

# MANITOWOC ENGINEERING CO.

Division of the Manitowoc Company, Inc. Manitowoc, Wisconsin 54220



## LIFT CRANE CAPACITIES

MEETS  
ANSI B30.5  
REQUIREMENTS

# M-1200

**BOOM NO. 72 WITH 800 METRIC TON BOOM POINT  
MAST NO. 75  
18.3m RINGER ATTACHMENT ON SCREW JACK PEDESTALS  
23 590 kg CRANE COUNTERWEIGHT  
795 420 kg AUXILIARY COUNTERWEIGHT  
360 DEGREE RATING**

CAPACITIES FOR VARIOUS BOOM LENGTHS AND 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 (\*).

WEIGHT OF ALL LOAD BLOCKS, HOOKS, SLINGS, HOIST LINES, ETC., BENEATH BOOM SHEAVES, IS CONSIDERED PART OF THE MAIN BOOM LOAD. BOOM IS 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.

MACHINE TO OPERATE IN A LEVEL POSITION ON A FIRM UNIFORMLY SUPPORTING SURFACE WITH ROLLER PATH LEVEL WITHIN A TOLERANCE OF 32 mm IN 18.3m AND PROPERLY SUPPORTED. REFER TO BOOM RIGGING NO. 173399 AND WIRE ROPE SPECIFICATION CHART NO. 7683-A. CRANE OPERATOR JUDGMENT MUST BE USED TO ALLOW FOR DYNAMIC LOAD EFFECTS OF SWINGING, HOISTING OR LOWERING, WIND CONDITIONS, AS WELL AS ADVERSE OPERATING CONDITIONS AND PHYSICAL MACHINE DEPRECIATION.

MACHINE MAY BE OPERATED IN WINDS UP TO 16 m/s PROVIDED CRANE OPERATOR JUDGMENT IS USED TO ALLOW FOR WIND EFFECT ON THE LIFTED LOAD AND OTHER CONSIDERATIONS NOTED ON CAPACITY CHART ARE FOLLOWED. WIND WILL HAVE A CONSIDERABLE EFFECT ON A LOAD WITH A LARGE 'SAIL AREA' AND MUST BE COMPENSATED FOR ACCORDINGLY BY REDUCING LOAD RATINGS, REDUCING OPERATING SPEEDS OR BY A COMBINATION OF BOTH. RECOMMEND STOPPING OPERATION AND LOWERING BOOM TO APPROXIMATELY 75 DEGREE BOOM ANGLE WHEN WIND EXCEEDS 16 m/s. LOWER BOOM TO GROUND WHEN WIND IS ABOVE 22 m/s.

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, AND IS AN INDICATION OF OPERATING RADIUS. IN ALL CASES, OPERATING RADIUS SHALL GOVERN CAPACITY. BOOM POINT ELEVATION IS VERTICAL DISTANCE FROM GROUND LEVEL TO CENTERLINE OF BOOM POINT SHAFT.

MACHINE EQUIPPED WITH 18.3m RINGER ATTACHMENT, 9 373 mm CRAWLERS, 1 229 mm TREADS, 8 534 mm RETRACTABLE GANTRY, 45.7m NO. 75 MAST, 32 PART BOOM HOIST REEVING, STRAP BOOM PENDANTS, 23 590 kg CRANE COUNTERWEIGHT AND 795 420 kg AUXILIARY COUNTERWEIGHT.

MAXIMUM BOOM LENGTH  
LIFTED UNASSISTED = 77.1m  
LOAD BLOCK ON GROUND AT START.

CONSULT JIB CHART FOR JIB CAPACITIES. JIB MUST BE REMOVED FOR USE OF THIS CHART.

**WARNING:** CHECK AMOUNT OF AUXILIARY COUNTERWEIGHT ON MACHINE BEFORE USE OF THIS CHART.

| BOOM LENGTH METERS         | BOOM LGTH. FEET      | OPER. RAD. METERS | BOOM ANG. DEG. | BOOM POINT ELEV. METERS | CAPACITY KI LOGRAMS |
|----------------------------|----------------------|-------------------|----------------|-------------------------|---------------------|
| <b>4<br/>6<br/>-<br/>6</b> | <b>1<br/>5<br/>3</b> | 17.1              | 81.9           | 49.4                    | 800 000*            |
|                            |                      | 18.0              | 80.8           | 49.2                    | 800 000*            |
|                            |                      | 19.0              | 79.6           | 49.0                    | 800 000*            |
|                            |                      | 20.0              | 78.3           | 48.7                    | 800 000*            |
|                            |                      | 22.0              | 75.8           | 48.2                    | 800 000*            |
|                            |                      | 24.0              | 73.2           | 47.5                    | 752 500             |
|                            |                      | 26.0              | 70.6           | 46.8                    | 664 600             |
|                            |                      | 28.0              | 67.9           | 45.9                    | 592 000             |
|                            |                      | 30.0              | 65.1           | 45.0                    | 532 900             |
|                            |                      | 32.0              | 62.3           | 43.9                    | 483 800             |
|                            |                      | 34.0              | 59.5           | 42.6                    | 442 300             |
|                            |                      | 36.0              | 56.5           | 41.3                    | 406 800             |
|                            |                      | 38.0              | 53.4           | 39.7                    | 376 000             |
|                            |                      | 40.0              | 50.1           | 38.0                    | 349 200             |
|                            |                      | 42.0              | 46.7           | 36.1                    | 325 500             |
|                            |                      | 44.0              | 43.1           | 33.9                    | 304 400             |
| 46.0                       | 39.2                 | 31.4              | 285 600        |                         |                     |
| 48.0                       | 34.8                 | 28.5              | 268 700        |                         |                     |
| 50.0                       | 29.9                 | 25.0              | 253 300        |                         |                     |

| BOOM LENGTH METERS         | BOOM LGTH. FEET      | OPER. RAD. METERS | BOOM ANG. DEG. | BOOM POINT ELEV. METERS | CAPACITY KI LOGRAMS |
|----------------------------|----------------------|-------------------|----------------|-------------------------|---------------------|
| <b>5<br/>4<br/>-<br/>3</b> | <b>1<br/>7<br/>8</b> | 19.8              | 80.2           | 56.6                    | 800 000*            |
|                            |                      | 20.0              | 80.0           | 56.6                    | 800 000*            |
|                            |                      | 22.0              | 77.8           | 56.1                    | 800 000*            |
|                            |                      | 24.0              | 75.6           | 55.5                    | 749 700             |
|                            |                      | 26.0              | 73.4           | 54.9                    | 660 800             |
|                            |                      | 28.0              | 71.2           | 54.2                    | 588 200             |
|                            |                      | 30.0              | 68.9           | 53.4                    | 529 000             |
|                            |                      | 32.0              | 66.6           | 52.5                    | 479 900             |
|                            |                      | 34.0              | 64.2           | 51.5                    | 438 400             |
|                            |                      | 36.0              | 61.8           | 50.3                    | 402 900             |
|                            |                      | 38.0              | 59.3           | 49.1                    | 372 200             |
|                            |                      | 40.0              | 56.8           | 47.8                    | 345 300             |
|                            |                      | 42.0              | 54.1           | 46.3                    | 321 600             |
|                            |                      | 44.0              | 51.4           | 44.6                    | 300 600             |
|                            |                      | 46.0              | 48.5           | 42.8                    | 281 800             |
|                            |                      | 48.0              | 45.6           | 40.8                    | 264 900             |
| 50.0                       | 42.4                 | 38.6              | 249 600        |                         |                     |
| 52.0                       | 39.0                 | 36.1              | 235 700        |                         |                     |
| 54.0                       | 35.3                 | 33.2              | 222 900        |                         |                     |
| 56.0                       | 31.2                 | 29.9              | 211 300        |                         |                     |

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**795 420 kg AUXILIARY COUNTERWEIGHT**  
**360 DEGREE RATING**

| BOOM LENGTH METERS   | BOOM LGTH. FEET      | OPER. RAD. METERS | BOOM ANG. DEG. | BOOM POINT ELEV. METERS | CAPACITY KI LOGRAMS |
|----------------------|----------------------|-------------------|----------------|-------------------------|---------------------|
| <b>6<br/>1<br/>9</b> | <b>2<br/>0<br/>3</b> | 19.8              | 81.4           | 64.4                    | 800 000*            |
|                      |                      | 20.0              | 81.2           | 64.3                    | 800 000*            |
|                      |                      | 22.0              | 79.3           | 63.9                    | 800 000*            |
|                      |                      | 24.0              | 77.4           | 63.4                    | 747 600             |
|                      |                      | 26.0              | 75.5           | 62.9                    | 658 100             |
|                      |                      | 28.0              | 73.6           | 62.3                    | 585 400             |
|                      |                      | 30.0              | 71.6           | 61.6                    | 526 200             |
|                      |                      | 32.0              | 69.6           | 60.8                    | 477 100             |
|                      |                      | 34.0              | 67.6           | 59.9                    | 435 500             |
|                      |                      | 36.0              | 65.6           | 59.0                    | 400 000             |
|                      |                      | 38.0              | 63.5           | 58.0                    | 369 300             |
|                      |                      | 40.0              | 61.4           | 56.8                    | 342 400             |
|                      |                      | 42.0              | 59.2           | 55.6                    | 318 700             |
|                      |                      | 44.0              | 57.0           | 54.3                    | 297 800             |
|                      |                      | 46.0              | 54.7           | 52.8                    | 278 900             |
|                      |                      | 48.0              | 52.3           | 51.2                    | 262 000             |
|                      |                      | 50.0              | 49.9           | 49.5                    | 246 700             |
|                      |                      | 52.0              | 47.3           | 47.6                    | 232 900             |
|                      |                      | 54.0              | 44.7           | 45.5                    | 220 200             |
|                      |                      | 56.0              | 41.9           | 43.3                    | 208 500             |
| 58.0                 | 38.9                 | 40.7              | 197 900        |                         |                     |
| 60.0                 | 35.7                 | 37.9              | 188 000        |                         |                     |
| 62.0                 | 32.2                 | 34.7              | 178 800        |                         |                     |
| 64.0                 | 28.3                 | 31.0              | 170 300        |                         |                     |
| <b>6<br/>9<br/>5</b> | <b>2<br/>2<br/>8</b> | 21.3              | 81.1           | 71.8                    | 800 000*            |
|                      |                      | 22.0              | 80.5           | 71.7                    | 800 000*            |
|                      |                      | 24.0              | 78.8           | 71.3                    | 744 600             |
|                      |                      | 26.0              | 77.1           | 70.8                    | 654 000             |
|                      |                      | 28.0              | 75.4           | 70.2                    | 581 300             |
|                      |                      | 30.0              | 73.7           | 69.6                    | 522 100             |
|                      |                      | 32.0              | 72.0           | 68.9                    | 473 000             |
|                      |                      | 34.0              | 70.2           | 68.2                    | 431 400             |
|                      |                      | 36.0              | 68.4           | 67.4                    | 395 900             |
|                      |                      | 38.0              | 66.6           | 66.5                    | 365 200             |
|                      |                      | 40.0              | 64.8           | 65.5                    | 338 200             |
|                      |                      | 42.0              | 62.9           | 64.4                    | 314 600             |
|                      |                      | 44.0              | 61.0           | 63.3                    | 293 500             |
|                      |                      | 46.0              | 59.1           | 62.1                    | 274 800             |
|                      |                      | 48.0              | 57.1           | 60.7                    | 257 800             |
|                      |                      | 50.0              | 55.1           | 59.3                    | 242 500             |
|                      |                      | 52.0              | 53.0           | 57.8                    | 228 600             |
|                      |                      | 54.0              | 50.9           | 56.1                    | 216 000             |
|                      |                      | 56.0              | 48.6           | 54.3                    | 204 300             |
|                      |                      | 58.0              | 46.3           | 52.4                    | 193 700             |
| 60.0                 | 43.9                 | 50.3              | 183 800        |                         |                     |
| 62.0                 | 41.4                 | 48.0              | 174 700        |                         |                     |
| 64.0                 | 38.8                 | 45.4              | 166 200        |                         |                     |
| 66.0                 | 36.0                 | 42.7              | 158 300        |                         |                     |
| 68.0                 | 32.9                 | 39.5              | 150 900        |                         |                     |
| 70.0                 | 29.6                 | 36.0              | 144 000        |                         |                     |

| BOOM LENGTH METERS   | BOOM LGTH. FEET      | OPER. RAD. METERS | BOOM ANG. DEG. | BOOM POINT ELEV. METERS | CAPACITY KI LOGRAMS |
|----------------------|----------------------|-------------------|----------------|-------------------------|---------------------|
| <b>7<br/>7<br/>1</b> | <b>2<br/>5<br/>3</b> | 21.3              | 82.0           | 79.6                    | 800 000*            |
|                      |                      | 22.0              | 81.5           | 79.5                    | 800 000*            |
|                      |                      | 24.0              | 80.0           | 79.1                    | 741 700             |
|                      |                      | 26.0              | 78.4           | 78.6                    | 650 000             |
|                      |                      | 28.0              | 76.9           | 78.1                    | 577 300             |
|                      |                      | 30.0              | 75.4           | 77.6                    | 518 000             |
|                      |                      | 32.0              | 73.8           | 77.0                    | 468 900             |
|                      |                      | 34.0              | 72.3           | 76.3                    | 427 300             |
|                      |                      | 36.0              | 70.7           | 75.6                    | 391 700             |
|                      |                      | 38.0              | 69.1           | 74.8                    | 361 000             |
|                      |                      | 40.0              | 67.5           | 73.9                    | 334 100             |
|                      |                      | 42.0              | 65.8           | 73.0                    | 310 400             |
|                      |                      | 44.0              | 64.2           | 72.0                    | 289 400             |
|                      |                      | 46.0              | 62.5           | 70.9                    | 270 500             |
|                      |                      | 48.0              | 60.8           | 69.8                    | 253 600             |
|                      |                      | 50.0              | 59.0           | 68.6                    | 238 300             |
|                      |                      | 52.0              | 57.2           | 67.2                    | 224 400             |
|                      |                      | 54.0              | 55.4           | 65.8                    | 211 700             |
|                      |                      | 56.0              | 53.6           | 64.3                    | 200 100             |
|                      |                      | 58.0              | 51.6           | 62.7                    | 189 500             |
| 60.0                 | 49.7                 | 61.0              | 179 600        |                         |                     |
| 62.0                 | 47.7                 | 59.1              | 170 400        |                         |                     |
| 64.0                 | 45.6                 | 57.1              | 162 000        |                         |                     |
| 66.0                 | 43.4                 | 55.0              | 154 100        |                         |                     |
| 68.0                 | 41.1                 | 52.7              | 146 700        |                         |                     |
| 70.0                 | 38.7                 | 50.1              | 139 800        |                         |                     |
| 72.0                 | 36.2                 | 47.4              | 133 300        |                         |                     |
| 74.0                 | 33.5                 | 44.3              | 127 200        |                         |                     |
| 76.0                 | 30.5                 | 40.9              | 121 500        |                         |                     |