Manitowoc Cranes, Inc.

Manitowoc, Wisconsin 54220 U.S.A.

## **Liftcrane Fixed Jib Capacities**

40 Ft. Fixed Jib No. 134 At 5 Degree Offset Angle On 130 Ft. Luffing Jib No. 149 On 180 Ft. Boom No. 82 219,600 Lb. Crane Counterweight 80,000 Lb. Carbody Counterweight 360 Degree Rating

Designed And Tested With The Intent To Be In The Scope of ANSI B30.5

**LIFTING CAPACITIES:** Lifting capacities for boom length, boom angles, luffing jib length, luffing jib angles, fixed jib length, and fixed jib operating radii are for freely suspended loads and do not exceed 75% of a static tipping load. Capacities based on structural competence are denoted by an asterisk (\*).

Consult Luffing Jib Raising Procedure chart **No. 8422-B** for Maximum Number of Lower Boom Point Sheaves (Layout Jack-Knife Method table, column A).

Weight of all load blocks, hooks, weight ball, slings, hoist lines, etc., beneath boom, luffing jib point and fixed jib point sheaves, is considered part of fixed jib load. Boom, luffing jib and fixed jib are not to be lowered beyond radii where combined weights are greater than rated capacity. Where no capacity is shown, operation is not intended or approved.

**OPERATING CONDITIONS:** Machine to operate on a firm uniformly supporting surface with gantry up and bearing turntable level within a tolerance of 1/2 in. in 10 Ft. and properly supported. During operation, boom must be maintained at one of the selected angles shown in chart. Refer to fixed jib assembly **No. 196404**, luffing jib assembly **No. A01031**, Wire Rope Specification chart **No. 8357-B** and Luffing Jib Raising Procedure chart **No. 8422-B**. Crane operator judgment must be used to allow for dynamic load effects of swinging, hoisting or lowering, travel, wind conditions, as well as adverse operating conditions and physical machine depreciation. <u>Refer to operators manual for operating guidelines.</u>

**MACHINE TRAVEL:** Machine to travel on a firm, level and uniformly supporting surface with boom and luffing jib within angle range shown in capacity chart. Refer to Maximum Allowable Travel Specification chart **No. 8360-B**.

**OPERATING RADIUS:** Operating radius is horizontal distance from axis of rotation to center of vertical hoist line or load block. Boom angle is angle between horizontal and centerline of boom butt and inserts. Luffing jib angle is angle between horizontal and centerline of luffing jib butt and inserts, and is an indication of operating radius. In all cases, operating radius shall govern capacity.

**FIXED JIB POINT ELEVATION:** Fixed jib point elevation is vertical distance from ground level to centerline of fixed jib point shaft.

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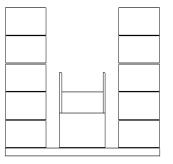
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**MACHINE EQUIPMENT:** Machine equipped with 28 Ft. 2 in. crawlers, 48 in. treads, 10 Ft. 3 in. retractable gantry, 30 Ft. live mast, 20 part boom hoist reeving, boom support straps, 9 part luffing jib hoist reeving, luffing jib straps, two 1-1/2 in. luffing jib backstay pendants, 219,600 Lb. crane counterweight, two 22,000 Lb. and two 18,000 Lb. carbody counterweights.

Maximum capacity on 26 mm wire rope is 29,500 Lbs. per line (20,000 Lbs. on 26 mm or 1 in. wire rope when auxiliary drum is used).

Consult chart No. 8419-A for luffing jib capacities.

Lower boom point and intermediate fall cannot be used when using this chart.



219,600 Lb. Crane Counterweight 10 Side Boxes - 1 Center Box

## **Boom Catwalks Deduct**

Deduct 300 Lbs. from capacities when boom catwalks are attached.

## **Liftcrane Fixed Jib Capacities**

40 Ft. Fixed Jib No. 134 At 5 Degree Offset Angle On 130 Ft. Luffing Jib No. 149 On 180 Ft. Boom No. 82 219,600 Lb. Crane Counterweight 80,000 Lb. Carbody Counterweight 360 Degree Rating

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## 180 Ft. Boom, 130 Ft. Luffing Jib, 40 Ft. Fixed Jib

|            |              | 88 Deg         |                    | 86 Degree    |                |                    | 83 Degree    |                |  | 80 Degree    |                |                           |            |
|------------|--------------|----------------|--------------------|--------------|----------------|--------------------|--------------|----------------|--|--------------|----------------|---------------------------|------------|
|            | Boom Angle   |                |                    | Boom Angle   |                |                    | Boom Angle   |                |  | Boom Angle   |                |                           |            |
| Fixed      |              | Fixed          |                    |              | Fixed          |                    |              | Fixed          |  |              | Fixed          |                           | Fixed      |
| Jib        | Luffing      | Jib            |                    | Luffing      | Jib            |                    | Luffing      | Jib            |  | Luffing      | Jib            |                           | Jib        |
| Oper.      | Jib          | Point          | Fixed Jib          | Jib          | Point          | Fixed Jib          | Jib          | Point          | Fixed Jib                                | Jib          | Point          | Fixed Jib                 | Oper.      |
| Rad.       | Angle        | Elev.          | Capacity           | Angle        | Elev.          | Capacity           | Angle        | Elev.          | Capacity                                 | Angle        | Elev.          | Capacity                  | Rad.       |
| Feet       | Degrees      | Feet           | Pounds             | Degrees      | Feet           | Pounds             | Degrees      | Feet           | Pounds                                   | Degrees      | Feet           | Pounds                    | Feet       |
| 65         | 74.0         | 353.1          | 35,600*            |              |                |                    |              |                |  |              |                |                           | 65         |
| 70         | 72.3         | 351.5          | 35,100*            |              |                |                    |              |                |  |              |                |                           | 70         |
| 75         | 70.5         | 349.7          | 34,600*            | 72.7         | 351.5          | 37,100*            |              |                |  |              |                |                           | 75         |
| 80         | 68.7         | 347.8          | 33,700*            | 71.0         | 349.8          | 35,700*            |              |                |  |              |                |                           | 80         |
| 85         | 66.9         | 345.6          | 32,800*            | 69.2         | 347.9          | 35,300*            |              |                |  |              |                |                           | 85         |
| 90         | 65.1         | 343.3          | 31,900*            | 67.4         | 345.8          | 34,800*            |              |                |  |              |                |                           | 90         |
| 95         | 63.2         | 340.7          | 30,600*            | 65.6         | 343.5          | 34,200*            | 69.0         | 346.6          | 41,200*                                  |              |                |                           | 95         |
| 100        | 61.4         | 338.0          | 28,800*            | 63.7         | 341.0          | 33,500*            | 67.2         | 344.5          | 41,000*                                  |              |                |                           | 100        |
| 105        | 59.4         | 335.0          | 27,000*            | 61.8         | 338.3          | 32,600*            | 65.3         | 342.2          | 40,600*                                  |              |                |                           | 105        |
| 110        | 57.5         | 331.8          | 25,300*            | 59.9         | 335.4          | 31,000*            | 63.5         | 339.6          | 40,100*                                  | 66.9         | 342.6          | 40,500*                   | 110        |
| 115        | 55.4         | 328.4          | 23,700*            | 58.0         | 332.3          | 29,100*            | 61.6         | 336.9          | 38,200*                                  | 65.1         | 340.3          | 40,600*                   | 115        |
| 120        | 53.4         | 324.7          | 22,200*            | 56.0         | 328.9          | 27,300*            | 59.7         | 334.0          | 36,200*                                  | 63.2         | 337.8          | 40,500*                   | 120        |
| 125        | 51.2         | 320.7          | 20,700*            | 53.9         | 325.2          | 25,600*            | 57.7         | 330.8          | 34,300*                                  | 61.3         | 335.0          | 38,700                    | 125        |
| 130        | 49.1         | 316.3          | 19,400*            | 51.8         | 321.3          | 24,000*            | 55.7         | 327.4          | 32,300*                                  | 59.4         | 332.1          | 36,600                    | 130        |
| 135        | 46.8         | 311.6          | 18,200*            | 49.6         | 317.1          | 22,500*            | 53.6         | 323.7          | 30,400*                                  | 57.4         | 328.9          | 34,800                    | 135        |
| 140        | 44.4         | 306.6          | 17,000*            | 47.4         | 312.5          | 21,000*            | 51.5         | 319.8          | 28,600*                                  | 55.4         | 325.4          | 33,100                    | 140        |
| 145        | 41.9         | 301.0          | 16,000*            | 45.0         | 307.5          | 19,700*            | 49.3         | 315.5          | 26,800*                                  | 53.3         | 321.7          | 31,500                    | 145        |
| 150        | 39.3         | 295.0          | 15,000*            | 42.6         | 302.1          | 18,400*            | 47.1         | 310.8          | 25,100*                                  | 51.2         | 317.7          | 30,000                    | 150        |
| 155        | 36.6         | 288.3          | 14,100*            | 40.0         | 296.2          | 17,200*            | 44.7         | 305.8          | 23,500*                                  | 49.0         | 313.3          | 28,700                    | 155        |
| 160        | 33.6         | 280.9          | 13,300*            | 37.3         | 289.7          | 16,100*            | 42.3         | 300.3          | 22,000*                                  | 46.8         | 308.7          | 27,400                    | 160        |
| 165<br>170 | 30.4<br>26.8 | 272.6<br>263.0 | 12,500*<br>11.900* | 34.4         | 282.5<br>274.4 | 15,200*<br>14,200* | 39.7<br>36.9 | 294.4<br>287.8 | 20,600*<br>19,200*                       | 44.4<br>41.9 | 303.6<br>298.0 | 26,200<br>25,000          | 165<br>170 |
|            | 20.8<br>22.7 |                | ,                  | 31.2         |                | 14,200* 13,400*    |              |                | - ,                                      |              |                | - ,                       | 170        |
| 175<br>180 | 22.7<br>17.6 | 251.6<br>237.2 | 11,300*<br>10,900* | 27.8<br>23.8 | 265.2<br>254.3 | 13,400*<br>12,700* | 34.0<br>30.8 | 280.5<br>272.3 | 17,900*<br>16,800*                       | 39.3<br>36.5 | 292.0<br>285.3 | 24,000<br>22,800*         | 175        |
| 180        | 17.6         | 237.2<br>215.2 | 10,900*<br>10,700* | 23.8<br>19.0 | 254.5<br>240.9 | 12,700*            | 30.8<br>27.3 | 272.5 262.9    | 16,800*                                  | 36.5<br>33.6 | 285.5<br>277.9 | 22,800*<br>21.300*        | 180        |
| 185        | 10.1         | 213.2          | 10,700*            | 19.0         | 240.9          | 12,100*            | 27.3         | 262.9          | 15,800*                                  | 30.4         | 269.6          | <u>21,300*</u><br>19.800* | 185        |
| 190        |              |                |                    | 12.5         | 221.0          | 11,700*            | 23.2<br>18.3 | 231.8          | 14,800*                                  | 26.8         | 269.0          | 19,800*                   | 190<br>195 |
| 200        |              |                |                    |              |                |                    | 18.5         | 237.9          | 14,000********************************** | 20.8         | 248.5          | 18,300*                   | 200        |
| 200        |              |                |                    |              |                |                    | 11.4         | 217.3          | 15,500*                                  | 17.5         | 248.5          | 16,200*                   | 200        |
| 203        |              |                |                    |              |                |                    |              |                |  | 17.5         | 234.0          | 15,300*                   | 203        |
| 210        |              |                |                    |              |                |                    |              |                |  | 10.0         | 211.9          | 15,500*                   | 210        |