

Manitex

(END)

Manitex

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

TC60131

(909) 222-0202

www.reliablecraneservice.com

260 North Smith Ave. Corona, CA 92880

# CONTENTS

# Crane Features Crane Features . 60131 Load Chart: Main Boom ...... 8-10 60131 Load Chart: Main Boom & Jib ..... 11 Range Diagram ......12 Area of Operation ...... 13



Effective Date: October 2019 This document is non-contractual. This document is supplied for reference use only. We are constantly making improvements to our products and reserve the right that specification, equipment, and prices are all subject to change without notice or obligation. The photographs, and /or images

in this document are for illustrative purposes only and may include optional equipment and accessories and may not include all standard equipment. Refer to the appropriate Operator's

Manual and Load Charts for instructions on the proper use of this equipment to determine allowable crane lifting capacities, assembly and operating procedures.

Failure to follow the appropriate operator's manual or load chart(s) when using our equipment or to otherwise act irresponsibly may result in serious injury or death.

The only warranty applicable to our equipment is the standard written warranty applicable to the particular product and sale. Manitex makes no other warranty, expressed or implied.

2

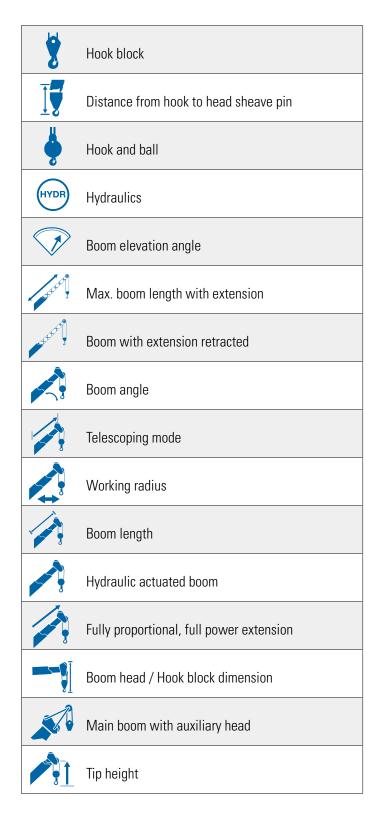
Products and services listed may be trademarks, service marks or tradenames of Manitex International and / or its subsidiaries in the USA and other countries.

All rights are reserved. Manitex® is a registered trademark of Manitex International, Inc. in the USA and many other countries Copyright 2019 Manitex Inc. Manitex Inc, Georgetown Texas, 78626



# 

	Operator aids								
	Cab								
<u> </u>	Heating / Air conditioning								
<b>1</b>	Controls								
$\langle \mathbf{O} \rangle$	Hoist speed								
	1 - Main hoist 2 - Auxiliary winch 3 - Recovery winch								
	Rope length								
•	Rope - Standard/optional								
•••	Rope diameter								
+• <b>••••</b> ••	Permissible line pull								
	Maximum line pull								
$\bigcirc$	Slewing / Allowable slewing range								
$\overline{\mathbf{O}}$	Slewing gears								
	Slewing brake								
<u>1</u>	Outriggers								
<u>i</u>	2-Person man basket								
	Counterweight								
÷	Radio remote control								





# **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.

#### **NEW COMBINED RADIO REMOTE NEW CAB**



### **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.



\_\_\_\_\_\_

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.

# 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° Tiltable cab
- 4-position out-and-down outriggers
- Remote outrigger controls

### **TELEMETICS**



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.

# 

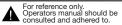


#### **CAB UPGRADES FOR EASIER OPERATOR CONTROL**



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

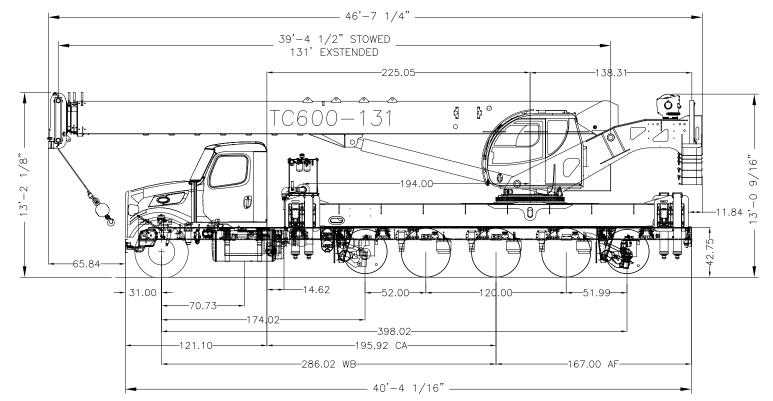
# 2

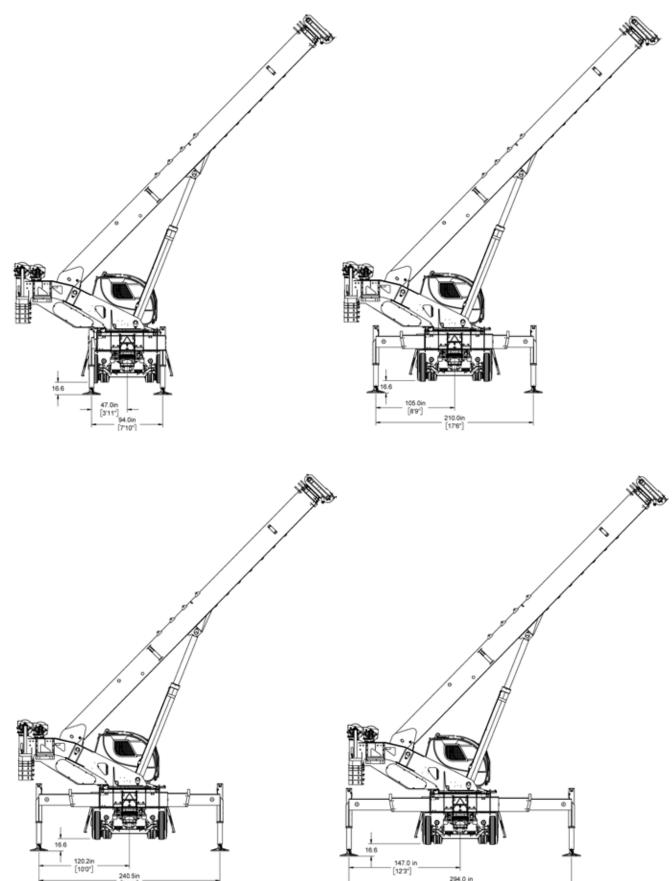
# CRANE SERVICE

# **60131 CHASSIS DATA**

# 

Dimensions





# **CHASSIS DATA**

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

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

### **TRUCK AXLE WEIGHT**

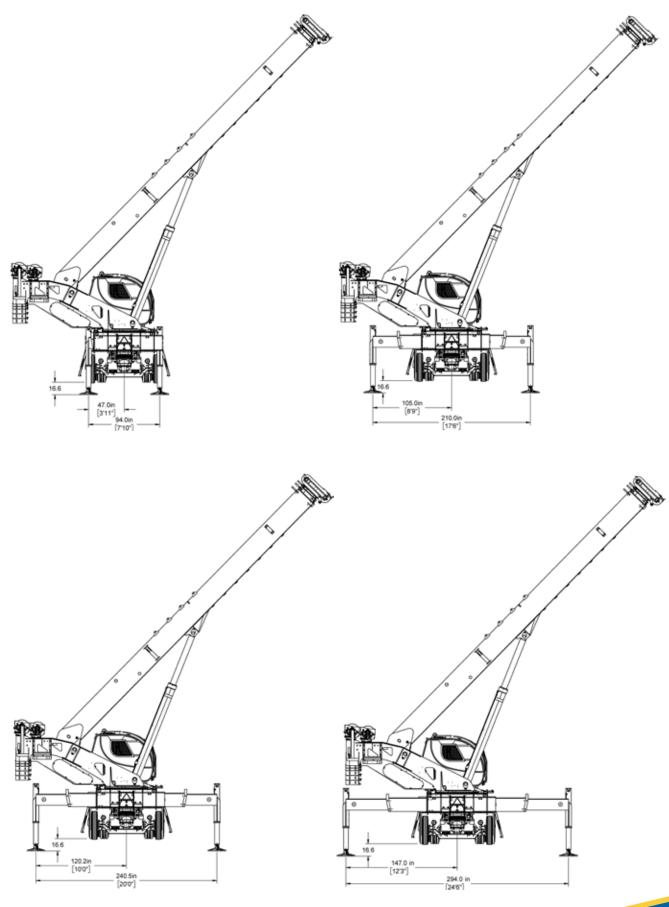
Model	60131
Min. truck axle W - Front**	10,750 lbs. (4876 kg)
Min. truck axle W - Rear**	12,300 lbs. (5,579 kg)
Nominal Frame W	34 in. (864 mm)

\*\* 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.

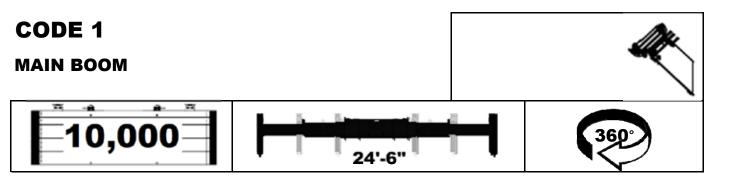


Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

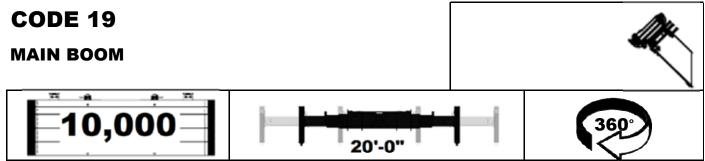
For reference only. Operators manual should be consulted and adhered to.

# 60131 LOAD CHART: Main Boom

# 60131 LOAD CHART: Main Boom



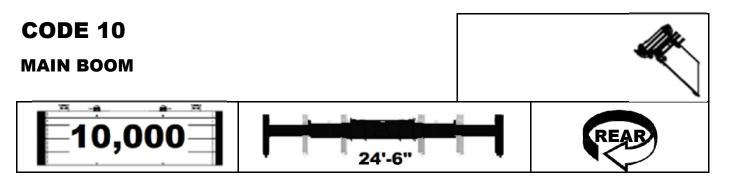
LOAD RADIUS (FT)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	ANGLE	LIFTING CAP. (LBS)	LOAD RADIUS
LENGT	н 74°	<b>38.5 FT</b> 120000	5	53 FT	e	56 FT	4	79 FT	Į	92 FT	1	05 FT	118 FT		131 FT		(FT) 6
8	74 70°	120000															8
10	70 67°	120000	74°	80000	77°	73200											
10	64°	95630	71°	80000	76°	68990	78°	54510									10
12	59°	84050	68°	74250	73°	62490	76°	49640	79°	38040							12
20	50°	65540	62°	62410	68°	53070	70°	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									1				29°	4310	39°	4440	100
105									7				23°	3670	36°	3800	105
110													14°	3080	31°	3230	110
115			$\leq$												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	
NS BOC		1570	570 1140 920 770 660		660		580	520			460	STOWED					
		3510 3240 3100 3010 2940		2940	2890			2850		2820	RET						
		3910		3530		3340		3200		3110	3040		2980		2940		EXT
FOF CAF		2620		2420		2320		2250		2200		2170	2140		2120		FIXED



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
LENGT	Н	38.5 FT	{	53 FT	(	66 FT	79 FT		92 FT		105 FT		118 FT		131 FT		(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	4 <mark>3°</mark>	2400	95
100									1				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
WC	0°	25300	0°	12800	0°	7750	0°	4900	0°	3000	0°	1650	0°	650	0°	600	
BOC		1570		1140		920		770		660		580	520		460		STOWED
AIN STIO		3510		3240		3100		3010		2940	2890		2850		2820		RET
DEDUCTIONS FOR MAIN BOOM CAPACITIES	3910			3530		3340	340 3200		3110		3040		2980		2940		EXT
FO CA		2620		2420		2320		2250		2200		2170	2140		2120		FIXED

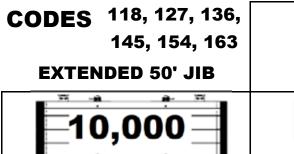
For reference only. Operators manual should be consulted and adhered to.

# 60131 LOAD CHART: 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
LENGT	-	38.5 FT	5	53 FT	6	66 FT	7	79 FT		92 FT		05 FT	1	18 FT	131 FT		(FT)
6	74°	120000															6
8	70°	120000	- 10														8
10	67°	104870	74°	80000	77°	73200											10
12	64°	95630	71°	80000	76°	68990	78°	54510	700	00040							12
15	59°	84050	68°	74250	73°	62490	76°	49640	79°	38040	700						15
20	50°	65540	62°	62410	68°	53070	72°	43090	75°	33510	78°	28990		00040			20
25	40°	50810	55°	51800	63°	46050	69°	37560	72°	29440	75°	25810	77°	22810	770	10100	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° 52°	26450 24040	62°	21000	66°	18910	70° 67°	17110	73°	15360	40
45			18°	24140	41°	24840	_		58°	18920	63°	17130		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 65					18°	13960	35°	15480	46°	14210	54°	12920	59°	12100	63°	11110	60 65
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
100 105													29° 23°	5870 5180	39° 36°	5720 5250	100 105
110													14°	4560	31°	4690	110
115															26°	4140	115
120															19°	3630	120
125															6°	3140	125
130	00	00700	00	40750	00	40750	<u>^</u>	0400	00	7050	~	4500	00	0750	~		130
SOV SOV	0°	30700	0°	19750	0°	13750	0°	9100	0°	7350	0°	4500	0°	3750	0°	600	07014/55
N BC		1570		1140		920		770		660		580	520		460		STOWED
VAIN		3510		3240		3100		3010		2940	2890		2850		2820		RET
DEDUCTIONS FOR MAIN BOOM CAPACITIES		3910		3530		3340		3200		3110	3040		2980		2940		EXT
ЫЧО		2620		2420		2320		2250		2200		2170		2140		2120	FIXED

# 60131 LOAD CHART: Main Boom & Jib

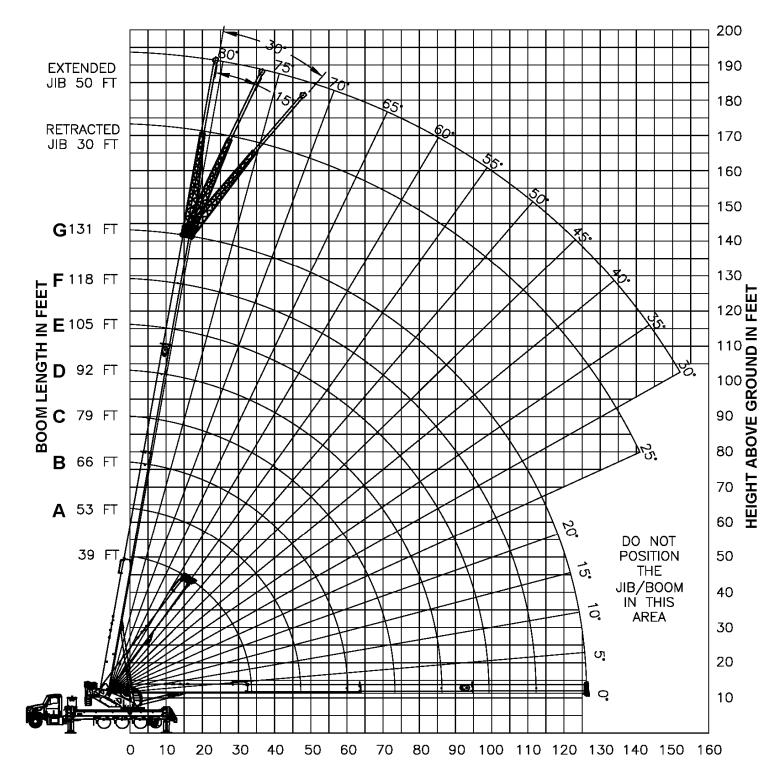


		,	_			24'-6"				$\mathcal{D}$				
		0° OFFSE	Т	Γ	15° OFFSE	T		30° OFFSET						
		CODE 145	CODE 118		CODE 154	CODE 127		CODE 163	CODE 136	1				
LOAD RADIUS (FT)	BOOM ANGLE (DEG)	OVER REAR (LBS)	FULL 360° (LBS)	BOOM ANGLE (DEG)	OVER REAR (LBS)	FULL 360° (LBS)	BOOM ANGLE (DEG)	OVER REAR (LBS)	FULL 360° (LBS)	LOAD RADIUS (FT)				
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				

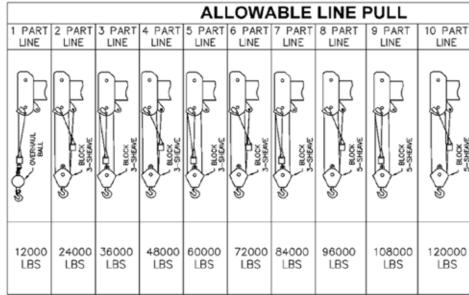
For reference only. Operators manual should be consulted and adhered to.

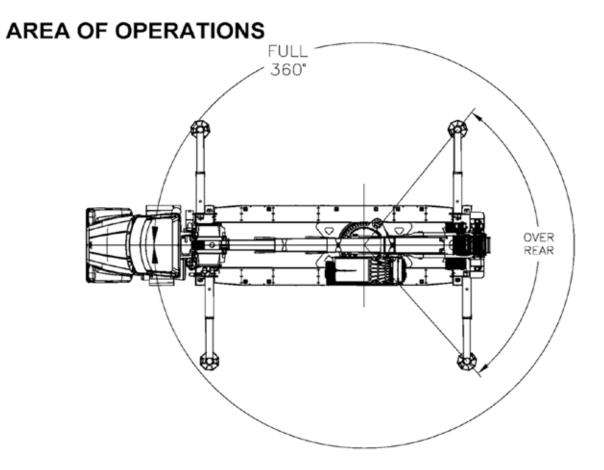


# RANGE DIAGRAM



# 





#### DEDUCTIONS FROM RATED LOADS FOR LOAD HANDLING DEVICES SUPPLIED BY MANITEX

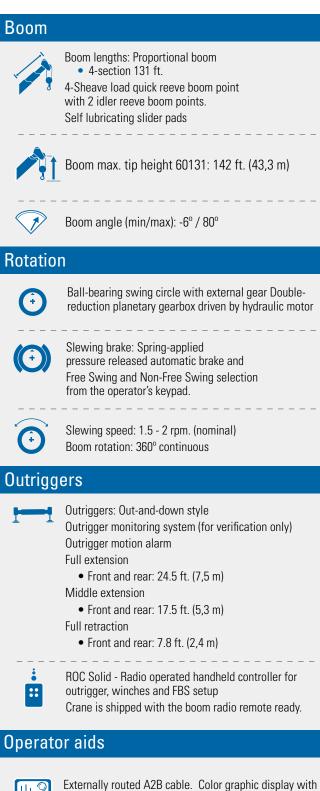
AUXILIARY BLOCK	50 LBS
AUXILIARY (ROOSTER) SHEAVE	70 LBS
LIFTING FROM MAIN BOOM WITH JIB STOWED OR ERECTED	SEE LOAD CHART
OVERHAUL BALL	SEE MANUFACTURER NAMEPLATE
LOAD BLOCK	SEE MANUFACTURER NAMEPLATE

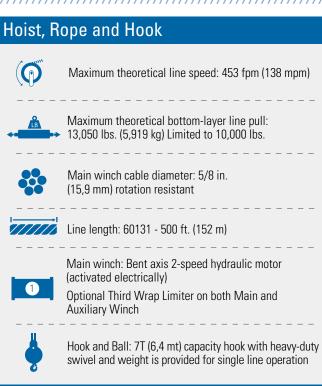
Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

For reference only. Operators manual should be consulted and adhered to.

WARNING 11 PART LINE LINE LINE LINE ANTI-TWO-BLOCK SYSTEM MUST BE IN GOOD OPERATING CONDITION BEFORE OPERATING CRANE REFER TO THE OWNER'S MANUAL. BLOCK KEEP AT LEAST 3 WRAPS OF LOAD LINE ON THE DRUM AT ALL TIMES. 5/8" ROT RESISTANT 96000 108000 120000 132000 (5:1 SF) 61,200 LBS MIN BREAKING LBS LBS LBS LBS STRENGTH

# **TECHNICAL DESCRIPTIONS**





#### 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 Reservior 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

Curved glass, 0° to 20° cab tilt, Sliding door,

### Tiltable Cab/Cab Controls



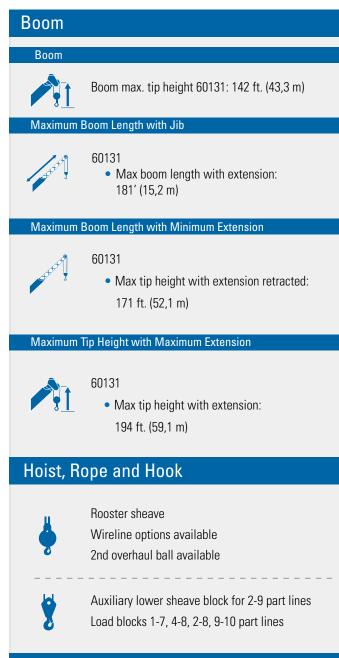
heated cloth seat, 8 seat adjustments, lumbar support, reclining and adjustable head rest, sliding windows, rear pop out window, top hinged hatch, with guard, front and top windshield wipers, heater, air conditioning, 12 volt DC outlet, USB ports, engine monitoring system, E-coated cab

#### Controls: 111



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**



#### **Removable Counterweights**

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

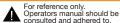
Data published herein is intended as a quide only. Crane operation is subject to machine specific load charts and information.

LMI crane function cut-offs for overload protection,

event recorder and WADS-Work Definition System.

HDRI - Hoist Drum Rotation Indicator

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



#### Cab



Video camera (1 or 2) Cab weather band bluetooth radio system Wired wind speed indicator Cab Step Light Perimeter Lighting Stobe 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 (cosult 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)

# Auxilary Winch



Auxiliary Winch Bent axis 2-speed hydraulic motor (activated electrically)

With drum rotation indicator third Wrap Limiter on both Main and Auxiliary Winch

Manitex



TC60131

UPTime ,

Manite

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

echnical data can be revised without prior not



This information is for reference use only. Operators manual should be consulted and adhered to. Please contact Bigge Crane and Rigging Co. at 888-337-BIGGE or email info@bigge.com for further information.

