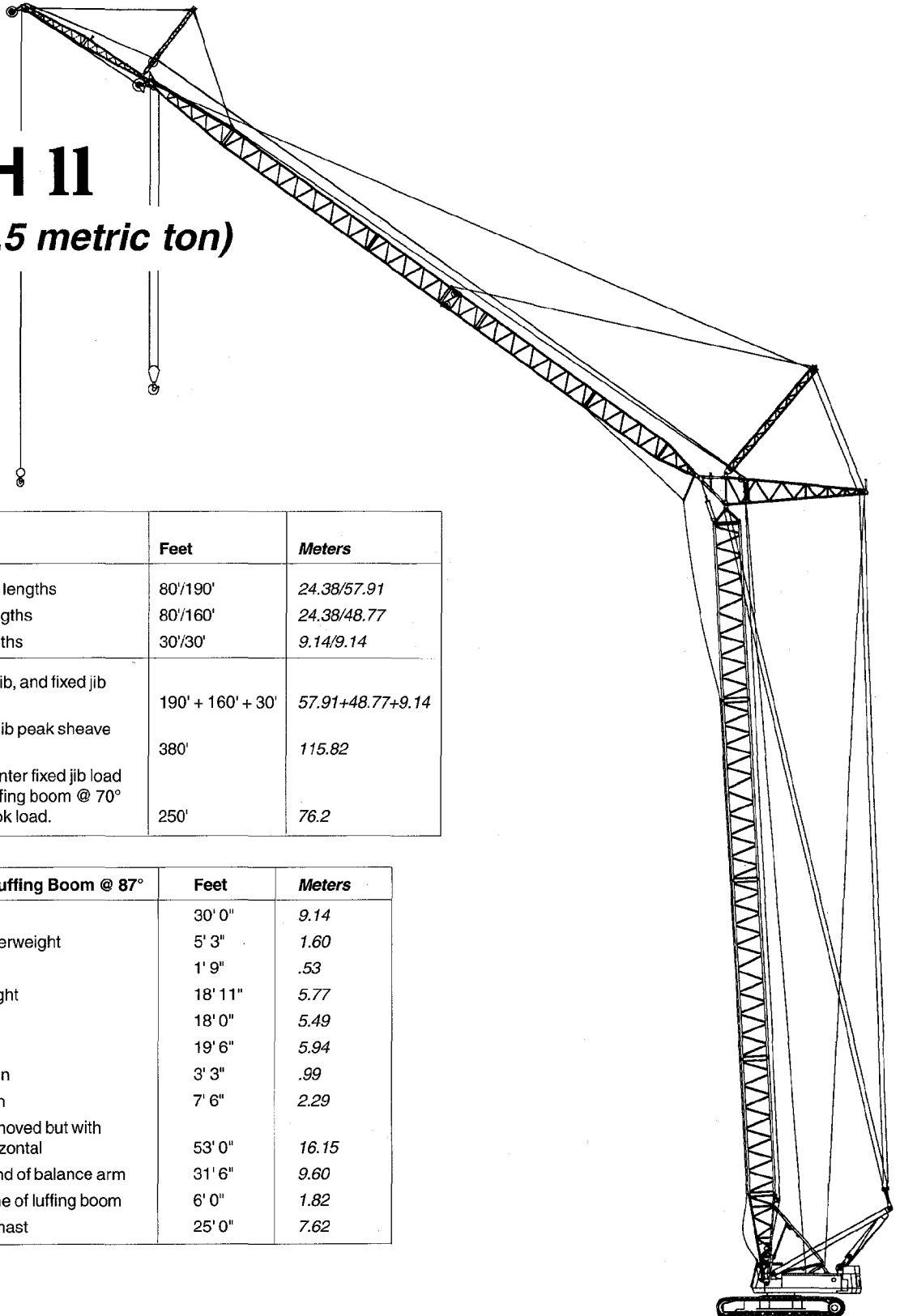


Specifications

Lattice Boom Crawler Crane With Luffing Attachment

LS-248H 11

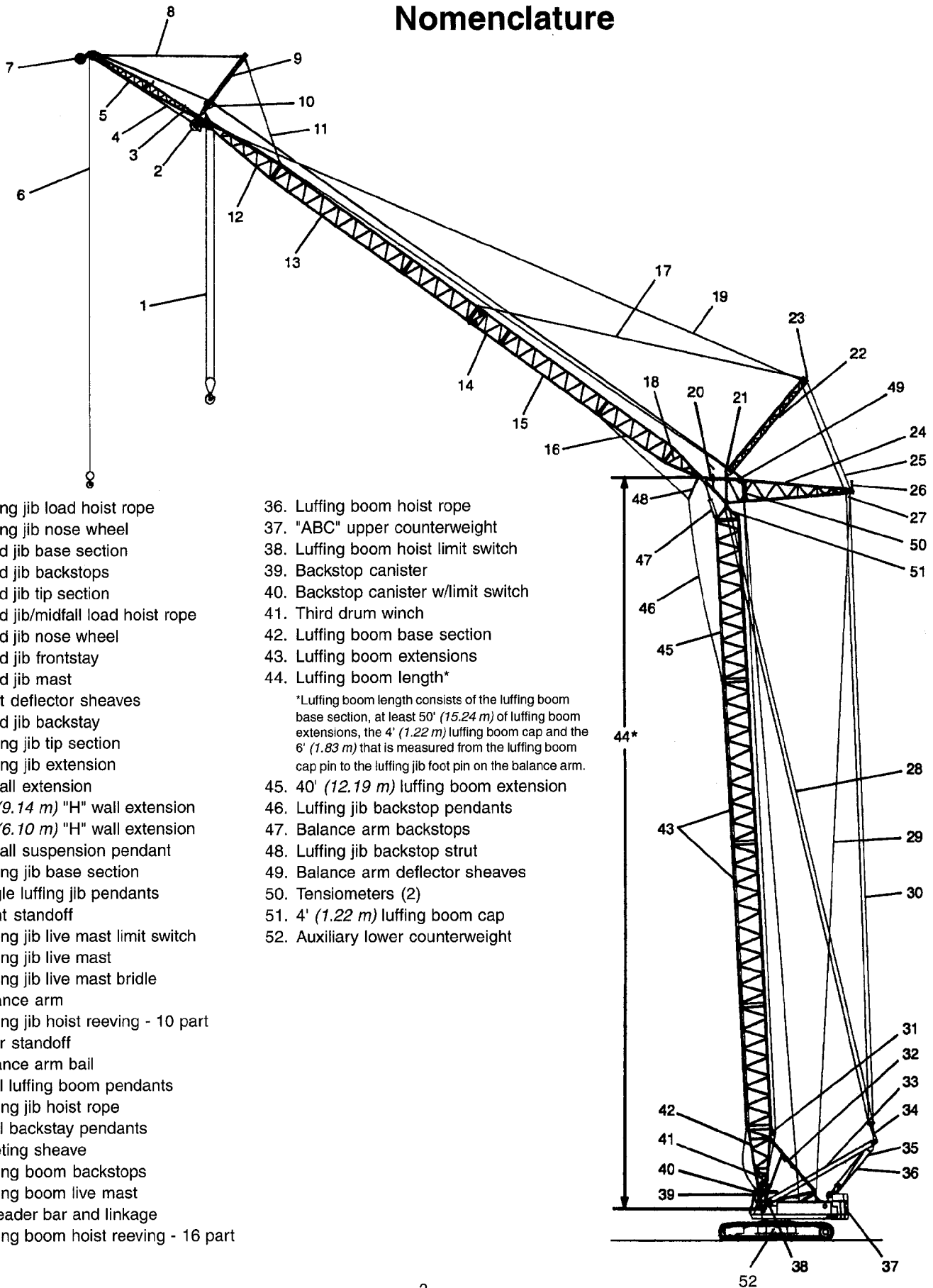
42.5 -Ton (38.5 metric ton)



Luffing Boom - Luffing Jib - Fixed Jib Combinations	Feet	Meters
Basic & maximum luffing boom lengths	80'/190'	24.38/57.91
Basic & maximum luffing jib lengths	80'/160'	24.38/48.77
Basic & maximum fixed jib lengths	30'/30'	9.14/9.14
Maximum luffing boom, luffing jib, and fixed jib combination lengths	190' + 160' + 30'	57.91+48.77+9.14
Maximum height - center fixed jib peak sheave @ 75' (22.86 m) radius	380'	115.82
Maximum horizontal reach - center fixed jib load hook @ max. chart radius w/luffing boom @ 70° offset - 5,400 lb. (2 449 kg) hook load.	250'	76.2

General Dimensions - 190' Luffing Boom @ 87°	Feet	Meters
Luffing boom live mast	30' 0"	9.14
Ground clearance under counterweight	5' 3"	1.60
Minimum ground clearance	1' 9"	.53
Tailswing of "ABC" counterweight	18' 11"	5.77
Tailswing of balance arm	18' 0"	5.49
Radius of luffing jib hinge pin	19' 6"	5.94
Radius of luffing boom hinge pin	3' 3"	.99
Height of luffing boom hinge pin	7' 6"	2.29
Overall length - attachment removed but with luffing boom mast lowered horizontal	53' 0"	16.15
Centerline of luffing boom to end of balance arm	31' 6"	9.60
Luffing jib hinge pin to centerline of luffing boom	6' 0"	1.82
Tail swing of luffing boom live mast	25' 0"	7.62

Nomenclature



1. Luffing jib load hoist rope
2. Luffing jib nose wheel
3. Fixed jib base section
4. Fixed jib backstops
5. Fixed jib tip section
6. Fixed jib/midfall load hoist rope
7. Fixed jib nose wheel
8. Fixed jib frontstay
9. Fixed jib mast
10. Mast deflector sheaves
11. Fixed jib backstay
12. Luffing jib tip section
13. Luffing jib extension
14. Midfall extension
15. 30' (9.14 m) "H" wall extension
16. 20' (6.10 m) "H" wall extension
17. Midfall suspension pendant
18. Luffing jib base section
19. Single luffing jib pendants
20. Front standoff
21. Luffing jib live mast limit switch
22. Luffing jib live mast
23. Luffing jib live mast bridle
24. Balance arm
25. Luffing jib hoist reeving - 10 part
26. Rear standoff
27. Balance arm bail
28. Dual luffing boom pendants
29. Luffing jib hoist rope
30. Dual backstay pendants
31. Fleeting sheave
32. Luffing boom backstops
33. Luffing boom live mast
34. Spreader bar and linkage
35. Luffing boom hoist reeving - 16 part

36. Luffing boom hoist rope
37. "ABC" upper counterweight
38. Luffing boom hoist limit switch
39. Backstop canister
40. Backstop canister w/limit switch
41. Third drum winch
42. Luffing boom base section
43. Luffing boom extensions
44. Luffing boom length*
45. 40' (12.19 m) luffing boom extension
46. Luffing jib backstop pendants
47. Balance arm backstops
48. Luffing jib backstop strut
49. Balance arm deflector sheaves
50. Tensiometers (2)
51. 4' (1.22 m) luffing boom cap
52. Auxiliary lower counterweight

*Luffing boom length consists of the luffing boom base section, at least 50' (15.24 m) of luffing boom extensions, the 4' (1.22 m) luffing boom cap and the 6' (1.83 m) that is measured from the luffing boom cap pin to the luffing jib foot pin on the balance arm.

General Specifications

■ Luffing Boom

Tubular; 80" (2.03 m) wide, 68" (1.72 m) deep at connections. Alloy steel round tubular chords 4.0 (1.0 m) outside diameter.

■ Luffing Boom Base Section

20' (6.09 m) long. Luffing boom feet on 55" (1.39 m) centers. Hydraulic powered luffing boom foot pin removal system standard.

■ Luffing Boom Extensions

Available in 10' (3.04 m), 20' (6.08 m), 30' (9.14 m) and 40' (12.19 m) lengths with appropriate length pendants.

■ Luffing Boom Connections

In-line pin connections

■ Luffing Boom Cap

4' 0" (1.21 m) long; tubular construction, pin connected to the top luffing boom extension.

■ Balance Arm

Provides an offset luffing jib connection to allow for a full 165° of luffing jib angle variation from erection to minimum radius operating position. Transfers the resultant of the luffing jib foot thrust to the luffing boom centerline so that all four chords are loaded equally. Tubular construction, front chords span 6' 0" (1.82 m) from luffing boom centerline and rear chords span 30' 0" (9.14 m) from luffing boom centerline to the luffing jib hoist bail shaft.

■ Luffing Boom Stops

Dual lever type, spring cushioned. Adjustable levers pin to luffing boom base section; backstops anchor to the upper revolving frame. Required for all luffing boom lengths.

■ Luffing Boom Hoist Bridle

The 16 part conventional boom hoist becomes the luffing boom hoist with no re-reeving required.

■ Luffing Boom Live Mast

Welded plate/tube construction 30' 0" (9.14 m) long, required for all luffing boom/luffing jib lengths; supports luffing jib hoist bridle. (Same live mast as on standard crane.)

■ Balance Arm Stops

Spring canisters with links that position the balance arm centerline approximately perpendicular to the luffing boom.

■ Wire Rope

See chart on page 4.

■ Basic Luffing Boom

80' (24.38 m) long; contains one 20' 0" (6.09 m) base section, one 10' 0" (3.04 m), one 40' 0" (12.19 m) extension, 4' 0" (1.21 m) tapered luffing boom cap and 6' 0" (1.82 m) balance arm. (Includes live mast, 10-part bridle and bail machinery, spreader bar and luffing jib backstop system.)

■ Maximum Luffing Boom

No assist luffing boom erection; 190' (57.91 m) luffing boom for use with maximum 160' (48.76 m) luffing jib and 30' (9.14 m) fixed jib.

■ Luffing Jib - 218A/218H Conventional Boom

Tubular; basic luffing jib 80' (24.38 m) long; 60" (1.52 m) wide, 50" (1.27 m) deep at connections. Alloy steel round tubular chords 3.0" (.07 m) outside diameter.

■ Luffing Jib Base Section

10' 0" (3.04 m) long; 80" (2.03 m) wide at luffing jib foot. 50" (1.27 m) deep and 60" (1.52 m) wide at pin connections.

■ Luffing Jib Extensions - .220" (5.59 mm) Wall

Available in 10' (3.04 m), 20' (6.10 m), 30' (9.14 m) and 40' (12.19 m) lengths with appropriate length pendants. (218A/218H extensions)

■ Luffing Jib Extensions - .259" Wall

Available in 20' (6.10 m) and 30' (9.14 m) lengths with appropriate length pendants. (218A/218H extensions). Required for first 50' (15.24 m) of luffing jib extensions.

■ Luffing Jib Connections

In-line pin connections.

■ Top Section - Luffing Jib

Open throat, 20' (6.09 m) long. (218A/218H top section)

■ Luffing Jib Live Mast

30' (9.14 m) long, required for all luffing jib/fixed jib lengths.

■ Luffing Jib Point Machinery

Five 21" (.53 m) root diameter sheaves. Sheaves mounted on anti-friction bearings.

■ Deflector Rollers

Deflect load hoist wire rope off luffing boom/luffing jib. Steel rollers mounted on anti-friction pillow block bearings.

■ Luffing Jib Backstop System

3/4" (19 mm) wire rope type "N" pendants. Contains spring canisters and a limit switch to prevent luffing jib from exceeding maximum operating angle.

■ Luffing Jib Hoist

1" (25 mm) type "N" luffing jib hoist line runs from the rear drum to the balance arm bail. Ten part reeving hoists luffing jib from -75° to 0° during erection and from 0° to 75° during operation.

■ Luffing Jib Hoist Limiting Device

One of the luffing jib backstop canisters is equipped with a luffing jib hoist limit switch used to avoid hoisting above minimum radius. Brakes apply automatically.

■ Drum Rotation Indicators

Standard for front drum (load hoist) and rear drum (luffing jib hoist).

■ Luffing Jib Lengths

Luffing jib lengths from 80' (24.38 m) to 160' (48.77 m) may be used on all luffing boom lengths from 80' (24.38 m) to 180' (54.86 m) with luffing boom angles at 87°, 85°, 80°, 75°, 70° and 65° angles.

■ Luffing Jib Nose Wheels

Pin-connected to end of luffing jib top section; support luffing jib peak on ground during luffing boom and luffing jib erection.

■ Luffing Boom And Luffing Jib Angle Indicators

Electronic type standard. Read out unit conveniently located in crane operator's cab.

■ Capacities

Available for luffing boom angles of 87°, 80°, 85°, 75°, and 70°.

■ Fixed Jib

Tubular; basic two-piece 30' (9.14 m) long; 32" (.81 m) wide; 24" (.51 m) deep at connections. Alloy steel round tubular chords 2-1/4" (57 mm) outside diameter. (Same jib as used on conventional LS-248H II boom.)

■ Base Section - Fixed Jib

15' 0" (4.57 m) long.

■ Jib Connections

In-line pin connections.

General Specifications (con't)

Tip section - Fixed Jib

15' 0" (4.57 m) long; equipped with single 21" (.53 m) root diameter sheave, mounted on anti-friction bearings.

Jib Adapter

Connects to the fixed jib lower section and the luffing jib upper section. Allows the fixed jib to pivot 90° to the luffing jib for erection purposes.

Jib Mast

17' 10" (5.43 m) long. Single jib load hoist rope (whipline) deflector sheave, 21" (.53 m) root diameter, mounted on anti-friction bearings. Two stayline equalizer sheaves mount at end of mast.

Fixed Jib Stops

Wire rope type; pin to fixed jib peak and to axle of luffing jib nose wheel.

Jib Staylines

Front and back staylines attach jib head shaft and luffing jib tip section to the jib mast respectively. Connections at the jib mast employ equalizing sheaves for both stays.

Fixed Jib Lengths And Offset Angles

30' (9.14 m) only; 5° offset only.

Fixed Jib Nose Wheel

Pin connected to jib peak; supports jib peak on ground during luffing boom/luffing jib/fixed jib erection.

3rd Drum Winch

Optional; used in conjunction with 30' (9.14 m) fixed jib as a whipline function.

Bolts in the luffing boom base section, 8' 0" (2.44 m) from the luffing boom foot pin. The winch drive consists of a variable displacement bent axis piston motor with an integral multi-disk brake and planetary. This drum is grooved for 1" (25.4 mm) rope.

Hydraulic power to the winch is supplied by a separate pump.

Quick disconnects at the outside of the machinery house allow the winch to be transported in the luffing boom lower section.

The hydraulic circuit contains a holding valve, which when coupled with the winch multi-disk brake will prevent load droop when initiating a hoist function. A ratchet-pawl system is not available.

Wire Rope and Rope Drum Data

Wire Rope: size and type

Wire rope application	Size: diameter		Type
	inches	mm	
Luffing boom hoist	1	25	LB
Luffing jib hoist	1	25	N
Main load hoist	1	25	N
Jib load hoist (1-part)	1	25	RB
Jib load hoist (2-part)	1	25	N
Luffing boom pendants (dual)	1	25	N
Backstay pendants (dual)	1	25	N
Luffing jib pendants (dual)	1-3/8	35	N
Jib front stay line	7/8	22	N
Jib back stay line	3/4	19	N
Luffing jib backstop pendants	3/4	19	N
Fixed jib backstop pendants	1/2	13	N
Midfall suspension pendants	3/4	19	N

Wire Rope: types available

- Type "N" - 6 x 25 (6 x 19 class) filler wire, extra improved plow steel, preformed, independent wire rope center, right lay, regular lay.
- Type "RB" - 19 x 19 rotation resistant.
- Type "LB" - 6 x 25 (6 x 19 class)

Drum Functions

Description	Lift Crane Function	Luffing Attachment Function
Front drum	Main load line	Main load line or whip line
Rear drum	Whip line	Luffing jib hoist
Boom hoist drum	Boom hoist	Luffing boom hoist
3rd drum	n/a	Whip line

Third Drum Winch Performance

Line speed and pull

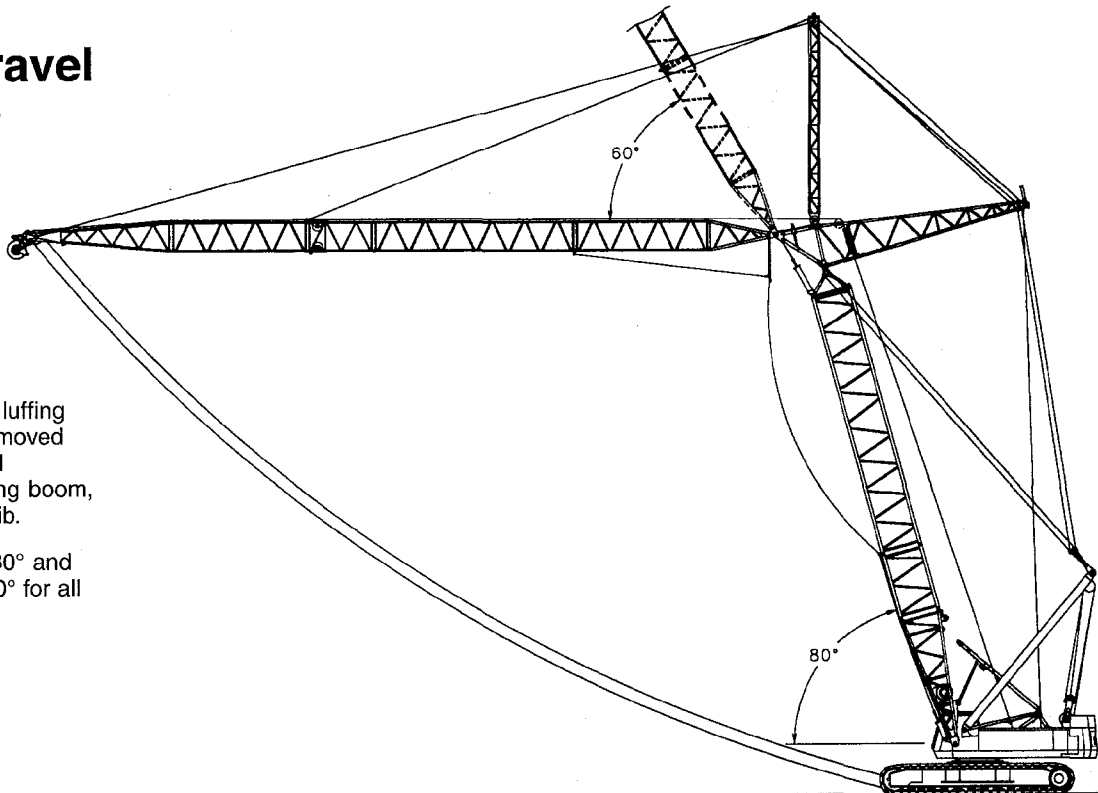
High Speed							
1.0" (25 mm) Dia. Rope	Maximum Line Pull		No Load Line Speed		Full Load Line Speed		
	Layer	lbs.	kg	fpm	m/min	fpm	m/min
	1	9,030	4 090	460	140	220	67
	2	8,200	3 720	510	155	250	76
	3	7,500	3 400	560	170	270	82
	4	6,920	3 130	610	185	290	88
	5	6,420	2 910	650	200	320	97
	6	5,990	2 715	700	215	340	104

Low Speed							
1.0" (25 mm) Dia. Rope	Maximum Line Pull		No Load Line Speed		Full Load Line Speed		
	Layer	lbs.	kg	fpm	m/min	fpm	m/min
	1	19,470	8 830	260	79	85	26
	2	17,680	8 020	290	88	95	29
	3	16,190	7 340	320	97	105	32
	4	14,930	6 770	340	105	110	33
	5	13,850	6 280	370	110	120	36
	6	12,910	5 860	400	120	130	39

Jobsite Travel (without load)

The LS-248H II with luffing attachment may be moved on the jobsite with all combinations of luffing boom, luffing jib, and fixed jib.

Set luffing boom at 80° and luffing jib at 0° to +60° for all travel conditions.



Over Front or Rear

