TADANO

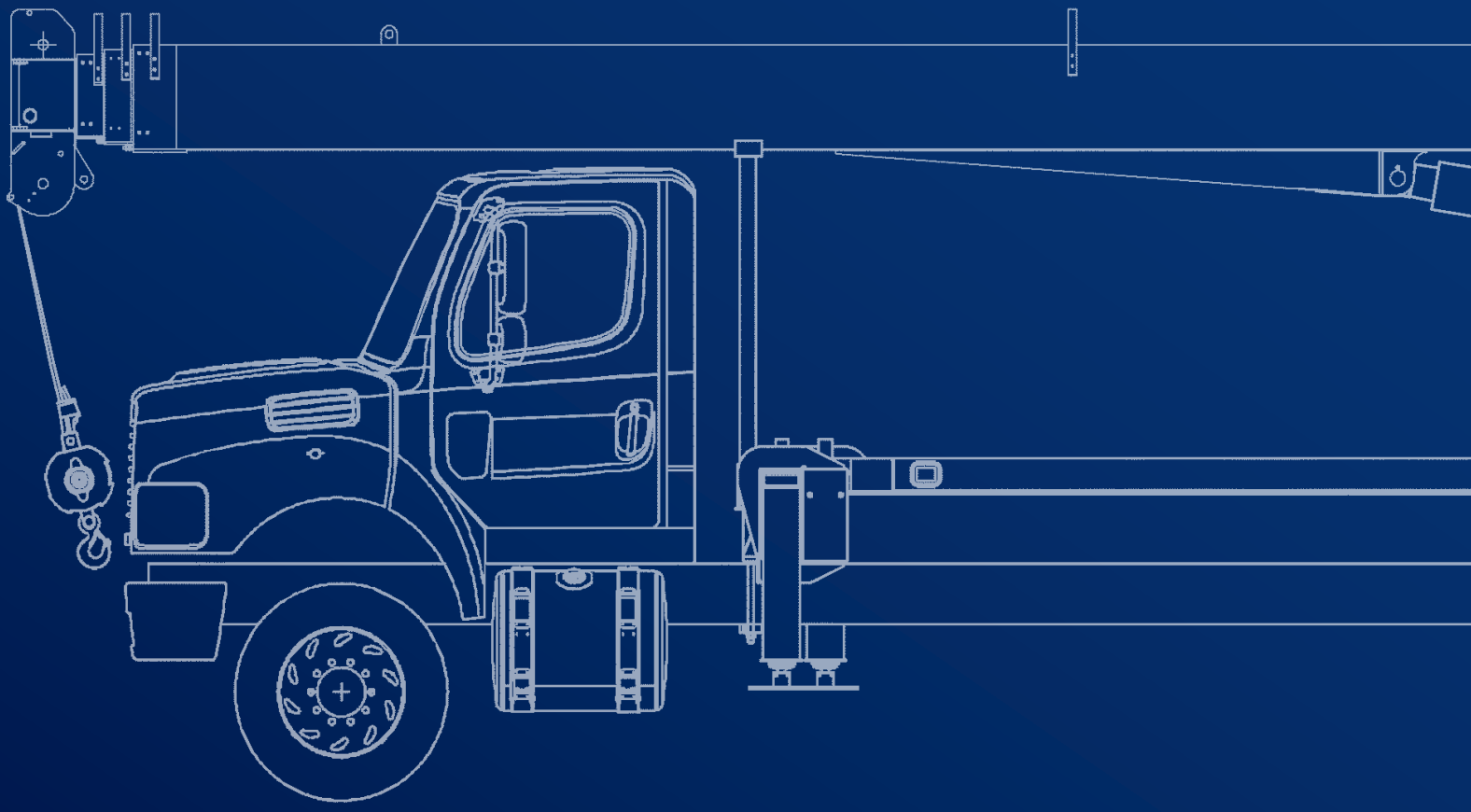
TECHNICAL DATA | IMPERIAL

# TC 220

## SERIES PRODUCT GUIDE

### 22 TON (20 MT) TELESCOPIC CRANE

Manitex



# Contents

# Key


Operator aids


Cab


Heating / Air conditioning


Controls


Hoist speed


1 - Main hoist 2 - Auxiliary winch
3 - Recovery winch


Rope length


Rope – Standard / optional


Rope diameter


Permissible line pull

Maximum line pull


Slewing / Allowable slewing range


Slewing gears


Slewing brake


Outriggers / Lifting on outriggers


2-person man basket


Counterweight


Radio remote control


Hook block


Distance from hook to head sheave pin


Hook and ball

Hydraulics


Boom elevation angle


Max. boom length with extension


Boom with extension retracted


Boom angle


Telescoping mode


Working radius


Boom length


Hydraulic actuated boom

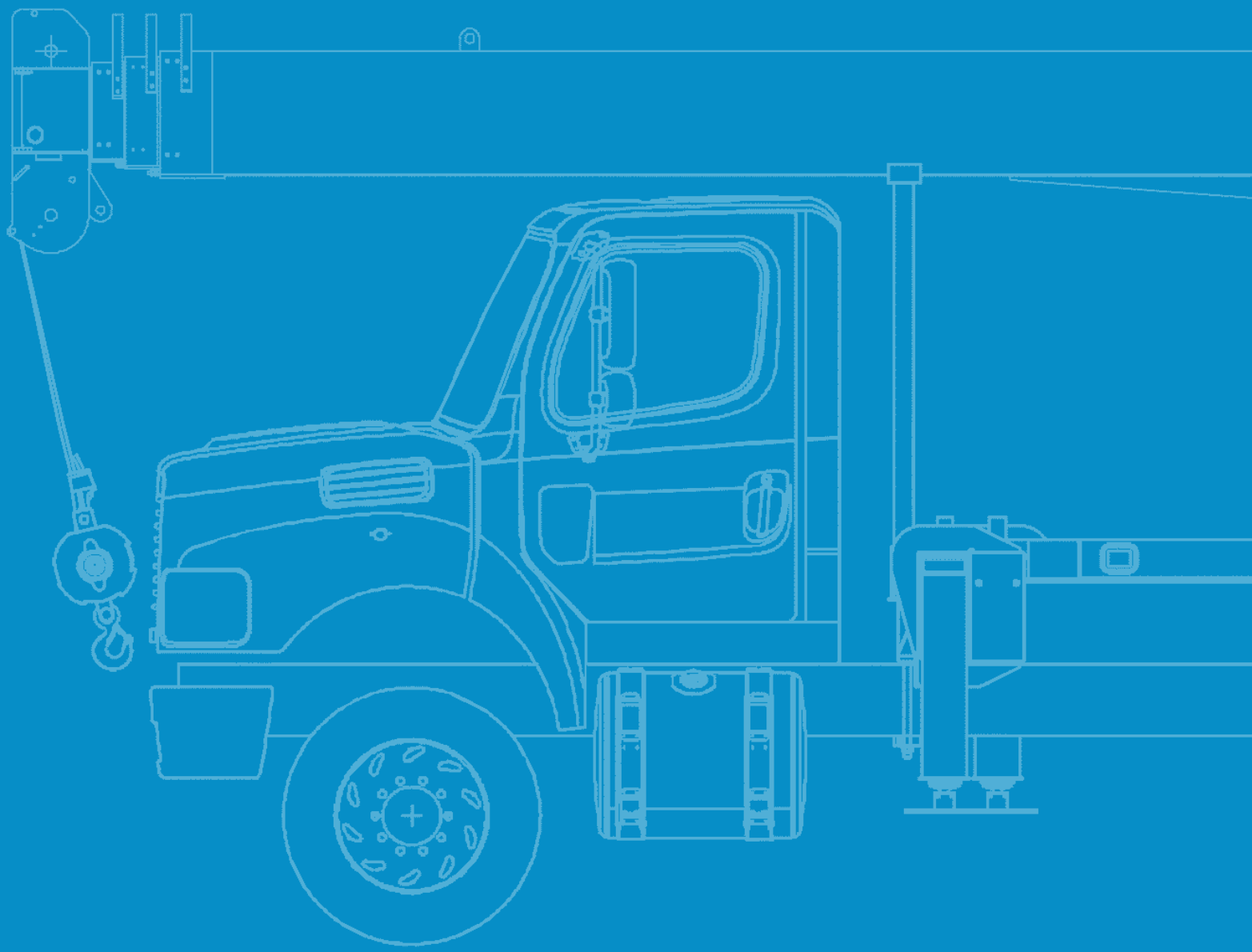

Full power mechanical synchronized


Boom head / Hook block dimension


Main boom with auxiliary head

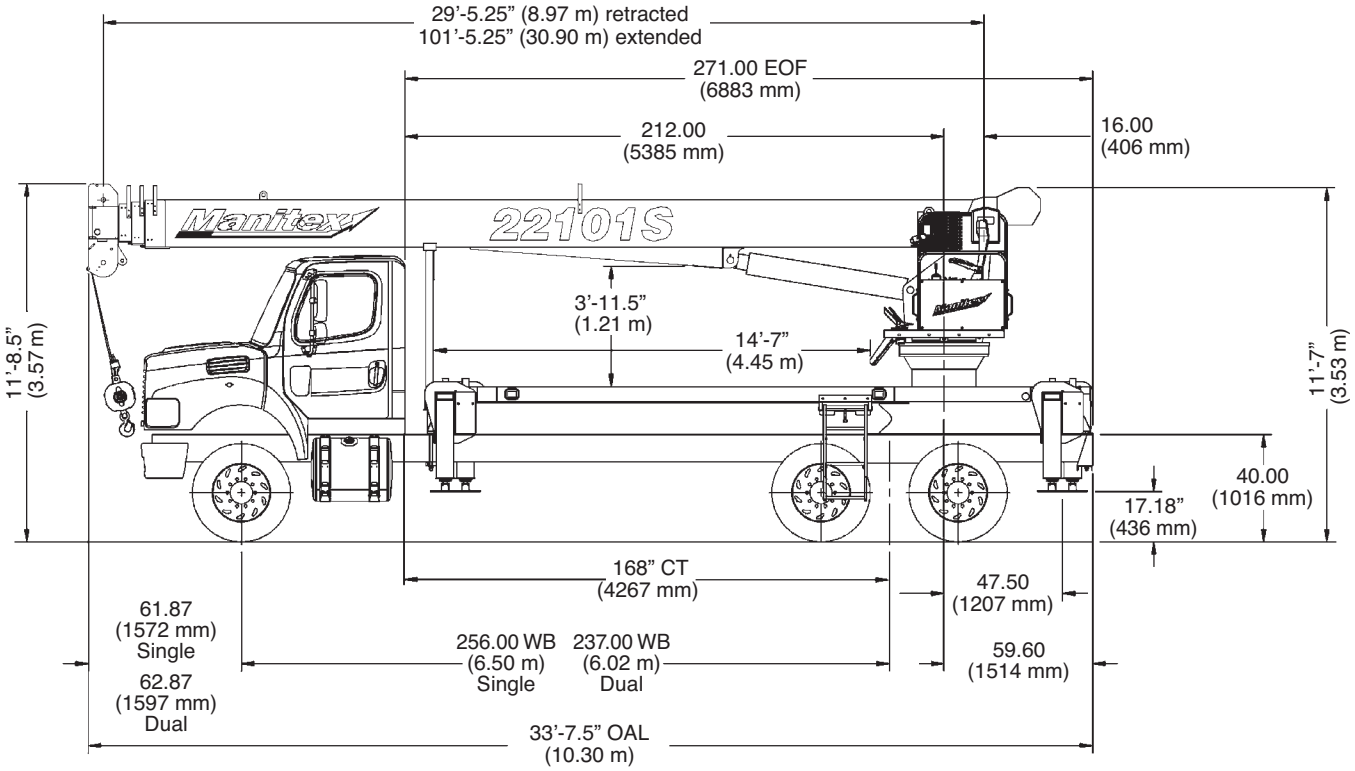

Tip height

# TC220



# TC220 Series Chassis Data

## Dimensions




## Chassis Data

| S Model | 22101S Single Axle | 22101S Tandem Axle |
|---|---|---|
| Wheel base (WB) | 256 in. (6,502 mm) | 237 in. (6,020 mm) |
| Cab to axle (CA) | 186 in. (4,724 mm) | – |
| Cab to tandem (CT) | – | 168 in. (4,267 mm) |
| Frame section modulus at 180° area of operation* | 15.9 $in^3$ 110,000 psi · 758,422 kPa | 15.9 $in^3$ 110,000 psi · 758,422 kPa |
| Cab to end of frame (EOF) | 271 in. (6,883 mm) | 271 in. (6,883 mm) |
| Nominal frame width | 34 in. (864 mm) | 34 in. (864 mm) |

* Frame selection modulus at 360° area of operation requires front bumper stabilizer.

## Truck Axle Weight

| | | |
|---|---|---|
| Front axle (FAWR) | Consult factory | 16,000 lbs (7,257 kg) |
| Rear axle (RAWR) | Consult factory | 40,000 lbs (18,143 kg) |
| Min. truck axle weight – Front** | Consult factory | 6,800 lbs (3,084 kg) |
| Min. truck axle weight – Rear** | Consult factory | 7,400 lbs (3,765 kg) |

** Minimum chassis weight is required to meet 85% stability requirements. Chassis data is general – not for engineering. Some dimensions depend on truck selection.

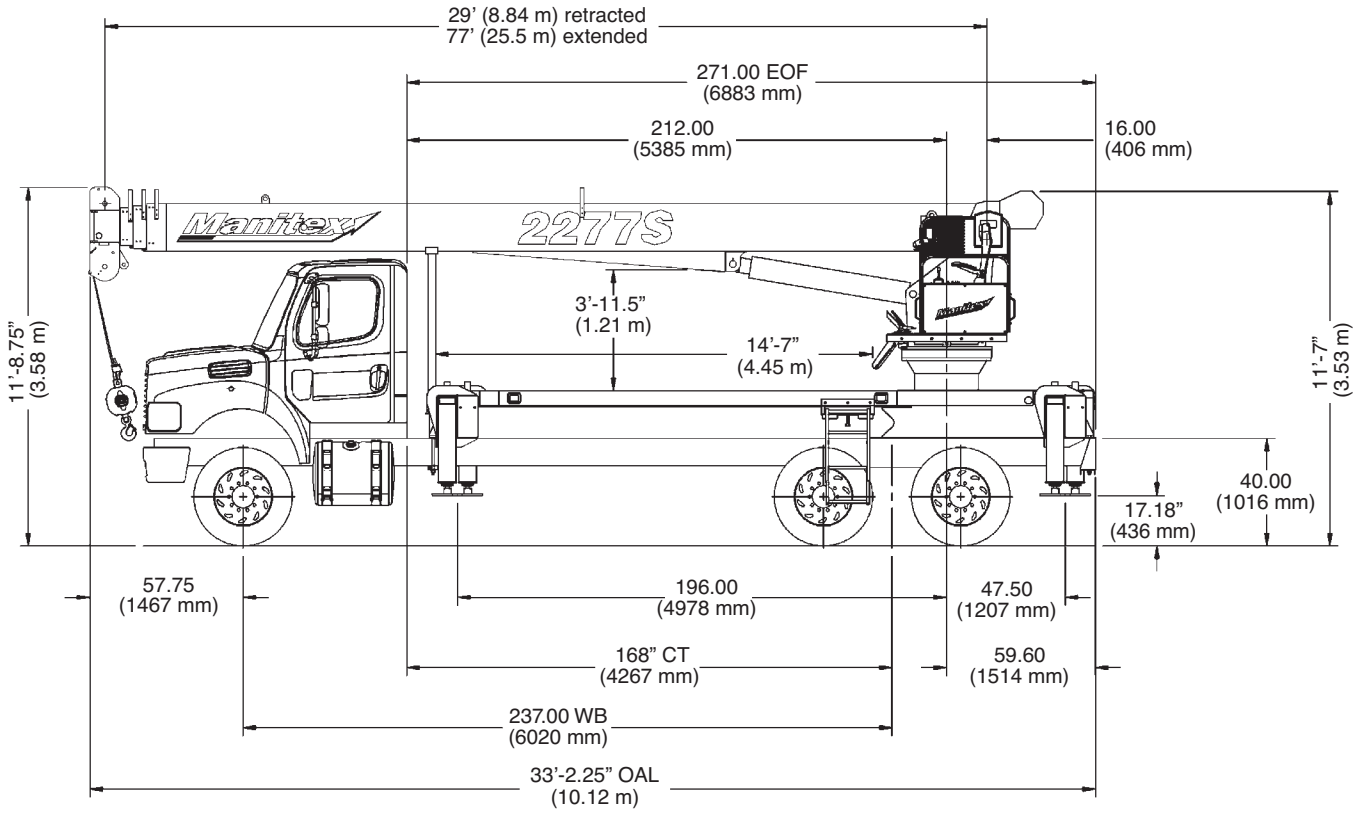
## Crane Weight – 22101S Model

| | | |
|---|---|---|
| Crane without cab | 18,100 lbs (8,210 kg) | |
| Cab | 575 lbs (261 kg) | |
| Flatbed 13 ft | 1,100 lbs (498 kg) | |
| Jib fixed | 660 lbs (299 kg) | |

Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

# 2277S Chassis Data

## Dimensions




## Chassis Data

| Model | 2277S Tandem Axle |
|---|---|
| Wheel base (WB) | 237 in. (6,020 mm) |
| Cab to tandem (CT) | 168 in. (4,267 mm) |
| Cab to end of frame (EOF) | 271 in. (6,883 mm) |
| Nominal frame width | 34 in. (864 mm) |
| Frame section modulus | 15.9 $in^3$<br>110,000 psi · 758,422 kPa |

## Truck Axle Weight

| | |
|---|---|
| Front axle (FAWR) | 14,000 lbs (6,350 kg) |
| Rear axle (RAWR) | 40,000 lbs (18,143 kg) |
| Min. truck axle weight – Front** | 5,750 lbs (2,608 kg) |
| Min. truck axle weight – Rear** | 6,750 lbs (3,062 kg) |

## Crane Weight – 2277S Model

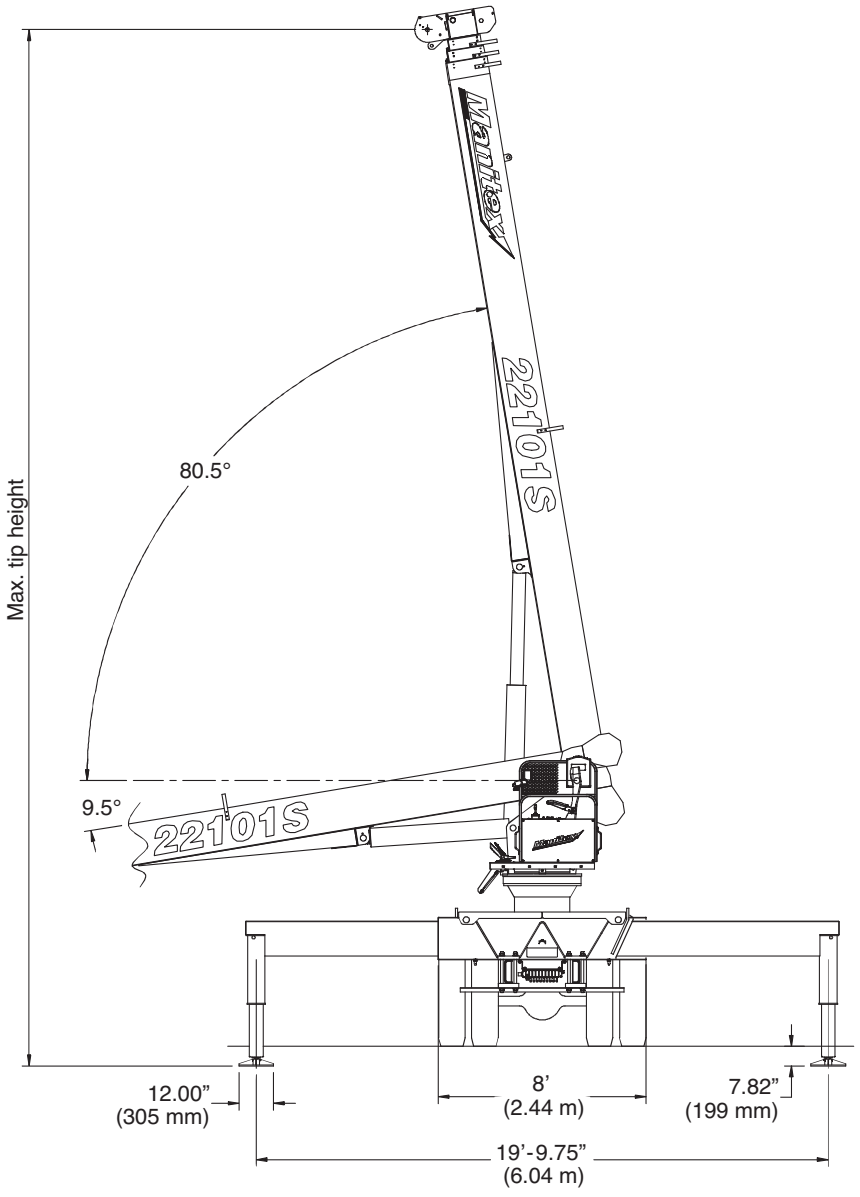
| | |
|---|---|
| Crane without cab | 16,575 lbs (7,518 kg) |
| Cab | 575 lbs (261 kg) |
| Flatbed 13 ft | 1,100 lbs (498 kg) |
| Jib fixed | 660 lbs (299 kg) |

** Minimum chassis weight is required to meet 85% stability requirements. Chassis data is general – not for engineering. Some dimensions depend on truck selection.

Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

# Outrigger Extension

## Full Extension




## Sub Frame

– Pedestal sub-frame and stabilizers are mounted to chassis by threaded rods and clamp plates

– Sub-frame: Torsion resistant, rigid 4-plate design mounted under crane full length of truck frame

– Rear under-ride protection: Standard on factory mounted cranes

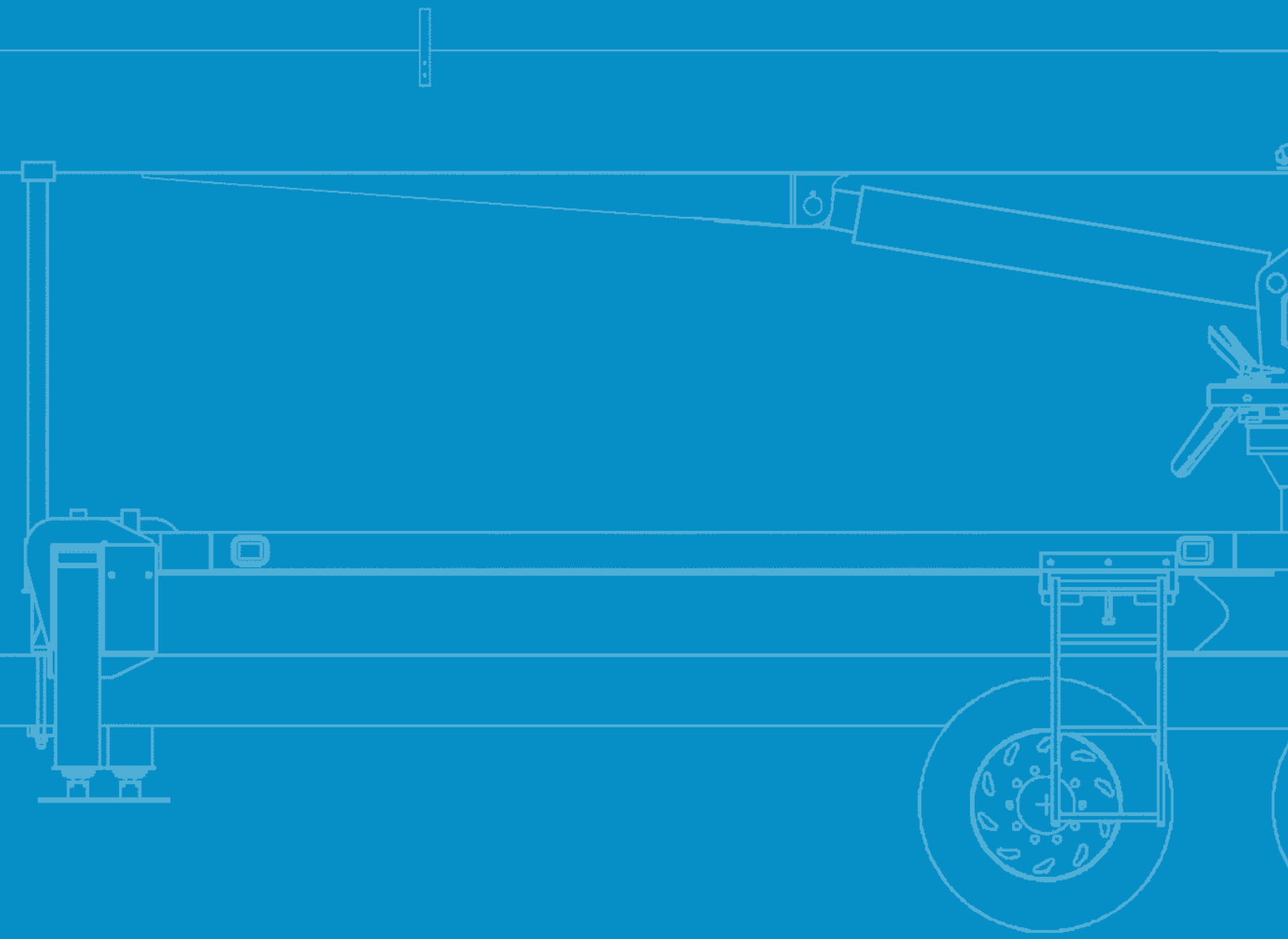
## Electrical System

– 12-Volt electrical system

– State-of-the-art, weather-resistant components throughout

– Hermetically sealed enclosure includes power in relays and circuit status LEDs

# TC220



# 22101S Single Axle Load Chart

## Main Boom
## Jib

**29.4 ft – 101.4 ft – 4 section** | **19' 9.75" (6 m)** | **Fully Extended (100 %)**

| | 29.4 ft | | 53 ft (A) * | | 69 ft (B) * | | 85 ft (C) * | | 101.4 ft (D) * | | Fixed Jib 29.4 ft | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ft | ° | lbs | ° | lbs | ° | lbs | ° | lbs | ° | lbs | ft | ° | lbs |
| 5 | 80 | 44,000 | - | - | - | - | - | - | - | - | 5 | - | - |
| 8 | 74 | 33,540 | - | - | - | - | - | - | - | - | 8 | - | - |
| 10 | 70 | 28,140 | - | - | - | - | - | - | - | - | 10 | - | - |
| 12 | 66 | 24,230 | 78 | 14,000 | - | - | - | - | - | - | 12 | - | - |
| 14 | 61 | 20,460 | 76 | 14,000 | 80 | 14,000 | - | - | - | - | 14 | - | - |
| 17 | 54 | 16,400 | 72 | 14,000 | 78 | 12,880 | - | - | - | - | 17 | - | - |
| 20 | 46 | 13,520 | 69 | 13,700 | 75 | 11,430 | 79 | 8,920 | - | - | 20 | - | - |
| 25 | 29 | 9,910 | 63 | 10,320 | 71 | 9,460 | 75 | 8,000 | 79 | 6,000 | 25 | - | - |
| 30 | - | - | 56 | 7,870 | 66 | 7,970 | 72 | 7,070 | 76 | 5,500 | 30 | 80 | 3,000 |
| 35 | - | - | 49 | 6,200 | 61 | 6,300 | 68 | 6,130 | 73 | 4,980 | 35 | 78 | 2,840 |
| 40 | - | - | 41 | 4,990 | 56 | 5,100 | 65 | 5,150 | 70 | 4,490 | 40 | 76 | 2,620 |
| 45 | - | - | 31 | 4,000 | 51 | 4,130 | 61 | 4,210 | 67 | 4,000 | 45 | 73 | 2,420 |
| 50 | - | - | 17 | 3,180 | 45 | 3,320 | 57 | 3,390 | 64 | 3,440 | 50 | 71 | 2,230 |
| 55 | - | - | - | - | 38 | 2,680 | 52 | 2,750 | 61 | 2,800 | 55 | 69 | 2,020 |
| 60 | - | - | - | - | 30 | 2,170 | 47 | 2,240 | 57 | 2,290 | 60 | 67 | 1,840 |
| 65 | - | - | - | - | 19 | 1,750 | 42 | 1,830 | 54 | 1,870 | 65 | 64 | 1,670 |
| 70 | - | - | - | - | - | - | 36 | 1,480 | 50 | 1,520 | 70 | 62 | 1,520 |
| 75 | - | - | - | - | - | - | 29 | 1,180 | 45 | 1,230 | 75 | 59 | 1,340 |
| 80 | - | - | - | - | - | - | 20 | 920 | 41 | 970 | 80 | 56 | 1,080 |
| 85 | - | - | - | - | - | - | - | - | 36 | 750 | 85 | 53 | 860 |
| 90 | - | - | - | - | - | - | - | - | 30 | 560 | 90 | 50 | 760 |
| 95 | - | - | - | - | - | - | - | - | 22 | 390 | 95 | 47 | 500 |
| 100 | - | - | - | - | - | - | - | - | - | - | 100 | - | - |
| 105 | - | - | - | - | - | - | - | - | - | - | 105 | - | - |
| 110 | - | - | - | - | - | - | - | - | - | - | 110 | - | - |

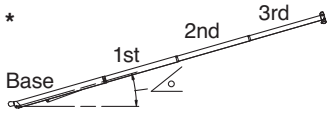
### Deductions from main boom capacities for stowed jibs

| | | | | | |
|---|---|---|---|---|---|
| **SJ** | 340 lbs | 190 lbs | 150 lbs | 120 lbs | 100 lbs |

**SJ** = Stowed jib

Structural

Stability

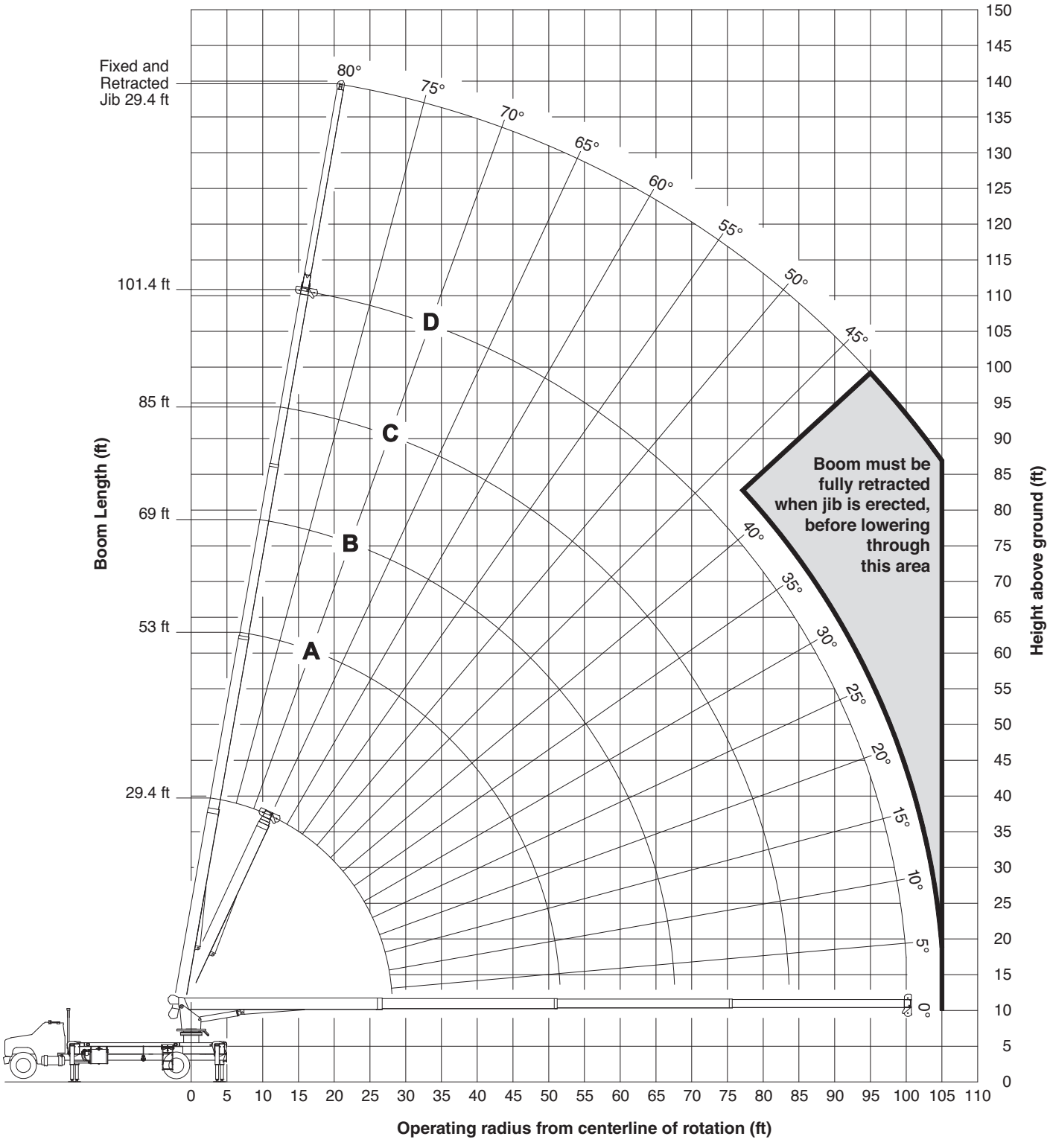



**NOTES:**

All "on outriggers" loads are based on 85% tipping
Loads based on crane on outriggers
Loads above heavy line are based on structural rating
Loads below heavy line are based on stability rating

# 22101S Single Axle Boom Diagram

## Main Boom
## Jib




Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

# 22101S Load Chart

# Main Boom Jib

**29.4 ft – 101.4 ft – 4 section** | **19' 9.75" (6 m)** | **Fully Extended (100 %)**

| | | 29.4 ft | | 53 ft (A) * | | 69 ft (B) * | | 85 ft (C) * | | 101.4 ft (D) * | Fixed Jib | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ft | ° | lbs | ° | lbs | ° | lbs | ° | lbs | ° | lbs | ft | ° | lbs |
| 5 | 80 | 44,000 | - | - | - | - | - | - | - | - | 5 | - | - |
| 8 | 74 | 33,540 | - | - | - | - | - | - | - | - | 8 | - | - |
| 10 | 70 | 28,140 | - | - | - | - | - | - | - | - | 10 | - | - |
| 12 | 66 | 24,230 | 78 | 14,000 | - | - | - | - | - | - | 12 | - | - |
| 14 | 61 | 20,460 | 76 | 14,000 | 80 | 14,000 | - | - | - | - | 14 | - | - |
| 17 | 54 | 16,400 | 72 | 14,000 | 78 | 12,880 | - | - | - | - | 17 | - | - |
| 20 | 46 | 13,520 | 69 | 13,700 | 75 | 11,430 | 79 | 8,920 | - | - | 20 | - | - |
| 25 | 29 | 10,210 | 63 | 10,600 | 71 | 9,460 | 75 | 8,000 | 79 | 6,000 | 25 | - | - |
| 30 | - | - | 56 | 8,390 | 66 | 8,210 | 72 | 7,070 | 76 | 5,500 | 30 | 80 | 3,000 |
| 35 | - | - | 49 | 6,790 | 61 | 6,890 | 68 | 6,130 | 73 | 4,980 | 35 | 78 | 2,840 |
| 40 | - | - | 41 | 5,590 | 56 | 5,700 | 65 | 5,320 | 70 | 4,490 | 40 | 76 | 2,620 |
| 45 | - | - | 31 | 4,640 | 51 | 4,760 | 61 | 4,640 | 67 | 4,000 | 45 | 73 | 2,420 |
| 50 | - | - | 17 | 3,880 | 45 | 4,000 | 57 | 4,070 | 64 | 3,580 | 50 | 71 | 2,230 |
| 55 | - | - | - | - | 38 | 3,380 | 52 | 3,450 | 61 | 3,200 | 55 | 69 | 2,020 |
| 60 | - | - | - | - | 30 | 2,860 | 47 | 2,930 | 57 | 2,850 | 60 | 67 | 1,840 |
| 65 | - | - | - | - | 19 | 2,410 | 42 | 2,490 | 54 | 2,520 | 65 | 64 | 1,670 |
| 70 | - | - | - | - | - | - | 36 | 2,090 | 50 | 2,130 | 70 | 62 | 1,520 |
| 75 | - | - | - | - | - | - | 29 | 1,740 | 45 | 1,790 | 75 | 59 | 1,380 |
| 80 | - | - | - | - | - | - | 20 | 1,440 | 41 | 1,500 | 80 | 56 | 1,230 |
| 85 | - | - | - | - | - | - | - | - | 36 | 1,240 | 85 | 53 | 1,080 |
| 90 | - | - | - | - | - | - | - | - | 30 | 1,020 | 90 | 50 | 950 |
| 95 | - | - | - | - | - | - | - | - | 22 | 820 | 95 | 47 | 830 |
| 100 | - | - | - | - | - | - | - | - | - | - | 100 | 44 | 720 |
| 105 | - | - | - | - | - | - | - | - | - | - | 105 | 40 | 570 |
| 110 | - | - | - | - | - | - | - | - | - | - | 110 | 36 | 430 |

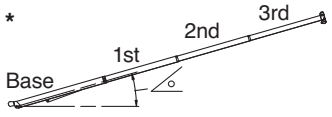
## Deductions from main boom capacities for stowed jibs

| | | | | | |
|---|---|---|---|---|---|
| **SJ** | 340 lbs | 190 lbs | 150 lbs | 120 lbs | 100 lbs |

**SJ** = Stowed jib

Structural

Stability

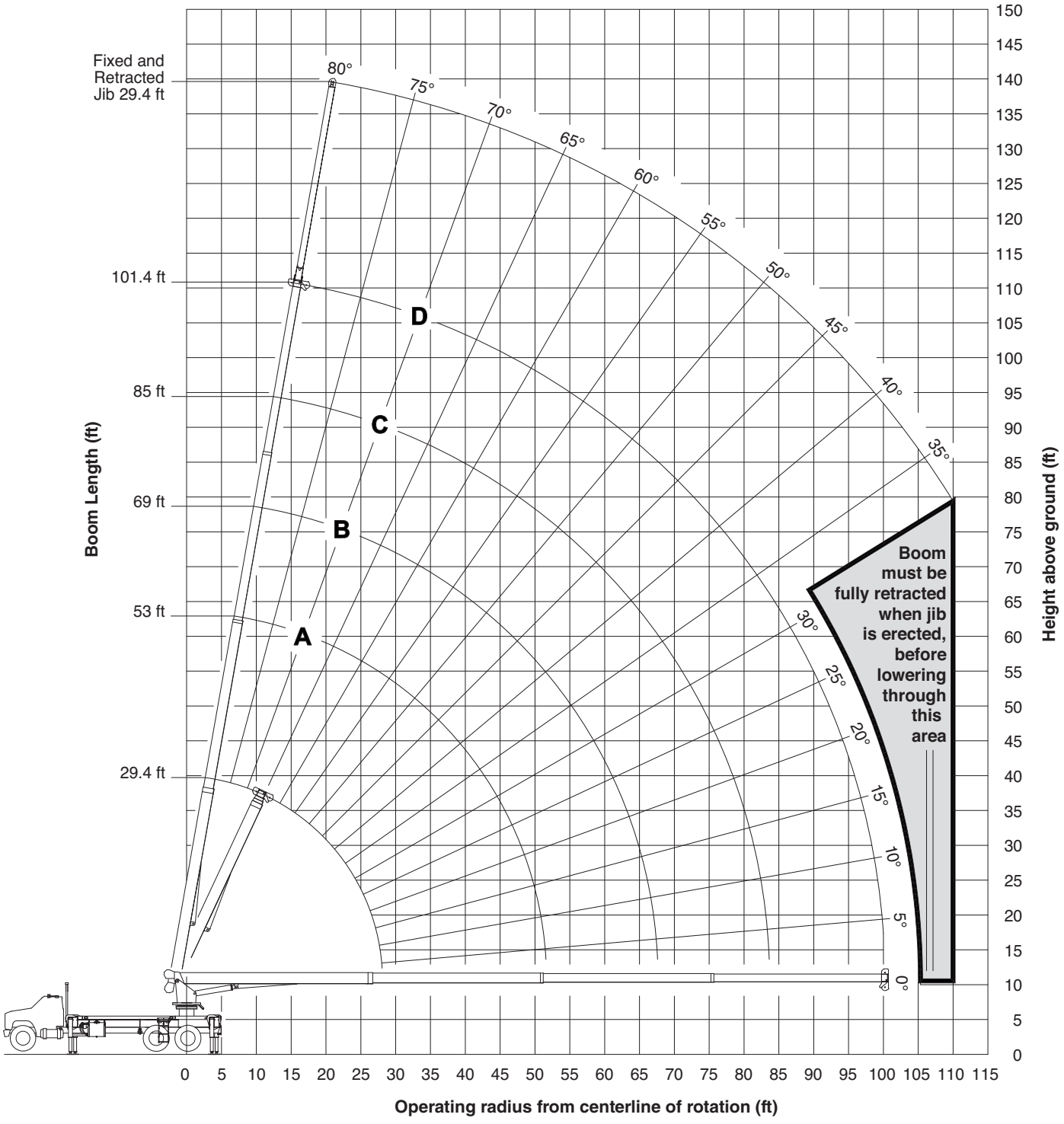



**NOTES:**

All "on outriggers" loads are based on 85% tipping
Loads based on crane on outriggers
Loads above heavy line are based on structural rating
Loads below heavy line are based on stability rating

# 22101S Boom Diagram

## Main Boom
## Jib




Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

# 2277S Load Chart

# Main Boom Jib

**29 ft – 77 ft – 3 section** | **19' 9.75" (6 m)** | **Fully Extended (100 %)**

| | 29 ft | | 41 ft (A) * | | 53 ft (B) * | | 65 ft (C) * | | 77 ft (D) * | |
|---|---|---|---|---|---|---|---|---|---|---|
| ft | ° | lbs | ° | lbs | ° | lbs | ° | lbs | ° | lbs |
| 5 | 80 | 44,000 | - | - | - | - | - | - | - | - |
| 8 | 74 | 31,040 | - | - | - | - | - | - | - | - |
| 10 | 69 | 26,090 | 76 | 22,000 | - | - | - | - | - | - |
| 12 | 65 | 22,570 | 73 | 21,220 | 78 | 18,500 | - | - | - | - |
| 14 | 60 | 19,910 | 70 | 18,650 | 75 | 16,850 | 79 | 14,340 | - | - |
| 17 | 53 | 16,880 | 66 | 15,800 | 72 | 14,430 | 76 | 12,540 | 79 | 11,500 |
| 20 | 45 | 14,070 | 61 | 13,710 | 69 | 12,560 | 73 | 11,060 | 77 | 9,800 |
| 25 | 27 | 10,780 | 52 | 10,970 | 63 | 10,200 | 69 | 9,120 | 73 | 8,270 |
| 30 | - | - | 42 | 8,760 | 56 | 8,500 | 64 | 7,840 | 69 | 7,030 |
| 35 | - | - | 30 | 7,120 | 49 | 7,220 | 59 | 6,670 | 65 | 6,050 |
| 40 | - | - | - | - | 41 | 5,930 | 53 | 5,750 | 61 | 5,240 |
| 45 | - | - | - | - | 31 | 4,850 | 47 | 4,920 | 56 | 4,570 |
| 50 | - | - | - | - | 17 | 3,980 | 40 | 4,060 | 51 | 4,010 |
| 55 | - | - | - | - | - | - | 33 | 3,880 | 46 | 3,430 |
| 60 | - | - | - | - | - | - | 22 | 2,840 | 40 | 2,890 |
| 65 | - | - | - | - | - | - | - | - | 34 | 2,440 |
| 70 | - | - | - | - | - | - | - | - | 25 | 2,070 |
| 75 | - | - | - | - | - | - | - | - | 13 | 1,750 |
| 80 | - | - | - | - | - | - | - | - | - | - |
| 85 | - | - | - | - | - | - | - | - | - | - |
| 90 | - | - | - | - | - | - | - | - | - | - |
| 95 | - | - | - | - | - | - | - | - | - | - |
| 100 | - | - | - | - | - | - | - | - | - | - |
| 105 | - | - | - | - | - | - | - | - | - | - |
| 110 | - | - | - | - | - | - | - | - | - | - |
| 115 | - | - | - | - | - | - | - | - | - | - |

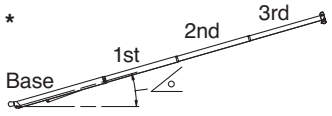
| | Fixed Jib | | Telescopic Jib | | | |
|---|---|---|---|---|---|---|
| | 29 ft | | 29 ft | | 52 ft | |
| ft | ° | lbs | ° | lbs | ° | lbs |
| 5 | - | - | - | - | - | - |
| 8 | - | - | - | - | - | - |
| 10 | - | - | - | - | - | - |
| 12 | - | - | - | - | - | - |
| 14 | - | - | - | - | - | - |
| 17 | - | - | - | - | - | - |
| 20 | - | - | - | - | - | - |
| 25 | 79 | 5,070 | 79 | 4,820 | - | - |
| 30 | 77 | 4,530 | 77 | 4,270 | 80 | 3,000 |
| 35 | 74 | 4,050 | 74 | 3,790 | 78 | 2,900 |
| 40 | 71 | 3,640 | 71 | 3,330 | 76 | 2,640 |
| 45 | 68 | 3,220 | 68 | 2,900 | 74 | 2,410 |
| 50 | 65 | 2,860 | 65 | 2,540 | 71 | 2,200 |
| 55 | 62 | 2,550 | 62 | 2,220 | 69 | 2,040 |
| 60 | 59 | 2,270 | 59 | 1,940 | 67 | 1,840 |
| 65 | 55 | 2,040 | 55 | 1,710 | 64 | 1,670 |
| 70 | 51 | 1,830 | 51 | 1,490 | 61 | 1,510 |
| 75 | 47 | 1,650 | 47 | 1,300 | 58 | 1,350 |
| 80 | 43 | 1,480 | 43 | 1,130 | 55 | 1,220 |
| 85 | 39 | 1,290 | 39 | 970 | 52 | 1,060 |
| 90 | 34 | 1,080 | 34 | 760 | 49 | 940 |
| 95 | 29 | 900 | 29 | 580 | 46 | 830 |
| 100 | 21 | 740 | - | - | 43 | 720 |
| 105 | - | - | - | - | 39 | 630 |
| 110 | - | - | - | - | 35 | 520 |
| 115 | - | - | - | - | - | - |

## Deductions from main boom capacities for stowed jibs

| | | | | | |
|---|---|---|---|---|---|
| **SFJ** | 430 lbs | 310 lbs | 240 lbs | 190 lbs | 170 lbs |
| **STJ** | 680 lbs | 480 lbs | 370 lbs | 300 lbs | 260 lbs |

**SFJ** = Stowed fixed jib · **STJ** = Stowed telescopic jib

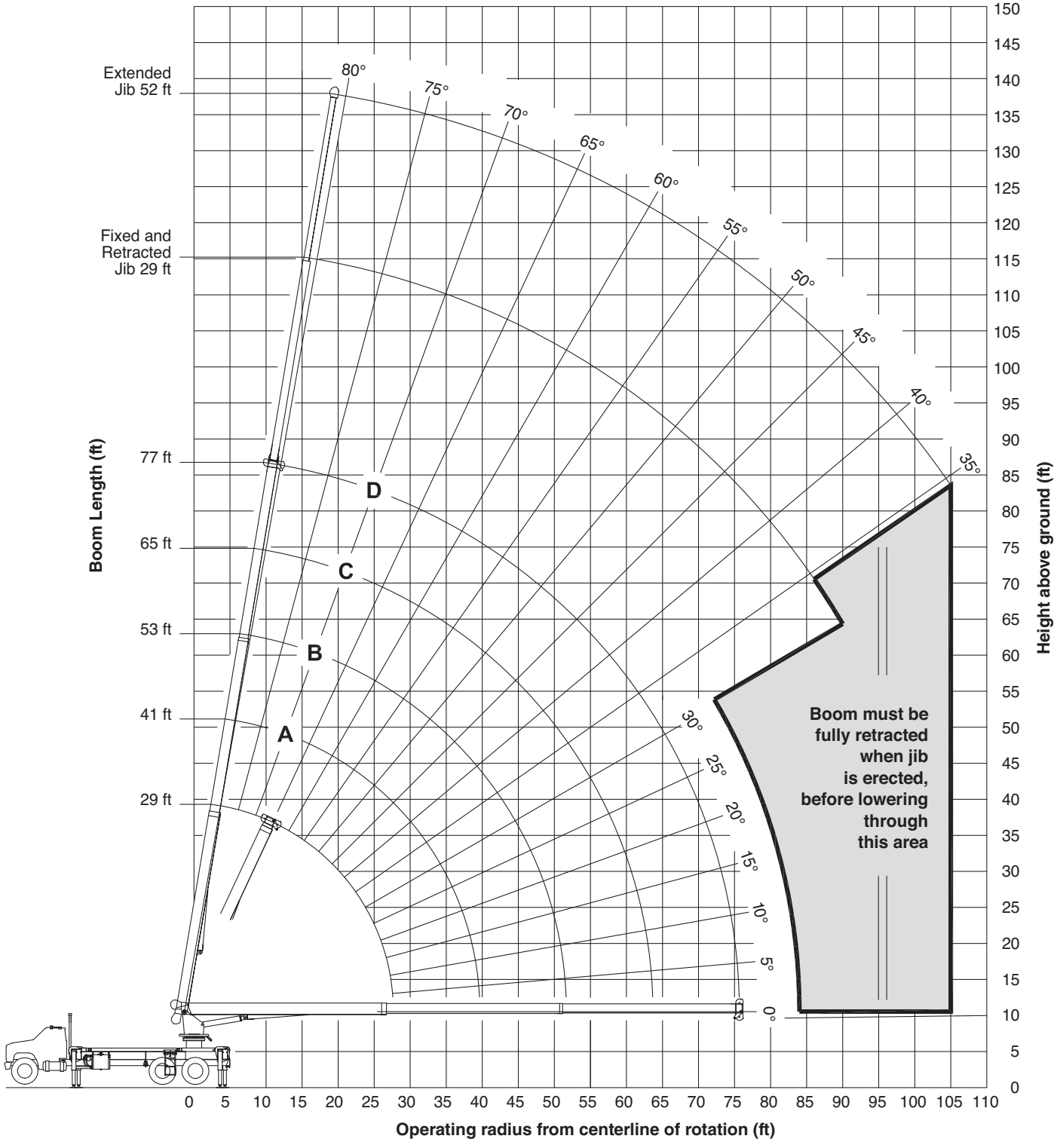
Structural
Stability




**NOTES:**
All "on outriggers" loads are based on 85% tipping
Loads based on crane on outriggers
Loads above heavy line are based on structural rating
Loads below heavy line are based on stability rating

# 2277S Boom Diagram

## Main Boom
## Jib



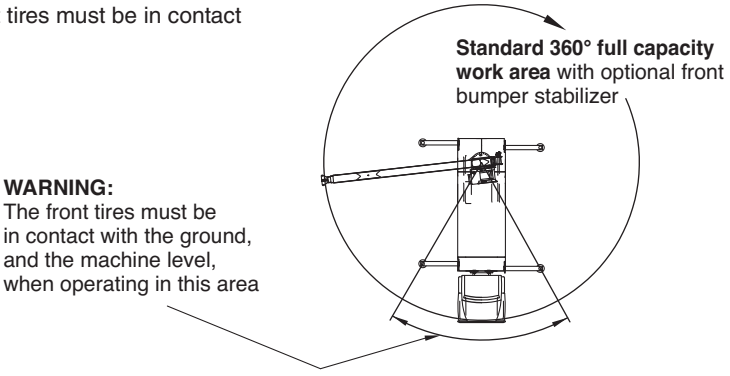

Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

# Area of Operation · Reeving Diagram

## Area of Operation

In order to take advantage of full 360° rotation, the optional front bumper stabilizer must be set in accordance to the manual before working in this area and machine must be level.

If a front bumper stabilizer was not supplied, then the front tires must be in contact with the ground before working in this area.

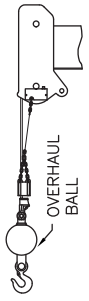
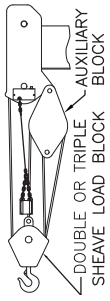



## Deductions from rated loads for load handling devices supplied by Manitex

| | |
|---|---|
| Auxiliary block | 50 lbs (22.7 kg) |
| Overhaul ball | See overhaul ball mfgr. nameplate |
| Load blocks | See load block mfgr. nameplate |
| Hose reel | 160 lbs (72.6 kg) |
| Swing around jib (stowed) | See load chart |

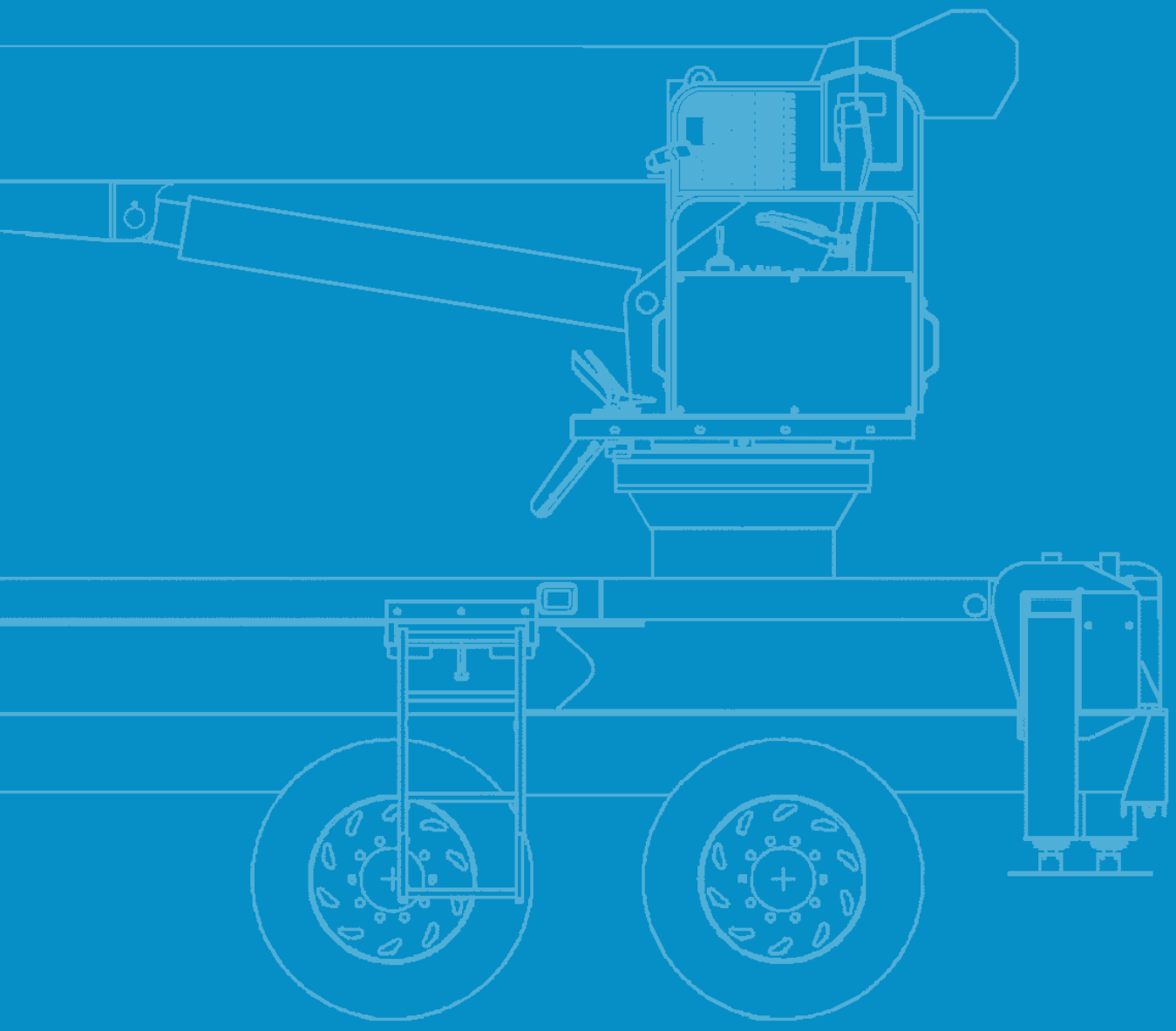
**WARNING:** Lifting off the main boom point while the jib is erected is not intended nor approved.

## Reeving Diagram

| Allowable Line Pull | | | | | | WARNING |
|---|---|---|---|---|---|---|
| 1 part line | 2 part line | 3 part line | 4 part line | 5 part line | 6 part line | |
|   |   |   |   |   |   | **Anti-Two-Block System must be in good operating condition before operating crane.**<br>**Refer to the owner's manual.**<br>**Keep at least 3 wraps of load line on the drum at all times.** |
| **8,500 lbs** | **17,000 lbs** | **25,500 lbs** | **34,000 lbs** | **42,500 lbs** | **44,000 lbs** | **9/16" 6 x 25 IWRC (3.5 : 1 SF) 29,750 lbs min. breaking strength** |
| **7,400 lbs** | **14,800 lbs** | **22,200 lbs** | **29,600 lbs** | **37,000 lbs** | **44,000 lbs** | **9/16" rot resistant (5.0 : 1 SF) 37,000 lbs min. breaking strength** |

Data published herein is intended as a guide only. Crane operation is subject to machine specific load charts and information.

# TC220



# Technical Description

## Boom

Boom lengths: Proportional boom
- 3-section 77 ft (23.5 m)
- 4-section 101 ft (30.8 m)
- 3-sheave quick reeve boom point
- 1-idler, 2-load

Self lubricating slider pad

Max. tip height 2277S: 86.3 ft (26.3 m)
Max. tip height 22101S: 110.6 ft (33.7 m)

Boom angle (min./max.):
-6° / 80°

## Rotation

Ball-bearing swing circle with external gear
Double-reduction planetary gearbox driven by hydraulic motor

Slewing brake:
Spring-applied pressure released automatic brake

Slewing speed: 1.5 - 2 rpm (nominal)
Boom rotation: 360° continuous

## Outriggers

Outriggers: Out-and-down style

FBS – Front Bumper Stabilizer (optional)

Outrigger monitoring system (for verification only)

Outrigger motion alarm

Full extension
- Center to center: 19.7 ft (6 m)

Mid extension for Tandem axle chassis only
- Center to center: 13.4 ft (4.1 m)

Full retraction for Tandem axle chassis only
- Center to center: 7.2 ft (2.2 m)

12 in. (304.8 mm) diameter steel pads

## Operator Aids

- 22101S is radio LMI with crane function cut-offs for overload protection and radio anti-two block system
- 2277S is externally wired LMI with crane function cut-offs for overload proctection
- 22101S is radio anti-two block system
- Boom angle indicator
- Bubble level
- Outrigger motion alarm

# Technical Description

## Hoist, Rope and Hook

Maximum theoretical line speed:
300 fpm (91 mpm)

Maximum theoretical bottom-layer line pull rating:
11,500 lbs (5,216 kg)

Rating: permissible 8,500 lbs (3,855 kg)

Main winch cable diameter: 0.56 in. (14.3 mm)
6 x 25 EIPS IWRC wire rope

Optional rotation resistant rope 0.56 in.

Line length:
300 ft (91.4 m)

Main winch:
Gear motor with burst of speed high speed (activated electrically)

Overhaul ball:
7 t (6.4 mt) capacity hook with heavy-duty swivel and weight is provided for single line operation.

## Hydraulics

8-bolt direct mounted PTO and SAE B or SAE BB output (factory mounted units only)

3-section gear pump, counter clockwise standard, SAE BB input (standard)

Hydraulic reservoir capacity: 70 gallons (265 l)

Pump sections@2000 rpm with 100 psi
- 32.4 gpm (123 lpm)
- 20.6 gpm (78 lpm)
- 8 gpm (38 lpm)

## Ride Around Operator Station Controls

Standard features:
Ride-around operator station with open seat

Controls:
- DS85 – Hirschman display unit
- Four single axis pilot oil control joysticks
- Outrigger controls located at rear of truck

# Technical Description – Options

## Boom

**Max. Tip Height**

2277S
- Max. tip height: 86.3 ft (26.3 m)

22101S
- Max. tip height: 110.5 ft (33.7 m)

**Jibs**

2277S, 22101S
- 1-section fixed jib: 30.5 ft (9.3 m)
- 2-section telescopic jib: 28.9 ft - 51.8 ft (8.8 m - 15.8 m) for 77 ft (23.5 m) boom only

**Max. Tip Height with Extension**

2277S
- Max. tip height with extension: 138.1 ft (42.1 m)
- Max. tip height with extension retracted: 115.5 ft (35.2 m)

22101S
- Max. tip height with extension: 139.4 ft (42.5 m)

**Bulkhead**

24 in. (607 mm) bulkhead

## Hook Block

Auxiliary lower sheave block for 2-8 part lines
Load blocks 1-3, 1-6, 2-6 part lines

## Hydraulics


Hose reel – boom mounted
Front Bumper Stabilizer (FBS)
Hydraulic oil cooler

## Cab

Optional cab available
- Air conditioner
- Heater

# Technical Description – Options

## 2-Person Basket

Consult Manitex for specific application and rating
- 2-person steel gravity leveled basket with friction brake
- 2-person steel gravity leveled basekt with hydraulic brake and manual rotation

## Radio Remote

4-function radio remote controls

## Tool Boxes and Flatbed

Tool Boxes
- 24 in. L x 18 in. W x 18 in. H (  610 mm L x 457 mm W x 457 mm H)
- 48 in. L x 24 in. W x 24 in. H (1,219 mm L x 610 mm W x 610 mm H)

Flatbeds
- 13.1 ft (4 m) steel flatbed
- 13.1 ft (4 m) wood flatbed

# Notes

# Notes

www.tadano.com
www.manitex.com

**Tadano Ltd.**
Kanda Square 18th Floor, 2-2-1 Kanda-Nishikicho, Chiyoda-ku, Tokyo 101-0054, Japan
Phone: +81-3-6811-7309 (International Division)

**Manitex Inc.**
3000 South Austin Avenue #7544, Georgetown, TX 78626, USA
Phone: +1 (803) 526-9672

Reaching new heights

TADANO