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

# TOWER CRANE INTERMEDIATE FALL CAPACITIES — 4000W CRAWLER

**123' TO 163' NO. 22 TOWER WITH NO. 23 BOOM**
**24' CRAWLERS — EXTENDED**
**104,400 LB. COUNTERWEIGHT**

**LIFTING CAPACITIES:** Capacities for various tower lengths, 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 SHOWN BY SHADED AREAS.**

Capacities are shown in pounds. Weight of all load blocks, hooks, weight ball, slings, hoist lines, etc., beneath boom, jib and intermediate fall point sheaves, is considered part of the intermediate fall load. When jib is attached, a deduction for jib weight is not required for this chart only. 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.

A maximum of two hoist lines may be used with one over the intermediate fall and one over the boom point or jib point. Simultaneous handling of loads with hoist lines over the intermediate fall and boom point or jib point is not permitted.

**OPERATING CONDITIONS:** Machine to operate on a firm surface with crawlers fully extended and roller path level within a tolerance of 1/2" in 10' and properly supported, and be rigged in accordance with and under conditions referred to in rigging drawing No. 50602 and load line specification chart No. 5334 and chart No. 6662-A for recommended procedure for operating under various wind conditions.

**BOOM MUST BE AT LEAST 13' SHORTER THAN TOWER IN ORDER TO FOLD BOOM UNDER TOWER.**

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.

**OPERATING RADIUS:** Operating radius is the horizontal distance from the axis of rotation to the center of vertical hoist line. Boom angle is the 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.

**INTERMEDIATE FALL POINT ELEVATION:** Intermediate fall point elevation, in feet, is the vertical distance from ground level to centerline of intermediate fall point shaft. Distances are given for 163' tower. Deduct 10' for each 10' reduction in tower height.

**MACHINE EQUIPMENT:** Machine equipped with 24'-0" extendible crawlers, 48" treads, 15' retractable gantry, 10 part boom hoist reeving, four 1-1/4" tower pendants, two 1-3/8" boom pendants, two 7/8" intermediate suspension pendants, 1st ctwt. 40,100 lbs., 2nd ctwt. 35,800 lbs., 3rd ctwt. 28,500 lbs. Total counterweight 104,400 pounds.

| LOAD LINE SPECIFICATIONS |
|---|
| INTERMEDIATE FALL: 1" — 6 x 25 Filler Wire, Improved Plow Steel, Regular Lay, IWRC. Minimum Breaking Strength 44.9 Ton. Maximum load on intermediate fall — 15,000 Lbs. Maximum load on jib —20,000 lbs. (Approx. Weight Per Ft. in Lbs. 1.85). |

| MAXIMUM TOWER AND BOOM LENGTHS LIFTED UNASSISTED | | | |
|---|---|---|---|
| OVER FRONT OF BLOCKED CRAWLERS | | OVER SIDE OF EXTENDED CRAWLERS | |
| Tower | Boom | Tower | Boom |
| 163' | 150' | 143' | 130' |
| Load block, hook and weight ball on ground until tower is in vertical position and boom is in operating range. Jib to be attached with tower in vertical position and with boom in a position which will allow jib to be attached. | | | |

| Boom Lgth.: Feet | Oper. Rad.: Feet | Boom Angle: Deg. | Int. Fall Point: Elev. | Capacity: |
|---|---|---|---|---|
| 110 thru 150 | 25 | 72.5 | 230.1 | 15,000 |
| | 30 | 67.7 | 228.1 | 15,000 |
| | 35 | 62.7 | 225.7 | 15,000 |
| | 40 | 57.4 | 222.6 | 12,700 |
| | 45 | 51.8 | 218.9 | 11,200 |
| | 50 | 45.8 | 214.4 | 10,000 |
| | 55 | 38.9 | 208.6 | 8,900 |
| | 60 | 30.9 | 201.1 | 8,100 |
| | 65 | 19.9 | 190.0 | 7,500 |

*Combined From Charts:*
*No. 5277-A1 11-21-84*
*No. 5334 4-6-82*