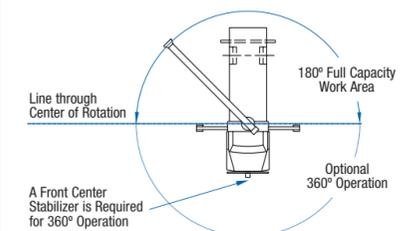


AREA OF OPERATION

ALLOWABLE LINE PULL

1 Part Line	2 Part Line	3 Part Line	4 Part Line	WARNING
				Anti-two-block system must be in good operating condition before operating crane. Refer to the owner's manual. Keep at least three wraps of load line on the drum at all times.
8,500 lb 3 856 kg	17,000 lb 7 711 kg	25,500 lb 11 567 kg	34,000 lb 15 422 kg	
7,400 lb 3 357 kg	14,800 lb 6 713 kg	22,200 lb 10 070 kg	29,600 lb 13 426 kg	.5625" ROTATION RESISTANT (5.0:1 SF) - 37000 lbs breaking strength

DEDUCTIONS

Load Block	See block manufacturer nameplate
Overhaul Ball	See overhaul ball manufacturer nameplate
Hose Reel	160 lb 72,57 kg
Swing Around Jib (Stowed)	See load rating chart

BOOM AND JIB COMBINATIONS

1747C	47'	3-Section Boom	18' - 30' 2-Section Jib
1761C	61'	3 Section Boom	23' - 40' 2-Section Jib
1770C	70'	3-Section Boom	23' - 40' 2-Section Jib
1781C	81'	4-Section Boom	23' - 40' 2-Section Jib

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series **1703**
BOOM TRUCKS

features

- 17 Ton (15,5 mton) Capacity
- 3-Section Proportional Booms 70' (21,3 m), 61' (18,6 m) and 47' (14,3 m)
- 4-Section 81' (24.7 m) Proportional Boom
- 131' 6" (40,1 m) Maximum Tip Height
- 2-Section, Telescopic Jibs 30' (9,1 m) and 40' (12,2 m)
- 2-Speed Layaway Planetary Hoist with Grooved Drum and Negative Draft Flange
- Radio ATB
- Removable Boom Rest
- Hydraulic Capacity Alert Warning System (HYCAS) - with Shutdown
- Optional Load Moment Indicator with Digital Display, CAN Bus, Overload Shutdown and Internal Boom Length Cable
- 20' 10" A-Frame Outriggers
- 10' A-Frame Rear Stabilizers
- Optional Front Bumper Stabilizer with Auto Retract Feature for 360° Area of Operation
- System Pressure Gauge
- Clamp-On Mounting
- Rugged Weatherproof Connectorized Electrical System. Circuit Status LED when Equipped with LMI Option.
- Manitex UPTime Comprehensive Support



product guide

series 1703

GENERAL SPECIFICATIONS

BOOM

Inverted T-cross section, 3 or 4-section telescoping type, extended and retracted proportionally by a double-acting hydraulic cylinder and cable-crowd system. Equipped with easily replaceable teflon-plugged nylatron wear pads for smooth operation.

1747C - 3-Section 19' 7.5" (6,0m) to 47'(14,3m)

1761C - 3-Section 24' 5" (7,4m) to 61' 5"(18,7m)

1770C - 3-Section 27' 3.5"(8,3m) to 70'(21,3 m)

1781C - 4-Section 24' 6" (7,5 m) to 81' (24,7 m)

Boom Point – Three non-metallic sheaves mounted on bronze bushings. Two removable pin-type rope guards.

Boom Elevation – Double-acting hydraulic cylinder. Working range from 8° below horizontal to 80° above.

Load Hook –5-ton (4,5 mton) capacity hook with heavy-duty swivel and weight is provided for single-line operation.

HOIST

Maximum theoretical line speed 300 fpm(91mpm). Maximum theoretical bottom - layer line pull 11,500lb (5 216 kg). Two-speed planetary reducer with wet multi-disc spring applied, pressure-released internal brake and grooved drum. The lay away hoist is mounted to the back of the boom assembly.

Wire Rope – For 81' and 70' booms; 300'(91,4m) of 9/16" (14,3 mm) diameter 6 x 37 EIPS IWRC. 47' and 61' booms are equipped with 244'(74,4m) of rope.

SWING SYSTEM

Externally mounted, double-reduction planetary ear-box driven by hydraulic motor. Maximum swing speed 1.5 rpm. Wet multi-disc is spring-applied, pressure released. Ball-bearing swing circle with external gear. 372° non-continuous rotation is standard.

OUTRIGGERS

A-frame link type, operated independently for precise leveling. Equipped with double-acting hydraulic cylinders. 11-1/2" (292 mm) x 15-5/8" (397 mm) pivoting pads. Bubble level located near outrigger controls.

MOUNTING

Pedestal and subframe are mounted to chassis by threaded rods and clamp plates. No welding, drilling or bolting to truck chassis is required.

Subframe – Torsion resistant, rigid 4-plate design mounted under crane full length of truck frame.

Rear Stabilizers – A-frame rigid design, clamp mounted under truck chassis by threaded rods and cross tube. Double-acting hydraulic cylinders operated independently for precise leveling. Fixed pad size 10-3/4" (273 mm) x 11-1/2" (292 mm) with flared leading edge.

Single Front Stabilizer (Option) – Mounted to truck frame at the front for 360° crane lifting operations. May require a full strength extended chassis depending on application, consult factory. Double acting hydraulic cylinder is equipped with an in-line relief valve to ensure proper float loading. Hydraulic circuit is operated from either operator station. Auto-retract feature automatically retracts the front stabilizer when the outriggers or stabilizers are retracted for traveling.

Rear Underride Protection – Supplied on factory mounted cranes. Fabricated structure mounted at rear of carrier. Complies with Bureau of Motor Carrier Safety Standard 393.86.

CONTROL SYSTEM

Dual operator stations are equipped with four single-lever crane controls arranged in accordance with ANSI B30.5 standards. Fully proportional control valves. A system pressure gauge is mounted on the driver's side console. Each station includes individual control levers for each outrigger and stabilizer for precise leveling. These control levers are shorter and positioned towards the center of the crane away from the main crane controls for added safety. Both control stations are equipped with engine start/stop, foot throttle, signal horn, boom angle indicator, load chart and range diagram. The pedestal is fitted with a ball mount on both sides for the moveable LMI display when this option is included.

HYDRAULICS

A 3-section pump direct-mounted to power take-off on truck transmission provides 35 gpm (132 lpm) to the hoist, 8.3 gpm (31 lpm) to the swing circuit and 18.3 gpm (69 lpm) to the remaining crane functions. A 70-gallon (265 liter) baffled hydraulic reservoir with strainer includes a 25-

micron filter in the return line. Ball-type shutoff valve and strainer are provided in suction line. Use of SAE O-ring and face seal O-ring hydraulic fittings throughout system.

Hydraulic Cylinders – All load-holding cylinders are equipped with integral holding valves.

WARNING SYSTEMS

Hydraulic Capacity Alert System (HYCAS) – Hydraulically senses boom hoist cylinder pressure, audio warning indicates overload condition and overload shutoff feature prevents continuing overload. This system is standard on this crane series.

Load Moment Indicator (LMI) – CAN bus system maximize expansion capabilities. Senses boom hoist cylinder pressure, boom length and boom angle. Audio-visual warning indicates overload condition and overload shutoff feature prevents continuing overload. Operator can access all load conditions via display at the operator station. Features an internal boom length cable. This system is an option on this crane series.

Radio Anti-Two-Block System – Audible warning and shutoff functions prevent hook from contacting boom point.

Back-Up Alarm – Electronic audible motion alarm activated when truck transmission is in reverse gear.

GENERAL

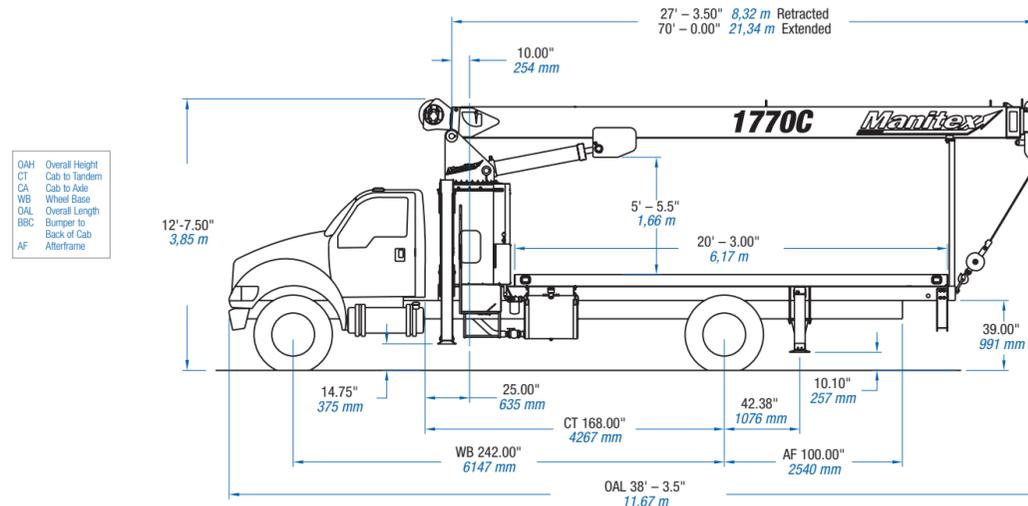
Electrical – State-of-the-art, weather-resistant components throughout. Environmentally sealed enclosure contains accessory circuit, terminal strips and relays. System is protected by a supplied in-line fuse. Designed to withstand high pressure washing and varying climates.

Design/Welding – Design conforms to ANSI B30.5. Welding conforms to AWS D1.1. Tested to SAE 1063 and SAE 765.

Manuals – Operator, service and parts manuals depict correct crane operation, maintenance procedures and parts listing.

Warranty – 12-month warranty covers parts and labor resulting from defects in material and workmanship.

* In order to ensure continuous improvement, specifications may change without notice.



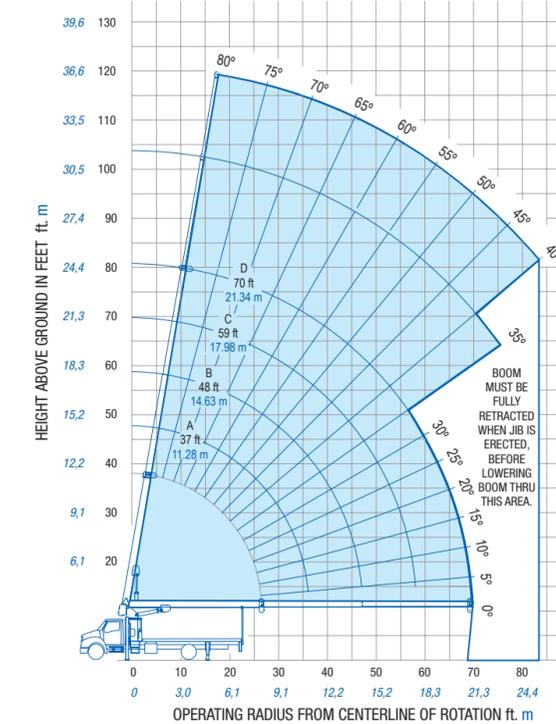
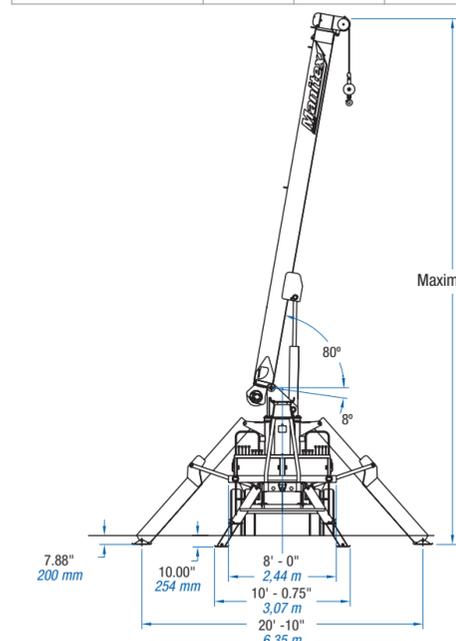
CHASSIS DATA	1747C	1761C	1770C	1781C
Wheelbase (WB)		236" 5 994 mm	236" 5 994 mm	236" 5 994 mm
Cab to Axle (CA)		168" 4 267 mm	168" 4 267 mm	168" 4 267 mm
After Frame (AF)		90" 2 286 mm	90" 2 286 mm	90" 2 286 mm
Frame Section Modulus at 180°/360° Area of Operation		15.9 in² 110,000 psi 758 422 kPa	15.9 in² 110,000 psi 758 422 kPa	15.9 in² 110,000 psi 758 422 kPa
Front Axle Gross Weight Rating	Consult Factory	12,000 lb 5 443 kg	12,000 lb 5 443 kg	16,000 lb 7 257 kg
Rear Axle Gross Weight Rating		21,000 lb 9 525 kg	21,000 lb 9 525 kg	34,000 lb 15 422 kg
Min. Truck Axle Weight - Front**		5,700 lb 2 585 kg	5,700 lb 2 585 kg	6,500 lb 2 948 kg
Min. Truck Axle Weight - Back**		3,900 lb 1 769 kg	3,900 lb 1 769 kg	6,500 lb 2 948 kg
Nominal Frame Width		34-35" 864-889 mm	34-35" 864-889 mm	34-35" 864-889 mm

*Frame section modulus at 360° area of operation requires front bumper stabilizer.
**Minimum chassis weight is required to meet 85% stability requirements.
Chassis data is general – not for engineering. Some dimensions depend on truck selection.

WEIGHTS	1747C	1761C	1770C	1781C
Total Crane Less Jib	11,483 lb *** 5 208 kg	15,916 lb 7 219 kg	16,611 lb 7 535 kg	18,116 lb 8 217 kg
Telescopic Jib 18' (5,49 m) - 30' (9,14 m)	375 lb 170 kg	-	-	-
Telescopic Jib 23' (7,01 m) - 40' (12,19 m)	-	800 lb 363 kg	800 lb 363 kg	800 lb 363 kg
Flatbed 18' (5,49 m)	-	1,550 lb 703 kg	-	1,550 lb 703 kg
Flatbed 20' (6,10 m)	-	-	1,907 lb 865 kg	-

*** For tractor mounts, weight shown is for Basic Machine less Jib, Bed, and Rear Stabilizer. For applications, consult factory.

MAX TIP HEIGHT	1747C	1761C	1770C	1761C
Configuration	Boom 47' 0" 14,3 m	Boom 61' 0" 18,6 m	Boom 70' 0" 21,3 m	Boom 81' 0" 24,7 m
Retracted Boom	31' 3" 9,5 m	35' 12" 11,0 m	38' 10" 11,8 m	36' 0" 11,0 m
Extended Boom	58' 3" 17,7 m	72' 5" 22,1 m	80' 10" 24,6 m	91' 9" 28,0 m
Fixed or Retracted Jib	76' 2" 23,2 m	95' 4" 29,1 m	103' 9" 31,6 m	114' 8" 35,0 m
Extended Jib	92' 11" 28,3 m	112' 1" 34,2 m	120' 6" 36,7 m	131' 5" 40,1 m



FULLY EXTENDED OUTRIGGER SPREAD: MODEL 1770C WITH LMI

Operating Radius	MAIN BOOM LOAD RATINGS																					
	27 Feet 8,23 Meters		37 Feet 11,28 Meters		48 Feet 14,63 Meters		59 Feet 17,98 Meters		70 Feet 21,34 Meters													
Feet	Meters	lb.	kg.	lb.	kg.	lb.	kg.	lb.	kg.	lb.	kg.											
5	1,52	79	34,000	15	4222																	
10	3,05	68	19,000	8	618	74	17,230	7	815	79	14,060	6	378	80	13,630	6	182					
15	4,57	56	13,270	6	019	66	12,280	5	570	73	9,790	4	441	78	9,380	4	255	80	9,090	4	123	
20	6,10	42	10,350	4	695	57	9,610	4	359	67	7,530	3	416	72	7,140	3	239	77	6,860	3	112	
25	7,62	21	7,840	3	556	47	7,860	3	565	60	6,100	2	767	67	5,750	2	608	72	5,490	2	490	
30	9,14					35	6,510	2	953	52	5,090	2	309	62	4,790	2	173	68	4,540	2	059	
35	10,67					16	5,000	2	268	44	4,310	1	955	56	4,070	1	846	63	3,850	1	746	
40	12,19									34	3,630	1	647	49	3,500	1	588	58	3,310	1	501	
45	13,71									20	2,860	1	297	42	3,010	1	365	53	2,870	1	302	
50	15,24													34	2,560	1	161	47	2,500	1	134	
55	16,76													22	2,060	934	41	2,160	980			
60	18,28																34	1,840	835			
65	19,81																24	1,500	680			
																				45	600	272
																				45	550	249

RATINGS BY BOOM ANGLE ONLY

JIB RATINGS											
Fixed Jib				Retracted Jib				Extended Jib			
23 Feet 7,01 Meters		23 Feet 7,01 Meters		23 Feet 7,01 Meters		40 Feet 12,19 Meters		23 Feet 7,01 Meters		40 Feet 12,19 Meters	
lb.	kg.	lb.	kg.	lb.	kg.	lb.	kg.	lb.	kg.	lb.	kg.
80	4,400	1	996	80	4,300	1	950				
75	3,500	1	588	75	3,400	1	542				
70	2,800	1	270	70	2,700	1	225				
65	2,200	998	65	2,100	953	80	2,500	1	134		
60	1,900	862	60	1,800	816	75	1,900	862			
55	1,500	680	55	1,400	635	70	1,600	726			
50	1,300	590	50	1,200	544	65	1,300	590			
45	1,200	544	45	1,000	454	60	1,000	454			
40	1,100	499	40	900	408	55	850	386			
35	900	408	35	700	318	50	750	340			

Meets ANSI B30.5 Requirements - Do not operate crane or accessories within 10' (3,05m) of live power lines. NOTICE: This chart is for reference only and must not be used for lifting purposes. Consult factory for other boom options.