

# MANITOWOC ENGINEERING CO.

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



## WIRE ROPE SPECIFICATIONS

LIFTCRANE - BOOM NO. 22EL

888 SERIES 1

888 SERIES 2

BRITISH STANDARDS  
4.5 : 1 SAFETY FACTOR

| WIRE ROPE LENGTHS |        |                                      |        |        |        |                         |        |                                         |
|-------------------|--------|--------------------------------------|--------|--------|--------|-------------------------|--------|-----------------------------------------|
| BOOM LENGTH       |        | WHIP LINE<br>FRONT OR AUXILIARY DRUM |        |        |        | HOIST LINE<br>REAR DRUM |        | MAXIMUM<br>REQUIRED<br>PARTS<br>OF LINE |
|                   |        | 1 PART                               |        | 2 PART |        |                         |        |                                         |
| FT.               | METERS | FT.                                  | METERS | FT.    | METERS | FT.                     | METERS |                                         |
| 70                | 21.3   | 180                                  | 55     | 270    | 82     | 1175                    | 358    | 14                                      |
| 80                | 24.4   | 200                                  | 61     | 300    | 91     | 1325                    | 404    | 14                                      |
| 90                | 27.4   | 220                                  | 67     | 330    | 101    | 1375                    | 419    | 13                                      |
| 100               | 30.5   | 240                                  | 73     | 360    | 110    | 1400                    | 427    | 12                                      |
| 110               | 33.5   | 260                                  | 79     | 390    | 119    | 1425                    | 434    | 11                                      |
| 120               | 36.6   | 280                                  | 85     | 420    | 128    | 1550                    | 472    | 11                                      |
| 130               | 39.6   | 300                                  | 91     | 450    | 137    | 1550                    | 472    | 10                                      |
| 140               | 42.7   | 320                                  | 98     | 480    | 146    | 1625                    | 465    | 10                                      |
| 150               | 45.7   | 340                                  | 104    | 500    | 152    | 1625                    | 495    | 9                                       |
| 160               | 48.8   | 360                                  | 110    | 530    | 162    | 1625                    | 495    | 8                                       |
| 170               | 51.8   | 380                                  | 116    | 560    | 171    | 1625                    | 495    | 8                                       |
| 180               | 54.9   | 400                                  | 122    | 590    | 180    | 1625                    | 495    | 7                                       |
| 190               | 57.9   | 420                                  | 128    | 620    | 189    | 1625                    | 495    | 7                                       |
| 200               | 61.0   | 440                                  | 134    | 650    | 198    | 1625                    | 495    | 6                                       |
| 210               | 64.0   | 460                                  | 140    | 680    | 207    | 1625                    | 495    | 6                                       |
| 220               | 67.1   | 480                                  | 146    | 710    | 216    | 1625                    | 495    | 5                                       |
| 230               | 70.1   | 500                                  | 152    | 740    | 226    | 1625                    | 495    | 5                                       |
| 240               | 73.2   | 520                                  | 158    | 770    | 235    | 1625                    | 495    | 5                                       |
| 250               | 76.2   | 540                                  | 165    | 800    | 244    | 1625                    | 495    | 4                                       |
| 260               | 79.2   | 560                                  | 171    | 830    | 253    | 1625                    | 495    | 4                                       |
| 270               | 82.3   | 580                                  | 177    | 860    | 262    | 1625                    | 495    | 4                                       |
| 280               | 85.3   | 600                                  | 183    | 890    | 271    | 1625                    | 495    | 3                                       |
| 290               | 88.4   | 620                                  | 189    | 920    | 280    | 1625                    | 495    | 3                                       |

NOTE: HOIST LINE AND WHIP LINE LENGTHS GIVEN IN TABLE WILL ALLOW HOOK TO TOUCH GROUND. WHEN BLOCK TRAVEL BELOW GROUND IS REQUIRED, ADD ADDITIONAL ROPE EQUAL TO PARTS OF LINE TIMES ADDED TRAVEL DISTANCE. HOISTING DISTANCE OR LINE PULL MAY BE LIMITED WHEN BLOCK TRAVEL BELOW GROUND IS REQUIRED.

| HOIST REEVING FOR MAIN LOAD BLOCK |         |         |         |         |         |         |         |
|-----------------------------------|---------|---------|---------|---------|---------|---------|---------|
| NO. PARTS OF LINE                 | 1       | 2       | 3       | 4       | 5       | 6       | 7       |
| MAXIMUM LOAD-LBS.                 | 29,500  | 59,000  | 88,500  | 118,000 | 147,500 | 177,000 | 206,500 |
| MAXIMUM LOAD-kg                   | 13 380  | 26 760  | 40 140  | 53 520  | 66 900  | 80 290  | 93 670  |
| NO. PARTS OF LINE                 | 8       | 9       | 10      | 11      | 12      | 13      | 14      |
| MAXIMUM LOAD-LBS.                 | 236,000 | 265,500 | 295,000 | 324,500 | 354,000 | 383,500 | 441,000 |
| MAXIMUM LOAD-kg                   | 107 050 | 120 430 | 133 810 | 147 190 | 160 570 | 173 950 | 200 000 |

| WIRE ROPE SPECIFICATIONS |                                                                                                                                                                                                                                         |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HOIST LINE:              | 26 mm - 2 160 N/mm <sup>2</sup> WIRE ROPE (REF. MEC PART NO. 719379)<br>MINIMUM BREAKING STRENGTH REQUIRED = 148,000 LBS. (658 KN)<br>APPROX. WEIGHT = 2.13 LBS. PER FT. (3.17 kg/m)                                                    |
| WHIP LINE:               | 26 mm - 2 160 N/mm <sup>2</sup> WIRE ROPE (REF. MEC PART NO. 719379)<br>MINIMUM BREAKING STRENGTH REQUIRED = 148,000 LBS. (658 KN)<br>MAXIMUM LOAD = 29,500 LBS. (13 380 kg) PER LINE<br>APPROX. WEIGHT = 2.13 LBS. PER FT. (3.17 kg/m) |
| AUXILIARY LINE:          | 26 mm - 1 960 N/mm <sup>2</sup> WIRE ROPE (MEC PART NO. 719378)<br>MINIMUM BREAKING STRENGTH = 146,200 LBS. (650.6 KN)<br>MAXIMUM LOAD = 20,000 LBS. (9 070 kg) PER LINE<br>APPROX. WEIGHT = 2.13 LBS. PER FT. (3.17 kg/m)              |

| MAXIMUM SPOOLING CAPACITIES                                                                                                           |                                                                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REAR DRUM:<br>(HOIST LINE)                                                                                                            | 26 mm WIRE ROPE - 7 LAYERS - 1,609' (490m)<br>7 LAYERS - 1,716' (523m) WITH 21-1/4" (540 mm) DIA. LAGGING                                                            |
| FRONT DRUM:<br>(WHIP LINE)                                                                                                            | 26 mm WIRE ROPE - 7 LAYERS - 1,609' (490m)<br>7 LAYERS - 1,716' (523m) WITH 21-1/4" (540 mm) DIA. LAGGING<br>4 LAYERS - 1,061' (323m) WITH 27" (686 mm) DIA. LAGGING |
| AUXILIARY DRUM:<br>(WHIP LINE)                                                                                                        | 26 mm WIRE ROPE - 6 LAYERS - 1,323' (403m)<br>6 LAYERS - 1,415' (431m) WITH 21-1/4" (540 mm) DIA. LAGGING                                                            |
| 17' (5m) (22' (7m) WITH 27" (686 mm) DIA. LAGGING) IS DEDUCTED FROM MAXIMUM SPOOLING CAPACITIES FOR 3 DEAD WRAPS PER DRUM OR LAGGING. |                                                                                                                                                                      |

REFER TO DRUM AND LAGGING CHART NO. 6119-A.

7905-A, 9-27-96/L