows single part reeving.

COUNTERWEIGHT

1 piece integrated counterweight design.

Fixed Configuration = 12,500lb (5,670 kg)

WINCHES

Planetary geared single-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: 0.625 in. x 500 ft (16 mm x 152 m)
- o Single line pull: 13,311 lb (59.2 kN) (first layer)
- o Single line speed: 256 ft/min (78.1 m/min) (fourth layer)
- Auxiliary Winch (optional)
- o Rope Diameter and Length: 0.625 in. x 300 ft (16 mm x 91.4 m)
- o Single line pull: 13,311 lb (59.2 kN) (first layer)
- o Single line speed: 256 ft/min (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 1.4 mph (2.2 km/hr) / 2.4 mph (3.8 km/hr)
- Gradeability (unladen): 74%
- Unladen Ground Pressure: 7.6 psi (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, parts-ofline (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.

35 Ton Telescopic Boom Crawler Crane

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.
- 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 disables 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: 173 hp (129 kW) @ 2200 RPM
- Max Torque: 520 Lb-ft (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: 75 gallon (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 spring type tensioner
- Track Shoes: 29.5 inch (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: 110 gpm (418 l/min) @ 2200 RPM engine speed. 5,000 psi (345 bar) maximum pressure
- Reservoir: 119 gallon (450 liter) capacity, 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: 23' 6" (7.2 m)
 Offset Angles: 5°, 25° & 45°
 - Max. Lifting Height: 109' 8" (33.4 m)
- o Fly jib
 - Total Length: 42' 0" (12.8m)
 Offset Angles: 5°, 25° & 45°
 - Max. Lifting Height: 127' 6" (38.9m)

HOOK BLOCK

• 35-ton (32t) block, four sheaves, lockable swivel hook and safety latch

TELEMATICS

Machine data logging and monitoring system with HELLO-NET via

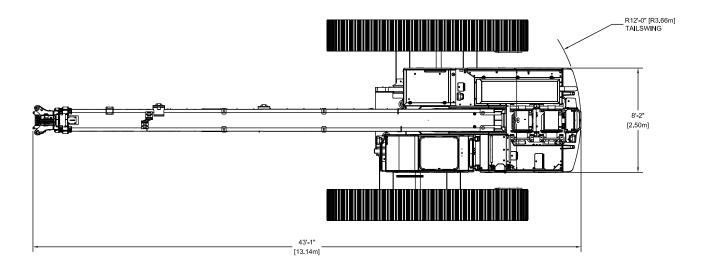
OPTIONAL EQUIPMENT

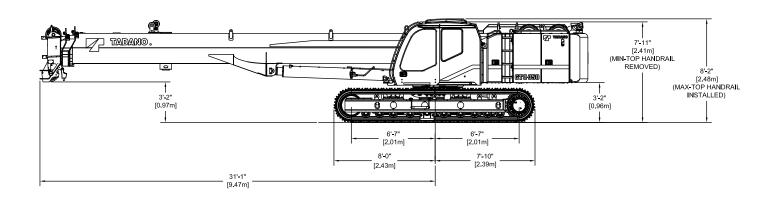
- Overhaul ball 4.4 ton (4t) with swivel hook & safety latch
- 360 degree house lock. Actuated from the operator's cab.
- · Track Shoes: 18 inch (460 mm), 3-bar semi grouser
- · Auger: Hydraulic auger boom package includes auger motor, hoses, fasteners, and stowage bracket assembly mounted to the 2nd stage section of boom for variable radius drilling.
- Tool Circuit: Provides 5 gpm (23 l/min) and 10 gpm (45 l/min) at 2,500 PSI (176 bar) through a 50 foot (15.2m) twin hose reel with quick disconnect fittings to operate open center tools.
- 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 36 in x 72 in (0.9m x 1.8m), all steel, welded, two person platform with maximum capacity of 750 lbs (340 kg).
- · Full function Radio remote control package
- Boom mounted anemometer with cab display
- · Automatic central lubrication system.

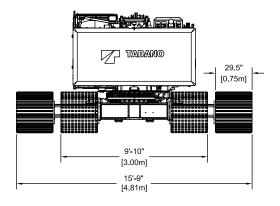
	MAIN WINCH AND AUXILIARY WINCH PERFORMANCE													
Wir	Wire Rope: 16mm diameter rotation resistant. Line pulls are not based on wire rope strength.													
Rope	Maximum Line	Line Speed	Pitch		_ , , , , , , ,									
Layer	Pull (lb / kN)	(ft/min / m/min)	Diameter (in / mm)	Layer (ft / m)	Total (ft / m)									
				00.04.004	000/00/									
1	13,310.9 / 59.2	203.7 / 62.1	13.3 / 336.7	98.8 / 30.1	98.8 / 30.1									
2	12,252.1 / 54.5	221.1 / 67.4	14.6 / 370.2	107.6 / 32.8	206.4 / 62.9									
3	11,375.3 / 50.6	238.5 / 72.7	15.9 / 403.6	115.8 / 35.3	322.2 / 98.2									
4	10,588.5 / 47.1	256.2 / 78.1	17.2 / 437.0	124 / 37.9	446.2 / 136									
5	9,914.1 / 44.1	273.6 / 83.4	18.5 / 470.5	132.9 / 40.4	579.1 / 176.5									
6	9,329.6 / 41.5	291.0 / 88.7	19.8 / 503.9	141 / 43.1	720.1 / 219.6									

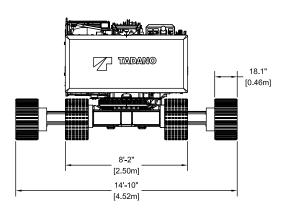
MACHINE WEIGHTS	LB	KG
Standard Crane with 3 section - 89' 3" boom, 12,500 lb. (5,670kg) counterweight, 1 winch with wire rope, bi-fold jib and 29.5" 3-bar semi grouser track shoes	71,500	32,432
OPTIONAL EQUIPMENT	LB	KG
Extendable jib - 23' 6" to 42' (7.2m to 12.8m)	1,390	630
Auxiliary Nose Sheave	98	44
Auxiliary Winch with 300' (91.4m) wire rope	1,149	521
35 ton (32t) hook block - four sheave	779	353
4.4 ton (4t) Overhaul Ball	250	113
Auger Ready Package	440	200
Complete Auger Package	1,500	680

DIMENSIONS

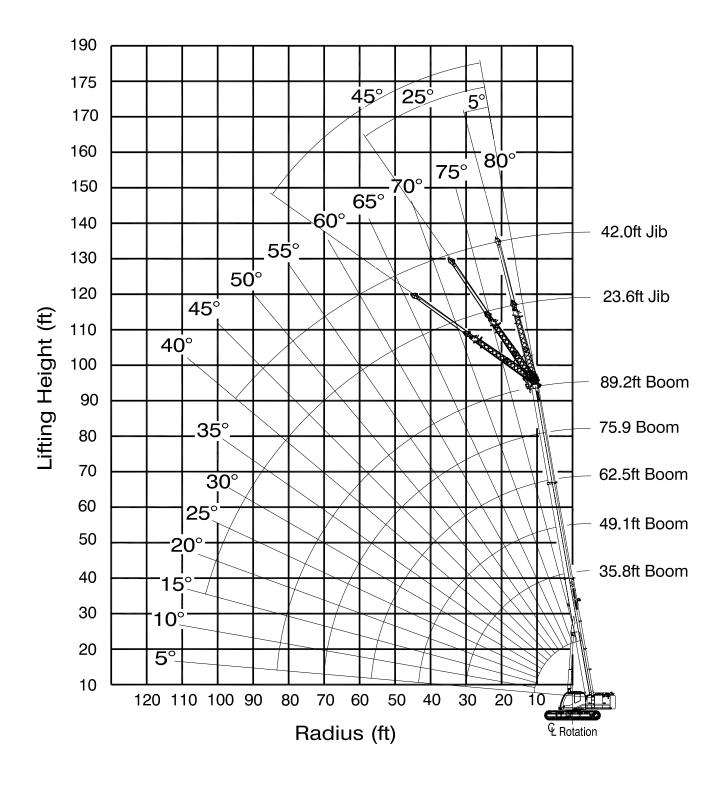








WORKING RANGE DIAGRAM



LOADS IN lb x 1000

M	MAIN BOOM with TRACKS FULLY EXTENDED - 360°													
	Up to 0.5° SLOPE													
12,500 lb COUNTERWEIGHT														
RADIUS	MAIN BOOM LENGTH (ft) RADIUS (ft)													
(ft)	35.8 49.1 62.5 75.9 89.2													
8	70.5	48.8	48.8			8								
10	70.5	48.7	48.7			10								
12	70.5	48.7	46.9	34.2		12								
15	49.9	48.7	46.5	33.2	23.8	15								
20	30.3	30.4	30.2	28.4	23.5	20								
25	21.3	21.4	21.4	21.4	20.1	25								
30	16.1	16.2	16.2	16.3	16.2	30								
35		12.8	12.8	12.9	12.8	35								
40		10.4	10.4	10.5	10.5	40								
45			8.7	8.8	8.7	45								
50			7.3	7.4	7.4	50								
55			6.3	6.3	6.3	55								
60				5.4	5.4	60								
65				4.7	4.7	65								
70				4.1	4.1	70								
75					3.6	75								
80					3.2	80								
PARTS OF LINE	8	6	6	4	4	PARTS OF LINE								

LOADS IN lb x 1000

M	MAIN BOOM with TRACKS FULLY EXTENDED - 360°													
Up to 4° SLOPE														
12,500 lb COUNTERWEIGHT														
RADIUS		RADIUS												
(ft)	35.8	(ft)												
8	64.2	44.1	36.0			8								
10	62.6	44.1	36.0			10								
12	51.3	44.1	36.0	24.7		12								
15	38.3	34.9	32.1	24.7	20.4	15								
20	25.5	23.9	22.4	21.2	19.3	20								
25	18.9	17.8	16.9	16.1	15.4	25								
30	15.2	14.0	13.3	12.9	12.3	30								
35		11.4	10.9	10.5	10.1	35								
40		9.6	9.1	8.8	8.4	40								
45	7.7 7.4		7.4	7.2	45									
50			6.6	6.4	6.2	50								
55			5.9	5.5	5.3	55								
60				4.9	4.6	60								
65				4.3	4.1	65								
70				3.9	3.6	70								
75					3.2	75								
80					2.9	80								
PARTS OF LINE	8	6	6	4	4	PARTS OF LINE								

LOADS IN Ib x 1000

MAIN BO	MAIN BOOM with TRACKS FULLY RETRACTED - OVER FRONT/REAR													
	Up to 0.5° SLOPE													
12,500 lb COUNTERWEIGHT														
RADIUS		RADIUS												
(ft)	35.8	49.1	62.5	75.9	89.2	(ft)								
8	70.5	48.8	48.8			8								
10	70.5	48.7	48.7			10								
12	70.5	48.7	46.9	34.2		12								
15	49.9	48.7	46.5	33.2	23.8	15								
20	30.3	30.4	30.2	28.4	23.5	20								
25	21.3	21.4	21.4	21.4	20.1	25								
30	16.1 1		16.2	16.3	16.2	30								
35		12.8	12.8	12.9	12.8	35								
40		10.4	10.4	10.5	10.5	40								
45			8.7	8.8	8.7	45								
50			7.3	7.4	7.4	50								
55			6.3	6.3	6.3	55								
60				5.4	5.4	60								
65				4.7	4.7	65								
70				4.1	4.1	70								
75					3.6	75								
80					3.2	80								
PARTS OF LINE	8	6	6	4	4	PARTS OF LINE								

LOADS IN lb x 1000

MA	MAIN BOOM with TRACKS RETRACTED - OVER SIDE													
	Up to 1.5° SLOPE													
12,500 lb COUNTERWEIGHT														
RADIUS	111111111111111111111111111111111111111													
(ft)	35.8	(ft)												
8	*	*	*			8								
10	*	*	*			10								
12	*	*	*	*		12								
15	*	*	*	*	*	15								
20	14.5	14.4	14.1	*	*	20								
25	10.5	10.5	10.4	10.3	10.1	25								
30	8.1 8.0		7.9	7.9	7.8	30								
35	6.3 6.3			6.2	6.2	35								
40		5.1	5.0	5.0	5.0	40								
45			4.1	4.1	4.0	45								
50			3.3	3.3	3.3	50								
55			2.8	2.7	2.7	55								
60				2.2	2.2	60								
65				1.8	1.8	65								
70				1.5	1.3	70								
75					1.0	75								
80					*	80								
PARTS OF LINE	8	6	6	4	4	PARTS OF LINE								

LOADS IN Ib x 1000

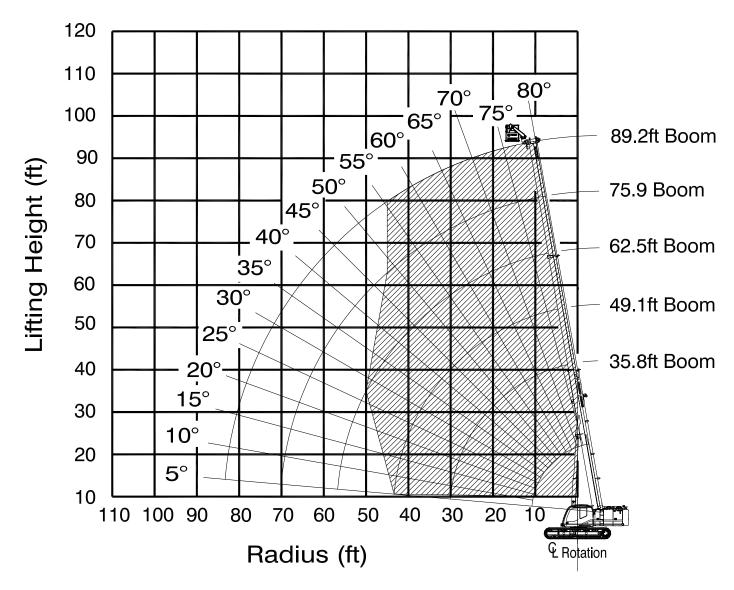
	23.6 FT JIB with TRACKS FULLY EXTENDED - 360°															
	UP to 0.5° SLOPE															
	12,500 lb MAIN COUNTERWEIGHT															
RADIUS	MAIN BOOM LENGTH (ft)														RADIUS	
(ft)		35.8			49.1			62.5			75.9			89.2		(ft)
	5°	25°	45°	5°	25°	45°	5°	25°	45°	5°	25°	45°	5°	25°	45°	1
8	11.1															8
10	11.1			11.1												10
12	11.1			11.1			11.1									12
15	11.1	7.3		11.1			11.1			11.1						15
20	9.6	6.4		10.7	6.7		11.1	6.7		10.8			10.2			20
25	8.0	5.7	4.4	9.1	6.0	4.5	9.6	6.1	4.4	9.4	6.0		9.0	5.8		25
30	6.9	5.1	4.1	7.9	5.5	4.2	8.4	5.6	4.2	8.4	5.5	4.1	8.0	5.3		30
35	6.1	4.7	3.8	7.0	5.0	4.0	7.5	5.2	4.0	7.5	5.1	3.9	7.2	5.0	3.8	35
40	5.4	4.3	3.7	6.3	4.7	3.8	6.8	4.8	3.8	6.9	4.8	3.7	6.6	4.7	3.6	40
45	4.9	4.1		5.7	4.4	3.7	6.2	4.5	3.7	6.3	4.5	3.6	6.1	4.4	3.5	45
50	4.5	3.9		5.2	4.1	3.6	5.7	4.3	3.5	5.8	4.3	3.5	5.7	4.2	3.4	50
55				4.8	4.0		5.3	4.1	3.5	5.4	4.1	3.4	5.3	4.0	3.2	55
60				4.5	3.9		4.9	3.9	3.4	5.1	3.9	3.3	5.0	3.8	3.2	60
65				4.3			4.7	3.8		4.6	3.8	3.2	4.5	3.7	3.1	65
70							4.1	3.7		4.0	3.7	3.2	3.9	3.5	3.0	70
75							3.6	3.7		3.4	3.6		3.3	3.4	3.0	75
80							3.1			3.0	3.1		2.8	3.0	3.0	80
85										2.6	2.6		2.4	2.6	2.6	85
90										2.2			2.1	2.2		90
95													1.8	1.9		95
100													1.5	1.5		100
105													1.2			105
PARTS OF LINE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	PARTS OF LINE

LOADS IN Ib x 1000

	42 FT JIB with TRACKS FULLY EXTENDED - 360°															
	UP to 0.5° SLOPE															
	12,500 Ib MAIN COUNTERWEIGHT															
RADIUS	MAIN BOOM LENGTH (ft)														RADIUS	
(ft)	35.8 49.1 62.5 75.9 89.2														(ft)	
	5°	25°	45°	5°	25°	45°	5°	25°	45°	5°	25°	45°	5°	25°	45°	
8																8
10																10
12	6.1															12
15	5.2			5.6												15
20	4.2			4.7			5.0			4.7						20
25	3.5	2.6		3.9			4.3			4.5			4.1			25
30	3.0	2.3		3.4	2.4		3.7	2.4		3.9			4.0			30
35	2.7	2.1		3.0	2.2		3.3	2.3		3.5	2.3		3.7			35
40	2.4	1.9	1.6	2.7	2.0	1.7	3.0	2.1		3.2	2.2		3.4	2.2		40
45	2.1	1.8	1.5	2.4	1.9	1.6	2.7	2.0	1.6	2.9	2.0	1.6	3.1	2.1		45
50	1.9	1.7	1.5	2.2	1.8	1.5	2.4	1.9	1.5	2.6	1.9	1.6	2.8	2.0	1.6	50
55	1.8	1.5	1.4	2.0	1.7	1.5	2.2	1.7	1.5	2.4	1.8	1.5	2.6	1.9	1.5	55
60	1.6	1.5	1.4	1.9	1.6	1.4	2.1	1.7	1.5	2.3	1.7	1.5	2.4	1.8	1.5	60
65	1.5	1.4		1.7	1.5	1.4	1.9	1.6	1.4	2.1	1.7	1.4	2.3	1.7	1.4	65
70	1.4	1.4		1.6	1.4	1.4	1.8	1.5	1.4	2.0	1.6	1.4	2.1	1.6	1.4	70
75				1.5	1.4		1.7	1.5	1.4	1.9	1.5	1.4	2.0	1.6	1.4	75
80				1.5	1.4		1.6	1.4	1.3	1.8	1.5	1.3	1.9	1.5	1.3	80
85				1.4			1.5	1.4		1.7	1.4	1.3	1.8	1.5	1.3	85
90							1.5	1.3		1.6	1.4	1.3	1.7	1.4	1.3	90
95							1.4			1.5	1.3		1.7	1.4	1.3	95
100										1.5	1.3		1.6	1.3	1.3	100
105										1.4	1.3		1.5	1.3		105
110										1.4			1.5	1.3		110
115													1.3	1.3		115
120													1.1	1.1		120
125													0.9			125
PARTS OF LINE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	PARTS OF LINE

WP750 WORK PLATFORM ON MAIN BOOM 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 = 750 lb
Maximum radius when mounted on main boom = 50 ft
Maximum occupancy = 2 persons

Notes:

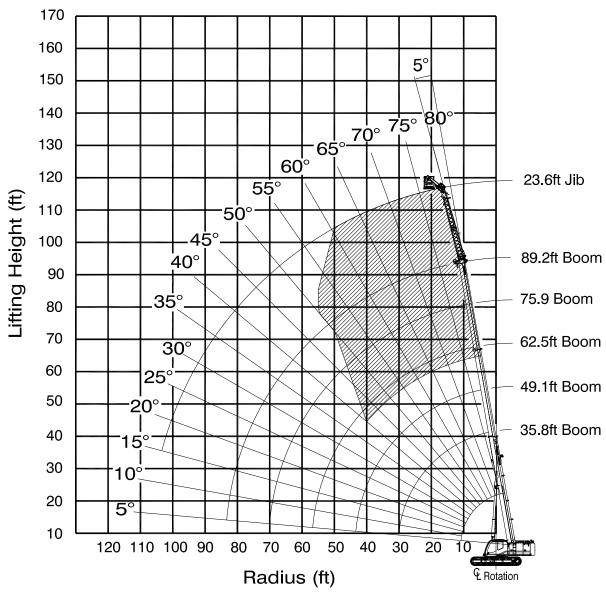
- 1. It is permissible to leave the jib stowed on the boom while operating with Work Platform mounted to the main boom.
- 2. The hook block(s) must be removed when using the Work Platform

WARNING: Lifting a load during Work Platform operation is <u>not</u> allowed.

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

WP750 WORK PLATFORM ON 23.6 FT (7.2 M) JIB 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 = 750 lb under "Limits of operation"

Maximum occupancy = 2 persons

Notes:

1. The hook block(s) must be removed when using the Work Platform

WARNING: Lifting a load during Work Platform operation is <u>not</u> allowed.

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



PLEASE READ, UNDERSTAND, AND FOLLOW THE MANUALS FURNISHED WITH THE CRANE AS WELL AS THE CAPACITY LIMITA-TIONS AND GENERAL CONDITIONS LISTED BELOW PRIOR TO OPERATI ON 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 20 mph. 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 lbs 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.

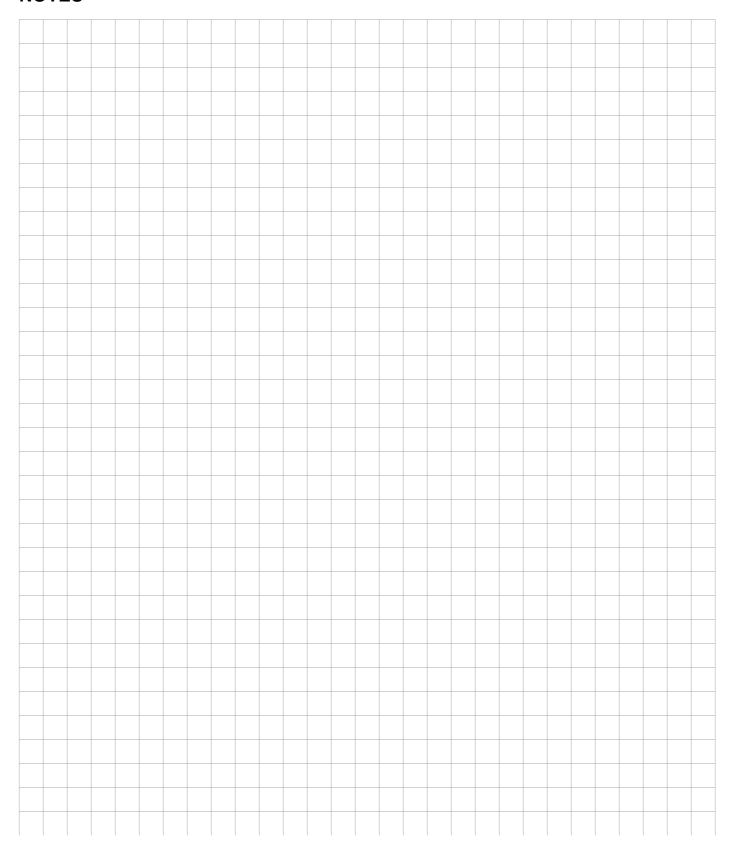
The working radius is the horizontal distance from the center of rotation to the center of the freely suspended, non-oscillating load.

Lifting capacities are for reference only. Load charts supplied with the crane should be used for lift planning.

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.

NOTES



TADANO MANTIS CORPORATION 1705 Columbia Avenue • Franklin, TN 37064 USA • Toll-Free: 1-800-272-3325 • Fax: 615-790-6803 • mantiscranes.com

TADANO Ltd., International Division

4-12, Kamezawa 2-chome, Sumida-Ku, Tokyo 130-0014, Japan

Tel: +81 3 3621 7750 Fax:+81 3 3621 7785 E-mail: info@tadano.com

www.tadano.com