

## features

- 40 Ton (36,3 mton) Capacity
- Self-Lubricating Boom Slider Pads
- 3-Section 77' (23,5 m) Proportional Boom
- 4-Section 100' (30,5 m) Proportional Boom
- 5-Section 124' (37,8 m) Proportional Boom
- 1 and 2-Section Jib 30' 6" (9,3 m) to 55' (16,8 m)
- 187' (57 m) Maximum Tip Height
- Continuous Rotation
- Retracted, Intermediate and Fully Extended Outrigger Charts are Standard
- Pilot Operated Controls with Optional Free Swing
- 2-Speed Planetary Hoist with Grooved Drum, Negative Draft Flange and Cable Roller.
- Auxiliary Hoist Option
- Hoist Drum Rotation Indicator
- Load Moment Indicator with Digital Display, CANbus system interface, Overload Shutdown and Internal Boom Length Cable
- Radio Anti-Two-Block System
- Rugged, Weatherproof Electrical System with Circuit Status LEDs
- Optional Cab with Diesel Heater, Air Conditioner Option available
- System Pressure Gauge
- Clamp-On Mounting
- Design meets ANSI B30.5 Recommendations
- Manitex UPTIME Comprehensive Support



# series 4002

## GENERAL SPECIFICATIONS

### BOOM

Inverted T-cross section, 3, 4, or 5-section telescoping type, extended and retracted proportionally by a double-acting hydraulic cylinder and cable-crowd system.

**4077S/SHL** – 3-Section, 29'5" (9m) to 77' (23,5m).

**40100S/SHL** – 4-Section, 30' 6" (9,3 m) to 100' 0" (30,5 m). 2-section, 31' (9,5 m) to 55' (16,8 m) jib option.

**40124S/SHL** – 5-Section, 30' 10" (9,4 m) to 123' 6" (37,6 m). 1-section, 31' (9,5 m) jib or 2-Section, 30' 6" (9,3 m) to 55' (16,8 m) jib option.

**Quick Reeve Boom Point** – Five high-density nylon load sheaves mounted on heavy-duty roller bearings. Removable pin-type rope guards.

**Boom Elevation** – Double-acting hydraulic cylinder. Working range from 10° 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

**Main Hoist** – Maximum theoretical line speed 453 fpm (138 mpm). Maximum theoretical bottom-layer line pull 13050 lb (5 919 kg). Two-speed planetary reducer with wet multi-disc spring applied, pressure-released internal brake and grooved drum.

**Auxiliary Hoist** (Option) - Same as Main

**Wire Rope** – 380' (115,8 m) of 5/8" (16 mm) diameter rotation resistant type.

### SWING SYSTEM

Continuous rotation, free swing system assists in tandem lifting and centering of boom over loads. Externally mounted, double-reduction planetary gearbox driven by hydraulic motor. Equipped with a dual brake system; spring-applied hydraulically-released Parking Brake and a foot actuated Dynamic Service brake. Ball-bearing swing circle with external gear.

### OUTRIGGERS

Out-and-down style outriggers, operated independently for precise leveling. Fully extended, intermediate extension and fully retracted positions. 16" (406 mm) diameter floats. Bubble level located near outrigger controls.

**Front Bumper Stabilizer** - Single stabilizer assembly mounted at the front of the truck; maximum float load is controlled by preset

counterbalance valve to prevent overloading the stabilizer. This feature requires truck front frame extensions, consult factory.

The front stabilizer is a required option for the SHL models. Option is also available for S models

### MOUNTING

Lower frame is mounted to chassis by threaded rods and clamp plates. No welding, drilling, or bolting to truck frame is required.

**Lower Frame** – Torsionally resistant, rigid 4-plate design with integrated outriggers and pedestal.

**Rear Underride Protection** – Supplied on factory-mounted cranes. Fabricated structure mounted under rear of crane. Complies with Bureau Motor Carrier Safety Standard 393.86.

**Boom Rest** – Heavy-duty fabrication. Easily removed to simplify loading and unloading truck deck.

### CONTROL SYSTEM

Single operator platform and seat mounted to turret. Four "pilot operated" single-axis crane controls provide precise metering and multifunction capability; winch control fitted with hoist drum rotation indicator (**HDMI**). Controls are arranged in accordance with ANSI B30.5 standards.

The operator station also includes engine start/stop, air foot throttle, signal horn, load moment indicator display, boom angle indicator, load chart, range diagram and the Manitex ACCUSwing control that allows the operator to adjust swing speed up to a maximum of 2.0 rpm.

### CAB OPTION

Enclosed cab designed to easily install over standard operator platform. Standard features include diesel heater, top hatch with electric wiper and locking latches, front electric two-speed wiper, spray washer, fuse block, operator cooling fan, dome light, slider side and rear windows and two- position side door with keyed outside latch. Hydraulic Air Conditioner option available.

Cab option is required if configuring the crane with both Free Swing and an Auxiliary Hoist.

### HYDRAULICS

**Hydraulic System** – A 3-section pump direct-mounted to power take-off on truck transmission provides 41.7 gpm (158 lpm) to the hoist, 28 gpm (106 lpm) to the boom hoist and telescope circuit, and 12 gpm (45 lpm) to the swing and outrigger circuit. 100-gallon (379-liter) baffled reservoir includes suction ball valve with strainer and two 25-micron filters in the return 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

**Load Moment Indicator** – CAN bus system maximize expansion capabilities. Senses boom hoist cylinder pressure, boom length and boom angle. Audio-visual warning indicates overload conditions and overload shutoff feature prevents continuing overload. Operator can access all relative crane configuration and load conditions via display at the operator station. Internal boom length cable.

**Radio Anti-Two-Block System** – Audible warning and shutoff functions prevent hook from contacting boom point. Switch is potted to ensure reliability.

**Back-Up Alarm** – Supplied on factory-mounted cranes, electronic audible motion alarm activated when truck transmission is in reverse gear.

### GENERAL

**Electrical** – State-of-the-art, weather-resistant components throughout. Automotive style electrical system for easy installation. 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/maintenance and parts manuals depict correct crane operation, maintenance procedures and parts listing.

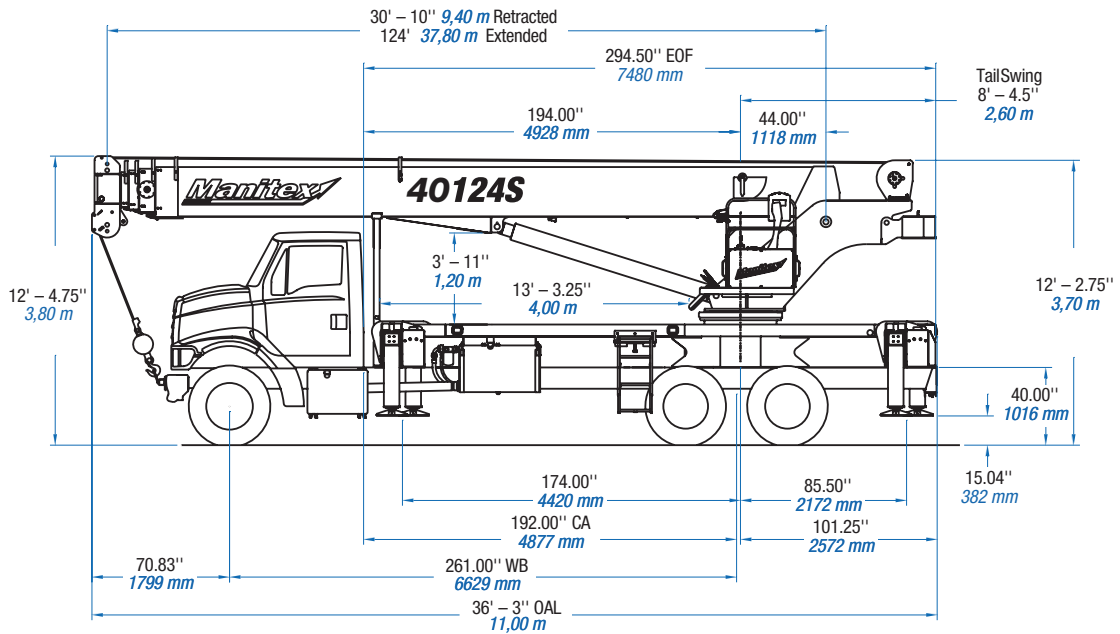
**Warranty** – 12-month warranty covers parts and labor resulting from defects in material and workmanship.

### Available Options

- Cab, includes diesel heater.
- Air conditioner for cab, hydraulic driven.
- 4-Function Radio Remote Controls - Boom Hoist, Swing, Telescope and Winch
- Two-Man Non-Rotating Gravity Leveled Basket
- Two-Man Rotating Gravity Leveled Basket
- Front Bumper Stabilizer
- Auxiliary Winch, same as main
- No Free Swing Option
- Vane Pump
- Steel Toolbox - 24" and 48" lengths

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

- OAH Overall Height
- CT Cab to Tandem
- CA Cab to Axle
- WB Wheel Base
- OAL Overall Length
- BBC Bumper to Back of Cab
- AF Afterframe
- EOF End Of Frame

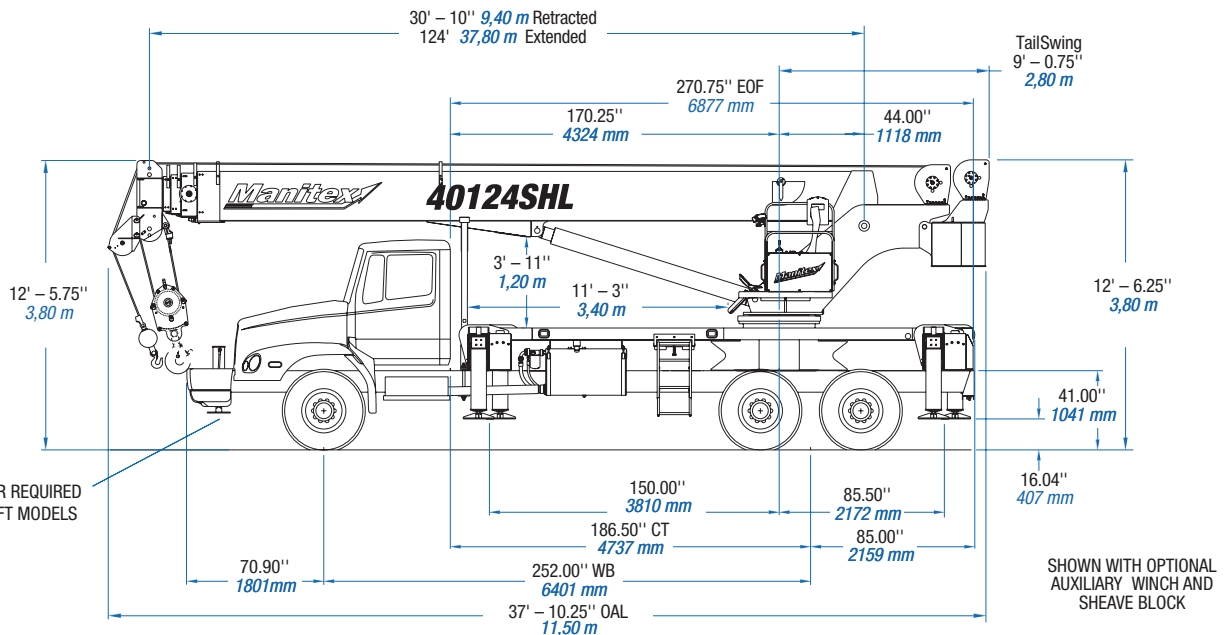


CHASSIS DATA	4077S 40100S	40124S	4077SHL/40100SHL 40124SHL
Front Axle Gross Weight Rating	<b>18,000 lb</b> <i>8 165 kg</i>	<b>20,000 lb</b> <i>9 072 kg</i>	<b>20,000 lb</b> <i>9 072 kg</i>
Rear Axle Gross Weight Rating	<b>40,000 lb</b> <i>18 144 kg</i>	<b>40,000 lb</b> <i>18 144 kg</i>	<b>44,000 lb</b> <i>19 958 kg</i>
Minimum Truck Axle Weight - Front**	<b>8,000 lb</b> <i>3 629 kg</i>	<b>9,200 lb</b> <i>4 173 kg</i>	<b>9,800 lb</b> <i>4 445 kg</i>
Minimum Truck Axle Weight - Back**	<b>8,300 lb</b> <i>3 765 kg</i>	<b>8,300 lb</b> <i>3 765 kg</i>	<b>8,000 lb</b> <i>3 629 kg</i>
Nominal Frame Width	<b>34"</b> <i>864 mm</i>	<b>34"</b> <i>864 mm</i>	<b>34"</b> <i>864 mm</i>

CHASSIS DATA	4077S 40100S	40124S	4077SHL/40100SHL 40124SHL
Wheelbase (WB)	<b>261"</b> <i>6 629 mm</i>	<b>261"</b> <i>6 629 mm</i>	<b>252"</b> <i>6 401 mm</i>
Cab to Tandem (CT)	<b>192"</b> <i>4 877 mm</i>	<b>192"</b> <i>4 877 mm</i>	<b>187"</b> <i>4 750 mm</i>
Cab to End of Frame (EOF)	<b>295"</b> <i>7 493 mm</i>	<b>295"</b> <i>7 493 mm</i>	<b>271"</b> <i>6 883 mm</i>
Frame Section Modulus at 180°/360° Area of Operation	<b>25.0 in<sup>3</sup></b> <i>110,000 psi</i> <i>758 422 kPa</i>	<b>25.0 in<sup>3</sup></b> <i>110,000 psi</i> <i>758 422 kPa</i>	<b>25.0 in<sup>3</sup></b> <i>110,000 psi</i> <i>758 422 kPa</i>

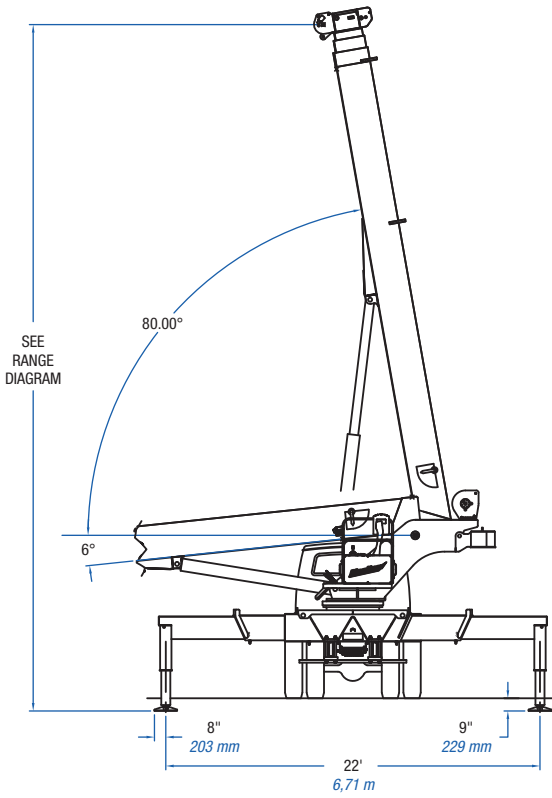
\*Frame section modulus at 360° area of operation requires front bumper stabilizer.  
 \*\*Minimum chassis weight is required to meet 85% stability requirements.  
 Chassis data is general – not for engineering. Some dimensions depend on truck selection.

- OAH Overall Height
- CT Cab to Tandem
- CA Cab to Axle
- WB Wheel Base
- OAL Overall Length
- BBC Bumper to Back of Cab
- AF Afterframe
- EOF End Of Frame

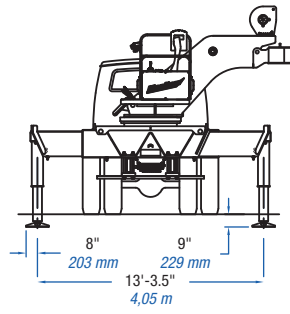


FRONT STABILIZER REQUIRED ON ALL HEAVY LIFT MODELS

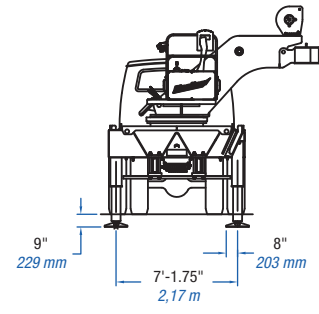
SHOWN WITH OPTIONAL AUXILIARY WINCH AND SHEAVE BLOCK



**FULL SPREAD**



**INTERMEDIATE SPREAD**

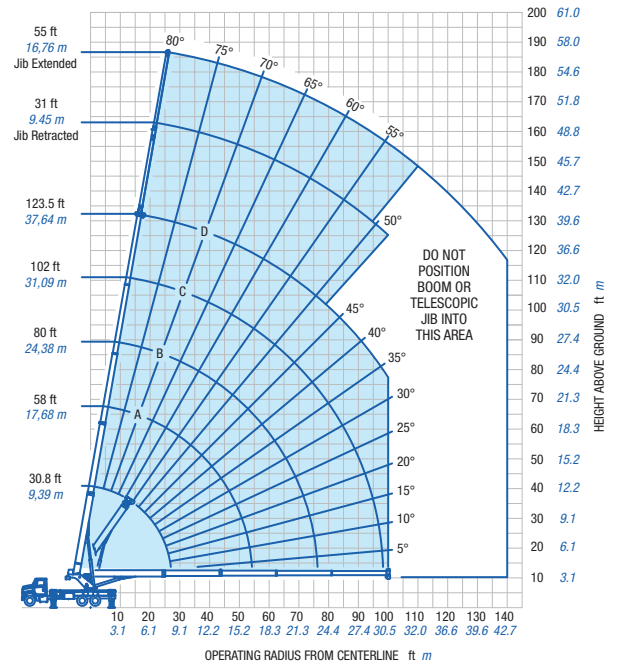
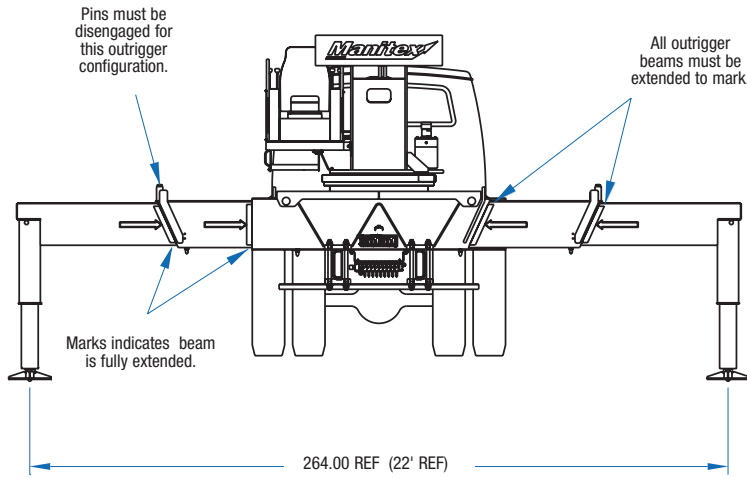


**RETRACTED SPREAD**

<b>MAXIMUM TIP HEIGHT</b>	<b>4077S/SHL</b>	<b>40100S/SHL</b>	<b>40124S/SHL</b>
<b>Configuration</b>	<b>Boom 77'</b> <i>23,5 m</i>	<b>Boom 100'</b> <i>30,5 m</i>	<b>Boom 124'</b> <i>37,8 m</i>
<b>Extended Boom</b>	<b>86' 5"</b> <i>26,3 m</i>	<b>109' 2"</b> <i>33,3 m</i>	<b>132' 4"</b> <i>40,3 m</i>
<b>Fixed or Retracted Jib</b>	—	<b>140' 0"</b> <i>42,7 m</i>	<b>163' 7"</b> <i>49,9 m</i>
<b>Extended Jib</b>	—	<b>164' 8"</b> <i>50,2 m</i>	<b>187' 0"</b> <i>57,0 m</i>

<b>WEIGHTS</b>	<b>4077S</b>	<b>40100S</b>	<b>40124S</b>	<b>4077SHL</b>	<b>40100SHL</b>	<b>40124SHL</b>
<b>Cab Alone</b>	<b>575 lb</b> <i>261 kg</i>	<b>575 lb</b> <i>261 kg</i>	<b>575 lb</b> <i>261 kg</i>	<b>575 lb</b> <i>261 kg</i>	<b>575 lb</b> <i>261 kg</i>	<b>575 lb</b> <i>261 kg</i>
<b>Crane without Cab</b>	<b>28,806 lb</b> <i>13 066 kg</i>	<b>29,733 lb</b> <i>13 847 kg</i>	<b>31,329 lb</b> <i>14 211 kg</i>	<b>34,535 lb</b> <i>15 664 kg</i>	<b>35,826 lb</b> <i>16 251 kg</i>	<b>37,246 lb</b> <i>16 895 kg</i>
<b>Flat Bed 10' (3,10 m)</b>	<b>1,000 lb</b> <i>454 kg</i>	<b>1,000 lb</b> <i>454 kg</i>	<b>1,000 lb</b> <i>454 kg</i>	—	—	—
<b>Flat Bed 8' (2,40 m)</b>	—	—	—	<b>750 lb</b> <i>340 kg</i>	<b>750 lb</b> <i>340 kg</i>	<b>750 lb</b> <i>340 kg</i>
<b>Fixed Jib 30' 6" (9,30 m)</b>	—	<b>1,126 lb</b> <i>511 kg</i>	—	—	<b>1,126 lb</b> <i>511 kg</i>	—
<b>Fixed Jib 31' (9,50 m)</b>	—	—	<b>850 lb</b> <i>386 kg</i>	—	—	<b>850 lb</b> <i>386 kg</i>
<b>Telescopic Jib 30' 6" - 55' (9,3 m - 16,8 m)</b>	—	<b>1,754 lb</b> <i>796 kg</i>	—	—	<b>1,754 lb</b> <i>796 kg</i>	<b>1,650 lb</b> <i>748 kg</i>

USE THIS CHART ONLY WHEN  
OUTRIGGERS ARE FULLY EXTENDED.

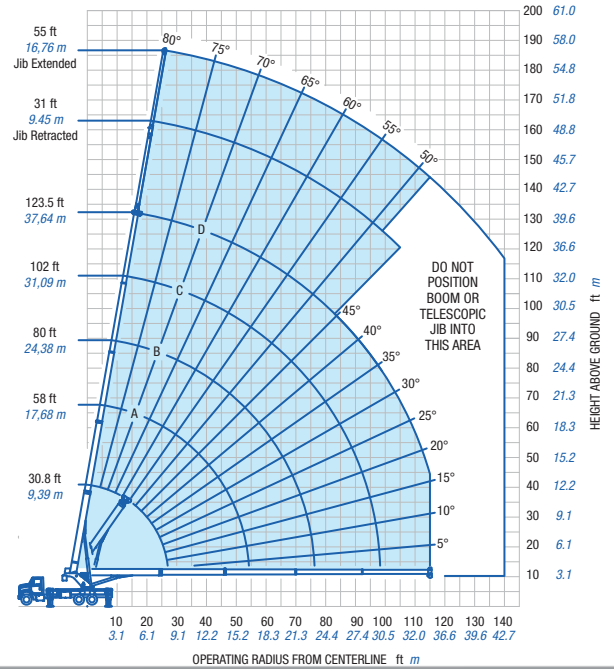
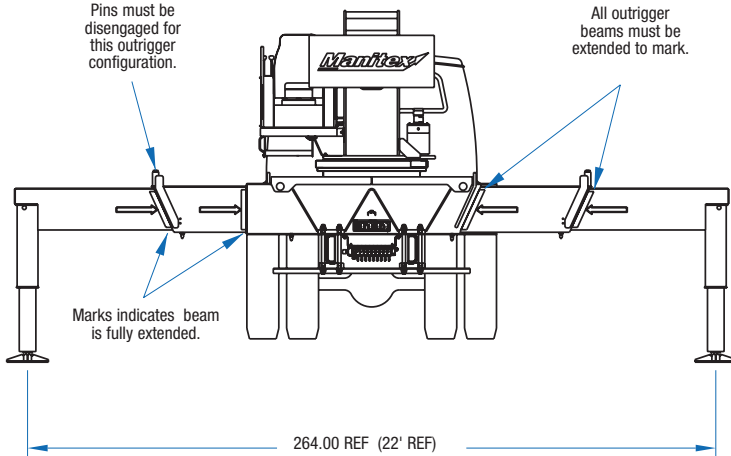


FULLY EXTENDED OUTRIGGER SPREAD: MODEL 40124S

		MAIN BOOM LOAD RATINGS										JIB LOAD RATINGS						
		Boom Length		A		B		C		D		Fixed		Telescopic				
Operating Radius	30.8 Feet 9,39 Meters		58 Feet 17,68 Meters		80 Feet 24,38 Meters		102 Feet 31,09 Meters		123.5 Feet 37,64 Meters		31 Feet 9,45 Meters		30.5 Feet 9,30 Meters		55 Feet 16,76 Meters			
	Ft	m	∠	lb.	kg.	∠	lb.	kg.	∠	lb.	kg.	∠	lb.	kg.	∠	lb.	kg.	
5	1,52		75	80,000	36 287													
8	2,44		69	60,500	27 442													
10	3,05		64	52,550	23 836													
12	3,66		60	46,600	21 137	75	25,000	11 340										
15	4,57		53	39,600	17 962	73	25,000	11 340	79	21,500	9 752							
20	6,10		40	30,300	13 744	67	25,000	11 340	75	19,700	8 936	80	14,500	6 577				
25	7,62		22	23,070	10 464	62	22,840	10 360	71	18,200	8 255	77	13,500	6 123	80	8,450	3 833	
30	9,14					56	18,670	8 469	67	16,250	7 371	74	12,820	5 815	78	8,150	3 697	
35	10,67					49	14,450	6 554	63	14,540	6 595	71	11,380	5 162	75	7,800	3 538	
40	12,19					42	11,190	5 076	59	11,490	5 212	68	10,160	4 608	72	7,280	3 302	
45	13,71					34	8,820	4 001	54	9,110	4 132	65	9,250	4 196	70	6,780	3 075	
50	15,24					23	7,030	3 189	50	7,340	3 329	61	7,480	3 393	67	6,160	2 794	
55	16,76								44	5,970	2 708	58	6,110	2 771	65	5,540	2 513	
60	18,28								39	4,880	2 214	54	5,020	2 277	62	5,000	2 268	
65	19,81								32	3,980	1 805	50	4,130	1 873	59	4,200	1 905	
70	21,34								24	3,230	1 465	46	3,390	1 538	56	3,460	1 569	
75	22,86								12	2,580	1 170	42	2,760	1 252	53	2,830	1 284	
80	24,38											37	2,220	1 007	50	2,300	1 043	
85	25,91											32	1,750	794	47	1,840	835	
90	27,43											25	1,340	608	43	1,430	649	
95	28,96											17	970	440	40	1,070	485	
100	30,48														35	750	340	
105	32,00																	
110	33,53																	
				450 lbs	204 kg		240 lbs	109 kg		180 lbs	82 kg		140 lbs	64 kg		120 lbs	54 kg	
				840 lbs	381 kg		450 lbs	204 kg		330 lbs	150 kg		260 lbs	118 kg		210 lbs	95 kg	
															FIXED			
															TELESCOPIC			
																		DEDUCTIONS FOR STOWED JIB

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.

USE THIS CHART ONLY WHEN  
OUTRIGGERS ARE FULLY EXTENDED.



FULLY EXTENDED OUTRIGGER SPREAD: MODEL 40124SHL

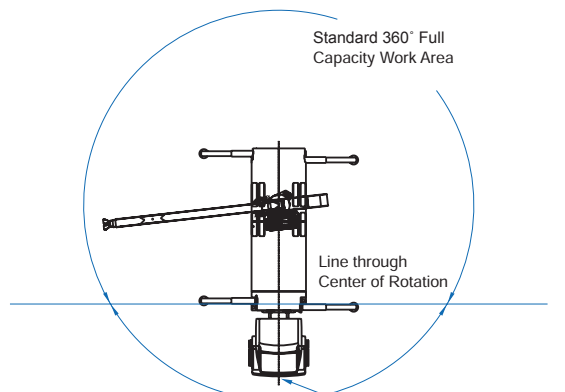
MAIN BOOM LOAD RATINGS

JIB LOAD RATINGS

Operating Radius	Boom Length		A		B		C		D		Fixed		Telescopic			
	30.8 Feet 9,39 Meters	58 Feet 17,68 Meters	80 Feet 24,38 Meters	102 Feet 31,09 Meters	123.5 Feet 37,64 Meters	31 Feet 9,45 Meters	30.5 Feet 9,30 Meters	55 Feet 16,76 Meters								
Ft m	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.		
5	80,000	36 287														
8	60,500	27 442														
10	52,550	23 836														
12	46,600	21 137	25,000	11 340												
15	39,600	17 962	25,000	11 340	21,500	9 752										
20	31,330	14 211	25,000	11 340	19,700	8 936	14,500	6 577								
25	24,100	10 932	22,840	10 360	18,200	8 255	13,500	6 123	8,450	3 833						
30			19,550	8 868	16,250	7 371	12,820	5 815	8,150	3 697	4,000	1 814	3,300	1 496		
35			16,100	7 303	14,540	6 595	11,380	5 162	7,800	3 538	3,850	1 746	3,300	1 496	2,450	1 111
40			12,900	5 851	13,070	5 928	10,160	4 608	7,280	3 302	3,700	1 678	3,300	1 496	2,450	1 111
45			10,540	4 781	10,800	4 899	9,370	4 250	6,780	3 075	3,550	1 610	3,300	1 496	2,450	1 111
50			8,720	3 955	9,000	4 082	8,430	3 824	6,160	2 794	3,400	1 542	3,300	1 496	2,450	1 111
55					7,570	3 434	7,620	3 456	5,540	2 513	3,250	1 474	3,300	1 496	2,450	1 111
60					6,400	2 903	6,530	2 962	5,000	2 268	3,080	1 397	3,300	1 496	2,450	1 111
65					5,430	2 463	5,570	2 527	4,520	2 050	2,910	1 320	3,070	1 392	2,420	1 097
70					4,610	2 091	4,760	2 159	4,090	1 855	2,750	1 247	2,750	1 247	2,260	1 025
75					3,900	1 769	4,060	1 842	3,700	1 678	2,600	1 179	2,380	1 079	2,110	957
80							3,470	1 574	3,350	1 520	2,460	1 116	2,050	929	1,940	880
85							2,940	1 334	3,020	1 370	2,320	1 052	1,760	798	1,750	793
90							2,480	1 125	2,560	1 161	2,170	984	1,500	680	1,580	716
95							2,060	934	2,150	975	1,930	875	1,260	571	1,440	653
100									1,790	812	1,720	780	1,050	476	1,280	580
105									1,460	662	1,530	694	850	385	1,100	499
110									1,160	526	1,350	612			930	421
115									880	399	1,200	544			770	349
120											1,020	463				
125											800	363				
	450 lbs	204 kg	240 lbs	109 kg	180 lbs	82 kg	140 lbs	64 kg	120 lbs	54 kg	FIXED		DEDUCTIONS FOR STOWED JIB			
	840 lbs	381 kg	450 lbs	204 kg	330 lbs	150 kg	260 lbs	118 kg	210 lbs	95 kg	TELESCOPIC					

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.

## AREA OF OPERATION



### WARNING

The machine must be level and the front tires must be in contact with the ground or the optional front bumper stabilizer must be set when operating in this area.

\* A front bumper stabilizer is required on all "SHL" machines.

## DEDUCTIONS

Auxiliary Block	<b>50 lb</b> <b>22,72 kg</b>
Load Block	<b>See block manufacturer nameplate</b>
Overhaul Ball	<b>See overhaul ball manufacturer nameplate</b>
Hose Reel	<b>260 lb</b> <b>117,93 kg</b>
Swing Around Jib (Stowed)	<b>See load rating chart</b>

## ALLOWABLE LINE PULL

1 Part Line	2 Part Line	3 Part Line	4 Part Line	5 Part Line	6 Part Line	7 Part Line	8 Part Line	<b>WARNING</b>
								<p><b>Anti-two-block system must be in good operating condition before operating crane.</b></p> <p><b>Refer to the owner's manual.</b></p> <p><b>Keep at least three wraps of load line on the drum at all times.</b></p>
<b>9,080 lb</b> <b>4 127 kg</b>	<b>18,160 lb</b> <b>8 254 kg</b>	<b>27,240 lb</b> <b>1 238 kg</b>	<b>36,320 lb</b> <b>16 509 kg</b>	<b>45,400 lb</b> <b>20 636 kg</b>	<b>54,480 lb</b> <b>24 763 kg</b>	<b>63,560 lb</b> <b>28 890 kg</b>	<b>72,640 lb</b> <b>32 949 kg</b>	
<b>10,000 lb</b> <b>4 536 kg</b>	<b>20,000 lb</b> <b>9 072 kg</b>	<b>30,000 lb</b> <b>13 608 kg</b>	<b>40,000 lb</b> <b>18 144 kg</b>	<b>50,000 lb</b> <b>22 680 kg</b>	<b>60,000 lb</b> <b>27 216 kg</b>	<b>70,000 lb</b> <b>31 751 kg</b>	<b>80,000 lb</b> <b>36 287 kg</b>	
								<p>.625" rot resistant (5.0:1 SF) - 45400 lb. min. breaking strength</p> <p>.625" 6 x 25 IWRC (3.5:1 SF) - 35000 lb. min. breaking strength</p>

## BOOM AND JIB COMBINATIONS

**4077S/SHL**                      **77'**                      **3 Section Boom**



**40100S/SHL**                      **100'**                      **4 Section Boom**                      **30' 6" to 55' 2- Section Jib**



**40124S/SHL**                      **124'**                      **5 Section Boom**                      **30' 6" to 55' 2- Section Jib**



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- Includes 24-7-365 parts assistance.
- Utilizes the efficiency of the Manitex Online Parts Search and Order System.
- Relies on Manitex's UPTrak support tracking system for performance analysis and resource allocation.
- Features REMan, Manitex's cost effective rebuild/exchange program.
- Provides expert service technicians for troubleshooting and site visits.
- Mandates training; at our facility and yours. It includes coordinated support from all component suppliers.
- Involves every Manitex team member in the support of every Manitex customer.

**What does UPTime mean to Manitex customers?**

***UPTime*** means reliability.

***UPTime*** means utilization.

***UPTime*** means profitability.



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