

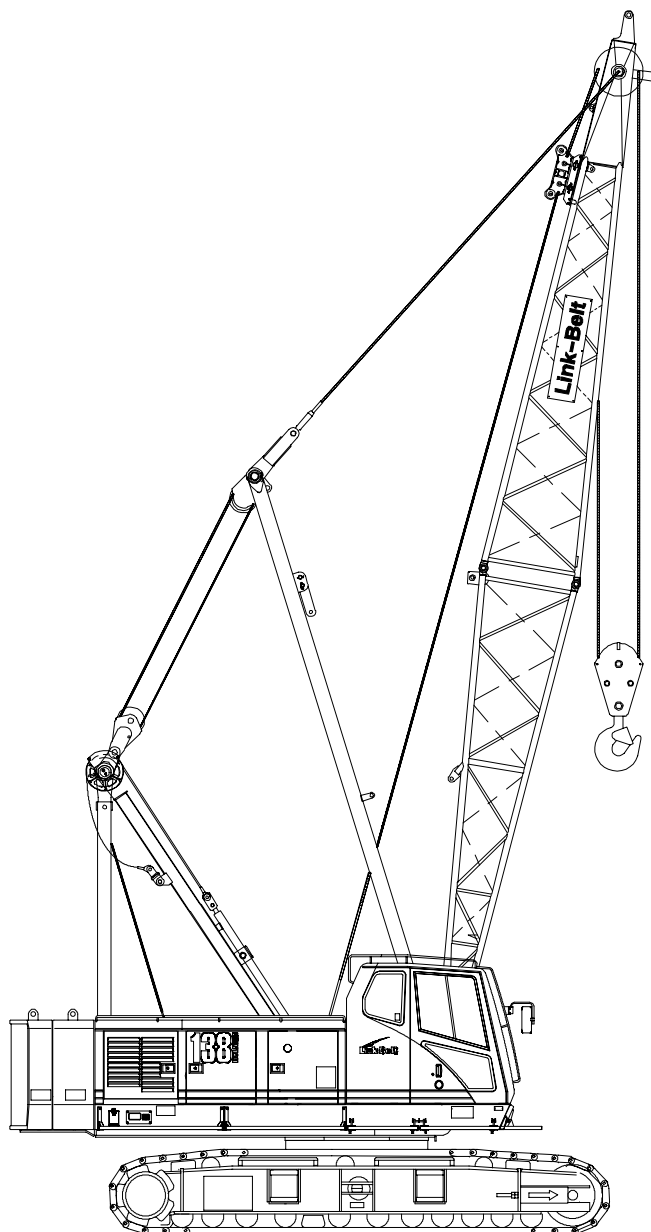
Technical Data

Specifications & Angle Boom Capacities

138

HYLAB5

Crawler Crane
80 Ton (72.6 metric ton)



CAUTION: This material is supplied for reference use only. Operator must refer to in-cab Crane Rating Manual and Operator's Manual to determine allowable crane lifting capacities and assembly and operating procedures.

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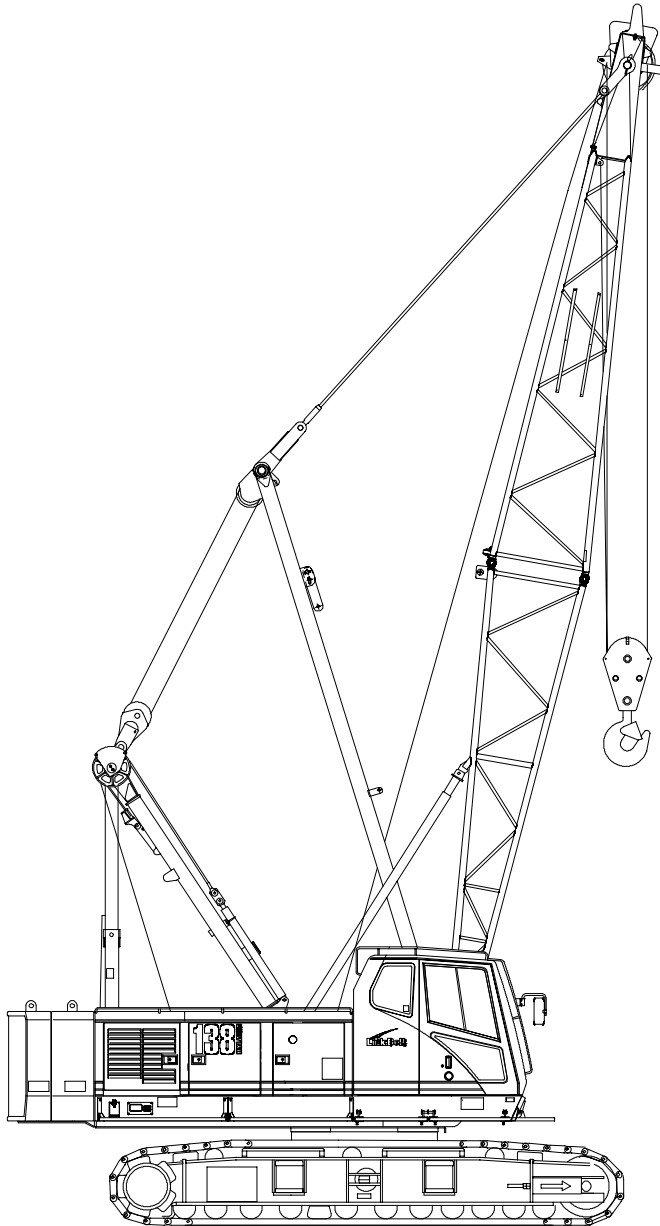
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Specifications

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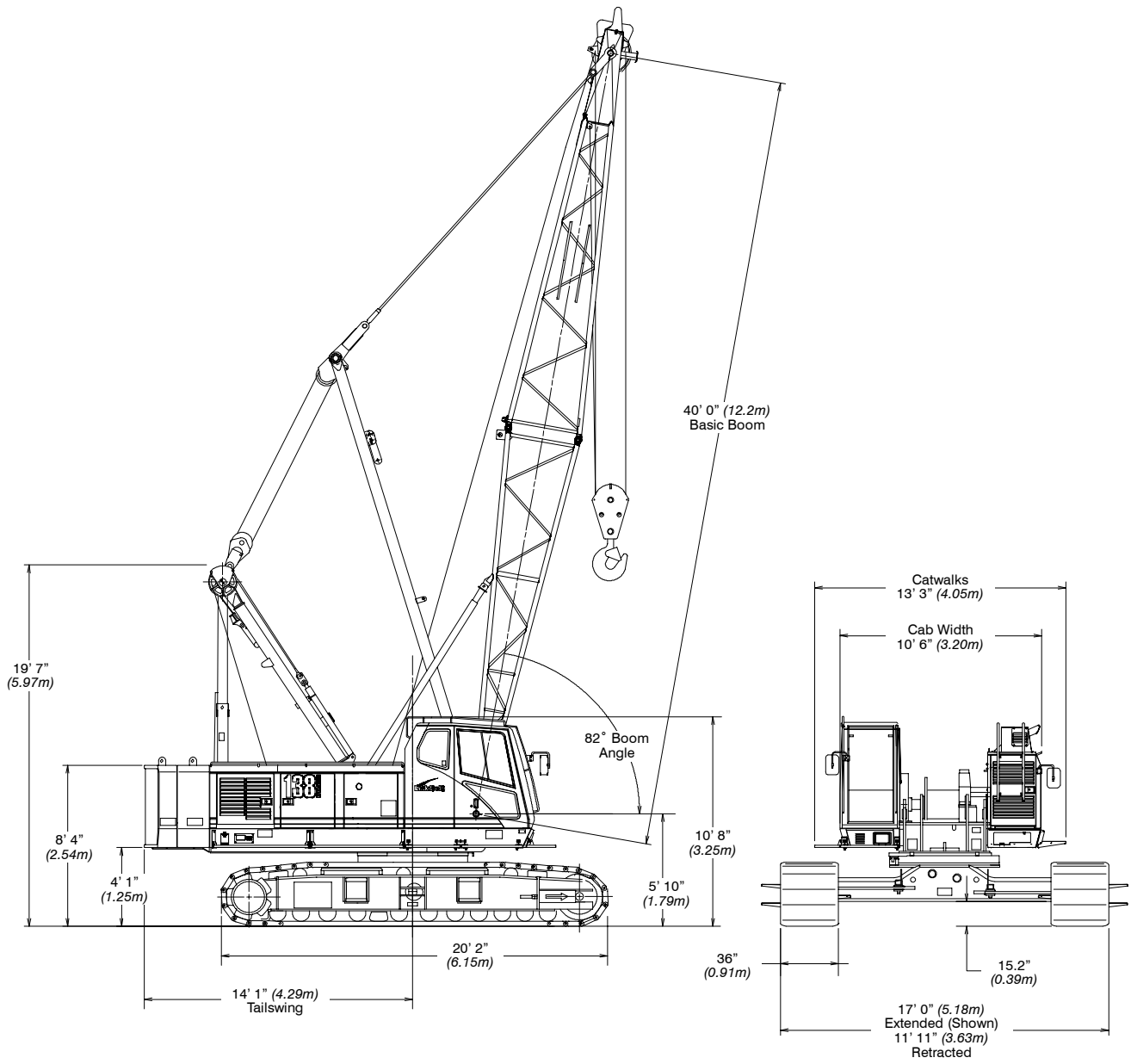
HYLABCS

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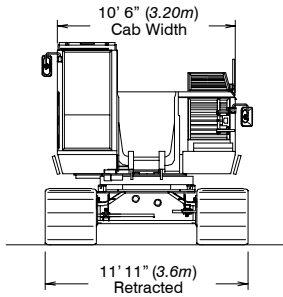


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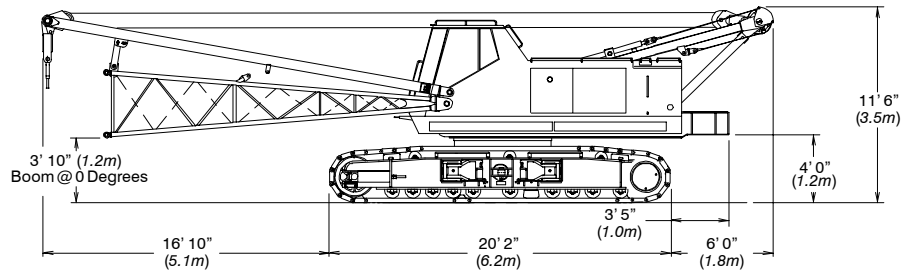
General Dimensions	English	Metric
Tailswing of counterweight "A"	13' 3"	4.04m
Maximum live mast working height	30' 9"	9.4m
Boom foot pin diameter	3.5"	8.9cm
Distance between inside of boom foot lugs	27"	0.7m



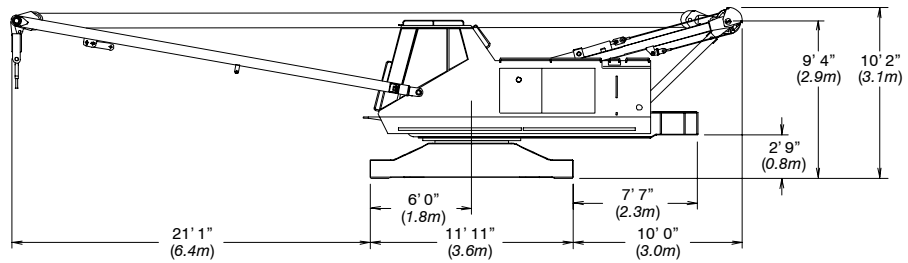
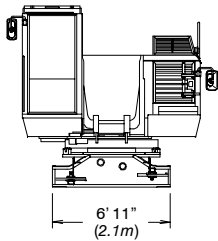
138 HYLAB 5 Crane Transport Weights - approximate



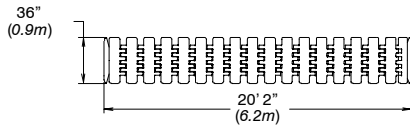
Basic Unit
Bare, no attachment, no rope, no backstops, catwalks on, 1/4 tank of fuel
80,840 lb (36 668kg)



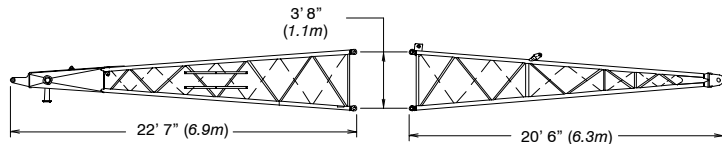
Transport Weight
Rope on both drums, backstops, catwalks, and 1/3 tank of fuel
Tubular: 89,778 lb (40 723kg)
Angle: 90,678 lb (41 131kg)



Upper & Carbody Shipping Weight
Rope on both drums, backstops, catwalks, and full of fuel
51,392 lb (23 311kg)

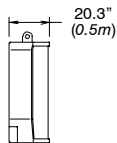
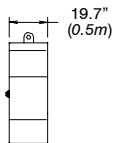


Side Frames w/ 36" (0.9m) Shoes
18,380 lb (8337kg)

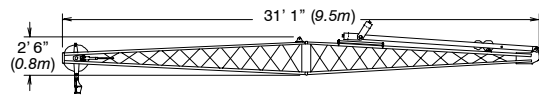
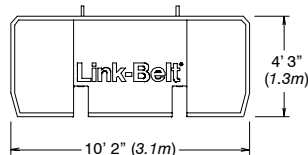


20' (6.1m) Top Section
Tubular: 2,700 lb (1 225kg)
Angle: 3,500 lb (1 588kg)

20' (6.1m) Base Section
Tubular: 1,988 lb (902kg)
Angle: 2,853 lb (1 294kg)



"A" Upper Counterweight 25,250 lb (11 450kg)
"B" Upper Counterweight 25,250 lb (11 450kg)



30' (9.1m) Basic Tubular Jib Assembly
1,683 lb (763kg)



Front Mounted Third Drum
1,345 lb (610kg) - w/o Rope

Transportation Weights

Base Crane: Rigid Boom Backstops, 27 gal (102.2L) of Fuel, Catwalks (front, right, and left side), 20' (6.10m) Tube Base Section, 24' (7.32m) Live Mast with Bridle & Spreader Bar, 14-Part Boom Hoist Reeving, 700' (213m) of Type "DB" Front Hoist Rope, 540' (165m) of Type "RB" Rear Hoist Rope.

Item Description	Gross Weight		Transport Loads			Notes and Load Summary
	lb	kg	Load #1	Load #2	Load #3	
Base Crane	89,778	40 723	1			Numbers in the load columns to the left represent quantities.
Add "A" Counterweight	25,250	11 453			1	
Add "B" Counterweight	25,250	11 453		1		Estimated transport load assumes the load out consist of 200' (60.96m) of tube boom + 60' (18.29m) of jib with full counterweight.
Add Hydraulic Third Drum Without Rope	1,345	610				
Add 20' (6.1m) Tube Top Section	2,700	1 225		1		
Add 10' (3.05m) Tube Extension With Pins & Pendants	677	307			1	
Add 20' (6.1m) Tube Extension With Pins & Pendants	1,076	488		1	2	Support loads were targeted at 45,000 lb (20 412kg), 8' 6" (2.6m) wide, 48' (14.63m) long, and 13' 6" (4.11m) high using a drop deck trailer. This may vary depending on state laws, empty truck/trailer weights, and style of trailer.
Add 30' (9.1m) Tube Extension With Pins & Pendants	1,481	672		2	1	
Add 20' (6.1m) Angle Base Section	2,853	1 294				
Add 20' (6.1m) Angle Top Section With 4 Lifting Sheaves	3,500	1 588				
Add 20' (6.1m) Angle Top Section With 3 Lifting Sheaves	3,400	1 542				
Add 20' (6.1m) Angle Top Section With 2 Lifting Sheaves	3,300	1 497				
Add 10' (3.05m) Angle Extension With Pins & Pendants	992	450				Estimated weights vary by +/- 2%.
Add 20' (6.1m) Angle Extension With Pins & Pendants	1,625	737				
Add 30' (9.1m) Angle Extension With Pins & Pendants	2,264	1 027				
Add Bridle & Spreader Bar Only (No Live Mast)	990	449				Estimated Total Load #1 89,778 lb (40 723kg).
Add Tagline Winder	760	345				Estimated Total Load #2 33,959 lb (15 404kg).
Add Fairleader	1,272	577				
Add 30' (9.1m) Tube Jib	1,683	763			1	Estimated Total Load #3 31,877 lb (14 459kg).
Add 15' (4.6m) Tube Jib Extension	317	144			2	
Add 5' (1.5m) Auxiliary Tip Extension	735	333				
Add Holding Rope - 0.88" X 165' Type "DB"	234	106				
Add Closing Rope - 0.88" X 220' Type "DB"	312	142				
Add Inhaul Rope - 0.88" X 105' Type "M"	141	64				
Add Hoist Rope - 0.88" x 210' Type "DB"	298	135				
Add Jib Wire Rope - 0.88" X 700' Type "DB"	994	451				
Add 3rd Drum Wire Rope 0.63" X 385' Type "ZB"	312	142				
Add 3rd Drum Wire Rope 0.63" X 385' Type "WB"	296	134				
Add Auxiliary Lifting Bail	191	87				
Add 15-ton (13.6mt) Hook Ball - Non Swivel	750	340		1		
Add 15-ton (13.6mt) Hook Ball - Swivel	760	345				
Add 80-ton (72.6mt) 4 Sheave Hook Block	1,221	554		1		
Remove 20' Tube Base Section	-1,988	-902				
Remove Front Hoist Rope 0.88" X 700' Type "DB"	-944	-428				
Remove Jib Wire Rope 0.88" X 540' Type "RB"	-1,050	-476				
Remove 24' (7.3m) Live Mast With Bridle & Spreader Bar	-2,356	-1 069				
Add 50 gal (189.3L) Of Fuel	362	164				

Working Weights

Option	Description	Gross Weight lb (kg)	Ground Bearing Pressure psi (kg/cm ²)
1	Base crane equipped with 40' (12.2m) of tubular boom, live mast, "A" counterweight, 700' (213m) front hoist rope, 540' (165m) rear hoist rope, 80-ton (72.6mt) hook block, 77 gal (291.5L) of fuel, and a 200 lb (90.7kg) operator.	119,511 (54 209)	7.62 (0.53)
2	Option #1 plus "B" counterweight, midpoint pendants, and 160' (48.77m) of boom extensions to obtain 200' (60.96m) of main boom.	153,109 (69 449)	9.76 (0.69)
3	Option #2 plus 60' (18.29m) of jib and 15-ton (13.6mt) hookball - subtract 20' (6.10m) of boom extension and midpoint pendants to obtain maximum 180' + 60' (54.86 + 18.29m) of main boom + jib.	155,100 (70 352)	9.88 (0.70)
4	Base crane equipped with 40' (12.20m) of angle boom, live mast, "A" counterweight, 700' (213m) front hoist rope, 540' (165m) rear hoist rope, 80-ton (72.6mt) hook block, 77 gal (291.5L) of fuel, and a 200 lb (90.7kg) operator.	121,176 (54 965)	7.72 (0.54)
5	Option #4 plus "B" counterweight and 110' (33.53m) of boom extensions to obtain 150' (45.72m) of main boom.	155,196 (70 396)	9.89 (0.70)
6	Option #5 plus 60' (18.29m) of jib and 15-ton (13.6mt) hookball to obtain maximum 150' + 60' (45.72 + 18.29m) of main boom + jib.	158,263 (71 786)	10.09 (0.71)

Notes:

- Ground bearing pressure is based on the total weight distributed evenly over the track contact area.
- Total contact area for 36" (0.91m) track shoes is 15,692 in² (101,239cm²).

Attachment Options

■ 40’-200’ Tube Boom (12.19 - 60.96m)

Basic Tube Boom - 40’ (12.19m) two-piece design that utilizes a 20’ (6.10m) base section and a 20’ (6.10m) open throat top section with in-line connecting pins on 54” (1.37m) wide and 44” (1.12m) deep centers.

- Boom foot on 50” (1.27m) centers
- 3” (76.2mm) diameter chords
- Lugs on base section to attach carrying links
- Skywalk platform
- Deflector roller on top section
- Permanent skid pads mounted on top section to protect head machinery
- Rigid sheave guards
- Five 18” (0.46m) root diameter steel sheaves mounted on sealed anti-friction bearings
- Mechanical boom angle indicator

Optional - Handling system that mounts in the boom base to allow loading/unloading of a counterweight or a boom section onto transport trailers.

Tube Boom Extensions - The following table provides the lengths available and the suggested quantity to obtain maximum boom in 10’ (3.05m) increments. Midpoint pendant connections are required at 80’ (24.38m) for 190’ (57.91m) and 200’ (60.96m) boom lengths.

Tube Boom Extensions	Suggested Quantity for Maximum Boom
10’ (3.05m)	1
20’ (6.10m)	3
30’ (9.14m)	3

- Deflector roller on top of each section
- Appropriate length pendants
- Maximum tube boom tip height of 204’ (62.18m)

■ 40’-150’ Angle Boom (12.19 - 45.72m)

Basic Angle Boom - 40’ (12.19m) two-piece design that utilizes a 20’ (6.10m) base section and a 20’ (6.10m) open throat top section with in-line connecting pins. Boom extensions are 48” (1.22m) wide and 48” (1.22m) deep at outside dimensions of angles.

- Boom foot on 50” (1.27m) centers
- 4” X 4” X 0.38” (101.6 x 101.6 x 9.7mm) angle chords
- Lugs on base section to attach carrying links
- Skywalk platform
- Deflector roller on top section
- Permanent skid pads mounted on top section to protect head machinery
- Rigid sheave guards
- Four 18” (0.46m) root diameter steel sheaves mounted on sealed anti-friction bearings
- Mechanical boom angle indicator

Optional - Three sheave head machinery for clam applications or two wide sheaves for dragline applications

Angle Boom Extensions - The following table provides the lengths available and the suggested quantity to obtain maximum boom in 10’ (3.05m) increments. Midpoint pendant connections are not required.

Angle Boom Extensions	Suggested Quantity for Maximum Boom
10’ (3.05m)	1
20’ (6.10m)	2
30’ (9.14m)	2

- Deflector roller on top of each section
- Appropriate length pendants
- Maximum angle boom tip height of 154’ (46.94m)

■ 30’ - 60’ Tube Jib (9.14- 18.29m)

Basic Tube Jib - 30’ (9.14m) two-piece design that utilizes a 15’ (4.57m) base section and a 15’ (4.57m) top section with in-line connecting pins on 32” (0.81m) wide and 24” (0.61m) deep centers.

- 2” (50.8mm) diameter tubular chords
- One 18.5” (0.47m) root diameter steel sheave mounted on sealed anti-friction bearings.
- 15’ (4.57m) jib extensions provide jib lengths at 45’ (13.72m) and 60’ (18.29m)
- Jib offset angles at 5°, 15°, and 25°
- Maximum tip height of boom + jib is 242’ (73.76m) using the tube boom and 204’ (62.18m) using the angle boom.

■ Auxiliary 5’ (1.52m) Tip Extension

Designed to use instead of a jib to provide clearance between working hoist lines. The extension is equipped with a single 15.25” (0.39m) root diameter steel sheave mounted on sealed anti-friction bearings. Maximum capacity is 9-ton (8.16mt).

■ Boom Hoist System

Designed to lift off maximum boom or maximum boom plus jib unassisted. Operates up to a maximum boom angle of 82°. Automatically limits maximum boom angle operation.

- Retractable gantry frame
- Pin-on bail frame
- 14-part reeving with 5/8” (15.88mm) type “W” wire rope
- Bridle assembly
- 24’ (7.31m) live mast (optional for angle attachment)
- Two 1.25” (31.75mm) pendants
- Telescopic boom backstops (tubular type)
- Sheaves contain sealed anti-friction bearings
- Boom speed from 10°-70° is 52 seconds with no load and 94 seconds with full load. Speed was determined using 100’ (30.5m) of tube boom.

Revolving Upperstructure

■ Frame

All welded steel frame with precision machined surfaces for mating parts.

■ Engine

Mitsubishi 6D16-TLE2A with oil filter, oil cooler, air cleaner, fuel filter, water separator, hour meter, tachometer, and electrical shutdown.	
Number of cylinders	6
Bore and stroke - in (mm)	4.65 x 4.53 (118 x 115)
Piston displacement - in ³ (cm ³)	460 (7 538)
Engine rpm at full load speed	2,000
Hi-idle rpm	2,200
Gross horsepower (kw)	182 (135)
Peak torque - ft lb (joule)	535 (726)
Peak torque - rpm	1,600
Electrical system	24 volt
Batteries	2-12 volt
Approximate fuel consumption	
	gal/hr (L/hr)
100% hp	9.17 (34.71)
50% hp	4.58 (17.34)
25% hp	2.29 (8.67)
15% hp	1.38 (5.22)

■ Hydraulic System

Hydraulic Pumps - The pump arrangement is designed to provide precise control with independent or simultaneous operation of all crane functions.

- Pump P1 - Variable displacement, semi-closed loop, piston pump operating at 4,480 psi (315kg/cm²) and 64 gpm (242Lpm). Supplies power for the front drum, rear drum, boom hoist drum, and travel.
- Pump P2 - Variable displacement, semi-closed loop, piston pump operating at 4,480 psi (315kg/cm²) and 64 gpm (242Lpm). Supplies power for the front drum, rear drum, travel, and optional 4th drum.
- Pump P3 - Fixed displacement, open loop, gear pump operating at 3,556 psi (250kg/cm²) and 33 gpm (125Lpm). Supplies power for swing and side frame retract cylinders.
- Pump P4 - Fixed displacement, open loop, gear pump operating at 1,422 psi (100kg/cm²) and 12.7 gpm (48Lpm). Supplies power for remote mounted hydraulic oil cooler fan.
- Pump P5 - Fixed displacement, open loop, gear pump operating at 2,987 psi (210kg/cm²) and 8.6 gpm (33Lpm). Supplies power for hydraulic remote control system and hydraulic counterweight self-assembly system.

- Pump P6 (Optional) - Fixed displacement, open loop, gear pump operating at 1,422 psi (100kg/cm²) and 6.3 gpm (24Lpm). Supplies power for optional hydraulic tagline.

Pump Control ("Fine Inching") mode

Special pump setting, selectable from operator's cab, that allows very slow movements of load hoist drums, boom hoist drum, and travel for precision work.

Hydraulic Reservoir - 53 gal (200.6L), equipped with sight level gauge. Diffusers built in for deaeriation.

Filtration - One 10 micron, full flow line filter in the control circuit. All oil is filtered prior to entering the reservoir.

Counterbalance Valves - All hoist motors are equipped with counterbalance valves to provide positive load lowering and prevent accidental load drop if the hydraulic pressure is suddenly lost.

■ Load Hoist Drums

Each drum contains a pilot controlled, bi-directional, axial piston motor and a planetary gear reduction unit to provide positive control under all load conditions.

- Power up/down & free-fall operation modes
- Automatic brake mode (spring applied, hydraulically released, band type brake)
- 0.88" (22.35mm) grooved lagging
- Drum pawl controlled manually
- Electronic drum rotation indicators
- Mounted on anti-friction bearings
- 17.64" (0.45m) root diameter
- 29.92" (0.76m) flange diameter
- 19.84" (0.50m) width

Note: The freefall operation mode is designed to prevent load lowering even if the freefall switch is accidentally activated. The automatic brake mode meets all OSHA requirements for personnel handling.

Drum Clutches - Power hydraulic two shoe clutch design that uses a 20" (0.51mm) diameter x 5" (0.13mm) wide shoe that internally expands to provide load control. Swept area is 314 in² (2 026 cm²).

■ Optional Front Mounted Third Hoist Drum

The hydraulic winch is pinned to the front of the upper frame and is used in conjunction with a fleeting sheave and 3-sheave idler assembly to run the wire rope over the boom top section.

- Free-spooling capability for pile driving applications
- 10.63" (0.27m) root diameter
- 20" (0.51m) outside flange diameter
- 13.5" (0.34m) width
- Mounted on anti-friction bearings

■ Boom Hoist Drum

Contains a pilot controlled, bi-directional, axial piston motor and a planetary gear reduction unit to provide positive control under all load conditions.

- Spring applied, hydraulically released, disc type automatically controlled brake
- 5/8" (15.88mm) grooved lagging
- Drum pawl controlled manually
- Mounted on anti-friction bearings
- 12.60" (0.32m) root diameter
- 24.41" (0.62m) flange diameter
- 9.57" (0.24m) width

■ Swing System

Mechanical linkage controls the bi-directional axial piston motor and the planetary gear reduction unit to provide positive control under all load conditions.

- Spring applied, hydraulically released, 360 degree multi-plate brake
- Free swing mode when lever is in neutral position
- Two position positive house lock
- Audio/Visual swing alarm
- Maximum swing speed is 3.0 rpm

■ Upper Counterweight

Consist of a two piece design that can be easily lowered to the ground using the gantry.

- 25,250 lb (11 453kg) "A" upper counterweight
- 25,250 lb (11 453kg) "B" upper counterweight can be added to maximize capacities

■ Operator's Cab and Controls

Fully enclosed modular steel compartment is independently mounted and insulated to protect against vibration and noise.

- All tinted/tempered safety glass
- Folding hinge entry door and sliding front glass window
- 19,000 BTU hot water heater
- 18,600 BTU air conditioner
- Door and window locks
- Circulating fan
- Sun visor
- Cloth seat
- Padded for noise and vibration reduction
- Defroster
- Windshield wipers and washer
- Dry chemical fire extinguisher
- Engine instrumentation panel (voltmeter, engine oil pressure, engine water temperature, fuel level, hydraulic oil temperature, hour meter, and service monitor system)
- Electronic drum rotation indicators for front and rear hoist drums
- Six way adjustable seat
- Hand and foot throttle
- Fully adjustable single axis controls
- Swing lever with swing brake and horn located on handle
- Bubble type level
- Ergonomic gauge layout
- Control shut off lever
- Right hand control stand is adjustable by electric motor for operator comfort
- Horn

■ Rated Capacity Limiter System

The rated capacity limiter system is a boom hoist load cell system. This system provides the operator with useful geometrical data, to include:

- Main Boom Length
- Main Boom Angle
- Jib Length
- Jib Angle
- Operating Mode
- Load Radius
- Boom Tip Height
- Audible Alarm
- Anti-Two Block Indicator
- Pre-Warning Light
- Overload Light
- Load On Hook
- Function kick-outs including over load
- Operator settable stops (Ramped Stops)
- Boom Hoist Dead End Load Cell (No Lineriders)
- Engine rpm Is Displayed On LCD1 Of Rated Capacity Limiter System

■ Additional Equipment - Standard

- 57.88" (1.47m) outside diameter turntable bearing
- Front, right, & left side removable catwalks
- 53 gal (200.6L) fuel tank (usable quantity)
- Crane lifting links

■ Additional Equipment - Optional

- Rud-o-matic® model 1248 tagline winder for angle boom (double barrel, spring wound, drum type)
- Rud-o-matic® model 648 tagline winder for tube boom
- Full revolving type Fairleader with barrel, sheaves, and guide rollers

Lower Structure

■ Lower Frame

All welded box construction frame with precision machined surfaces for turntable bearing and rotating joint.

- 8' 10.7" (2.71m) overall width
- 11' 11" (3.63m) overall length

■ Side Frames

All welded, precision machined, steel frames can be hydraulically extended and retracted by a hydraulic cylinder mounted in the lower frame.

- 14' (4.27m) extended gauge
- 8' 11" (2.72m) retracted gauge
- 20' 2" (6.15m) overall length
- 36" (0.91m) wide track shoes
- 11 sealed (oil filled) track rollers per side frame
- Sealed (oil filled) idler and drive planetaries
- Compact travel drives
- Hydraulic self adjusting tracks

Travel and Steering - Each side frame contains a pilot controlled, bi-directional, axial piston motor and a planetary gear reduction unit to provide positive control under all load conditions.

- Individual control provides smooth, precise maneuverability including full counter-rotation
- Spring applied, hydraulically released disc type automatically controlled brake
- Maximum travel speed is 1.0 mph (1.6km/h) in high speed and 0.6 mph (1km/h) in low speed
- Designed to 30% gradeability

Load Hoisting Performance

Front Or Rear Drum – 7/8” (22.22mm) Wire Rope

Rope Layer	Maximum Line Pull		No Load Line Speed		Full Load Line Speed		Pitch Diameter		Layer		Total	
	lb	kg	ft/min	m/min	ft/min	m/min	in	mm	ft	m	ft	m
1	32,377	14 686	300	91	91	28	18.5	470	100	30	100	30
2	29,581	13 418	329	100	100	30	20.3	516	109	33	209	64
3	27,229	12 351	357	109	109	33	22.0	559	119	36	327	100
4	25,224	11 441	386	118	117	36	23.8	605	128	39	455	139
5	23,493	10 657	414	126	126	38	25.5	648	137	42	593	181
6	21,985	9 972	442	135	134	41	27.3	693	147	45	740	225

Boom Hoist Drum – 5/8” (15.88mm) Wire Rope

Rope Layer	Maximum Line Pull		No Load Line Speed		Full Load Line Speed		Pitch Diameter		Layer		Total	
	lb	kg	ft/min	m/min	ft/min	m/min	in	mm	ft	m	ft	m
1	17,856	8 099	186	57	177	54	13.2	336	48	15	48	15
2	16,313	7 400	203	62	193	59	14.5	368	52	16	100	31
3	15,017	6 812	221	67	210	64	15.7	400	57	17	157	48
4	13,911	6 310	238	73	227	69	17.0	432	61	19	218	67
5	12,956	5 877	256	78	243	74	18.3	464	66	20	284	87
6	12,125	5 500	274	84	260	79	19.5	496	70	21	355	108
7	11,393	5 168	291	89	277	84	20.8	528	75	23	430	131

Optional Third Drum – 5/8” (15.88mm) Wire Rope

Rope Layer	Maximum Line Pull		No Load Line Speed		Full Load Line Speed		Pitch Diameter		Layer		Total	
	lb	kg	ft/min	m/min	ft/min	m/min	in	mm	ft	m	ft	m
1	15,041	6 822	157	48	143	44	11.25	286	57	17	57	17
2	13,537	6 140	175	53	159	48	12.50	318	64	20	121	37
3	12,307	5 582	192	59	175	53	13.75	349	71	22	192	59
4	11,282	5 117	210	64	191	58	15.00	381	77	23	269	82
5	10,414	4 724	228	69	207	63	16.25	413	83	25	352	107
6	9,671	4 387	245	75	223	68	17.50	445	90	27	442	135

Wire Rope Applications

Wire Rope Application	Diameter		Length		Type	Maximum Permissible Load	
	in	mm	ft	m		lb	kg
Boom Hoist	5/8	15.88	610	186	W	11,770	5 339
Front Hoist	7/8	22.22	700	213	DB	22,740	10 315
Rear Hoist (Optional)	7/8	22.22	540	165	RB	17,520	7 947
Rear Hoist (Optional)	7/8	22.22	700	213	DB	22,740	10 315
Third Drum (Optional)	5/8	15.88	385	117	ZB	11,080	5 026
Third Drum (Optional)	5/8	15.88	385	117	WB	13,650	6 192

Rope Type	Description
DB	6 x 26 (6 X 19 Class) – Warrington Seal – Extra Improved Plow Steel – Preformed – Right Lay – Regular Lay – I.W.R.C.
RB	19 x 19 Rotation Resistant – Extra Improved Plow Steel – Preformed – Right Lay – Regular Lay – Swaged
ZB	36 x 7 – Non-rotating – Extra Improved Plow Steel – Right Lay – Regular Lay
WB	8 Strand – Regular Lay
W	6 x 26 (6 X 19 Class) – Extra Improved Plow Steel – Preformed – Right Lay – Alternate Lay – I.W.R.C.

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Link-Belt Construction Equipment Company Lexington, Kentucky www.linkbelt.com

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Lifting Capacities

Lattice Boom Crawler Crane

138 HYLAB 5

80-ton (72.6 metric ton)

Angle Boom Capacities

40' – 150' (12.19 – 45.72m)

24' (7.31m) Live Mast

- Extended/Retracted Side Frames

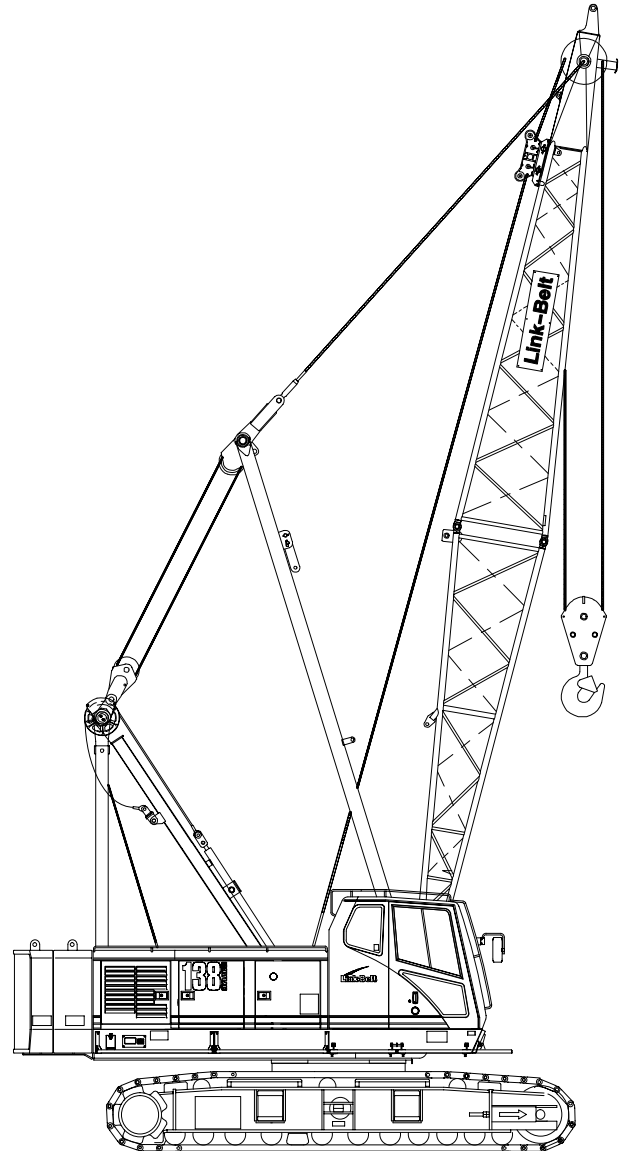
5' (1.52m) Tip Extension

Duty Cycle Capacities

- 40' – 70' (12.19 – 21.34m) Angle Boom
- Extended Side Frames
- "A" Counterweight

Angle Boom Capacities

- 40' – 150' (12.19 – 45.72m) Angle Boom
- 48" (1.22m) Wide x 48" (1.22m) Deep Boom
- 20' (6.10m) Open Throat Top Section
- With or Without 24' (7.31m) Live Mast
- Extended / Retracted Side Frames
- Over End Blocked Capacities
- "AB", "A", or "O" Counterweight Options
- 20' 2" (6.15m) Crawler Length



CAUTION: This material is supplied for reference use only. Operator must refer to in-cab Crane Rating Manual to determine allowable crane lifting capacities and operating procedures.



WARNING

READ AND UNDERSTAND THE OPERATOR'S AND SAFETY MANUALS AND THE FOLLOWING INSTRUCTIONS AND CHART VALUES BEFORE OPERATING THE CRANE. OPERATION WHICH DOES NOT FOLLOW THESE INSTRUCTIONS MAY RESULT IN AN ACCIDENT.

LIFTING NOTES

GENERAL:

1. Rated lifting capacities in pounds as shown on lift charts pertain to this crane as originally manufactured and normally equipped. Modifications to the crane or use of optional equipment other than that specified can result in a reduction of capacity.
2. Construction equipment can be dangerous if improperly operated or maintained. Operation and maintenance of this crane must be in compliance with the information in the Operator's, Parts, and Safety Manuals supplied with this crane. If these manuals are missing, order replacements through the distributor.
3. The operator and other personnel associated with this crane shall read and fully understand the latest applicable American National Standards Institute (ANSI) safety standards for cranes.
4. All capacities listed in this book are in compliance with ASME/ANSI B30.5c at date of manufacture.
3. For recommended reeving, parts of line, wire rope type, and wire rope inspection, see Wire Rope Capacity chart, Operator's Manual, and Parts Manual.
4. Load ratings in the Crane Rating Manual are based on freely suspended loads and make no allowances for such factors as the effect of the wind, ground conditions, and operating speeds. The operator shall therefore reduce load ratings in order to take these conditions into account.
5. Rated lifting capacities do not account for the effects of wind on a suspended load or boom. Lifting capacities should be considered acceptable for wind speeds less than 20 mph and appropriately reduced for wind speeds greater than 20 mph. Extreme caution should be used when lifting heavy loads or loads with large wind sail area under high wind conditions (over 20 mph).

LIFT CRANE OPERATION:

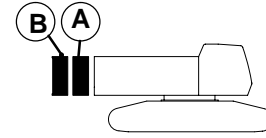
1. Capacities shown are in pounds and are not more than 75% of the tipping loads with the crane standing level on firm supporting surface. A deduction must be made from these capacities for weight of hook block, hook ball, sling, grapple, load weighing device (other than those supplied with the crane), etc. When using main hook while jib is attached, reduce capacities by values shown on Capacity Deductions For Lifting Off Main Boom Hook With Jib Installed. When using main hook while 5' tip extension is attached, reduce capacities by values shown on Capacity Deductions For Lifting Off Main Boom Hook With 5' Tip Extension Installed. See Operator's Manual for all limitations when raising or lowering attachment.
2. The crane capacities in the shaded areas are based on structural strength. The crane capacities in the non-shaded areas are based on stability.
6. The capacities listed in the Crane Rating Manual are for the crane with or without live mast, with the gantry in the raised position.
7. The least stable rated condition is over the side.
8. Booms must be erected and lowered over the end for maximum stability.
9. Do not operate at radii and boom lengths where the Crane Rating Manual lists no capacity. Do not use longer booms or jibs than those listed in the Crane Rating Manual. Any of the above can cause a tipping condition or boom and jib failure.
10. These capacities apply only to the crane as originally manufactured and normally equipped by Link-Belt Construction Equipment Company.

FOR OVER END CAPACITIES ONLY

1. These capacities can be lifted over either end with the crane standing level on a firm supporting surface with adequate blocking placed under the side frame sprockets/idlers, to prevent rocking.
2. Do not travel with a load.

WIRE ROPE CAPACITY

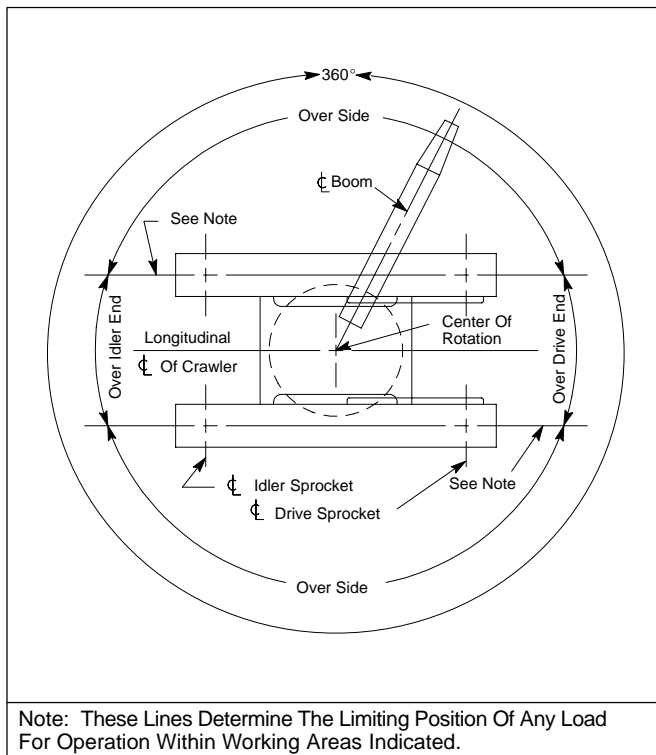
Parts of Line	7/8"		5/8"		Notes
	Type "DB"	Type "RB"	Type "ZB"	Type "WB"	
1	22,700	17,520 *	11,000 **	13,650 *	Capacities shown are in pounds and working loads must not exceed the ratings on the capacity charts in the Crane Rating Manual. Study Operator's Manual for wire rope inspection procedures and single part of line applications.
2	45,400	35,040	22,000	27,310	
3	68,100	52,560	33,000	40,970	
4	90,800	70,080	44,000	54,620	
5	113,500	87,600	55,000	68,280	
6	136,200	105,120	66,000	81,940	
7	158,900	122,640	77,000	95,600	
8	181,600	140,160	88,000	109,250	
LBCE Type	Description				
DB	6 x 26 (6 x 19 Class) – Warrington Seale – Extra Improved Plow Steel – Preformed – Right Lay – Regular Lay – I.W.R.C.				
RB	19 x 19 Rotation Resistant– Extra Extra Improved Plow Steel – Preformed – Right Lay – Regular Lay. Swaged				
ZB	36 x 7 Class – Non–Rotating – Extra Improved Plow Steel – Right Lay – Regular Lay				
WB	8 Strand – Regular Lay				
M	6 X 19 Class – Extra Improved Plow Steel – Lang Lay				



LIFTOFF CAPABILITIES

Counterweight (Side Frames)	Over End / Over Side (Gantry In Raised Position)	
	Maximum Boom (ft)	Maximum Boom + Jib (ft)
NO (RETRACTED)	80	N/A
NO (EXTENDED)	100	N/A
A (RETRACTED)	120	N/A
A (EXTENDED)	140	N/A
A (EXTENDED) See Note 4	150	N/A
AB (EXTENDED)	150	140 + 60 150 + 30

WORKING AREAS



Counterweight (Side Frames)	Over End / Over Side (Gantry In Lowered Position)	
	Maximum Boom (ft)	Maximum Boom + Jib (ft)
NO (RETRACTED)	80	N/A
NO (EXTENDED)	90	N/A
A (RETRACTED)	90	N/A
A (EXTENDED)	90	N/A
AB (EXTENDED)	90	60 + 60 70 + 45

NOTES:

1. For maximum stability, booms must be erected or lowered over the end with no load – hook block on ground.
2. Crane on firm and level surface.
3. gantry pins must be installed when the gantry is in the lowered position.
4. For 150' boom (side frames extended) with A counterweight only – Adequate blocking must be placed under both side frame sprockets (or idler rollers) at the end that the boom is to be lifted off to prevent rocking. The ramps supplied with the crane are considered to be adequate blocking.

CAPACITY DEDUCTIONS FOR LIFTING OFF MAIN BOOM HOOK WITH JIB INSTALLED (OPEN THROAT BOOM ONLY)

When using main boom hook, while jib is attached, reduce boom capacities by the values in the following chart:

Jib Length (ft)	Offset Angle (deg)	Capacity Deduction (lb)
30	5	3,700
	15	4,800
	25	6,200
45	5	4,500
	15	6,400
	25	8,400
60	5	5,500
	15	7,900
	25	10,600

CAPACITY DEDUCTIONS FOR LIFTING OFF MAIN BOOM HOOK WITH 5 FOOT TIP EXTENSION INSTALLED

When using main boom hook, while 5 foot tip extension is attached, reduce boom capacities by the values in the following chart:

Tip Extension	Capacity Deduction (lb)
5' Tip Extension – Not Reeved	900
5' Tip Extension – With 15T Hook Ball	2,200

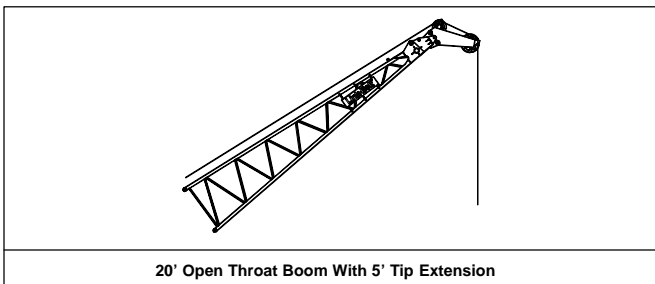
MAXIMUM ALLOWABLE CAPACITIES FOR 5' TIP EXTENSION

Lifting capacity to be the smallest of the following values:

- 18,000 lb
- The standard crane lift capacity minus 1,100 lb for the boom length, tip extension load radius, and counterweight configuration in use on the crane.

Notes:

- All notes are to be adhered to as listed on the standard lift crane capacity charts.
- Reduce the main boom lift capacities by 1,100 lb when the tip extension is installed.
- The 5' tip extension can be installed on the maximum boom length of 150'.
- Do not lift or suspend a load from the boom tip extension and main boom at the same time.

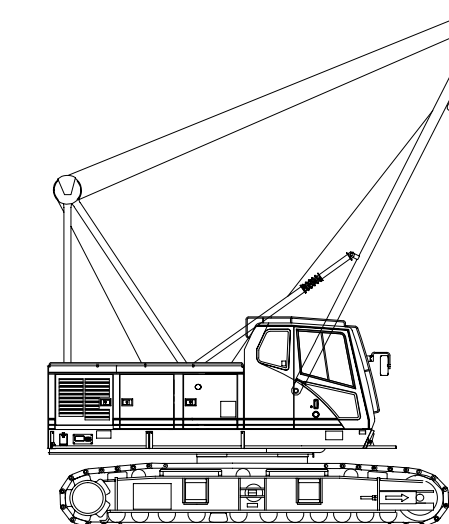


LIVE MAST LIFTING CAPACITIES (WITHOUT COUNTERWEIGHT INSTALLED)

Live Mast		Side Frames Extended (lb)	Side Frames Retracted (lb)
Radius (ft)	Angle (deg)		
10	73.7	60,000	60,000
11	71.2	60,000	51,600
12	68.7	60,000	44,600
13	66.1	60,000	39,200
14	63.5	60,000	34,900
15	60.8	59,400	31,500
16	58.0	52,700	28,600
17	55.1	47,400	26,200
18	52.2	43,000	24,200
19	49.1	39,300	22,500
20	45.8	36,200	20,900
21	42.4	33,500	19,600
22	38.8	31,200	18,400
23	34.8	29,200	17,300
24	30.3	27,400	16,400

Notes:

- Refer to the Operator's Manual.
- Live mast backstops must be in position and operative.
- Use rear hoist drum only. Reeve hoist line to drum over live mast cross member.
- Reeve hoist rope with three (3) parts of 7/8" diameter wire rope.
- The crane shall be leveled on a firm supporting surface.
- Capacities are based on 75% stability.
- See Crane Assembly Component Weights chart for weight of components for crane assembly in the Crane Rating Manual.
- Rated capacities for 360° rotation.
- Gantry can be either in the raised or lowered position when lifting loads with the live mast. When the gantry is in the lowered position the backstay links must be pinned.
- Do not lower live mast below 3° angle with gantry in lowered position.



DUTY CYCLE NOTES FOR ANGLE BOOM

- The capacities included in the “Duty Cycle Capacities – Angle Boom” chart are the maximum allowable, and are based on crane standing level on firm supporting surface under ideal job conditions.
- Capacities are based on 75% of minimum tipping loads for dragline; 67.5% for clamshell.
- Weight of bucket plus load, must not exceed these capacities.
- Dragline operation is not recommended with boom angles less than 35°.
- Boom length for dragline/clamshell attachment operation should not exceed 70’.
- Retractable high gantry must be fixed in raised position for all capacities on the “Duty Cycle Capacities – Angle Boom” chart.
- These capacities apply to the crane as originally manufactured and normally equipped by Link–Belt Construction Equipment Company.
- Capacities are maximum recommended by PCSA Standard #4. Operator must make allowances for soft or uneven supporting surfaces, rapid cycle operations, bucket suction, or other unfavorable conditions which may require smaller buckets for most efficient operation.

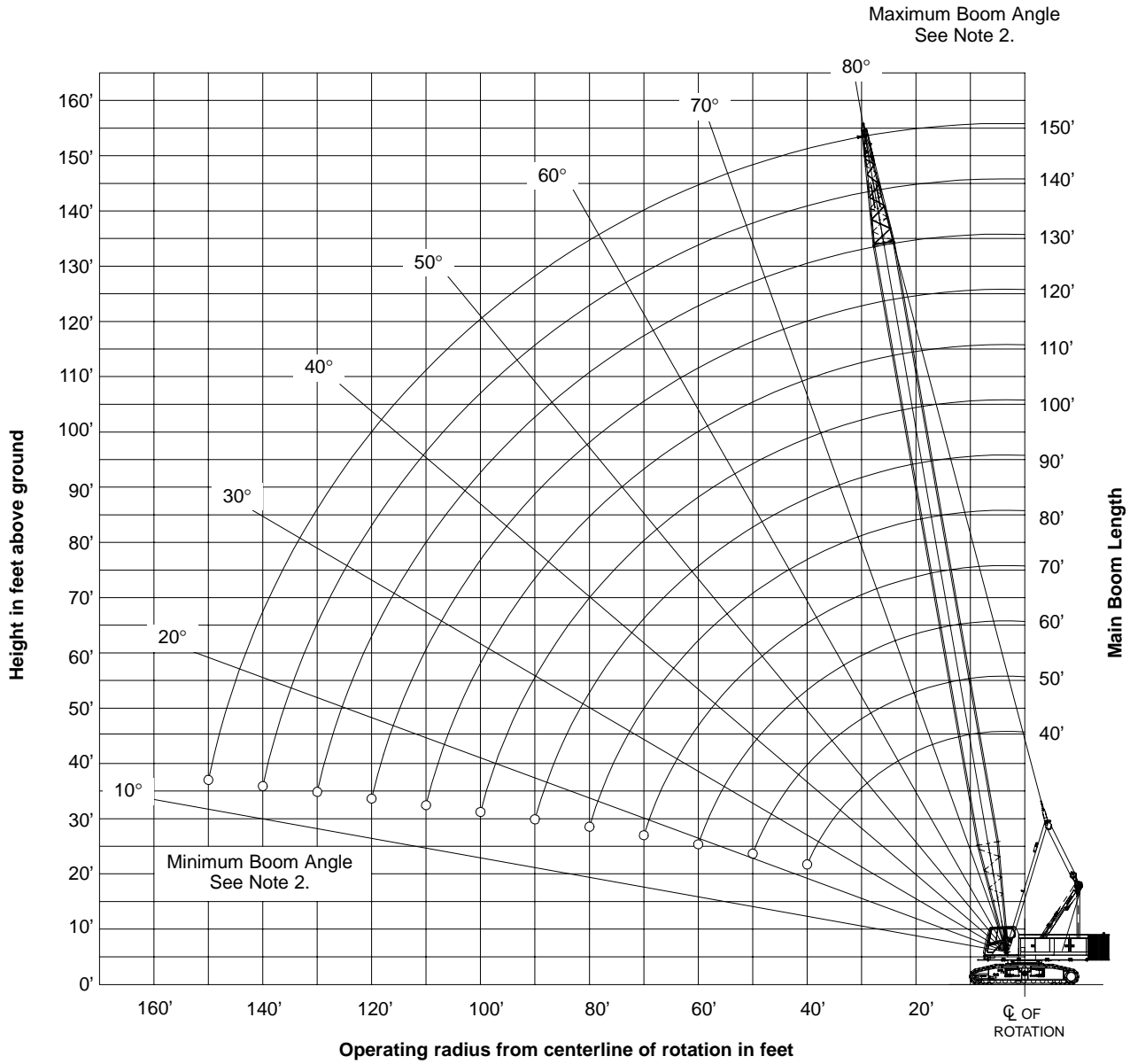
DUTY CYCLE CAPACITIES – ANGLE BOOM

Boom Length (ft)	Load Radius (ft)	Boom Angle (deg)	Side Frames Extended – “A” Counterweight Only (All capacities listed are in pounds)	
			Dragline	Clamshell/Magnet
40	9	81.8	---	22,700
40	10	80.3	---	22,700
40	11	78.9	---	22,700
40	12	77.4	---	22,700
40	13	75.9	---	22,700
40	14	74.5	---	22,700
40	15	73.0	---	22,700
40	16	71.5	---	22,700
40	17	69.9	---	22,700
40	18	68.4	---	22,700
40	19	66.9	---	22,700
40	20	65.3	---	22,700
40	25	57.1	22,700	22,700
40	30	48.1	22,700	22,700
40	35	37.5	22,700	22,700
40	40	23.4	---	20,160
50	11	81.1	---	22,700
50	12	80.0	---	22,700
50	13	78.8	---	22,700
50	14	77.6	---	22,700
50	15	76.4	---	22,700
50	16	75.3	---	22,700
50	17	74.1	---	22,700
50	18	72.9	---	22,700
50	19	71.7	---	22,700
50	20	70.5	---	22,700
50	25	64.3	---	22,700
50	30	57.7	22,700	22,700
50	35	50.6	22,700	22,700
50	40	42.7	22,500	20,250
50	50	20.9	---	14,670
60	12	81.6	---	22,700
60	13	80.7	---	22,700
60	14	79.7	---	22,700
60	15	78.7	---	22,700
60	16	77.8	---	22,700
60	17	76.8	---	22,700
60	18	75.8	---	22,700

Boom Length (ft)	Load Radius (ft)	Boom Angle (deg)	Side Frames Extended – “A” Counterweight Only (All capacities listed are in pounds)	
			Dragline	Clamshell/Magnet
60	19	74.8	---	22,700
60	20	73.8	---	22,700
60	25	68.8	---	22,700
60	30	63.6	---	22,700
60	35	58.1	22,700	22,700
60	40	52.3	22,400	20,160
60	50	38.9	16,300	14,670
60	60	19.0	---	11,160
70	14	81.2	---	22,700
70	15	80.4	---	22,700
70	16	79.5	---	22,700
70	17	78.7	---	22,700
70	18	77.9	---	22,700
70	19	77.0	---	22,700
70	20	76.2	---	22,700
70	25	71.9	---	22,700
70	30	67.6	---	22,700
70	35	63.1	---	22,700
70	40	58.4	22,200	19,980
70	50	48.1	16,200	14,580
70	60	35.9	12,400	11,160
70	70	17.6	---	8,730
80	15	81.6	---	22,700
80	16	80.9	---	22,700
80	17	80.1	---	22,700
80	18	79.4	---	22,700
80	19	78.7	---	22,700
80	20	77.9	---	22,700
80	25	74.2	---	22,700
80	30	70.5	---	22,700
80	35	66.6	---	22,700
80	40	62.7	---	19,800
80	50	54.3	16,000	14,400
80	60	44.8	12,200	10,980
80	70	33.5	9,600	8,640
80	80	16.5	---	6,840

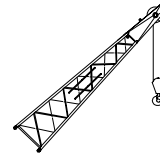
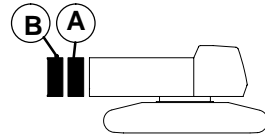
WORKING RANGE DIAGRAM

40' TO 150' OPEN THROAT BOOM



Notes:

1. Boom geometry shown is for unloaded condition and crane standing level on firm supporting surface. Boom deflection, subsequent radius, and boom angle change must be accounted for when applying load to hook.
2. Maximum and minimum boom angles are equal to the values listed in the capacity chart for each boom length.

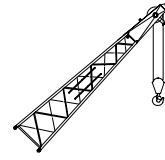
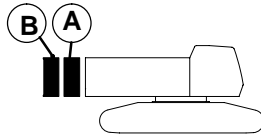


MAIN BOOM CAPACITIES – 40 FT OPEN THROAT ANGLE BOOM							
Load Radius (ft)	Boom Angle (deg)	Over End Blocked	360° Rotation				
			Side Frames Extended			Side Frames Retracted	
			AB CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	A CTWT (lb)
8.9	82.0	160,000	160,000	160,000	160,000	145,600	77,200
9	81.8	160,000	160,000	160,000	160,000	140,700	74,600
10	80.3	160,000	160,000	160,000	152,300	114,800	60,600
11	78.9	160,000	160,000	156,700	119,900	96,800	50,900
12	77.4	160,000	160,000	144,600	95,700	83,600	43,800
13	75.9	151,200	151,200	134,100	79,500	73,500	38,300
14	74.5	140,900	140,900	116,900	67,800	65,500	34,000
15	73.0	132,000	132,000	102,000	59,100	59,000	30,500
16	71.5	124,000	124,000	90,500	52,200	53,600	27,600
17	69.9	117,000	117,000	81,200	46,800	49,100	25,200
18	68.4	110,600	107,700	73,600	42,300	45,300	23,100
19	66.9	104,900	98,600	67,300	38,600	42,000	21,300
20	65.3	99,800	90,800	61,900	35,400	39,100	19,800
25	57.1	79,600	64,900	44,000	24,800	28,900	14,300
30	48.1	60,500	50,200	33,800	18,800	22,500	10,700
35	37.5	48,500	40,600	27,100	14,800	18,200	8,300
40	23.4	35,500	33,800	22,400	11,900	15,000	6,600

MAIN BOOM CAPACITIES – 60 FT OPEN THROAT ANGLE BOOM							
Load Radius (ft)	Boom Angle (deg)	Over End Blocked	360° Rotation				
			Side Frames Extended			Side Frames Retracted	
			AB CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	A CTWT (lb)
11.7	82.0	130,200	130,200	130,200	103,800	87,900	46,100
12	81.6	129,000	129,000	129,000	96,100	83,500	43,700
13	80.7	125,900	125,900	125,900	79,700	73,300	38,200
14	79.7	122,800	122,800	117,000	68,000	65,300	33,800
15	78.7	120,000	120,000	102,100	59,100	58,800	30,300
16	77.8	117,300	117,300	90,500	52,300	53,400	27,400
17	76.8	114,700	114,700	81,200	46,700	48,900	25,000
18	75.8	110,100	107,700	73,600	42,200	45,000	22,900
19	74.8	104,500	98,500	67,200	38,500	41,700	21,100
20	73.8	99,400	90,700	61,800	35,300	38,800	19,500
25	68.8	79,500	64,700	43,800	24,600	28,500	13,900
30	63.6	60,300	49,900	33,600	18,500	22,300	10,500
35	58.1	48,300	40,400	27,000	14,600	18,100	8,300
40	52.3	40,100	33,800	22,400	11,900	15,100	6,600
50	38.9	29,700	25,100	16,300	8,300	10,900	4,300
60	19.0	21,900	19,600	12,400	5,900	8,100	2,700

MAIN BOOM CAPACITIES – 50 FT OPEN THROAT ANGLE BOOM							
Load Radius (ft)	Boom Angle (deg)	Over End Blocked	360° Rotation				
			Side Frames Extended			Side Frames Retracted	
			AB CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	A CTWT (lb)
10.3	82.0	149,300	149,300	149,300	148,400	109,900	58,000
11	81.1	146,200	146,200	146,200	120,200	96,800	50,900
12	80.0	142,300	142,300	142,300	95,900	83,600	43,800
13	78.8	138,700	138,700	133,700	79,600	73,400	38,300
14	77.6	134,000	134,000	117,000	67,900	65,400	34,000
15	76.4	130,800	130,800	102,100	59,100	58,900	30,500
16	75.3	123,800	123,800	90,500	52,300	53,500	27,500
17	74.1	116,800	116,800	81,200	46,800	49,000	25,100
18	72.9	110,500	107,700	73,600	42,300	45,200	23,000
19	71.7	104,800	98,500	67,300	38,500	41,900	21,200
20	70.5	99,600	90,800	61,900	35,300	39,000	19,700
25	64.3	79,600	64,800	43,900	24,700	28,700	14,100
30	57.7	60,400	50,100	33,700	18,700	22,500	10,700
35	50.6	48,500	40,600	27,100	14,800	18,200	8,400
40	42.7	40,300	33,900	22,500	12,000	15,100	6,700
50	20.9	27,100	25,100	16,300	8,300	10,900	4,300

MAIN BOOM CAPACITIES – 70 FT OPEN THROAT ANGLE BOOM							
Load Radius (ft)	Boom Angle (deg)	Over End Blocked	360° Rotation				
			Side Frames Extended			Side Frames Retracted	
			AB CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	A CTWT (lb)
13.1	82.0	114,400	114,400	114,400	79,400	73,000	37,900
14	81.2	110,700	110,700	110,700	68,000	65,100	33,700
15	80.4	108,200	108,200	102,100	59,100	58,600	30,200
16	79.5	105,900	105,900	90,500	52,200	53,200	27,200
17	78.7	103,700	103,700	81,100	46,700	48,700	24,800
18	77.9	101,500	101,500	73,500	42,100	44,800	22,700
19	77.0	99,500	98,400	67,100	38,400	41,500	20,900
20	76.2	97,500	90,600	61,700	35,100	38,600	19,300
25	71.9	79,300	64,500	43,600	24,400	28,300	13,700
30	67.6	60,200	49,800	33,400	18,400	22,100	10,300
35	63.1	48,200	40,200	26,800	14,400	17,900	8,000
40	58.4	40,000	33,600	22,200	11,700	14,800	6,400
50	48.1	29,500	24,900	16,200	8,100	10,700	4,200
60	35.9	23,000	19,500	12,400	5,800	8,000	2,600
70	17.6	17,500	15,700	9,700	4,200	6,100	1,500



MAIN BOOM CAPACITIES – 80 FT OPEN THROAT ANGLE BOOM							
Load Radius (ft)	Boom Angle (deg)	Over End Blocked	360° Rotation				
			Side Frames Extended			Side Frames Retracted	
			AB CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	A CTWT (lb)
14.5	82.0	101,100	101,100	101,100	64,000	62,100	32,000
15	81.6	99,800	99,800	99,800	59,100	58,500	30,000
16	80.9	97,800	97,800	90,400	52,100	53,100	27,100
17	80.1	95,800	95,800	81,000	46,600	48,500	24,600
18	79.4	93,900	93,900	73,400	42,000	44,700	22,500
19	78.7	92,100	92,100	67,000	38,200	41,300	20,700
20	77.9	89,200	89,200	61,500	35,000	38,400	19,100
25	74.2	78,900	64,400	43,500	24,300	28,100	13,500
30	70.5	60,000	49,600	33,200	18,200	21,900	10,100
35	66.6	48,000	40,000	26,600	14,200	17,600	7,800
40	62.7	39,800	33,400	22,000	11,500	14,600	6,200
50	54.3	29,300	24,700	16,000	7,900	10,500	3,900
60	44.8	22,800	19,300	12,200	5,700	7,900	2,500
70	33.5	18,400	15,600	9,600	4,100	6,000	—
80	16.5	14,200	12,800	7,600	2,900	4,500	—

MAIN BOOM CAPACITIES – 100 FT OPEN THROAT ANGLE BOOM							
Load Radius (ft)	Boom Angle (deg)	Over End Blocked	360° Rotation				
			Side Frames Extended			Side Frames Retracted	
			AB CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	A CTWT (lb)
17.2	82.0	80,700	80,700	79,200	45,400	47,300	PROHIBITED
18	81.5	79,600	79,600	73,100	41,800	44,200	
19	81.0	78,200	78,200	66,700	38,000	40,900	
20	80.4	76,900	76,900	61,300	34,700	38,000	
25	77.5	70,800	64,000	43,100	23,900	27,700	
30	74.5	59,600	49,200	32,800	17,800	21,400	
35	71.5	47,600	39,600	26,200	13,800	17,100	
40	68.5	39,400	32,900	21,500	11,000	14,100	
50	62.1	28,800	24,300	15,500	7,400	10,000	
60	55.4	22,400	18,800	11,700	5,200	7,400	
70	48.2	18,000	15,100	9,100	3,600	5,600	
80	39.9	14,800	12,400	7,300	2,500	4,200	
90	29.9	12,400	10,300	5,800	1,600	3,100	
100	14.7	9,400	8,600	4,600	—	2,200	

MAIN BOOM CAPACITIES – 90 FT OPEN THROAT ANGLE BOOM							
Load Radius (ft)	Boom Angle (deg)	Over End Blocked	360° Rotation				
			Side Frames Extended			Side Frames Retracted	
			AB CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	A CTWT (lb)
15.9	82.0	89,500	89,500	89,500	53,300	53,800	PROHIBITED
16	81.9	89,200	89,200	89,200	52,100	52,900	
17	81.2	87,500	87,500	80,900	46,500	48,300	
18	80.6	85,900	85,900	73,200	41,900	44,400	
19	79.9	84,300	84,300	66,800	38,100	41,100	
20	79.3	82,800	82,800	61,400	34,900	38,200	
25	76.0	76,000	64,200	43,300	24,100	27,900	
30	72.7	59,800	49,400	33,000	18,000	21,600	
35	69.4	47,800	39,800	26,400	14,000	17,400	
40	65.9	39,600	33,200	21,800	11,300	14,400	
50	58.7	29,000	24,500	15,700	7,700	10,300	
60	50.9	22,600	19,100	12,000	5,400	7,700	
70	42.2	18,200	15,400	9,400	3,900	5,800	
80	31.5	15,100	12,600	7,500	2,700	4,400	
90	15.5	11,600	10,500	6,000	1,800	3,300	

MAIN BOOM CAPACITIES – 110 FT OPEN THROAT ANGLE BOOM							
Load Radius (ft)	Boom Angle (deg)	Over End Blocked	360° Rotation				
			Side Frames Extended			Side Frames Retracted	
			AB CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	A CTWT (lb)
18.6	82.0	73,000	73,000	69,000	—	42,000	PROHIBITED
19	81.8	72,500	72,500	66,600	—	40,700	
20	81.3	71,300	71,300	61,100	—	37,800	
25	78.6	64,900	63,800	42,900	—	27,400	
30	75.9	59,500	48,900	32,600	—	21,100	
35	73.2	47,400	39,400	25,900	—	16,900	
40	70.5	39,100	32,700	21,300	—	13,900	
50	64.9	28,600	24,000	15,200	—	9,800	
60	59.0	22,100	18,600	11,500	—	7,100	
70	52.7	17,700	14,900	8,900	—	5,300	
80	45.8	14,600	12,200	7,000	—	4,000	
90	38.0	12,200	10,100	5,600	—	2,900	
100	28.4	10,300	8,500	4,400	—	2,000	
110	14.0	7,500	7,100	3,400	—	—	



MAIN BOOM CAPACITIES – 120 FT OPEN THROAT ANGLE BOOM								
Load Radius (ft)	Boom Angle (deg)	Over End Blocked	360° Rotation					Load Radius (ft)
			Side Frames Extended			Side Frames Retracted		
			AB CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	A CTWT (lb)	
20.0	82.0	65,100	65,100	61,000	PROHIBITED	37,600	PROHIBITED	
25	79.6	60,500	60,500	42,700		27,200		
30	77.1	56,400	48,700	32,400		20,900		
35	74.7	47,200	39,200	25,700		16,600		
40	72.2	38,900	32,500	21,100		13,600		
50	67.1	28,400	23,800	15,000		9,500		
60	61.8	21,900	18,300	11,200		6,900		
70	56.2	17,500	14,600	8,600		5,000		
80	50.3	14,300	11,900	6,800		3,700		
90	43.7	12,000	9,900	5,300		2,600		
100	36.3	10,100	8,200	4,200		1,800		
110	27.2	8,600	6,900	3,200		—		
120	13.4	5,900	5,800	2,400	—			

MAIN BOOM CAPACITIES – 140 FT OPEN THROAT ANGLE BOOM								
Load Radius (ft)	Boom Angle (deg)	Over End Blocked	360° Rotation					Load Radius (ft)
			Side Frames Extended			Side Frames Retracted		
			AB CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	A CTWT (lb)	
22.8	82.0	53,900	53,900	49,100	PROHIBITED	37,600	22.8	
25	81.1	52,300	52,300	42,300		27,200		
30	79.0	49,000	48,300	31,900		20,900		
35	76.9	43,000	38,700	25,200		16,600		
40	74.8	38,400	32,000	20,600		13,600		
50	70.5	27,900	23,300	14,500		9,500		
60	66.1	21,400	17,800	10,700		6,900		
70	61.5	17,000	14,100	8,100		5,000		
80	56.8	13,800	11,400	6,200		3,700		
90	51.7	11,400	9,300	4,800		2,600		
100	46.3	9,600	7,700	3,700		1,800		
110	40.3	8,100	6,400	2,700		—		
120	33.5	6,800	5,300	2,000		—		
130	25.2	5,800	4,400	—		—		
140	12.4	3,300	3,300	—	—			

MAIN BOOM CAPACITIES – 130 FT OPEN THROAT ANGLE BOOM								
Load Radius (ft)	Boom Angle (deg)	Over End Blocked	360° Rotation					Load Radius (ft)
			Side Frames Extended			Side Frames Retracted		
			AB CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	A CTWT (lb)	
21.4	82.0	59,200	59,200	54,500	PROHIBITED	37,600	21.4	
25	80.4	56,300	56,300	42,500		27,200		
30	78.1	52,600	48,500	32,100		20,900		
35	75.9	47,000	38,900	25,500		16,600		
40	73.6	38,700	32,200	20,800		13,600		
50	68.9	28,100	23,500	14,800		9,500		
60	64.1	21,600	18,100	11,000		6,900		
70	59.1	17,200	14,400	8,400		5,000		
80	53.8	14,100	11,700	6,500		3,700		
90	48.2	11,700	9,600	5,100		2,600		
100	41.9	9,800	8,000	3,900		1,800		
110	34.8	8,300	6,700	3,000		—		
120	26.1	7,100	5,600	2,200		—		
130	12.9	4,500	4,500	1,500	—			

MAIN BOOM CAPACITIES – 150 FT OPEN THROAT ANGLE BOOM								
Load Radius (ft)	Boom Angle (deg)	Over End Blocked	360° Rotation					Load Radius (ft)
			Side Frames Extended			Side Frames Retracted		
			AB CTWT (lb)	AB CTWT (lb)	A CTWT (lb)	0 CTWT (lb)	A CTWT (lb)	
24.2	82.0	49,000	49,000	44,500	PROHIBITED	37,600	24.2	
25	81.7	48,500	48,500	42,100		27,200		
30	79.7	44,400	44,400	31,700		20,900		
35	77.8	40,000	38,500	25,000		16,600		
40	75.8	35,700	31,800	20,300		13,600		
50	71.9	27,600	23,000	14,200		9,500		
60	67.8	21,100	17,600	10,400		6,900		
70	63.6	16,700	13,800	7,800		5,000		
80	59.2	13,600	11,100	6,000		3,700		
90	54.7	11,200	9,100	4,500		2,600		
100	49.9	9,300	7,400	3,400		1,800		
110	44.6	7,800	6,100	2,500		—		
120	38.9	6,500	5,100	1,700		—		
130	32.4	5,300	4,100	—		—		
140	24.3	4,000	3,300	—		—		
150	12.0	2,100	2,100	—	—			

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Jib Capacities

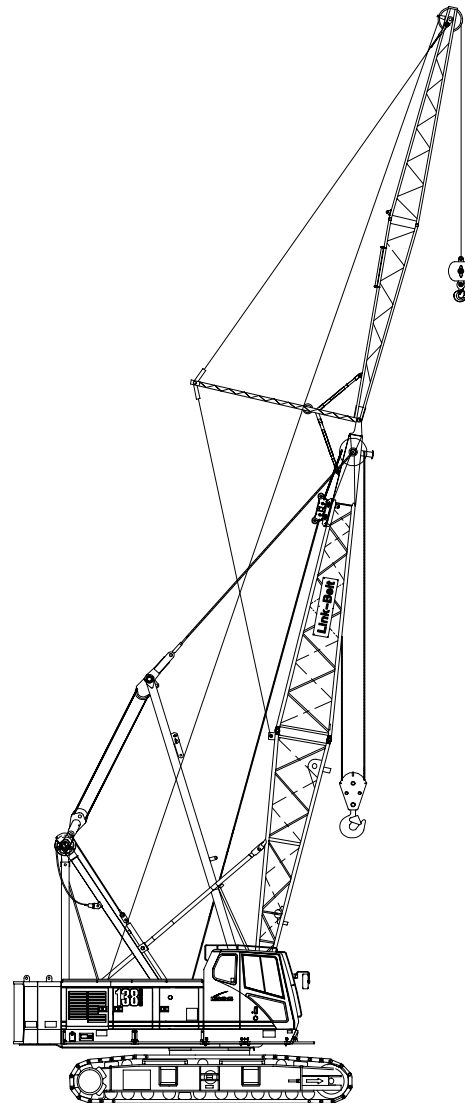
Lattice Boom Crawler Crane

138 HYLAB 5

80-ton (72.6 metric ton)

Angle Boom + Jib

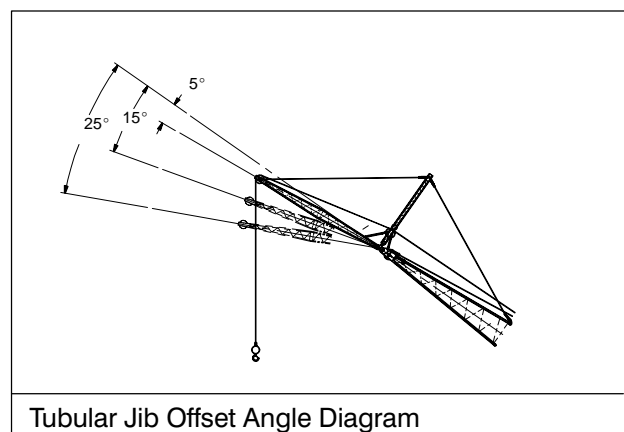
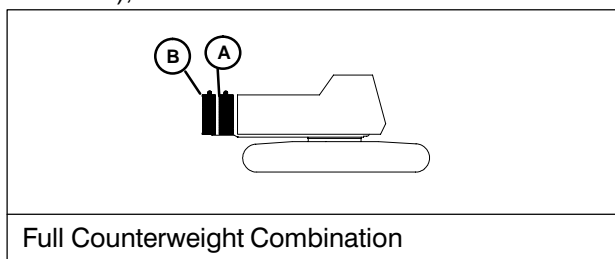
- 40'–140' (12.19 – 42.7m) Angle Boom with 30' – 60' (9.14 – 18.28m) of Jib
- 40' – 150' (12.19 – 45.72m) Angle Boom with 30' (9.14m) of Jib
- 20' (6.10m) Open Throat Top Section with 32" (0.81m) Wide x 24" (0.61m) Deep Jib
- With or Without 24' (7.31m) Live Mast
- Extended / Retracted Side Frames
- Over End Blocked Capacities
- 360° Capacities
- "AB" Counterweight Options
- 20' 2" (6.15m) Crawler Length



CAUTION: This material is supplied for reference use only. Operator must refer to in-cab Crane Rating Manual to determine allowable crane lifting capacities and operating procedures.

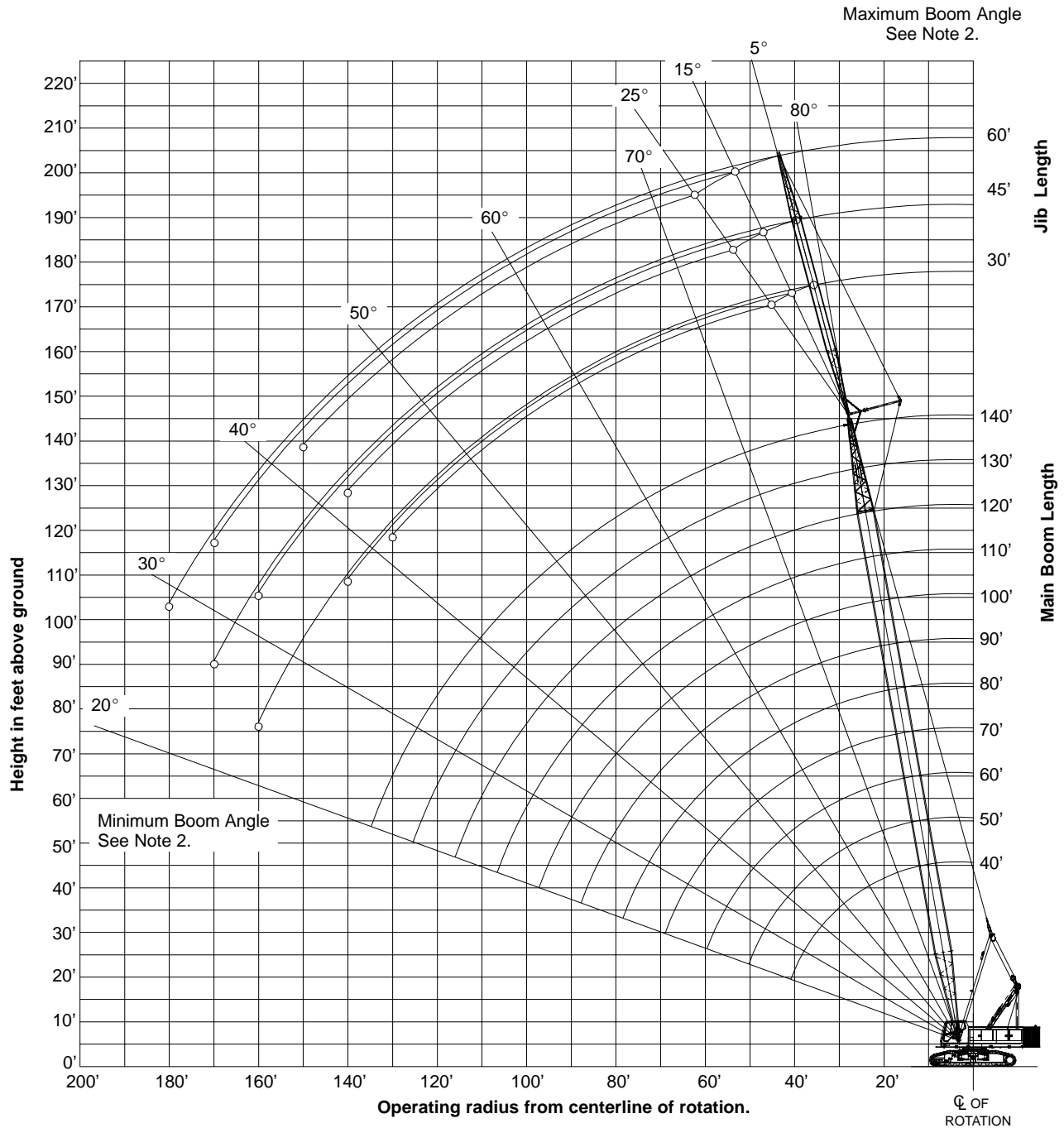
TUBULAR JIB NOTES FOR OPEN THROAT BOOM

1. Capacities are for a 138 HYLAB crawler crane with AB (50,500 lb) counterweight.
2. Separate capacity charts are listed for 360° and for over end blocked crawler working areas. Verify operating conditions as described on the Working Area Chart found in the general information section of the Crane Rating Manual. Apply the appropriate lift capacity chart based on the working area and the specific operating conditions.
3. Over end blocked capacities can be lifted over either end with the crane standing level on a firm supporting surface. Adequate blocking must be placed under both side frame sprockets (or idler rollers) at the end that the load is to be lifted to prevent rocking. The ramps supplied with the crane are considered to be adequate blocking.
4. Capacities are for side frames in the extended position only and are based on the crane standing level on a firm supporting surface.
5. Capacities are limited to a LBCE 48" x 48" angle boom with an open throat and a LBCE 12 ton, 24" x 32" cross section jib with a 11'6" high jib mast properly assembled.
6. Two parts of 7/8" Diameter Type "DB" or Type "RB" wire rope are required for maximum lift.
7. Capacities are for 30', 45', and 60' jib lengths only.
8. Maximum boom plus jib combination is 140' + 60' or 150' + 30'. The only jib length available on the 150' open throat boom length is 30'.
9. The least stable condition is over the side.
10. All capacities are listed in pounds and are not more than 75% of the tipping loads. Those capacities followed by an asterisk (*) are governed by factors other than those that would cause a tipping condition.
11. A deduction must be made from the jib capacities for the weight of the following: Main boom hook block or hook ball, jib hook block or hook ball, slings, grapple, load weighing devices (other than those supplied with the crane), etc.



WORKING RANGE DIAGRAM

40' TO 140' MAIN BOOM WITH 30' TO 60' JIB

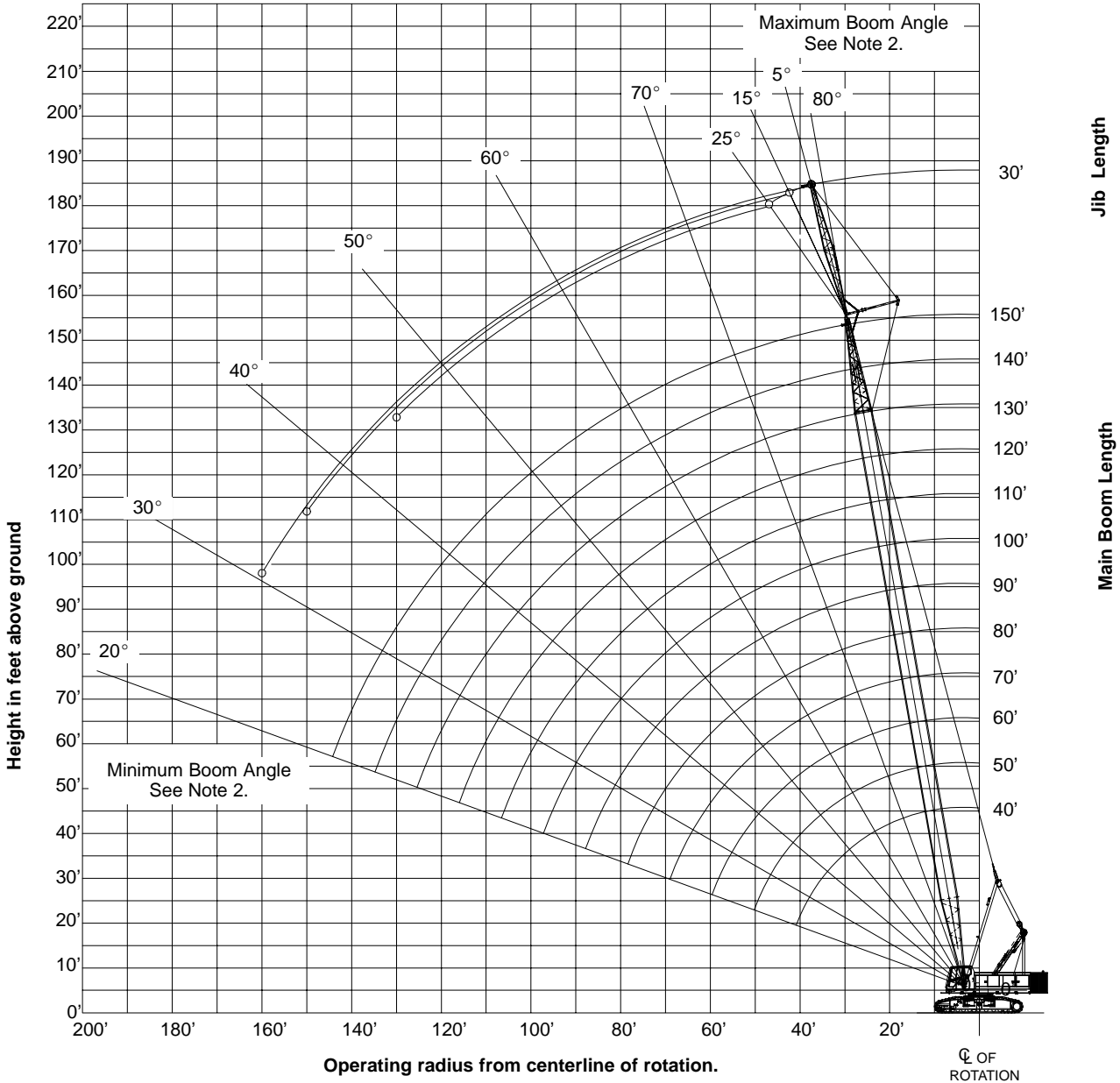


Notes:

1. Boom geometry shown is for unloaded condition and crane standing level on firm supporting surface. Boom deflection, subsequent radius, and boom angle change must be accounted for when applying load to hook.
2. Maximum and minimum boom angles are equal to the values listed in the capacity chart for each boom length.

WORKING RANGE DIAGRAM

40' TO 150' MAIN BOOM WITH 30' JIB



Notes:

1. Boom geometry shown is for unloaded condition and crane standing level on firm supporting surface. Boom deflection, subsequent radius, and boom angle change must be accounted for when applying load to hook.
2. Maximum and minimum boom angles are equal to the values listed in the capacity chart for each boom length.

138 HYLAB 5 - w/ 48" x 48" Angle Boom, w/ 24" x 32" Tube Jib, w/ "AB" Ctw

Refer to the Tubular Jib notes for Open Throat Boom in the Crane Rating Manual before operating the crane.

Boom Length (ft)	Jib Length (ft)	Jib Load Radius (ft)	Jib Angle to Boom												Jib Load Radius (ft)
			5 Degrees				15 Degrees				25 Degrees				
			Boom Angle (deg)	Jib Point Height (ft)	Over End Capacity (lbs)	Jib 360° Capacity (lbs)	Boom Angle (deg)	Jib Point Height (ft)	Over End Capacity (lbs)	Jib 360° Capacity (lbs)	Boom Angle (deg)	Jib Point Height (ft)	Over End Capacity (lbs)	Jib 360° Capacity (lbs)	
50	30	20.1	80.0	85.9	24,000 *	24,000 *									20.1
50	30	25	76.4	84.7	24,000 *	24,000 *									25
50	30	30	72.8	83.1	24,000 *	24,000 *	76.3	82.6	24,000 *	24,000 *	79.6	81.3	20,500 *	20,500 *	30
50	30	35	69.0	81.2	24,000 *	24,000 *	72.5	80.7	24,000 *	24,000 *	75.8	79.4	18,600 *	18,600 *	35
50	30	40	65.2	78.9	24,000 *	24,000 *	68.6	78.4	22,800 *	22,800 *	71.8	77.0	17,400 *	17,400 *	40
50	30	50	57.0	72.9	23,600 *	23,600 *	60.4	72.4	18,900 *	18,900 *	63.4	70.9	15,600 *	15,600 *	50
50	30	60	47.9	64.7	19,500 *	19,500 *	51.2	64.2	17,400 *	17,400 *	54.0	62.4	14,000 *	14,000 *	60
50	30	70	37.2	53.1	17,400 *	16,700 *	40.2	52.4	15,600 *	15,700 *					70
50	45	24.0	80.0	100.1	24,000 *	24,000 *									24.0
50	45	25	79.4	99.8	24,000 *	24,000 *									25
50	45	30	76.3	98.5	24,000 *	24,000 *									30
50	45	35	73.2	96.8	23,500 *	23,500 *	77.7	96.2	17,700 *	17,700 *					35
50	45	40	70.0	94.9	20,700 *	20,700 *	74.5	94.2	17,300 *	17,300 *	78.8	92.4	13,000 *	13,000 *	40
50	45	50	63.5	90.0	17,300 *	17,300 *	67.9	89.4	14,500 *	14,500 *	72.0	87.4	11,100 *	11,100 *	50
50	45	60	56.4	83.6	15,100 *	15,100 *	60.8	82.9	12,400 *	12,400 *	64.8	80.8	9,700 *	9,700 *	60
50	45	70	48.7	75.2	12,900 *	12,900 *	53.0	74.4	10,800 *	10,800 *	56.7	72.0	8,700 *	8,700 *	70
50	45	80	39.9	64.0	11,200 *	11,200 *	43.9	63.1	9,600 *	9,600 *	47.4	60.3	7,900 *	7,900 *	80
50	45	90	28.7	47.8	10,000 *	10,000 *									90
50	60	27.9	80.0	114.6	24,000 *	24,000 *									27.9
50	60	30	78.8	114.1	22,600 *	22,600 *									30
50	60	35	76.2	112.7	19,500 *	19,500 *									35
50	60	40	73.5	111.1	17,300 *	17,300 *	78.7	110.4	14,400 *	14,400 *					40
50	60	50	68.0	107.0	14,900 *	14,900 *	73.1	106.3	11,800 *	11,800 *	78.1	104.2	8,800 *	8,800 *	50
50	60	60	62.2	101.7	12,300 *	12,300 *	67.3	101.0	9,900 *	9,900 *	72.1	98.7	7,600 *	7,600 *	60
50	60	70	56.0	95.0	10,400 *	10,400 *	61.1	94.3	8,600 *	8,600 *	65.8	91.8	6,700 *	6,700 *	70
50	60	80	49.3	86.5	9,000 *	9,000 *	54.3	85.8	7,600 *	7,600 *	58.8	83.0	6,100 *	6,100 *	80
50	60	90	41.8	75.7	7,900 *	7,900 *	46.6	74.8	6,800 *	6,800 *	50.9	71.6	5,500 *	5,500 *	90
50	60	100	32.7	61.1	7,100 *	7,100 *	37.3	59.9	6,200 *	6,200 *					100

138 HYLAB 5 - w/ 48" x 48" Angle Boom, w/ 24" x 32" Tube Jib, w/ "AB" Cwt

Refer to the Tubular Jib notes for Open Throat Boom in the Crane Rating Manual before operating the crane.

Boom Length (ft)	Jib Length (ft)	Jib Load Radius (ft)	Jib Angle to Boom												Jib Load Radius (ft)			
			5 Degrees				15 Degrees				25 Degrees							
			Boom Angle (deg)	Jib Point Height (ft)	Over End Capacity (lbs)	Jib Capacity (lbs)	Boom Angle (deg)	Jib Point Height (ft)	Over End Capacity (lbs)	Jib Capacity (lbs)	360° Jib Capacity (lbs)	Boom Angle (deg)	Jib Point Height (ft)	Over End Capacity (lbs)		Jib Capacity (lbs)	360° Jib Capacity (lbs)	
80	30	25.3	80.0	115.4	24,000 *	24,000 *												25.3
80	30	30	77.5	114.3	24,000 *	24,000 *			0									30
80	30	35	74.9	113.0	24,000 *	24,000 *	77.4	112.4	24,000 *	24,000 *	79.8	110.9	20,600 *	20,600 *				35
80	30	40	72.2	111.4	24,000 *	24,000 *	74.7	110.8	24,000 *	24,000 *	77.1	109.3	19,100 *	19,100 *				40
80	30	50	66.6	107.4	24,000 *	24,000 *	69.1	106.8	23,100 *	23,100 *	71.4	105.2	17,300 *	17,300 *				50
80	30	60	60.8	102.1	23,200	19,600	63.3	101.5	20,000 *	19,900	65.5	99.8	16,000 *	16,000 *				60
80	30	70	54.7	95.5	18,800	15,900	57.1	94.9	17,700 *	16,200	59.2	93.0	14,700 *	14,700 *				70
80	30	80	48.0	87.1	15,600	13,200	50.3	86.4	15,800	13,300	52.3	84.4	13,700 *	13,500				80
80	30	90	40.5	76.3	13,200	11,100	42.7	75.5	13,300	11,200								90
80	30	100	31.4	61.8	10,700 *	9,400												100
80	45	29.2	80.0	129.6	24,000 *	24,000 *												29.2
80	45	30	79.6	129.4	24,000 *	24,000 *												30
80	45	35	77.3	128.2	24,000 *	24,000 *												35
80	45	40	74.9	126.8	24,000 *	24,000 *	78.3	125.9	18,100 *	18,100 *								40
80	45	50	70.1	123.2	20,700 *	20,700 *	73.5	122.4	17,100 *	17,100 *	76.7	120.2	12,200 *	12,200 *				50
80	45	60	65.2	118.6	17,400 *	17,400 *	68.5	117.8	14,700 *	14,700 *	71.6	115.6	10,900 *	10,900 *				60
80	45	70	60.0	113.0	16,500 *	16,200	63.3	112.1	13,000 *	13,000 *	66.3	109.8	9,900 *	9,900 *				70
80	45	80	54.5	106.0	14,400 *	13,400	57.8	105.2	11,600 *	11,600 *	60.6	102.6	9,100 *	9,100 *				80
80	45	90	48.6	97.5	12,800 *	11,300	51.8	96.6	10,600 *	10,600 *	54.5	93.8	8,400 *	8,400 *				90
80	45	100	42.0	86.9	11,500 *	9,700	45.1	85.8	9,700 *	9,700 *	47.6	82.7	7,900 *	7,900 *				100
80	45	110	34.4	73.3	9,800 *	8,300	37.3	72.0	9,000 *	8,400								110
80	60	33.1	80.0	144.2	23,700 *	23,700 *												33.1
80	60	35	79.2	143.7	22,800 *	22,800 *												35
80	60	40	77.1	142.5	20,300 *	20,300 *												40
80	60	50	72.9	139.3	17,300 *	17,300 *	76.9	138.4	13,400 *	13,400 *								50
80	60	60	68.5	135.4	15,200 *	15,200 *	72.6	134.5	11,500 *	11,500 *	76.4	131.9	8,400 *	8,400 *				60
80	60	70	64.0	130.5	13,000 *	13,000 *	68.0	129.6	10,100 *	10,100 *	71.8	126.8	7,500 *	7,500 *				70
80	60	80	59.3	124.5	11,300 *	11,300 *	63.3	123.6	9,000 *	9,000 *	66.9	120.7	6,800 *	6,900 *				80
80	60	90	54.4	117.4	10,000 *	10,000 *	58.3	116.5	8,100 *	8,100 *	61.8	113.4	6,300 *	6,300 *				90
80	60	100	49.1	108.9	8,900 *	8,900 *	52.9	107.8	7,400 *	7,400 *	56.3	104.5	5,800 *	5,800 *				100

138 HYLAB 5 - w/ 48" x 48" Angle Boom, w/ 24" x 32" Tube Jib, w/ "AB" Cwt

Refer to the Tubular Jib notes for Open Throat Boom in the Crane Rating Manual before operating the crane.

Boom Length (ft)	Jib Length (ft)	Jib Load Radius (ft)	Jib Angle to Boom												Jib Load Radius (ft)
			5 Degrees				15 Degrees				25 Degrees				
			Boom Angle (deg)	Jib Point Height (ft)	Over End Capacity (lbs)	Jib Capacity (lbs)	360° Jib Capacity (lbs)	Boom Angle (deg)	Jib Point Height (ft)	Over End Capacity (lbs)	Jib Capacity (lbs)	360° Jib Capacity (lbs)	Boom Angle (deg)	Jib Point Height (ft)	
80	60	110	43.3	98.5	8,100 *	8,100 *	47.0	97.3	6,800 *	6,800 *	50.2	93.6	5,500 *	5,500 *	110
80	60	120	36.7	85.6	7,400 *	7,400 *	40.3	84.2	6,300 *	6,300 *					120
80	60	130	28.7	68.6	6,800 *	6,400									130
90	30	27.0	80.0	125.3	24,000 *	24,000 *									27.0
90	30	30	78.6	124.6	24,000 *	24,000 *									30
90	30	35	76.1	123.4	24,000 *	24,000 *	78.5	122.8	24,000 *	24,000 *					35
90	30	40	73.7	121.9	24,000 *	24,000 *	76.0	121.3	24,000 *	24,000 *	78.2	119.8	19,700 *	19,700 *	40
90	30	50	68.7	118.3	24,000 *	24,000 *	71.0	117.7	23,900 *	23,800 *	73.1	116.1	17,400 *	17,400 *	50
90	30	60	63.5	113.6	23,000	19,400	65.7	113.0	21,100 *	19,700	67.8	111.3	16,500 *	16,500 *	60
90	30	70	58.0	107.7	18,500	15,700	60.2	107.1	18,700	15,900	62.2	105.3	15,300 *	15,300 *	70
90	30	80	52.2	100.4	15,400	12,900	54.4	99.7	15,600	13,100	56.2	97.8	14,200 *	13,300	80
90	30	90	45.8	91.3	12,900	10,800	47.9	90.6	13,100	11,000	49.7	88.4	13,200	11,100	90
90	30	100	38.6	79.8	11,000	9,200	40.7	78.9	11,100	9,300					100
90	30	110	30.0	64.5	8,700 *	7,800									110
90	45	30.9	80.0	139.5	24,000 *	24,000 *									30.9
90	45	35	78.2	138.5	24,000 *	24,000 *									35
90	45	40	76.1	137.2	24,000 *	24,000 *	79.2	136.3	18,700 *	18,700 *					40
90	45	50	71.7	133.9	21,000 *	21,000 *	74.8	133.1	17,300 *	17,300 *	77.8	130.8	12,600 *	12,600 *	50
90	45	60	67.1	129.8	18,300 *	18,300 *	70.2	128.9	15,400 *	15,400 *	73.1	126.6	11,300 *	11,300 *	60
90	45	70	62.4	124.6	16,800 *	16,000	65.5	123.7	13,600 *	13,600 *	68.3	121.3	10,200 *	10,200 *	70
90	45	80	57.5	118.4	15,000 *	13,200	60.5	117.5	12,200 *	12,200 *	63.2	114.9	9,400 *	9,400 *	80
90	45	90	52.3	110.8	13,200	11,100	55.2	109.9	11,100 *	11,100 *	57.8	107.2	8,700 *	8,700 *	90
90	45	100	46.6	101.7	11,300	9,400	49.5	100.7	10,200 *	9,600	52.0	97.7	8,200 *	8,200 *	100
90	45	110	40.3	90.5	9,700	8,000	43.1	89.3	9,500 *	8,200					110
90	45	120	33.0	76.2	8,000 *	6,900									120
90	60	34.8	80.0	154.0	22,800 *	22,800 *									34.8
90	60	35	79.9	154.0	22,700 *	22,700 *									35
90	60	40	78.0	152.8	20,800 *	20,800 *									40
90	60	50	74.0	149.9	17,400 *	17,400 *	77.8	148.9	13,800 *	13,800 *					50
90	60	60	70.0	146.2	16,100 *	16,000 *	73.8	145.3	11,900 *	12,000 *	77.4	142.6	8,600 *	8,600 *	60

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