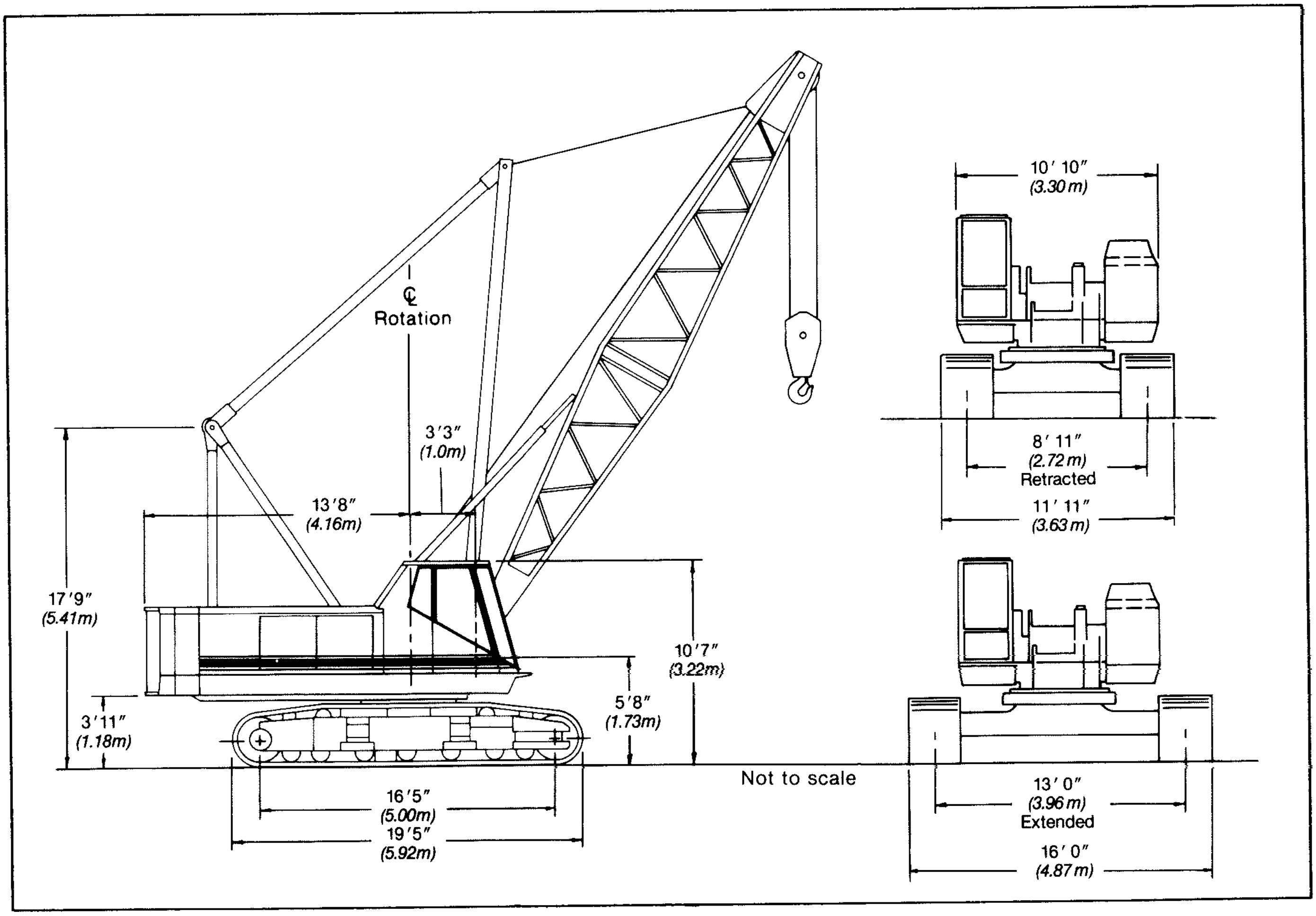
# LS-138H Specifications

## 75 ton (*68 metric ton*)

## Lattice boom crawler crane/excavator



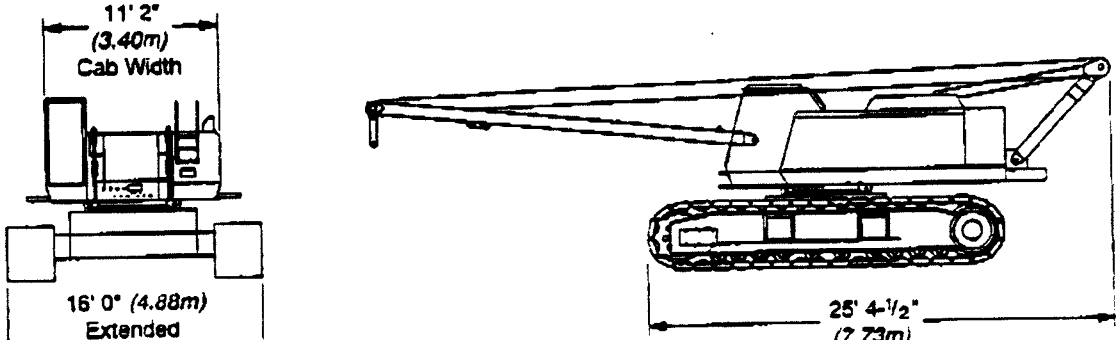

| General dimensions | Feet | meters |
|---|---|---|
| Basic boom length | 40' 0" | 12.20 |
| Overall width side frames extended —36" (0.91 m) track shoes | 16' 0" | 4.87 |
| Overall width side frames retracted —36" (0.91 m) track shoes | 11' 11" | 3.63 |
| Overall width side frames removed (axles in-line with truck - catwalks folded) | 10' 10" | 3.30 |
| Minimum ground clearance | 16" | 0.40 |

| General dimensions | Feet | meters |
|---|---|---|
| Ground clearance - ctwt. "A" | 3' 11" | 1.19 |
| Ground clearance - ctwt. "AB" | 3' 11" | 1.19 |
| Overall width of counterweight | 10' 2" | 3.09 |
| Tailswing of counterweight "A" | 13' 6" | 4.10 |
| Tailswing of counterweight "AB" | 13' 8" | 4.16 |
| Overall width of upper (catwalks folded) | 10' 10" | 3.30 |
| Overall height for transport, gantry lowered | 11' 2" | 3.40 |

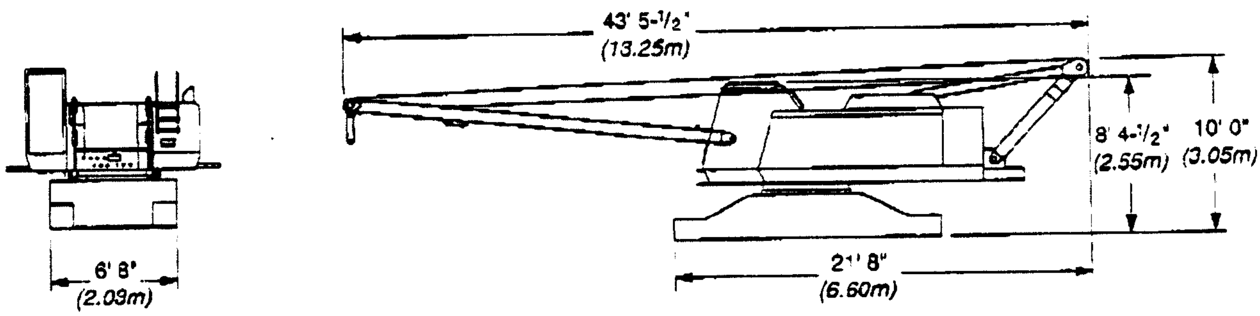
Litho in USA 3/88

**#5102** (supersedes #5079)

# LS-138H Machine Transport Weights - approximate

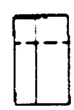



Assembly Weight - as shown
84,900 lbs. *(38 511 kg)* w/Live Mast and rope on one drum
82,550 lbs. *(37 445 kg)* w/o Live Mast and rope on one drum

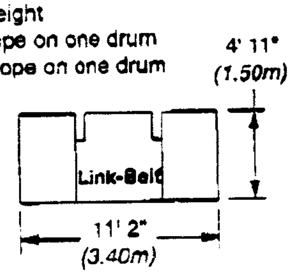


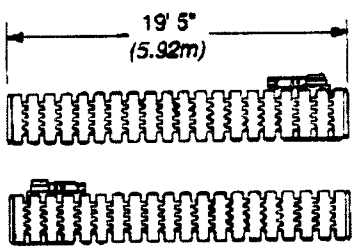

Upper & Carbody Shipping Weight
48,500 lbs. *(22 000 kg)* w/Live Mast and rope on one drum
45,800 lbs. *(20 775 kg)* w/o Live Mast and rope on one drum

"A" Upper Counterweight
19,600 lbs. *(8 891 kg)*



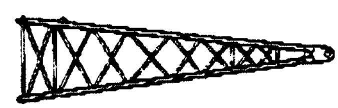
"B" Upper Counterweight
20,100 lbs. *(9 117 kg)*




Tread Member w/36" *(.91m)* Shoes
18,400 lbs. *(8 346 kg)* Each

20' *(6.10m)* Peak Section
2,570 lbs. *(1 166 kg)* Tube Boom
3,230 lbs. *(1 465 kg)* Angle Boom



20' *(6.10m)* Base Section
1,840 lbs. *(835 kg)* Tube Boom
2,525 lbs. *(1 145 kg)* Angle Boom

20' *(6.10m)* Basic Jib Assembly
1,120 lbs. *(508 kg)* Tube Jib
1,700 lbs. *(771 kg)* Angle Jib

Front Mount Third Drum
1,265 lbs. *(574 kg)* w/Rope

| Optional Boom Sections | Weight | Cross Section Size |
|---|---|---|
| 10' *(3.05 m)* tube boom extension | 690 lbs. *(313 kg)* | 54" *(1.37 m)* wide x 44" *(1.12 m)* deep |
| 20' *(6.10 m)* tube boom extension | 1,095 lbs. *(497 kg)* | 54" *(1.37 m)* wide x 44" *(1.12 m)* deep |
| 30' *(9.14 m)* tube boom extension | 1,490 lbs. *(675 kg)* | 54" *(1.37 m)* wide x 44" *(1.12 m)* deep |
| 10' *(3.05 m)* angle boom extension | 925 lbs. *(420 kg)* | 48" *(1.22 m)* wide x 48" *(1.22 m)* deep |
| 20' *(6.10 m)* angle boom extension | 1,680 lbs. *(762 kg)* | 48" *(1.22 m)* wide x 48" *(1.22 m)* deep |
| 30' *(9.14 m)* angle boom extension | 2,400 lbs. *(1 089 kg)* | 48" *(1.22 m)* wide x 48" *(1.22 m)* deep |

## Machine working weights - approximate

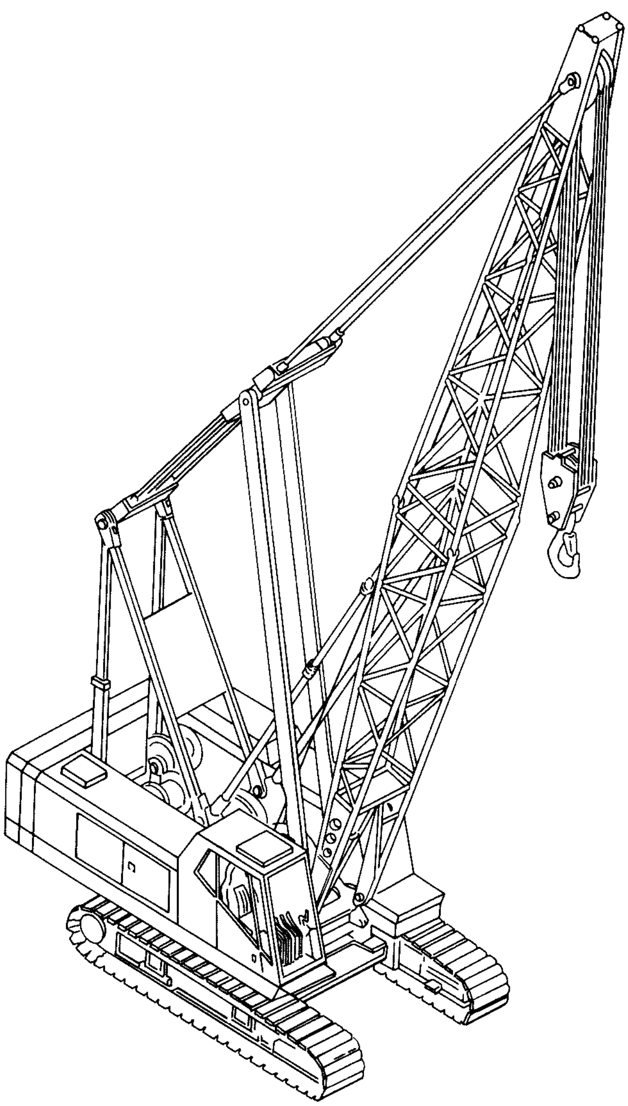
| Complete basic machine with Isuzu 6SA1T diesel engine, turntable bearing, hydraulic independent swing and travel, main operating drums and boomhoist, 40' (12.19 m) tubular boom w/live mast, no bucket or hook block but with 900' (274.3 m) of 7/8" (22.2 mm) dia. hoist rope. | Track shoes<br>36" (0.91 m)<br>pounds |
|---|---|
| With 39,750 lb. (18 031 kg) counterweight "AB" | 126,900 |

### Ground contact area

Note; Determining ground bearing pressure - divide the total weight of machine as shown above by the respective ground contact area.

| Track shoes | | Ground contact areas | |
|---|---|---|---|
| inches | meters | $in^2$ | $cm^2$ |
| 36 | 0.91 | 15,100 | 97,420 |

## Weight deductions for transporting – approximate



| Deduct or add for the following components: | pounds |
|---|---|
| Counterweight "A" | 19,600 |
| Counterweight "AB" | 39,750 |
| Basic 40' tubular boom: | |
| Tip: (includes head machinery) | 2,630 |
| Base | 1,700 |
| Boom pendants - basic | 250 |
| Bridle and spreader bar | 765 |
| Boomhoist rope - 645' | 465 |
| Hoist rope - 900' of 7/8" dia. | 1,280 |
| Live mast | 1,550 |
| 10' extension and pendants | 650 |
| 20' extension and pendants | 1,055 |
| 30' extension and pendants | 1,450 |
| Side frames: | |
| 36" track shoes | 36,220 |
| Lower carbody | 10,890 |
| Catwalks | 340 |
| Backstops | 500 |
| Fairlead | 500 |

# LS-138H Performance Specifications

## Wire rope and rope drum data

### Main load hoist wire rope length – using 7/8" (22 mm) diameter wire rope

| Parts of line | Boom lengths | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 40' (12.19 m) | | 50' (15.24 m) | | 60' (18.29 m) | | 70' (21.34 m) | | 80' (24.38 m) | | 90' (27.43 m) | | 100' (30.48 m) | |
| | ft. | meters | ft. | meters | ft. | meters | ft. | meters | ft. | meters | ft. | meters | ft. | meters |
| 1 | 105 | 32.00 | 125 | 38.10 | 145 | 44.20 | 165 | 50.29 | 185 | 56.39 | 205 | 62.48 | 225 | 68.58 |
| 2 | 150 | 45.72 | 180 | 54.86 | 210 | 64.01 | 240 | 73.15 | 270 | 82.30 | 300 | 91.44 | 330 | 100.58 |
| 3 | 195 | 59.44 | 235 | 71.63 | 275 | 83.82 | 315 | 96.01 | 355 | 108.20 | 395 | 120.40 | 435 | 132.59 |
| 4 | 240 | 73.15 | 290 | 88.39 | 340 | 103.63 | 390 | 118.87. | 440 | 134.11 | 490 | 149.35 | 540 | 164.59 |
| 5 | 285 | 86.87 | 345 | 105.16 | 405 | 123.44 | 465 | 141.73 | 525 | 160.02 | 585 | 178.31 | 645 | 196.60 |
| 6 | 330 | 100.58 | 400 | 121.92 | 470 | 143.26 | 540 | 164.59 | 610 | 185.93 | 680 | 207.26 | 750 | 228.60 |
| 7 | 375 | 114.30 | 455 | 138.68 | 535 | 163.07 | 615 | 187.45 | 695 | 211.84 | 775 | 236.22 | 855 | 260.60 |
| 8 | 420 | 128.02 | 510 | 155.45 | 600 | 182.88 | 690 | 210.03 | 780 | 237.74 | 870 | 265.18 | 960 | 292.61 |
| 9 | 465 | 141.73 | 565 | 172.21 | 665 | 202.69 | 765 | 233.17 | 865 | 263.65 | 965 | 294.13 | | |
| 10 | 510 | 155.45 | 620 | 188.98 | 730 | 222.50 | 840 | 256.03 | 950 | 289.56 | | | | |

| Parts of line | Boom lengths | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 110' (33.53 m) | | 120' (38.58 m) | | 130' (39.62 m) | | 140' (42.67 m) | | 150' (45.72 m) | | 160' (48.77 m) | | 170' (51.82 m) | | 180' (54.86 m) | |
| | ft. | meters | ft. | meters | ft. | meters | ft. | meters | ft. | meters | ft. | meters | ft. | meters | ft. | meters |
| 1 | 245 | 74.68 | 265 | 80.77 | 285 | 86.87 | 305 | 92.96 | 325 | 99.06 | 345 | 105.16 | 365 | 111.25 | 385 | 117.35 |
| 2 | 360 | 109.73 | 390 | 118.87 | 420 | 128.02 | 450 | 137.16 | 480 | 146.30 | 510 | 155.45 | 540 | 164.59 | 570 | 173.74 |
| 3 | 475 | 144.78 | 515 | 156.97 | 555 | 169.16 | 595 | 181.36 | 635 | 193.55 | 675 | 205.74 | 715 | 217.93 | 755 | 230.12 |
| 4 | 590 | 179.83 | 640 | 195.07 | 690 | 210.31 | 740 | 225.55 | 790 | 247.79 | 840 | 256.03 | 890 | 271.27 | 940 | 286.51 |
| 5 | 705 | 214.88 | 765 | 233.17 | 825 | 251.46 | 885 | 269.75 | 945 | 288.04 | | | | | | |
| 6 | 820 | 249.94 | 890 | 271.27 | | | | | | | | | | | | |
| 7 | 935 | 284.99 | | | | | | | | | | | | | | |

### Dragline or clamshell wire rope lengths – using one part of line

| Attachments | Function | Boom Lengths | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 40' (12.12 m) | | 50' (15.24 m) | | 60' (18.29 m) | | 70' (21.34 m) | |
| | | Feet | meters | Feet | meters | Feet | meters | Feet | meters |
| Clamshell | Holding | 110 | 33.53 | 130 | 39.62 | 150 | 45.72 | 170 | 51.82 |
| | Closing | 160 | 48.77 | 180 | 54.86 | 200 | 60.96 | 220 | 67.06 |
| Dragline | Hoist | 110 | 33.53 | 130 | 39.62 | 150 | 45.72 | 170 | 51.82 |
| | Inhaul | 65 | 19.81 | 75 | 22.86 | 85 | 25.90 | 95 | 28.96 |

### Drum wire rope capacities

| Wire rope layer | Front or rear drum - 17-5/8" (0.45 m) root diameter grooved lagging, 7/8" (22 mm) wire rope | | | | Front mounted third drum - 12¾" (0.32 m) root diameter smooth lagging, 5/8" (16 mm) wire rope | | | | Boomhoist drum - 10-11/16" (0.27 m) root diameter grooved lagging, 5/8" (16 mm) wire rope | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rope per layer | | Total wire rope | | Rope per layer | | Total wire rope | | Rope per layer | | Total wire rope | |
| | Feet | meters | Feet | meters | Feet | meters | Feet | meters | Feet | meters | Feet | meters |
| 1 | 101 | 31.0 | 101 | 31.0 | 77 | 23.5 | 77 | 23.5 | 46.0 | 14.0 | 46.0 | 14.0 |
| 2 | 109 | 33.5 | 211 | 64.5 | 84 | 25.6 | 161 | 49.0 | 50.5 | 15.4 | 96.5 | 29.4 |
| 3 | 118 | 36.1 | 330 | 100.6 | 91 | 27.7 | 252 | 76.8 | 54.8 | 16.7 | 151.3 | 46.1 |
| 4 | 126 | 38.6 | 456 | 139.2 | 99 | 30.1 | 351 | 107.0 | 59.4 | 18.1 | 210.7 | 64.2 |
| 5 | 134 | 41.1 | 591 | 180.3 | 106 | 32.3 | 457 | 139.3 | 63.6 | 19.4 | 274.3 | 83.0 |
| 6 | 143 | 43.6 | 734 | 223.9 | | | | | 68.2 | 20.8 | 342.5 | 104.4 |
| 7 | | | | | | | | | 72.5 | 22.1 | 415.0 | 126.5 |
| 8 | | | | | | | | | 77.1 | 23.5 | 492.1 | 150.0 |
| 9 | | | | | | | | | 86.9 | 26.5 | 579.0 | 176.5 |

# LS-138H Load Hoisting Performance

Available line speed and line pull - based on ISUZU 6SA1T at 2100 rpm full load speed.

Line pulls are not based on wire rope strength. See wire rope chart for maximum permissible single part of line working loads.

## Front or Rear Drum: Line speeds and pulls

| 17-5/8" Root Dia. - 7/8" dia. rope | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Single line pull | | First layer speed | | | | Fourth layer speed | | | | Sixth layer speed | | | |
| | | Low | | High | | Low | | High | | Low | | High | |
| lbs. | kgs | fpm | m/min | fpm | m/min | fpm | m/min | fpm | m/min | fpm | m/min | fpm | m/min |
| 1,000 | 454 | 138 | 42 | 276 | 84 | 177 | 54 | 354 | 108 | 203 | 62 | 406 | 124 |
| 5,000 | 2 268 | 137 | 41 | 274 | 83 | 175 | 53 | 349 | 106 | 201 | 61 | 391 | 119 |
| 10,000 | 4 536 | 136 | 41 | 244 | 74 | 174 | 53 | 284 | 86 | 198 | 60 | 304 | 92 |
| 15,000 | 6 804 | 134 | 41 | 204 | 62 | 172 | 52 | 262 | 80 | 196 | 59 | 233 | 71 |
| 20,000 | 9 072 | 133 | 40 | 170 | 51 | 170 | 51 | 179 | 54 | 174 | 53 | 174 | 53 |
| 22,700 | 10 297 | 132 | 40 | 155 | 47 | 155 | 47 | 155 | 47 | — | — | — | — |

## Wire rope: size, type and working strength

| Wire rope application | Size: diameter | | Type | Max. permissible load | |
|---|---|---|---|---|---|
| | inches | mm | | lbs. | kgs. |
| Boom hoist | 5/8 | 16 | W | 11,700 | 5 307 |
| Main load hoist | 7/8 | 22 | N | 22,700 | 10 297 |
| Auxiliary hoist | 7/8 | 22 | P | 13,000 | 5 896 |
| Dragline inhaul | 7/8 | 22 | M | 22,700 | 10 297 |
| Dragline hoist | 7/8 | 22 | N | 22,700 | 10 297 |
| Clamshell Holding (hoist) | 7/8 | 22 | N | 22,700 | 10 297 |
| Clamshell closing | 7/8 | 22 | N | 22,700 | 10 297 |
| Third drum | 5/8 | 16 | N | 11,700 | 5 307 |
| Boom pendants | 1-1/4 | 32 | N | 53,200 | 24,100 |

## Third drum: Line speeds and pulls

| Rope Layer | 12-3/4" Root Dia. | | | |
|---|---|---|---|---|
| | fpm | m/min | pounds | kilograms |
| 1 | 210 | 64.0 | 9,220 | 4 182 |
| 2 | 230 | 70.1 | 8,430 | 3 823 |
| 3 | 250 | 76.2 | 7,770 | 3 524 |
| 4 | 269 | 82.0 | 7,200 | 3 265 |
| 5 | 289 | 88.1 | 6,710 | 3 043 |

## Wire rope: types available

- Type "M" – 6 X 25 (6 X 19 class), filler wire, extra improved plow steel, preformed, independent wire rope center, right lay, lang lay.
- 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 "W"– 6 X 26 (6 X19 class), extra improved plow steel, preformed, independent wire rope center, right lay, alternate lay.
- Type "P" – 19 X 7 non-rotating, extra improved plow steel, preformed, wire strand core.

# LS-138H

PSCA Class 12-268
Refer to notes Page 4

## Lifting Crane & Dragline Capacities

**Boom** – tubular:
54"(1.37 m) wide and 44"(1.12 m) deep with open throat top section; with 24' (7.32 m) live mast.

**Jib** – tubular: 30" (.76 m) wide and 24"(.61 m) deep.

**Mounting** – crawler:
extended gauge: 13' 0" (3.96 m)
retracted gauge: 8' 11" (2.72 m)
overall length: 19' 5" (5.92 m)

**Counterweights** –
**Ctwt. "A"** : 19,592 lbs. (8 887 kg)
**Ctwt. "AB"**: 39,720 lbs. (18 017 kg)

### Maximum tubular boom or boom + jib① machine can lift off ground unassisted – without load

| | Counterweight "A" | | Counterweight "AB" | |
|---|---|---|---|---|
| | 44" X54" tubular boom | | 44" X54" tubular boom | |
| | feet | meters | feet | meters |
| **Over End**<br>Side frames extended<br>Side frames retracted | 150 or 130 + 50<br>150 or 130 + 50 | 45.72 or 39.62 + 15.24<br>45.72 or 39.26 + 15.24 | 180 or 160 + 50<br>② | 54.86 or 48.77 + 15.24<br>② |
| **Over Sides**<br>Side frames extended<br>Side frames retracted | 140 or 120 + 40<br>120 or 100 + 40 | 42.67 or 36.58 + 12.19<br>36.58 or 30.48 + 12.19 | 170 or 150 + 40<br>② | 51.82 or 45.72 + 12.19<br>② |

① With boom live mast and 1-1/4" (32 mm) diameter pendants, and hook blocks on ground.

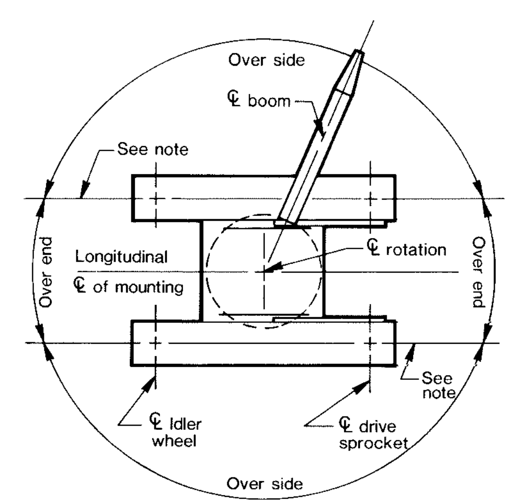
### Maximum tubular boom or boom + jib machine can lift off ground unassisted and travel without load with boom horizontal③ – minimum travel speed on firm level supporting surface

| | Counterweight "A" | | Counterweight "AB" | |
|---|---|---|---|---|
| | 44" X54" tubular boom | | 44" X54" tubular boom | |
| | feet | meters | feet | meters |
| **Over End**<br>Side frames extended<br>Side frames retracted | 120 or 90 + 40<br>120 or 90 + 40 | 36.58 or27.43 + 12.19<br>36.58 or27.43 + 12.19 | 150 or 120 + 40<br>② | 45.72 or 36.58 + 12.19<br>② |
| **Over Sides**<br>Side frames extended<br>Side frames retracted | 120 or 90 + 40<br>100 or 70 + 50 | 36.58 or 27.43 + 12.19<br>30.48 or 21.34 + 15.24 | 150 or 120 + 40<br>② | 45.72 or 36.58 + 12.19<br>② |

② With counterweight "AB", machine must not be operated with side frames retracted.
③ Hook blocks carried at boom and jib points. Based on 75 ton (68 mt) three sheave hook block.

## Working Areas

**Note** – These lines determine the limiting position of any load for operation within the working areas indicated.




**Caution** – This material is for reference only. Operator must refer to in-cab capacity plate to determine allowable machine lifting capacities and operating procedures.

# LS-138H Lift Crane Capacities

**Boom** –tubular:
54" (1.37 m) wide and 44" (1.12 m) deep with open throat top section; with 24'(7.32 m) live mast 1-1/4" (32 mm) diameter boom pendants.

**Mounting** – crawler
extended gauge: 13' 0" (3.96 m)
retracted: 8' 11" (2.72 m)
overall length: 19' 5" (5.92 m)

**Counterweights**:
**Ctwt. "A"**: 19,592 lbs. (8 887 kg)
**Ctwt. "AB"**: 39,720 lbs. (18 017 kg)

| Length | Boom | | | | | Side Frames Extended | | | | Retracted | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Radius | | Angle | Boom Pt.Height① | | Ctwt. "A" | | Ctwt. "AB" | | Ctwt. "A" | |
| | feet | meters | degree | feet | meters | pounds | kilograms | pounds | kilograms | pounds | kilograms |
| 40' (12.19 m) | 12 | 3.66 | 77.4 | 44' 8" | 20.3 | 127,200 | 57 698 | 150,000* | 68 040* | 72,600 | 32 931 |
| | 13 | 3.96 | 75.9 | 44' 6" | 20.2 | 107,200 | 48 626 | 150,000* | 68 040* | 63,700 | 28 894 |
| | 14 | 4.27 | 74.5 | 44' 2" | 20.1 | 92,500 | 41 958 | 131,000 | 59 422 | 56,700 | 25 719 |
| | 15 | 4.57 | 73.0 | 43' 11" | 19.9 | 81,200 | 36 832 | 115,200 | 52 255 | 51,000 | 23 134 |
| | 20 | 6.10 | 65.3 | 42' 0" | 19.1 | 49,900 | 22 635 | 71,300 | 32 342 | 33,600 | 15 241 |
| | 25 | 7.62 | 57.1 | 39' 3" | 17.8 | 35,500 | 16 103 | 51,100 | 23 179 | 24,600 | 11 159 |
| | 30 | 9.14 | 48.1 | 35' 5" | 16.1 | 27,200 | 12 338 | 39,500 | 17 917 | 19,100 | 8 664 |
| | 35 | 10.67 | 37.5 | 30' 0" | 13.6 | 21,800 | 9 888 | 31,900 | 14 470 | 15,400 | 6 985 |
| | 40 | 12.19 | 23.4 | 21' 6" | 9.8 | 18,000 | 8 165 | 26,600 | 12 066 | 12,600 | 5 715 |
| 50' (15.24 m) | 12 | 3.66 | 80.0 | 54' 11" | 16.7 | 127,900 | 58 015 | 150,000* | 68 040* | 73,000 | 21 365 |
| | 13 | 9.96 | 78.8 | 54' 8" | 16.7 | 107,800 | 48 898 | 150,000* | 68 040* | 64,100 | 29 076 |
| | 14 | 4.27 | 77.6 | 54' 6" | 16.6 | 93,000 | 42 185 | 131,500 | 59 648 | 57,100 | 25 901 |
| | 15 | 4.57 | 76.4 | 54' 3" | 16.6 | 81,700 | 37 059 | 115,700 | 52 482 | 51,300 | 23 270 |
| | 20 | 6.10 | 70.5 | 52' 9" | 16.1 | 50,200 | 22 771 | 71,700 | 32 523 | 33,800 | 15 332 |
| | 25 | 7.62 | 64.3 | 50' 8" | 15.5 | 35,800 | 16 239 | 51,400 | 23 315 | 24,800 | 11 249 |
| | 30 | 9.14 | 57.7 | 47' 11" | 14.6 | 27,400 | 12 429 | 39,700 | 18 008 | 19,200 | 8 709 |
| | 35 | 10.67 | 50.6 | 44' 4" | 13.5 | 22,000 | 9 979 | 32,200 | 14 606 | 15,500 | 7 031 |
| | 40 | 12.19 | 42.7 | 39' 7" | 12.1 | 18,200 | 8 256 | 26,800 | 12 156 | 12,800 | 5 806 |
| | 50 | 15.24 | 20.9 | 23' 6" | 7.2 | 13,100 | 5 942 | 19,800 | 8 981 | 9,200 | 4 173 |
| 60' (18.29 m) | 13 | 9.96 | 80.7 | 64' 10" | 19.8 | 108,700 | 49 306 | 142,200* | 64 502* | 64,700 | 2 9348 |
| | 15 | 4.57 | 78.7 | 64' 6" | 19.7 | 82,400 | 37 377 | 116,400 | 52 799 | 51,800 | 2 3496 |
| | 20 | 6.10 | 73.8 | 63' 3" | 19.3 | 50,700 | 22 998 | 72,100 | 32 705 | 34,100 | 1 5468 |
| | 25 | 7.62 | 68.8 | 61' 7" | 18.8 | 36,100 | 16 375 | 51,700 | 23 451 | 25,000 | 1 1340 |
| | 30 | 9.14 | 63.6 | 59' 5" | 18.1 | 27,700 | 12 565 | 40,000 | 18 144 | 19,400 | 8 800 |
| | 35 | 10.67 | 58.1 | 56' 7" | 17.3 | 22,200 | 10 070 | 32,400 | 14 697 | 15,700 | 7 122 |
| | 40 | 12.19 | 52.3 | 53' 1" | 16.2 | 18,400 | 8 346 | 27,000 | 12 247 | 13,000 | 5 897 |
| | 50 | 15.24 | 38.9 | 43' 4" | 13.2 | 13,300 | 6 033 | 20,000 | 9 072 | 9,300 | 4 218 |
| | 60 | 18.29 | 19.0 | 25' 3" | 7.7 | 10,100 | 4 581 | 15,500 | 7 031 | 6,900 | 3 130 |
| 70' (21.34 m) | 15 | 4.57 | 80.4 | 74' 8" | 22.8 | 82,600 | 37 467 | 116,600 | 52 890 | 51,900 | 23 542 |
| | 20 | 6.10 | 76.2 | 73' 8" | 22.4 | 50,800 | 23 043 | 72,200 | 32 750 | 34,100 | 15 468 |
| | 25 | 7.62 | 71.9 | 72' 2" | 22.0 | 36,100 | 16 375 | 51,700 | 23 451 | 25,000 | 11 340 |
| | 30 | 9.14 | 67.6 | 70' 4" | 21.5 | 27,700 | 12 565 | 40,000 | 18 144 | 19,400 | 8 800 |
| | 35 | 10.67 | 63.1 | 68' 1" | 20.8 | 22,200 | 10 070 | 32,400 | 14 697 | 15,700 | 7 122 |
| | 40 | 12.19 | 58.4 | 65' 3" | 19.9 | 18,400 | 8 346 | 27,000 | 12 247 | 12,900 | 5 851 |
| | 50 | 15.24 | 48.1 | 57' 9" | 17.6 | 13,300 | 6 033 | 19,900 | 9 027 | 9,300 | 4 218 |
| | 60 | 18.29 | 35.9 | 46' 8" | 14.2 | 10,100 | 4 581 | 15,500 | 7 031 | 6,900 | 3 130 |
| | 70 | 21.34 | 17.6 | 26' 10" | 8.2 | 7,800 | 3 538 | 12,400 | 5 625 | 5,200 | 2 359 |
| 80' (24.38 m) | 16 | 4.88 | 80.9 | 84' 8" | 25.8 | 73,600 | 33 385 | 104,100 | 47 220 | 47,100 | 21 365 |
| | 20 | 6.10 | 77.9 | 83' 11" | 25.6 | 50,800 | 23 043 | 72,200 | 32 750 | 34,100 | 15 468 |
| | 25 | 7.62 | 74.2 | 82' 8" | 25.2 | 36,100 | 16 375 | 51,700 | 23 451 | 24,900 | 11 295 |
| | 30 | 9.14 | 70.5 | 81' 1" | 24.7 | 27,700 | 12 565 | 40,000 | 18 144 | 19,300 | 8 754 |
| | 35 | 10.67 | 66.6 | 79' 1" | 24.1 | 22,200 | 10 070 | 32,300 | 14 651 | 15,300 | 6 940 |
| | 40 | 12.19 | 62.7 | 76' 9" | 23.4 | 18,300 | 8 301 | 26,900 | 12 202 | 12,900 | 5 851 |
| | 50 | 15.24 | 54.3 | 70' 7" | 21.5 | 13,200 | 5 988 | 19,900 | 9 027 | 9,200 | 4 173 |
| | 60 | 18.29 | 44.8 | 62' 2" | 18.9 | 10,000 | 4 536 | 15,400 | 6 985 | 6,900 | 3 130 |
| | 70 | 21.3 | 33.5 | 49' 10" | 15.2 | 7,800 | 3 538 | 12,400 | 5 625 | 5,200 | 2 359 |
| | 80 | 24.38 | 16.5 | 28' 4" | 8.7 | 6,200 | 2 812 | 10,100 | 4 581 | 3,900 | 1 769 |
| 90' (27.43 m) | 18 | 5.49 | 80.6 | 94' 5" | 28.8 | 60,300 | 27 352 | 85,400 | 38 737 | 36,600 | 16 602 |
| | 20 | 6.10 | 79.3 | 94' 2" | 28.7 | 50,800 | 23 043 | 72,200 | 32 750 | 24,900 | 11 295 |
| | 25 | 7.62 | 76.0 | 93' 0" | 28.4 | 36,100 | 16 375 | 51,700 | 23 451 | 19,300 | 8 754 |
| | 30 | 9.14 | 72.7 | 91' 7" | 27.9 | 27,600 | 12 519 | 39,900 | 18 099 | 15,300 | 6 940 |
| | 35 | 10.67 | 69.4 | 89' 11" | 27.4 | 22,100 | 10 025 | 32,200 | 14 606 | 12,800 | 4 309 |
| | 40 | 12.19 | 65.9 | 87' 10" | 26.8 | 18,200 | 8 256 | 26,900 | 12 202 | 9,500 | 5 806 |
| | 50 | 15.24 | 58.7 | 82' 7" | 25.2 | 13,100 | 5 942 | 19,800 | 8 981 | 6,800 | 3 084 |
| | 60 | 18.29 | 50.9 | 75' 6" | 23.0 | 9,900 | 4 491 | 15,400 | 6 985 | 5,100 | 2 313 |
| | 70 | 21.34 | 42.2 | 66' 1" | 20.1 | 7,700 | 3 49[illegible] | 12,300 | 5 579 | 3,900 | 1 769 |
| | 80 | 24.38 | 31.5 | 52' 9" | 18.3 | 6,100 | 2 767 | 10,100 | 4 581 | 2,900 | 1 315 |
| | 90 | 27.43 | 15.5 | 29' 9" | 9.1 | 4,900 | 2 223 | 8,300 | 3 765 | 2,600 | 1 179 |
| 100' (30.48 m) | 19 | 5.79 | 81.0 | 104' 5" | 31.8 | 55,100 | 24 993 | 78,300 | 35 517 | 36,600 | 16 602 |
| | 25 | 7.62 | 77.5 | 103' 3" | 31.5 | 36,000 | 16 329 | 51,600 | 23 406 | 24,800 | 11 249 |
| | 30 | 9.14 | 74.5 | 102' 0" | 31.1 | 27,500 | 12 474 | 39,800 | 18 053 | 19,100 | 8 664 |
| | 35 | 10.67 | 71.5 | 100' 6" | 30.6 | 22,000 | 9 979 | 32,100 | 14 561 | 15,400 | 6 985 |
| | 40 | 12.19 | 68.5 | 98' 8" | 30.1 | 18,100 | 8 210 | 26,700 | 12 111 | 12,600 | 5 715 |
| | 50 | 15.24 | 62.1 | 94' 1" | 28.7 | 13,000 | 5 897 | 19,700 | 8 936 | 9,000 | 4 082 |
| | 60 | 18.29 | 55.4 | 88' 0" | 26.8 | 9,800 | 4 445 | 15,200 | 6 895 | 6,600 | 2 994 |
| | 70 | 21.34 | 48.1 | 80' 2" | 24.4 | 7,600 | 3 447 | 12,200 | 5 534 | 5,000 | 2 268 |
| | 80 | 24.38 | 39.9 | 69' 10" | 21.3 | 6,000 | 2 722 | 10,000 | 4 536 | 3,800 | 1 724 |
| | 90 | 27.43 | 29.9 | 55' 5" | 16.9 | 4,800 | 2 177 | 8,200 | 3 720 | 2,800 | 1 270 |
| | 100 | 30.48 | 14.7 | 31' 1" | 9.5 | 3,800 | 1 724 | 6,900 | 3 130 | 2,000 | 907 |

① **Measured vertically from center of boom head sheave to ground.**

# LS-138H Lift Crane Capacities

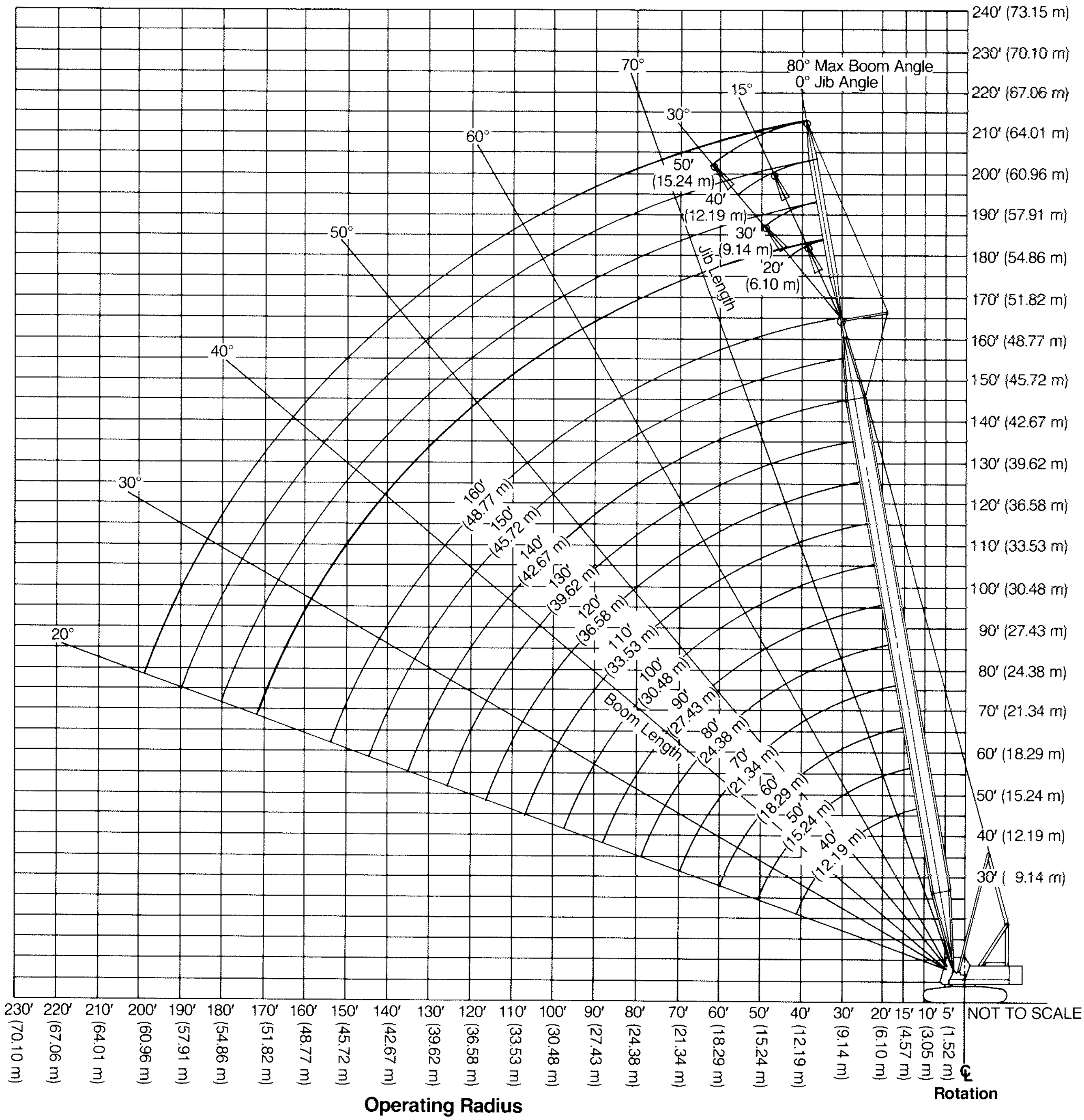
continued

| Length | Boom | | | | | Side Frames Extended | | | | Retracted | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Radius | | Angle | Boom Pt.Height① | | Ctwt. "A" | | Ctwt. "AB" | | Ctwt. "A" | |
| | feet | meters | degree | feet | meters | pounds | kilograms | pounds | kilograms | pounds | kilograms |
| 110' (33.53 m) | 25 | 7.62 | 78.6 | 113' 6" | 34.6 | 35,900 | 16 284 | 51,500 | 23 360 | 24,600 | 11 159 |
| | 30 | 9.14 | 75.9 | 112' 4" | 34.2 | 27,400 | 12 429 | 39,700 | 18 008 | 19,000 | 8 618 |
| | 35 | 10.67 | 73.2 | 111' 0" | 33.8 | 21,900 | 9 934 | 32,000 | 14 515 | 15,200 | 6 895 |
| | 40 | 12.19 | 70.5 | 109' 4" | 33.3 | 18,000 | 8 165 | 26,600 | 12 066 | 12,500 | 5 670 |
| | 50 | 15.24 | 64.9 | 105' 3" | 32.1 | 12,900 | 5 851 | 19,500 | 8 845 | 8,800 | 3 992 |
| | 60 | 18.29 | 59.0 | 99' 11" | 30.4 | 9,700 | 4 400 | 15,100 | 6 849 | 6,500 | 2 948 |
| | 70 | 21.34 | 52.7 | 93' 1" | 28.4 | 7,500 | 3 402 | 12,000 | 5 443 | 4,800 | 2 177 |
| | 80 | 24.38 | 45.8 | 84' 6" | 25.8 | 5,900 | 2 676 | 9,800 | 4 445 | 3,600 | 1 633 |
| | 90 | 27.43 | 38.0 | 73' 4" | 22.4 | 4,600 | 2 087 | 8,100 | 3 674 | 2,700 | 1 225 |
| | 100 | 30.48 | 28.4 | 58' 1" | 17.7 | 3,700 | 1 678 | 6,800 | 3 084 | – | – |
| | 110 | 33.53 | 14.0 | 32' 4" | 9.8 | 2,800 | 1 270 | 5,600 | 2 540 | – | – |
| 120' (36.58 m) | 25 | 7.62 | 79.6 | 123' 8" | 37.7 | 35,800 | 16 239 | 51,500 | 23 360 | 24,500 | 11 113 |
| | 30 | 9.14 | 77.1 | 122' 8" | 37.4 | 27,300 | 12 383 | 39,600 | 17 963 | 18,900 | 8 573 |
| | 35 | 10.67 | 74.7 | 121' 5" | 37.0 | 21,800 | 9 888 | 31,900 | 14 470 | 15,100 | 6 849 |
| | 40 | 12.19 | 72.2 | 119' 11" | 36.6 | 17,900 | 8 119 | 26,500 | 12 020 | 12,400 | 5 625 |
| | 50 | 15.24 | 67.1 | 116' 2" | 35.4 | 12,800 | 5 806 | 19,400 | 8 800 | 8,700 | 3 946 |
| | 60 | 18.29 | 61.8 | 111' 5" | 34.0 | 9,500 | 4 309 | 15,000 | 6 804 | 6,300 | 2 858 |
| | 70 | 21.34 | 56.2 | 105' 5" | 32.1 | 7,300 | 3 311 | 11,900 | 5 398 | 4,700 | 2 132 |
| | 80 | 24.38 | 50.3 | 97' 11" | 29.9 | 5,700 | 2 586 | 9,700 | 4 400 | 3,500 | 1 588 |
| | 90 | 27.43 | 43.7 | 88' 7" | 27.0 | 4,500 | 2 041 | 8,000 | 3 629 | 2,500 | 1 134 |
| | 100 | 30.48 | 36.3 | 76' 8" | 23.4 | 3,500 | 1 588 | 6,600 | 2 994 | – | – |
| | 110 | 33.53 | 27.2 | 60' 6" | 18.4 | 2,700 | 1 225 | 5,500 | 2 495 | – | – |
| | 120 | 36.58 | 13.4 | 33' 6" | 10.2 | 2,000 | 907 | 4,600 | 2 087 | – | – |
| 130' (39.62 m) | 25 | 7.62 | 80.4 | 133' 10" | 40.8 | 35,700 | 16 194 | 51,400 | 23 315 | | |
| | 30 | 9.14 | 78.1 | 132' 11" | 40.5 | 27,300 | 12 383 | 39,500 | 17 917 | | |
| | 35 | 10.67 | 75.9 | 131' 9" | 40.2 | 21,600 | 9 798 | 31,800 | 14 424 | | |
| | 40 | 12.19 | 73.6 | 130' 4" | 39.8 | 17,700 | 8 029 | 26,400 | 11 975 | | |
| | 50 | 15.24 | 68.9 | 127' 0" | 38.7 | 12,600 | 5 715 | 19,300 | 8 754 | | |
| | 60 | 18.29 | 64.1 | 122' 8" | 37.4 | 9,400 | 4 264 | 14,800 | 6 713 | | |
| | 70 | 21.34 | 59.1 | 117' 3" | 35.7 | 7,200 | 3 266 | 11,700 | 5 307 | | |
| | 80 | 24.38 | 53.8 | 110' 7" | 33.7 | 5,600 | 2 540 | 9,500 | 4 309 | | |
| | 90 | 27.43 | 48.2 | 102' 6" | 31.2 | 4,300 | 1 950 | 7,800 | 3 538 | | |
| | 100 | 30.48 | 41.9 | 92' 6" | 28.2 | 3,400 | 1 542 | 6,500 | 2 948 | | |
| | 110 | 33.53 | 34.8 | 79' 11" | 24.4 | 2,600 | 1 179 | 5,400 | 2 449 | | |
| | 120 | 36.58 | 26.1 | 62' 11" | 19.2 | – | – | 4,500 | 2 041 | | |
| | 130 | 39.62 | 12.9 | 34' 8" | 10.6 | – | – | 3,700 | 1 678 | | |
| 140' (42.67 m) | 30 | 9.14 | 79.0 | 143' 1" | 43.6 | 27,100 | 12 293 | 39,400 | 17 872 | | |
| | 35 | 10.67 | 76.9 | 142' 0" | 43.3 | 21,500 | 9 752 | 31,600 | 14 334 | | |
| | 40 | 12.19 | 74.8 | 140' 9" | 42.9 | 17,600 | 7 983 | 26,200 | 11 884 | | |
| | 50 | 15.24 | 70.5 | 137' 8" | 42.0 | 12,500 | 5 670 | 19,100 | 8 664 | | |
| | 60 | 18.29 | 66.1 | 133' 8" | 40.7 | 9,200 | 4 173 | 14,600 | 6 623 | Not Applicable | |
| | 70 | 21.34 | 61.5 | 128' 9" | 39.3 | 7,000 | 3 175 | 11,600 | 5 262 | | |
| | 80 | 24.38 | 56.8 | 122' 9" | 37.4 | 5,400 | 2 449 | 9,300 | 4 218 | | |
| | 90 | 27.43 | 51.7 | 115' 7" | 35.2 | 4,200 | 1 905 | 7,600 | 3 447 | | |
| | 100 | 30.48 | 46.3 | 106' 11" | 32.6 | 3,200 | 1 452 | 6,300 | 2 858 | | |
| | 110 | 33.53 | 40.3 | 96' 3" | 29.4 | 2,400 | 1 089 | 5,200 | 2 359 | | |
| | 120 | 36.58 | 33.5 | 83' 0" | 25.3 | – | – | 4,300 | 1 951 | | |
| | 130 | 39.62 | 25.2 | 65' 2" | 19.9 | – | – | 3,500 | 1 588 | | |
| | 140 | 42.67 | 12.4 | 35' 9" | 10.9 | – | – | 2,900 | 1 315 | | |
| 150' (45.72 m) | 30 | 9.14 | 79.7 | 153' 3" | 46.7 | 27,000 | 12 247 | 39,300 | 17 826 | | |
| | 35 | 10.67 | 77.8 | 152' 3" | 46.4 | 21,400 | 9 707 | 31,500 | 14 288 | | |
| | 40 | 12.19 | 75.8 | 151' 1" | 46.1 | 17,400 | 7 893 | 26,100 | 11 839 | | |
| | 50 | 15.24 | 71.9 | 148' 2" | 45.2 | 12,300 | 5 579 | 18,900 | 8 573 | | |
| | 60 | 18.29 | 67.8 | 144' 6" | 44.0 | 9,000 | 4 082 | 14,400 | 6 532 | | |
| | 70 | 21.34 | 63.6 | 140' 0" | 42.7 | 6,800 | 3 084 | 11,400 | 5 171 | | |
| | 80 | 24.38 | 59.2 | 134' 7" | 41.0 | 5,200 | 2 359 | 9,100 | 4 128 | | |
| | 90 | 27.43 | 54.7 | 128' 1" | 39.0 | 3,900 | 1 769 | 7,400 | 3 357 | | |
| | 100 | 30.48 | 49.8 | 120' 4" | 36.7 | 3,000 | 1 361 | 6,100 | 2 767 | | |
| | 110 | 33.53 | 44.6 | 111' 1" | 33.9 | 2,000 | 907 | 5,000 | 2 268 | | |
| | 120 | 36.58 | 38.9 | 99' 10" | 30.4 | – | – | 4,100 | 1 860 | | |
| | 130 | 39.62 | 32.3 | 85' 11" | 26.2 | – | – | 3,300 | 1 497 | | |
| | 140 | 42.67 | 24.3 | 67' 4" | 20.5 | – | – | 2,700 | 1 225 | | |
| | 150 | 45.72 | 12.0 | 36' 10" | 11.2 | – | – | 2,000 | 907 | | |

① Measured vertically from center of boom head sheave to ground.

Link-Belt
CONSTRUCTION EQUIPMENT

# LS-138H Working Ranges




We are constantly improving our products and therefore reserve the right to change designs and specifications.



Link-Belt Construction Equipment Company Lexington, Kentucky

# LS-138H Lift Crane Capacities

**continued**

refer to notes below

| Length | Boom Radius (feet) | Boom Radius (meters) | Boom Angle (degree) | Boom Pt.Height① (feet) | Boom Pt.Height① (meters) | Side Frames Extended Ctwt. "A" (pounds) | Side Frames Extended Ctwt. "A" (kilograms) | Side Frames Extended Ctwt. "AB" (pounds) | Side Frames Extended Ctwt. "AB" (kilograms) | Retracted Ctwt. "A" (pounds) | Retracted Ctwt. "A" (kilograms) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 160' (48.77 m) | 30 | 9.14 | 80.4 | 163' 5" | 49.8 | | | 39,100 | 17 736 | | |
| | 35 | 10.67 | 78.6 | 162' 6" | 49.5 | | | 31,400 | 14 243 | | |
| | 40 | 12.19 | 76.7 | 161' 5" | 49.2 | | | 25,900 | 11 748 | | |
| | 50 | 15.24 | 73.0 | 158' 8" | 48.4 | | | 18,800 | 8 528 | | |
| | 60 | 18.29 | 69.2 | 155' 3" | 47.3 | | | 14,300 | 6 486 | | |
| | 70 | 21.34 | 65.4 | 151' 1" | 46.1 | | | 11,200 | 5 080 | | |
| | 80 | 24.38 | 61.3 | 146' 1" | 44.5 | | | 9,000 | 4 082 | | |
| | 90 | 27.43 | 57.2 | 140' 1" | 42.7 | | | 7,200 | 3 266 | | |
| | 10 | 30.48 | 52.8 | 133' 1" | 40.6 | | | 5,900 | 2 676 | | |
| | 110 | 33.53 | 48.2 | 124' 10" | 38.1 | | | 4,800 | 2 177 | | |
| | 120 | 36.58 | 43.2 | 115' 1" | 35.1 | | | 3,900 | 1 769 | | |
| | 130 | 39.62 | 37.6 | 103' 4" | 31.5 | | | 3,100 | 1 406 | | |
| | 140 | 42.67 | 31.3 | 88' 9" | 27.1 | | | 2,500 | 1 134 | | |
| | 150 | 45.72 | 23.5 | 69' 6" | 21.2 | | | – | – | | |
| | 160 | 48.77 | 11.6 | 37' 11" | 11.6 | | | – | – | | |
| 170' (51.82 m) | 30 | 9.14 | 81.0 | 173' 7" | 52.9 | | | 38,000 | 17 237 | | |
| | 35 | 10.67 | 79.2 | 172' 8" | 52.6 | | | 31,200 | 14 152 | | |
| | 40 | 12.19 | 77.5 | 171' 8" | 52.3 | | | 25,800 | 11 703 | | |
| | 50 | 15.24 | 74.0 | 169' 1" | 51.6 | | | 18,600 | 8 437 | | |
| | 60 | 18.29 | 70.5 | 165' 11" | 50.6 | Not Applicable | | 14,100 | 6 396 | Not Applicable | |
| | 70 | 21.34 | 66.9 | 162' 0" | 49.4 | | | 11,000 | 4 990 | | |
| | 80 | 24.38 | 63.2 | 157' 4" | 48.0 | | | 8,800 | 3 992 | | |
| | 90 | 27.43 | 59.3 | 151' 11" | 46.3 | | | 7,100 | 3 221 | | |
| | 100 | 30.48 | 55.3 | 145' 6" | 44.4 | | | 5,700 | 2 586 | | |
| | 110 | 33.53 | 51.1 | 138' 1" | 42.1 | | | 4,600 | 2 087 | | |
| | 120 | 36.58 | 46.6 | 129' 3" | 39.4 | | | 3,700 | 1 678 | | |
| | 130 | 39.62 | 41.8 | 119' 0" | 36.3 | | | 3,000 | 1 361 | | |
| | 140 | 42.67 | 36.5 | 106' 8" | 32.5 | | | 2,300 | 1 043 | | |
| | 150 | 45.72 | 30.3 | 91' 6" | 27.9 | | | – | – | | |
| | 160 | 48.77 | 22.8 | 71' 6" | 21.8 | | | – | – | | |
| | 170 | 51.82 | 11.3 | 38' 11" | 11.9 | | | – | – | | |
| 180' (54.86 m) | 35 | 10.67 | 79.9 | 182' 10" | 55.7 | | | 31,100 | 14 107 | | |
| | 40 | 12.19 | 78.2 | 181' 10" | 55.5 | | | 25,600 | 11 612 | | |
| | 50 | 15.24 | 75.0 | 179' 6" | 54.7 | | | 18,400 | 8 346 | | |
| | 60 | 18.29 | 71.6 | 176' 6" | 53.8 | | | 13,900 | 6 305 | | |
| | 70 | 21.34 | 68.2 | 172' 10" | 52.7 | | | 10,800 | 4 899 | | |
| | 80 | 24.38 | 64.8 | 168' 6" | 51.4 | | | 8,600 | 3 901 | | |
| | 90 | 27.43 | 61.2 | 163' 5" | 49.8 | | | 6,900 | 3 130 | | |
| | 100 | 30.48 | 57.5 | 157' 6" | 48.0 | | | 5,500 | 2 495 | | |
| | 110 | 33.53 | 53.6 | 150' 7" | 45.9 | | | 4,500 | 2 041 | | |
| | 120 | 36.58 | 49.6 | 142' 8" | 43.5 | | | 3,600 | 1 633 | | |
| | 130 | 39.62 | 45.3 | 133' 6" | 40.7 | | | 2,800 | 1 270 | | |
| | 140 | 42.67 | 40.6 | 122' 9" | 37.4 | | | 2,100 | 953 | | |
| | 150 | 45.72 | 35.4 | 109' 11" | 33.5 | | | – | – | | |
| | 160 | 48.77 | 29.5 | 94' 2" | 28.7 | | | – | – | | |
| | 170 | 51.82 | 22.1 | 73' 6" | 22.4 | | | – | – | | |
| | 180 | 54.86 | 11.0 | 39' 10" | 12.2 | | | – | – | | |

① Measured vertically from center of boom head sheave to ground.

## Notes

1. The capacities included in this chart are the maximum allowable, and are based on machine standing level on firm supporting surface under ideal job conditions.
2. Capacities are based on 75% of minimum tipping loads unless marked with an asterisk (*).
   (*) Asterisk indicates capacities based on factors other than those which would cause a tipping condition.
3. Capacities based on freely suspended loads and make no allowance for such factors as the effect of wind, sudden stopping of loads, supporting surface conditions, and operating speeds. Operator must reduce load ratings to take such conditions into account. Deduction from rated capacities must be made for weight of hook block, weighted ball / hook, sling, spreader bar, or other suspended gear.
4. 54"(1.37m) tubular boom with open throat top section — for lifting 150,000# (68 040 kg), 8-part load hoist line (7/8" — 22 mm, Type "N" wire rope) is required. Check parts of line required for all capacities.
5. Retractable high gantry must be fixed in raised position for all capacities on this chart.
6. Boom lengths exceeding 120' (36.58 m) must be erected and lowered over end. Adequate blocking must be placed under the tread member sprockets to prevent the machine from rocking.
7. For boom length exceeding 140' (42.67 m) the mid-point suspension pendants are required.
8. Least stable position is over the side.
9. Main boom length must not exceed 180' (54.86 m).
10. These capacities apply only to the machine as originally manufactured and normally equipped by Link-Belt Construction Equipment Company.