

Manitex



TC600

**60-ton (54, 4 mt) TC600 SERIES
PRODUCT GUIDE**

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KEY

	Operator aids
	Cab
	Heating / Air conditioning
	Controls
	Hoist speed
	1 - Main hoist 2 - Auxiliary winch 3 - Recovery winch
	Rope length
	Rope - Standard/optional
	Rope diameter
	Permissible line pull
	Maximum line pull
	Slewing / Allowable slewing range
	Slewing gears
	Slewing brake
	Outriggers
	2-Person man basket
	Counterweight
	Radio remote control

	Hook block
	Distance from hook to head sheave pin
	Hook and ball
	Hydraulics
	Boom elevation angle
	Max. boom length with extension
	Boom with extension retracted
	Boom angle
	Telescoping mode
	Working radius
	Boom length
	Hydraulic actuated boom
	Fully proportional, full power extension
	Boom head / Hook block dimension
	Main boom with auxiliary head
	Tip height



THE TC600 SERIES TELESCOPIC CRANE

Versatile. Rugged. Operator friendly.

The TC600 series telescopic cranes are built to meet the wide-ranging needs of owner operators who may use it for residential construction one day and bridge work the next. No matter what the task, the 60-ton line of telescopic cranes is designed to get you on the job quickly.

- Go from Free-Swing to No-Free Swing with a push of a button.
- Set up quickly with remote outrigger controls
- Operate comfortably and confidently
- Move from job to job in less time.

Other features include:

- 60-ton capacity @ 8 ft. radius
- 4-section proportional booms
- Optional telescopic lattice jib (0-15-30° offsets)
- 194 ft. maximum tip height (with optional jib)
- 20° Tilttable cab
- 4-position out-and-down outriggers
- Remote outrigger controls

NEW COMBINED RADIO REMOTE



R.O.C. (RADIO OUTRIGGER CONTROLS)

One control to operate outriggers, winch and boom controls with boom stowed.

R.O.C. (RADIO OUTRIGGER CONTROLS)

Operate the outriggers remotely, with a clear view from anywhere around the machine.

NEW CAB



Equipped with Heat and AC and 200% more air flow. Adjustable cab tilt speed and crane functions. USB ports for quick software updates or phone charging. More leg room and one display unit needed for both crane and chassis operations. Remote mounted HVAC for no vibration and low ambient noise.

TELEMETRICS



A modem is incorporated into the crane PLC system to aid troubleshooting machines in the field. Crane software updates can now be uploaded to the machine without having to send a technician to the field! GPS ready for tracking through the Manitex web portal.

FEATURES



CAB UPGRADES FOR EASIER OPERATOR CONTROL



Externally routed A2B cable. LMI with crane function cut-offs for overload protection. Color graphic display, event recorder, WADS-Work Definition System.

SUB FRAME

- Pedestal sub-frame and stabilizers are mounted to chassis by threaded rods and clamp plates
- Sub-frame: Torsion resistant, rigid 4-plate design mounted under crane full length of truck frame
- Rear under-ride protection: Standard on factory mounted cranes

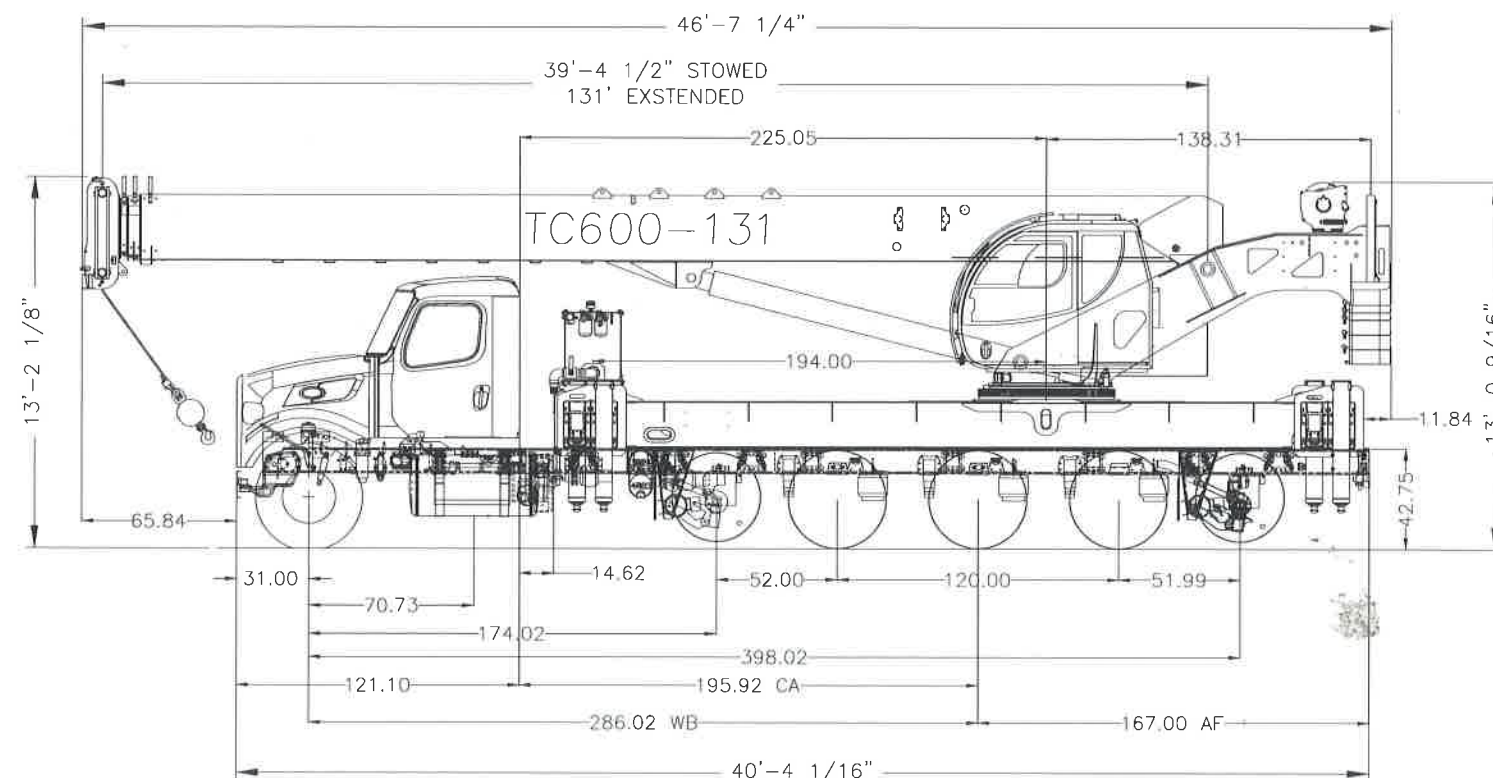
ELECTRICAL SYSTEM

- State-of-the-art, weather-resistant components throughout
- Hermetically sealed enclosure includes power in relays and circuit status LEDs
- 12-24 Volt capability
- J1939 CAN Bus
- IQAN PLC System
- Bluetooth connectivity

Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

60131 CHASSIS DATA

Dimensions



CHASSIS DATA

Model	60131
Frame section modulus at 180/360° area of operation*	27.0 in ³ 110,000 psi, 758,423 kPa

* Frame section modulus at 360° area of operation requires front bumper stabilizer.

TRUCK AXLE WEIGHT

Model	60131
Min. truck axle W - Front**	10,750 lbs. (4876 kg)
Min. truck axle W - Rear**	12,300 lbs. (5,579 kg)
Nominal Frame W	34 in. (864 mm)

** Minimum chassis weight is required to meet 85% stability requirements. Chassis data is general - not for engineering. Some dimensions depend on truck selection.

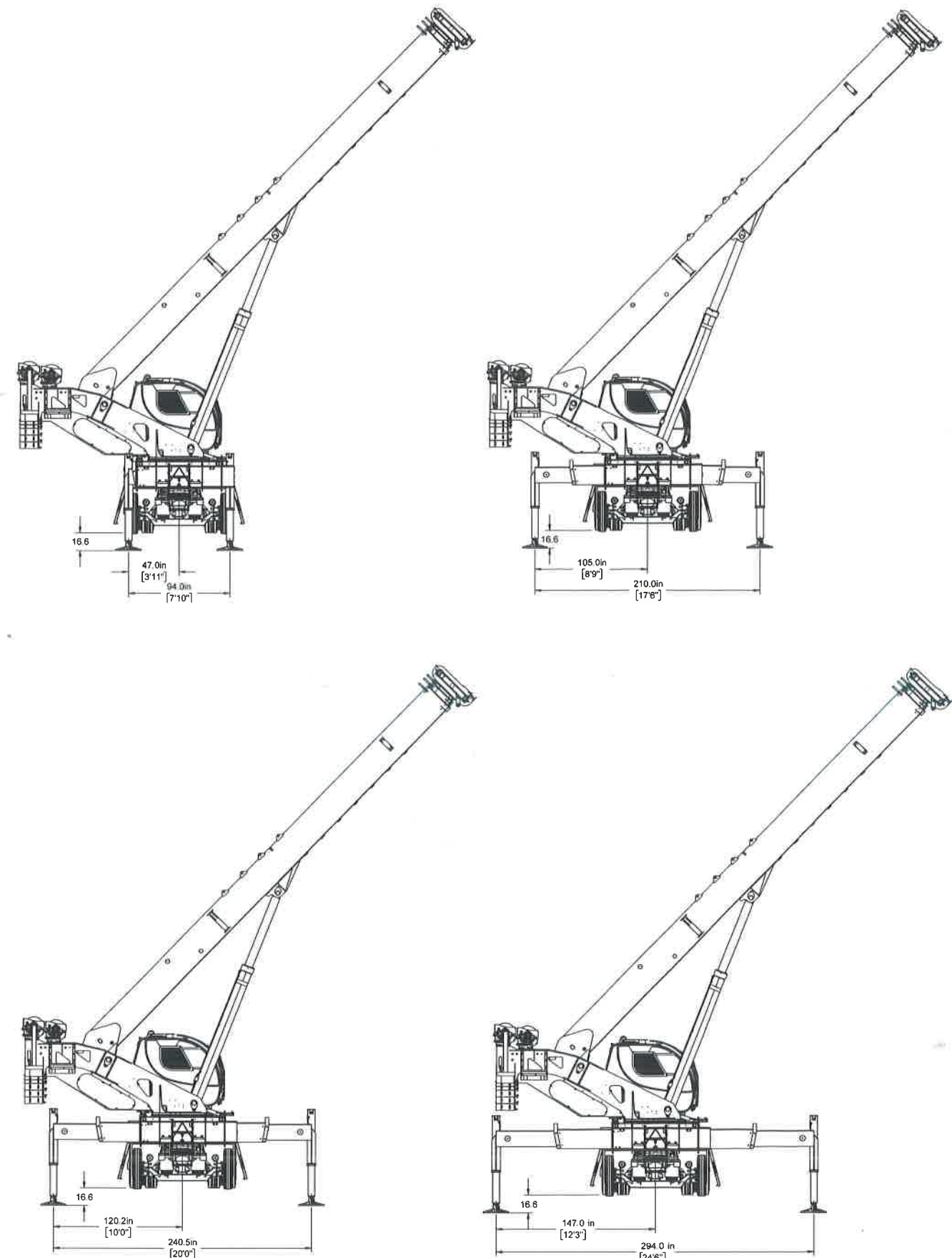
CRANE WEIGHT

Model	60131
Crane	51,229 lbs. (23,237 kg)
Jib fixed	1,700 lbs. (771 kg)
Jib telescopic	2,300 lbs. (1,043 kg)
Aluminum Platforms	555 lbs. (252 kg)

Notes: Additional axles required for federal bridge legal configuration - consult Manitex. Manitex highly recommends the addition of a front stabilizer and it may be required on some installations - consult Manitex.

Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

OUTRIGGER EXTENSION



60131 LOAD CHART: Main Boom

CODE 1

MAIN BOOM



LOAD RADIUS (FT)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	LOAD RADIUS (FT)
LENGTH	38.5 FT		53 FT		66 FT		79 FT		92 FT		105 FT		118 FT		131 FT		
6	74°	120000															6
8	70°	120000															8
10	67°	104870	74°	80000	77°	73200											10
12	64°	95630	71°	80000	76°	68990	78°	54510									12
15	59°	84050	68°	74250	73°	62490	76°	49640	79°	38040							15
20	50°	65540	62°	62410	68°	53070	72°	43090	75°	33510	78°	28990					20
25	40°	50810	55°	51800	63°	46050	69°	37560	72°	29440	75°	25810	77°	22810			25
30	26°	40810	49°	41860	58°	40230	65°	33320	69°	26050	72°	23390	75°	20770	77°	18180	30
35			41°	34350	53°	35090	61°	29630	66°	23500	69°	21000	73°	18830	75°	16770	35
40			31°	26710	47°	27420	56°	26450	62°	21000	66°	18910	70°	17110	73°	15360	40
45			18°	21340	41°	22090	52°	22510	58°	18920	63°	17130	67°	15520	70°	14070	45
50					35°	18150	47°	18570	55°	17110	60°	15540	65°	14150	68°	12900	50
55					28°	15110	41°	15550	51°	15570	57°	14150	62°	12930	66°	12100	55
60					18°	12630	35°	13150	46°	13430	54°	12920	59°	12100	63°	11110	60
65							28°	11200	42°	11490	50°	11680	56°	11100	61°	10190	65
70							18°	9560	36°	9870	46°	10070	53°	10190	58°	9370	70
75									30°	8510	42°	8710	50°	8850	55°	8620	75
80									23°	7340	38°	7550	46°	7690	52°	7800	80
85									11°	6300	33°	6550	43°	6690	49°	6800	85
90											27°	5670	39°	5820	46°	5930	90
95											19°	4850	34°	5030	43°	5150	95
100													29°	4310	39°	4440	100
105													23°	3670	36°	3800	105
110													14°	3080	31°	3230	110
115															26°	2710	115
120															19°	2240	120
125															6°	1790	125
130																	130
DEDUCTIONS FOR MAIN BOOM CAPACITIES	0°	30700	0°	18200	0°	12450	0°	8350	0°	6050	0°	4250	0°	2900	0°	600	
		1570		1140		920		770		660		580		520		460	STOWED
		3510		3240		3100		3010		2940		2890		2850		2820	RET
		3910		3530		3340		3200		3110		3040		2980		2940	EXT
		2620		2420		2320		2250		2200		2170		2140		2120	FIXED

60131 LOAD CHART: Main Boom

CODE 19

MAIN BOOM



LOAD RADIUS (FT)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	LOAD RADIUS (FT)
LENGTH	38.5 FT		53 FT		66 FT		79 FT		92 FT		105 FT		118 FT		131 FT		
6	74°	120000															6
8	70°	120000															8
10	67°	104870	74°	80000	77°	73200											10
12	64°	95630	71°	80000	76°	68990	78°	54510									12
15	59°	84050	68°	74250	73°	62490	76°	49640	79°	38040							15
20	50°	65540	62°	62410	68°	53070	72°	43090	75°	33510	78°	28990					20
25	40°	42660	55°	44110	63°	44890	69°	37560	72°	29440	75°	25810	77°	22810			25
30	26°	29650	49°	31020	58°	31720	65°	32170	69°	26050	72°	23390	75°	20770	77°	18180	30
35			41°	23160	53°	23820	61°	24240	66°	23500	69°	21000	73°	18830	75°	16770	35
40			31°	17890	47°	18540	56°	18950	62°	19220	66°	18910	70°	17110	73°	15360	40
45			18°	14080	41°	14770	52°	15160	58°	15430	63°	15630	67°	15520	70°	14070	45
50					35°	11930	47°	12320	55°	12590	60°	12770	65°	12920	68°	12900	50
55					28°	9700	41°	10110	51°	10370	57°	10560	62°	10690	66°	10800	55
60					18°	7840	35°	8330	46°	8600	54°	8780	59°	8910	63°	9020	60
65							28°	6870	42°	7140	50°	7320	56°	7460	61°	7560	65
70							18°	5630	36°	5920	46°	6110	53°	6240	58°	6350	70
75									30°	4890	42°	5080	50°	5210	55°	5320	75
80									23°	3990	38°	4190	46°	4330	52°	4430	80
85									11°	3190	33°	3420	43°	3560	49°	3670	85
90											27°	2740	39°	2890	46°	2990	90
95											19°	2130	34°	2290	43°	2400	95
100													29°	1760	39°	1870	100
105													23°	1280	36°	1390	105
110													14°	830	31°	960	110
115																	115
120																	120
125																	125
130																	130
DEDUCTIONS FOR MAIN BOOM CAPACITIES	0°	25300	0°	12800	0°	7750	0°	4900	0°	3000	0°	1650	0°	650	0°	600	
	1570		1140		920		770		660		580		520		460		STOWED
	3510		3240		3100		3010		2940		2890		2850		2820		RET
	3910		3530		3340		3200		3110		3040		2980		2940		EXT
	2620		2420		2320		2250		2200		2170		2140		2120		FIXED

60131 LOAD CHART: Main Boom

CODE 10

MAIN BOOM

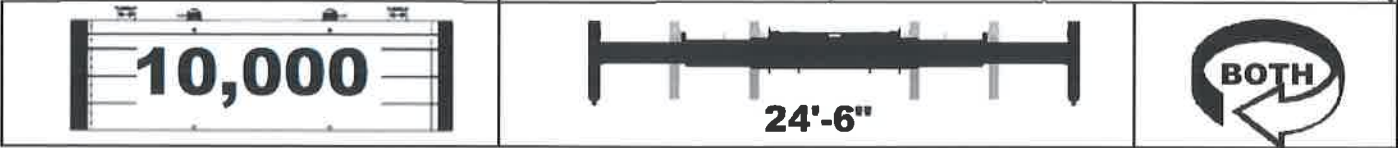


LOAD RADIUS (FT)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	LOAD RADIUS (FT)
LENGTH	38.5 FT		53 FT		66 FT		79 FT		92 FT		105 FT		118 FT		131 FT		
6	74°	120000															6
8	70°	120000															8
10	67°	104870	74°	80000	77°	73200											10
12	64°	95630	71°	80000	76°	68990	78°	54510									12
15	59°	84050	68°	74250	73°	62490	76°	49640	79°	38040							15
20	50°	65540	62°	62410	68°	53070	72°	43090	75°	33510	78°	28990					20
25	40°	50810	55°	51800	63°	46050	69°	37560	72°	29440	75°	25810	77°	22810			25
30	26°	40810	49°	41860	58°	40230	65°	33320	69°	26050	72°	23390	75°	20770	77°	18180	30
35			41°	34680	53°	35220	61°	29630	66°	23500	69°	21000	73°	18830	75°	16770	35
40			31°	29250	47°	29810	56°	26450	62°	21000	66°	18910	70°	17110	73°	15360	40
45			18°	24140	41°	24840	52°	24040	58°	18920	63°	17130	67°	15520	70°	14070	45
50					35°	20780	47°	21180	55°	17110	60°	15540	65°	14150	68°	12900	50
55					28°	17600	41°	18010	51°	15570	57°	14150	62°	12930	66°	12100	55
60					18°	13960	35°	15480	46°	14210	54°	12920	59°	12100	63°	11110	60
65							28°	13390	42°	13000	50°	12100	56°	11100	61°	10190	65
70							18°	11630	36°	11930	46°	11110	53°	10190	58°	9370	70
75									30°	10460	42°	10190	50°	9360	55°	8620	75
80									23°	9180	38°	9380	46°	8620	52°	7940	80
85									11°	8050	33°	8290	43°	7950	49°	7310	85
90											27°	7320	39°	7300	46°	6740	90
95											19°	6460	34°	6620	43°	6200	95
100													29°	5870	39°	5720	100
105													23°	5180	36°	5250	105
110													14°	4560	31°	4690	110
115															26°	4140	115
120															19°	3630	120
125															6°	3140	125
130																	130
DEDUCTIONS FOR MAIN BOOM CAPACITIES	0°	30700	0°	19750	0°	13750	0°	9100	0°	7350	0°	4500	0°	3750	0°	600	
		1570		1140		920		770		660		580		520		460	STOWED
		3510		3240		3100		3010		2940		2890		2850		2820	RET
		3910		3530		3340		3200		3110		3040		2980		2940	EXT
		2620		2420		2320		2250		2200		2170		2140		2120	FIXED

60131 LOAD CHART: Main Boom & Jib

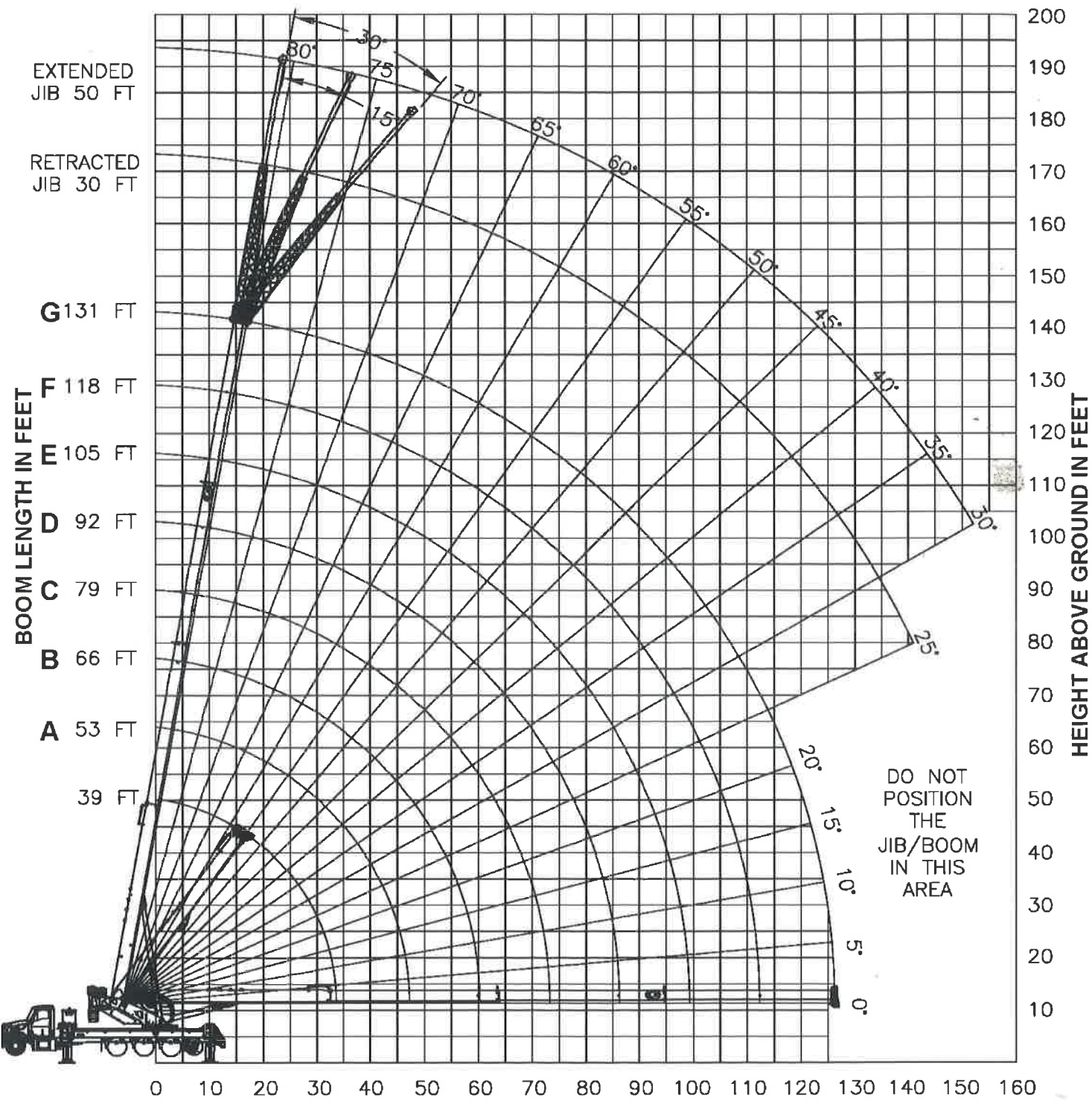
CODES 118, 127, 136,
145, 154, 163

EXTENDED 50' JIB



LOAD RADIUS (FT)	0° OFFSET			15° OFFSET			30° OFFSET			LOAD RADIUS (FT)
	BOOM ANGLE (DEG)	CODE 145	CODE 118	BOOM ANGLE (DEG)	CODE 154	CODE 127	BOOM ANGLE (DEG)	CODE 163	CODE 136	
		OVER REAR (LBS)	FULL 360° (LBS)		OVER REAR (LBS)	FULL 360° (LBS)		OVER REAR (LBS)	FULL 360° (LBS)	
25										25
30										30
35										35
40	78°	7600	7600							40
45	76°	7200	7200							45
50	75°	6900	6900	79°	6370	6370				50
55	73°	6500	6500	78°	6040	6040				55
60	72°	6200	6200	76°	5750	5750	79°	5340	5340	60
65	70°	5900	5900	75°	5460	5460	78°	5080	5080	65
70	69°	5600	5600	73°	5190	5190	76°	4840	4840	70
75	67°	5300	5300	71°	4940	4940	74°	4620	4620	75
80	66°	5000	5000	70°	4700	4700	72°	4410	4410	80
85	64°	4800	4800	68°	4470	4470	70°	4210	4210	85
90	63°	4500	4500	66°	4260	4260	69°	4020	4020	90
95	61°	4300	4300	64°	4060	4060	67°	3850	3850	95
100	59°	4100	4100	62°	3870	3870	65°	3680	3680	100
105	57°	3900	3900	60°	3690	3690	63°	3530	3530	105
110	54°	3600	3600	58°	3530	3530	61°	3390	3390	110
115	52°	3300	3300	56°	3370	3370	58°	3250	3250	115
120	49°	3000	3000	53°	3220	3220	56°	3130	3130	120
125	47°	2700	2600	51°	2980	2980	53°	3000	3000	125
130	44°	2400	2220	48°	2700	2610	50°	2890	2890	130
135	42°	2200	1870	45°	2440	2230	47°	2610	2500	135
140	39°	2000	1540	42°	2190	1870	44°	2340	2100	140
145	36°	1700	1240	39°	1950	1530	41°	2070	1730	145
150	33°	1500	960	36°	1720	1220	37°	1820	1380	150
155	30°	1300		32°	1500	930	32°	1580	1050	155
160										160
165										165
170										170
175										175
180										180

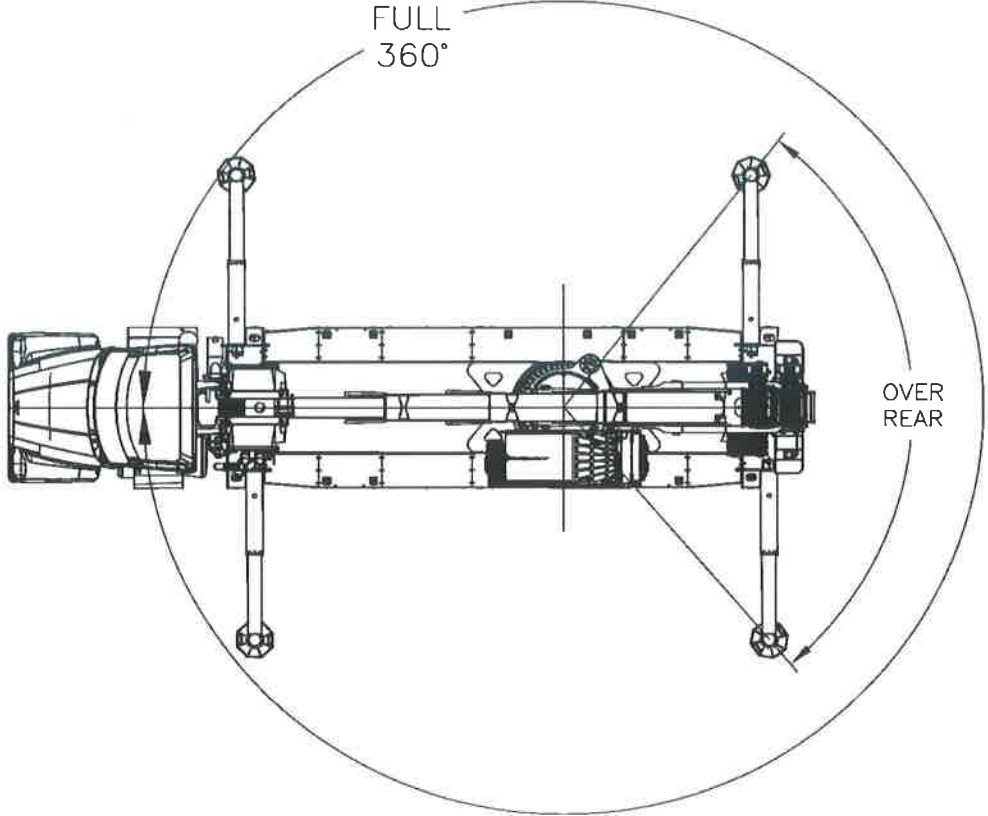
RANGE DIAGRAM



AREA OF OPERATION

ALLOWABLE LINE PULL											WARNING
1 PART LINE	2 PART LINE	3 PART LINE	4 PART LINE	5 PART LINE	6 PART LINE	7 PART LINE	8 PART LINE	9 PART LINE	10 PART LINE	11 PART LINE	
											ANTI-TWO-BLOCK SYSTEM MUST BE IN GOOD OPERATING CONDITION BEFORE OPERATING CRANE. REFER TO THE OWNER'S MANUAL. KEEP AT LEAST 3 WRAPS OF LOAD LINE ON THE DRUM AT ALL TIMES. 5/8" ROT RESISTANT (5:1 SF) 61,200 LBS MIN BREAKING STRENGTH
12000 LBS	24000 LBS	36000 LBS	48000 LBS	60000 LBS	72000 LBS	84000 LBS	96000 LBS	108000 LBS	120000 LBS	132000 LBS	

AREA OF OPERATIONS



DEDUCTIONS FROM RATED LOADS FOR LOAD HANDLING DEVICES SUPPLIED BY MANITEX	
AUXILIARY BLOCK	50 LBS
AUXILIARY (ROOSTER) SHEAVE	70 LBS
LIFTING FROM MAIN BOOM WITH JIB STOWED OR ERECTED	SEE LOAD CHART
OVERHAUL BALL	SEE MANUFACTURER NAMEPLATE
LOAD BLOCK	SEE MANUFACTURER NAMEPLATE

Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

TECHNICAL DESCRIPTIONS

Boom



Boom lengths: Proportional boom

- 4-section 131 ft.

4-Sheave load quick reeve boom point with 2 idler reeve boom points.
Self lubricating slider pads



Boom max. tip height 60131: 142 ft. (43,3 m)



Boom angle (min/max): -6° / 80°

Rotation



Ball-bearing swing circle with external gear Double-reduction planetary gearbox driven by hydraulic motor



Slewing brake: Spring-applied pressure released automatic brake and Free Swing and Non-Free Swing selection from the operator's keypad.



Slewing speed: 1.5 - 2 rpm. (nominal)
Boom rotation: 360° continuous

Outriggers



Outriggers: Out-and-down style
Outrigger monitoring system (for verification only)
Outrigger motion alarm
Full extension

- Front and rear: 24.5 ft. (7,5 m)

Middle extension

- Front and rear: 17.5 ft. (5,3 m)

Full retraction

- Front and rear: 7.8 ft. (2,4 m)



ROC Solid - Radio operated handheld controller for outrigger, winches and FBS setup
Crane is shipped with the boom radio remote ready.

Operator aids



Externally routed A2B cable. Color graphic display with LMI crane function cut-offs for overload protection, event recorder and WADS-Work Definition System.
HDRI - Hoist Drum Rotation Indicator

Hoist, Rope and Hook



Maximum theoretical line speed: 453 fpm (138 mpm)



Maximum theoretical bottom-layer line pull: 13,050 lbs. (5,919 kg) Limited to 10,000 lbs.



Main winch cable diameter: 5/8 in. (15,9 mm) rotation resistant



Line length: 60131 - 500 ft. (152 m)



Main winch: Bent axis 2-speed hydraulic motor (activated electrically)
Optional Third Wrap Limiter on both Main and Auxiliary Winch



Hook and Ball: 7T (6,4 mt) capacity hook with heavy-duty swivel and weight is provided for single line operation

Hydraulics



8-bolt direct mounted PTO and SAE C output (factory mounted units only)
1-Section Variable Displacement Piston Pump, SAE C input
Piggy back Fixed Gear Pump
Hydraulic Reservoir capacity: 115 Gallon-155 Gallon Pump Sections @ 2000 RPM with 100 PSI

- Variable Displacement Pump: 77 GPM (291 lpm)
- Fixed Displacement Gear Pump: 12 GPM (45 lpm)
- Optional Front Bumper Stabilizer

Tiltable Cab/Cab Controls



Standard features:
Curved glass, 0° to 20° cab tilt, Sliding door, heated cloth seat, 8 seat adjustments, lumbar support, reclining and adjustable head rest, sliding windows, rear pop out window, top hinged hatch, with guard, front and top windshield wipers, heater, air conditioning, 12 volt DC outlet, USB ports, engine monitoring system, E-coated cab



Controls:
PLC crane controller, CANBUS communication, J1939 truck engine communication, electric hand and foot throttle, twin dual axis joysticks, electric/hydraulic valve actuation, electronic sensor monitoring, Hirschmann/PAT or 3B6 LMI system available, wired ATB and wired wind speed sensors, telematics, GPS monitoring, remote diagnostic capability, Work Area Definition (WADS)

TECHNICAL DESCRIPTIONS

Boom



Boom max. tip height 60131: 142 ft. (43,3 m)

Maximum Boom Length with Jib



60131

- Max boom length with extension: 181' (15,2 m)

Maximum Boom Length with Minimum Extension



60131

- Max tip height with extension retracted: 171 ft. (52,1 m)

Maximum Tip Height with Maximum Extension



60131

- Max tip height with extension: 194 ft. (59,1 m)

Hoist, Rope and Hook



Rooster sheave
Wireline options available
2nd overhaul ball available



Auxiliary lower sheave block for 2-9 part lines
Load blocks 1-7, 4-8, 2-8, 9-10 part lines

Removable Counterweights



- Removable Counterweights 10,000 - 1,250 lbs.

OPTIONS

Cab



Video camera (1 or 2)
Cab weather band bluetooth radio system
Wired wind speed indicator
Cab Step Light
Perimeter Lighting
Strobe Light
Cab Go-light
Utilization light

Operator Aids



4-function radio remote crane control system with joy sticks (crane is radio remote ready)

- 900 Mhz
- 433 Mhz

Wired Wind Speed Sensor Option (consult factory)

Tool Boxes & Platforms

Tool Boxes

- 24 " L x 18" w x 18" H - Steel (610 mm L x 457 mm W x 457 mm H)
- 48 " L X 24" W x 24" H - Aluminum (1219 mm L x 610 mm W x 610 mm H)
- 48 " L X 24" W x 24" H - Aluminum Top MTD-Swing Door (1219 mm L x 610 mm W x 610 mm H)

Auxiliary Winch



Auxiliary Winch Bent axis 2-speed hydraulic motor (activated electrically)
With drum rotation indicator third Wrap Limiter on both Main and Auxiliary Winch



TC600

60-ton (54, 4 mt) TC600 SERIES
PRODUCT GUIDE



Uptime is the Manitex commitment to complete support of thousands of units working every day.

MANITEX

3000 South Austin Avenue
Georgetown, Texas 78626

1-877-314-3390 | www.Manitex.com

Technical data can be supplied without prior notice

MTX-TC600-ENG-V1-092019