MANITOWOC ENGINEERING CO.
division of The Manitowoc Company, Inc. *Manitowoc, Wisconsin 54220*

LOAD LINE HOISTING RANGE — 4100W

BOOM NO. 27 WITH OPEN THROAT TOP — RINGER®—SERIES-3

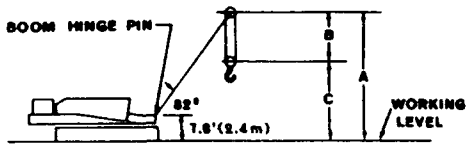
TABLE 1: CONDITIONS

1. Capacities based on Capacity Chart No. 6281-A1 and No. 6281-F1.
2. Number of parts of line based on Load Line Specifications Chart No. 6144 or No. 6144-B.
3. Minimum block to boom point distance of 12.7'(3.9m) [Manitowoc 300-ton (272tm) load block].
4. 7.8'(2.4m) distance from center of boom hinge pin to working level and 82 degree boom angle.
5. Two dead wraps [11'(3.4m)] on each drum.

TOTAL USABLE DRUM SPOOLING CAPACITIES:

1 full width drum ..... 1,494'(455.4m)
2 full width drums ..... 2,988'(910.7m)
1 full width drum and
1 equal width drum ..... 2,103'(641.0m)

TABLE 2: ILLUSTRATION



Dimension A = Distance from boom point shaft to working level.
Dimension B = Distance between boom point shaft and load block.
Dimension C = Block travel.

TABLE 3: HOISTING RANGE

ONE FULL WIDTH DRUM — 37¼"(.9m) WIDE X 19"(.5m) DIAMETER

Boom Length — Ft.	140	160	180	200	220	240	260	280	300	320	340
Boom Length — M	42.7	48.8	54.9	61.0	67.1	73.2	79.2	85.3	91.4	97.5	103.6
A — Feet	146.3	166.2	186.0	205.8	225.6	245.4	265.2	285.0	304.8	324.7	344.5
A — Meters	44.6	50.7	56.7	62.7	68.8	74.8	80.8	86.9	92.9	99.0	105.0
B — Feet	63.3	78.3	92.6	99.1	101.1	109.6	115.8	119.0	118.0	111.3	95.5
B — Meters	19.3	23.9	28.2	30.2	30.8	33.4	35.3	36.3	36.0	33.9	29.1
C — Feet	83.0	87.9	93.4	106.7	124.5	135.8	149.4	166.0	186.8	213.4	249.0
C — Meters	25.3	26.8	28.5	32.5	37.9	41.4	45.5	50.6	56.9	65.0	75.9
(1) Parts of Line	18	17	16	14	12	11	10	9	8	7	6
(2) Parts of Line	11	9	8	7	7	6	5	5	5	—	4

TWO FULL WIDTH DRUMS 37¼"(.9m) WIDE X 19"(.5m) DIAMETER

B — Feet	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7
B — Meters	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
C — Feet	166.0	166.0	186.8	213.4	249.0	249.0	298.8	298.8	373.5	373.5	498.0
C — Meters	50.6	50.6	56.9	65.0	75.9	75.9	91.1	91.1	113.8	113.8	151.8
(3) Parts of Line	18	18	16	14	12	12	10	10	8	8	6

ONE FULL WIDTH DRUM 37¼"(.9m) WIDE X 19" (.5m) DIAMETER AND ONE EQUAL WIDTH SPLIT DRUM 17⅜"(.4m) WIDE X 21"(.5m) DIAMETER

B — Feet	29.5	49.4	69.2	74.4	75.4	70.1	89.9	74.7	41.9	61.8	12.7
B — Meters	9.0	15.1	21.1	22.7	23.0	21.4	27.4	22.8	12.8	18.8	3.9
C — Feet	116.8	116.8	116.8	131.4	150.2	175.3	175.3	210.3	262.9	262.9	350.5
C — Meters	35.6	35.6	35.6	40.1	45.8	53.4	53.4	64.1	80.1	80.1	106.8
(1) Parts of Line	18	18	18	16	14	12	12	10	8	8	6
(2) Parts of Line	14	12	12	10	8	8	8	6	6	6	6

(1) **Parts of Line** required for maximum capacity.
(2) Maximum **Parts of Line** which will allow full hoisting range.
(3) **Parts of Line** required for maximum capacity and which will allow full hoisting range.

TABLE 4: NOTES

1. Dimension "C" (Block Travel) is determined by dividing drum spooling capacity by number of parts of load line.
2. If Dimension "C" plus 12.7'(3.9m) is greater than Dimension "A" load block can be lowered below working level.
3. Distance load block can be lowered below working level depends on boom length, parts of load line and drum spooling capacity.
4. Total usable drum spooling capacity is drum capacity minus 2 dead wraps per drum.

Drwg. No. 6144-A, 5-20-81/GA