

features

- 38 Ton (34,5 mton) Capacity
- 5-Section 124' (37,8 m) Proportional Boom
- 4-Section 100' (30,5 m) Proportional Boom
- 3-Section 77' (23,5 m) Proportional Boom
- 1 and 2-Section 30' 6" (9,3 m) to 55' (16,8 m) Jib
- 165' 11" (50,6 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. Optional Aux Hoist
- Load Moment Indicator with Digital Display, CAN Bus, Overload Shutdown and Internal Boom Length Cable
- Radio ATB
- Rugged, Weatherproof Electrical System with Circuit Status LEDs
- Optional Cab and Heater
- System Pressure Gauge
- Clamp-On Mounting
- Self-Lubricating Slider Pads
- Manitex UPTIME Comprehensive Support



product guide

series 3802

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.

38100S/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.

38124S/SHL – 5-section 30' 10" (9,4 m) to 123' 6" (37,6 m). 1-section, 31' (9,5 m) jib.

3877S/SHL – 3-section, 29'5" (9m) to 77' (23,5m).

Quick Reeve Boom Point – Five high-density nylon load sheaves mounted on heavy-duty roller bearings. Two 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.

Optional Aux Hoist - Same as Main

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

SWING SYSTEM

Free swing continuous rotation system. 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. Manitex ACCUSwing control allows operator to adjust crane swing speed up to a maximum of 2.0 rpm.

Free swing not available when crane is equipped with Auxiliary winch option.

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.

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. Swing is further refined using Manitex ACCUSwing control to allow setting to individual operator preference. Optional free swing is available to assist in tandem lifting and centering of boom over loads. 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 and range diagram. Enclosed cab and heater are optional.

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.

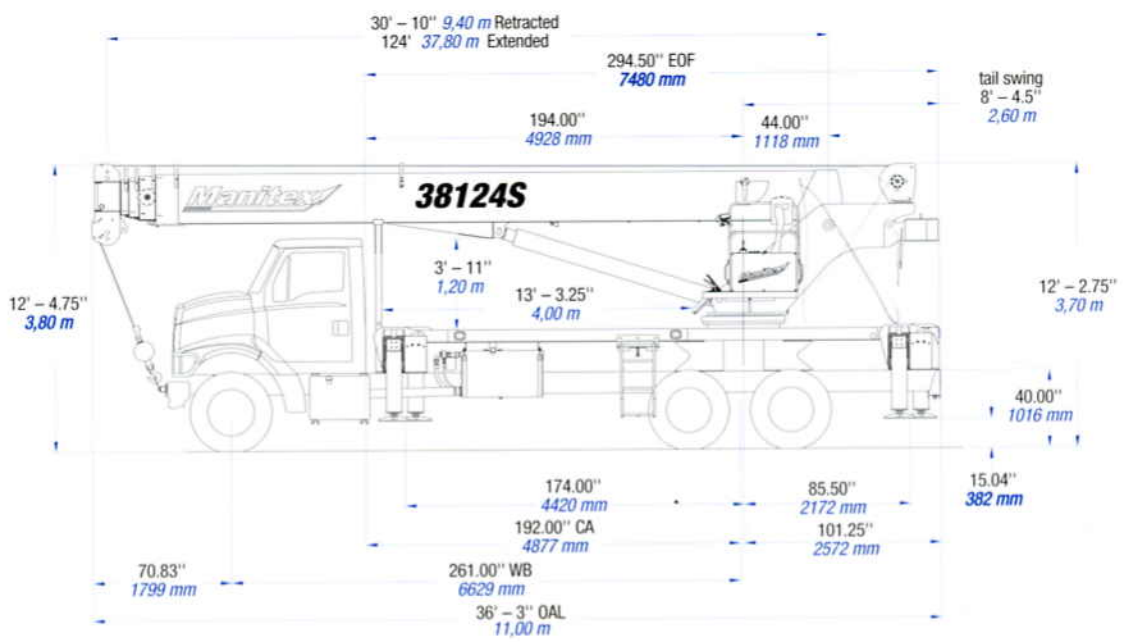
Design/Welding – Design conforms to ANSI B30.5. Welding conforms to AWS D1.1. Tested to SAE 1063 and SAE 765.

Manuals – Operator, 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.

- 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



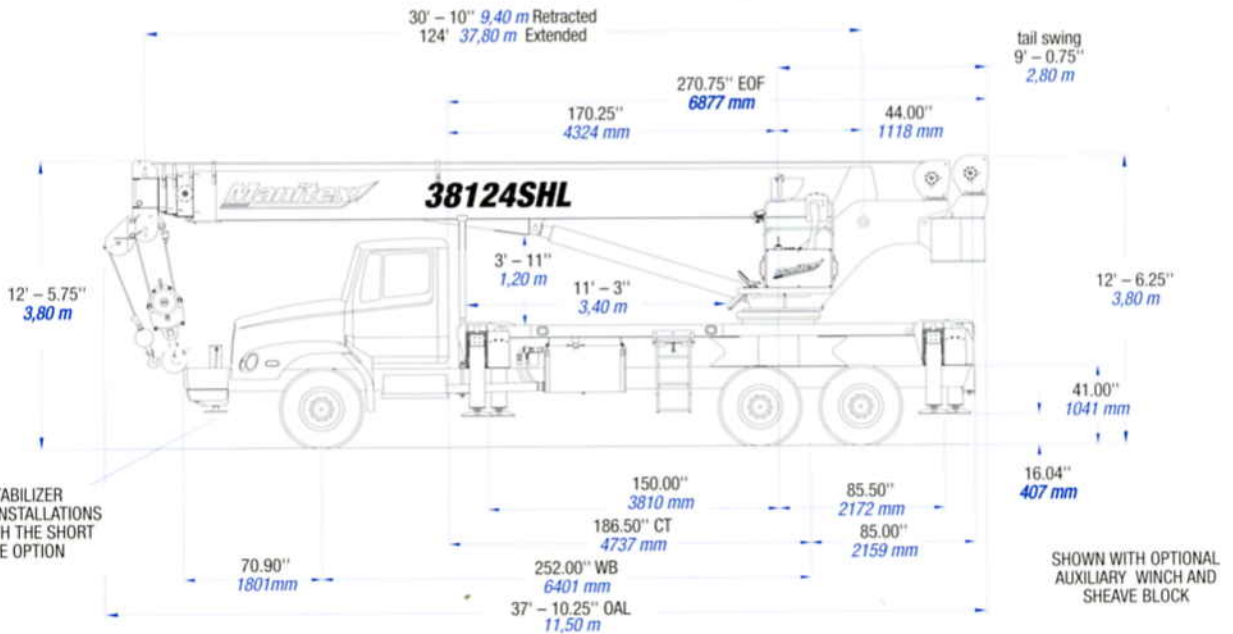
CHASSIS DATA	3877S 38100S	38124S	3877SHL/38100SHL 38124SHL
Front Axle Gross Weight Rating	18,000 lb 8 165 kg	20,000 lb 9 072 kg	20,000 lb 9 072 kg
Rear Axle Gross Weight Rating	40,000 lb 18 144 kg	40,000 lb 18 144 kg	44,000 lb 19 958 kg
Minimum Truck Axle Weight - Front**	8,000 lb 3 629 kg	9,200 lb 4 173 kg	9,800 lb 4 445 kg
Minimum Truck Axle Weight - Back**	8,300 lb 3 765 kg	8,300 lb 3 765 kg	8,000 lb 3 629 kg
Nominal Frame Width	34" 864 mm	34" 864 mm	34" 864 mm

CHASSIS DATA	3877S 38100S	38124S	3877SHL/38100SHL 38124SHL
Wheelbase (WB)	261" 6 629 mm	261" 6 629 mm	252" 6 401 mm
Cab to Tandem (CT)	192" 4 877 mm	261" 6 629 mm	187" 4 750 mm
Cab to End of Frame (EOF)	295" 7 493 mm	261" 6 629 mm	271" 6 883 mm
Frame Section Modulus at 180°/360° Area of Operation	25.0 in ³ 110,000 psi 758 422 kPa	261" 6 629 mm	25.0 in ³ 110,000 psi 758 422 kPa

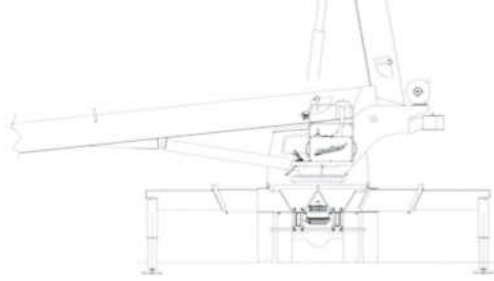
*Frame section modulus at 360° area of operation requires front bumper stabilizer.
 **Minimum chassis weight is required to meet 85% stability requirements.
 Chassis data is general - not for engineering. Some dimensions depend on truck selection.

- 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 INSTALLATIONS
EQUIPPED WITH THE SHORT
SUBFRAME OPTION

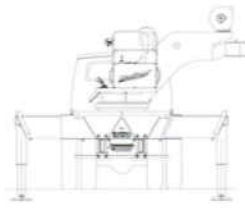


SHOWN WITH OPTIONAL
AUXILIARY WINCH AND
SHEAVE BLOCK



22.00'
6,71 m

FULL SPREAD



13' - 3.50"
4,05 m

INTERMEDIATE SPREAD



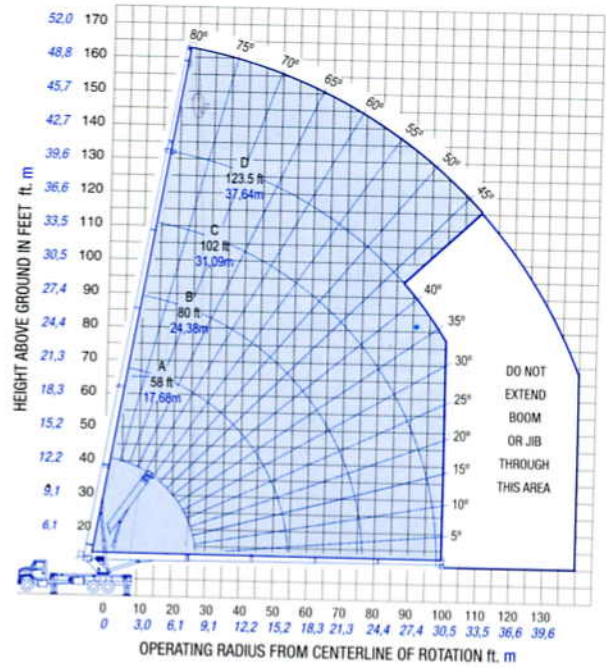
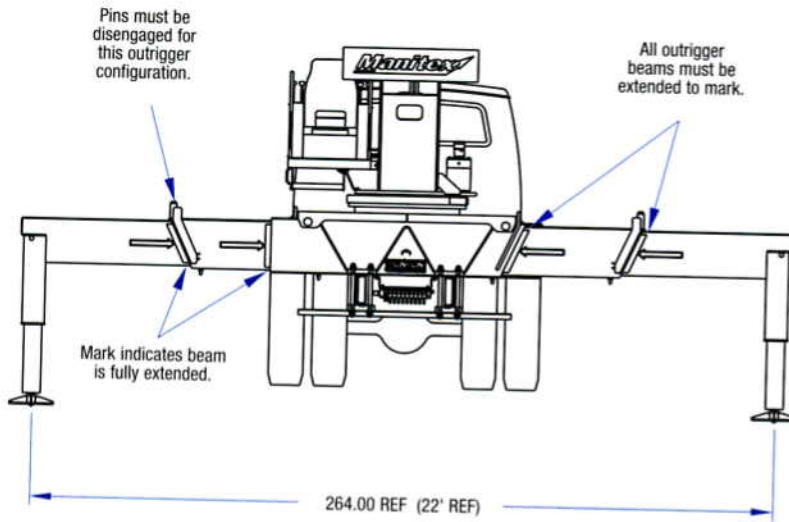
7' - 1.75"
2,18 m

RETRACTED SPREAD

MAXIMUM TIP HEIGHT	3877S/SHL	38100S/SHL	38124S/SHL
Configuration	Boom 77' <i>23,5 m</i>	Boom 100' <i>30,5 m</i>	Boom 124' <i>37,8 m</i>
Extended Boom	86' 5" <i>26,3 m</i>	109' 2" <i>33,3 m</i>	132' 4" <i>40,3 m</i>
Fixed or Retracted Jib	—	140' 0" <i>42,7 m</i>	163' 7" <i>49,9 m</i>
Extended Jib	—	164' 8" <i>50,2 m</i>	—

WEIGHTS	3877S	38100S	38124S	3877SHL	38100SHL	38124SHL
Cab Alone	575 lb <i>261 kg</i>	575 lb <i>261 kg</i>	575 lb <i>261 kg</i>	575 lb <i>261 kg</i>	575 lb <i>261 kg</i>	575 lb <i>261 kg</i>
Crane without Cab	28,806 lb <i>13 066 kg</i>	29,733 lb <i>13 847 kg</i>	31,329 lb <i>14 211 kg</i>	34,535 lb <i>15 664 kg</i>	35,826 lb <i>16 251 kg</i>	37,246 lb <i>16 895 kg</i>
Flat Bed 10' (3,10 m)	1,000 lb <i>454 kg</i>	1,000 lb <i>454 kg</i>	1,000 lb <i>454 kg</i>	—	—	—
Flat Bed 8' (2,40 m)	—	—	—	750 lb <i>340 kg</i>	750 lb <i>340 kg</i>	750 lb <i>340 kg</i>
Fixed Jib 30'6" (9,30 m)	—	1,126 lb <i>511 kg</i>	—	—	1,126 lb <i>511 kg</i>	—
Fixed Jib 31' (9,50 m)	—	—	850 lb <i>386 kg</i>	—	—	850 lb <i>386 kg</i>
Telescopic Jib 30'6"–55' (9,3m – 16,8m)	—	1,754 lb <i>796 kg</i>	—	—	1,754 lb <i>796 kg</i>	—

USE THIS CHART ONLY WHEN OUTRIGGERS ARE FULLY EXTENDED.



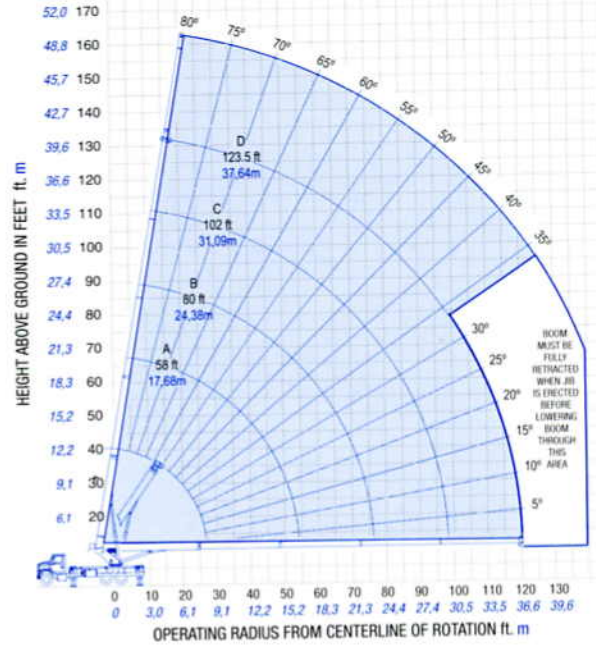
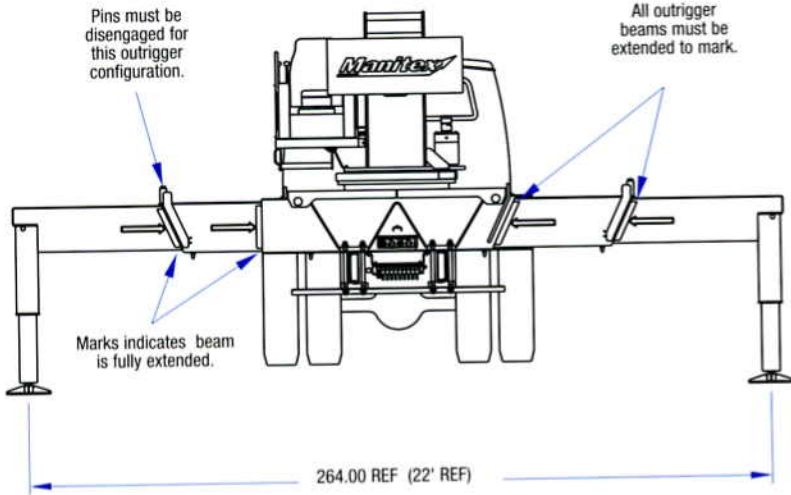
FULLY EXTENDED OUTRIGGER SPREAD: MODEL 38124S

MAIN BOOM LOAD RATINGS

Operating Radius	Boom Length		A		B		C		D		JIB							
	30.8 Feet 9,40 Meters		58 Feet 17,68 Meters		80 Feet 24,38 Meters		102 Feet 31,09 Meters		123.5 Feet 37,64 Meters		Fixed Jib 31 Feet 9,50 Meters							
Feet Meters	lb.	kg.	lb.	kg.	lb.	kg.	lb.	kg.	lb.	kg.	lb.	kg.						
5 1,52	75	76,000	34 473															
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	80	4,000	1 814
35 10,67				49	14,450	6 554	63	14,540	6 595	71	11,380	5 162	75	7,800	3 538	78	3,850	1 746
40 12,19				42	11,190	5 076	59	11,490	5 212	68	10,160	4 608	72	7,280	3 302	76	3,700	1 678
45 13,71				34	8,820	4 001	54	9,110	4 132	65	9,250	4 196	70	6,780	3 075	74	3,550	1 610
50 15,24				23	7,030	3 189	50	7,340	3 329	61	7,480	3 393	67	6,160	2 794	72	3,400	1 542
55 16,76							44	5,970	2 708	58	6,110	2 771	65	5,540	2 513	70	3,250	1 474
60 18,28							39	4,880	2 214	54	5,020	2 277	62	5,000	2 268	68	3,080	1 397
65 19,81							32	3,980	1 805	50	4,130	1 873	59	4,200	1 905	66	2,910	1 320
70 21,34							24	3,230	1 465	46	3,390	1 538	56	3,460	1 569	64	2,750	1 247
75 22,86							12	2,580	1 170	42	2,760	1 252	53	2,830	1 284	62	2,600	1 179
80 24,38										37	2,220	1 007	50	2,300	1 043	60	2,460	1 116
85 25,91										32	1,750	794	47	1,840	835	58	2,260	1 025
90 27,43										25	1,340	608	43	1,430	649	55	1,850	839
95 28,96										17	970	440	40	1,070	485	53	1,490	676
100 30,48													35	750	340	51	1,170	531
105 32,00																48	880	399
110 33,53																45	620	281
		450 lbs 204 kg		240 lbs 109 kg		180 lbs 82 kg		140 lbs 64 kg		120 lbs 54 kg			DEDUCTIONS FOR STOWED JIB					

Meets ANSI B30.5 Requirements - Do not operate crane or accessories within 10' (3,05m) of live power lines.
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USE THIS CHART ONLY WHEN
OUTRIGGERS ARE FULLY EXTENDED.



FULLY EXTENDED OUTRIGGER SPREAD: MODEL 38124SHL

MAIN BOOM LOAD RATINGS

JIB

Operating Radius	Boom Length		A		B		C		D		Fixed Jib								
	30.8 Feet 9,40 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								
	Feet	Meters	lb.	kg.	lb.	kg.	lb.	kg.	lb.	kg.	lb.	kg.							
5	1,52	75	76,000	34 473															
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	31,330	14 211	67	25,000	11 340	75	19,700	8 936	80	14,500	6 577						
25	7,62	22	24,100	10 932	62	22,840	10 360	71	18,200	8 255	77	13,500	6 123	80	8,450	3 833			
30	9,14				56	19,550	8 868	67	16,250	7 371	74	12,820	5 815	78	8,150	3 697	80	4,000	1 814
35	10,67				49	16,100	7 303	63	14,540	6 595	71	11,380	5 162	75	7,800	3 538	78	3,850	1 746
40	12,19				42	12,900	5 851	59	13,070	5 928	68	10,160	4 608	72	7,280	3 302	76	3,700	1 678
45	13,71				34	10,540	4 781	54	10,800	4 899	65	9,370	4 250	70	6,780	3 075	74	3,550	1 610
50	15,24				23	8,720	3 955	50	9,000	4 082	61	8,430	3 824	67	6,160	2 794	72	3,400	1 542
55	16,76							44	7,570	3 434	58	7,620	3 456	65	5,540	2 513	70	3,250	1 474
60	18,28							39	6,400	2 903	54	6,530	2 962	62	5,000	2 268	68	3,080	1 397
65	19,81							32	5,430	2 463	50	5,570	2 527	59	4,520	2 050	66	2,910	1 320
70	21,34							24	4,610	2 091	46	4,760	2 159	56	4,090	1 855	64	2,750	1 247
75	22,86							12	3,900	1 769	42	4,060	1 842	53	3,700	1 678	62	2,600	1 179
80	24,38										37	3,470	1 574	50	3,350	1 520	60	2,460	1 116
85	25,91										32	2,940	1 334	47	3,020	1 370	58	2,320	1 052
90	27,43										25	2,480	1 125	43	2,560	1 161	55	2,170	984
95	28,96										17	2,060	934	40	2,150	975	53	1,930	875
100	30,48												35	1,790	812	51	1,720	780	
105	32,00												31	1,460	662	48	1,530	694	
110	33,53												25	1,160	526	45	1,350	612	
115	35,05												18	880	399	43	1,200	544	
120	36,58															40	1,020	463	
125	38,10															36	800	363	
			450 lbs 204 kg			240 lbs 109 kg			180 lbs 82 kg			140 lbs 64 kg			120 lbs 54 kg		DEDUCTIONS FOR STOWED JIB		

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