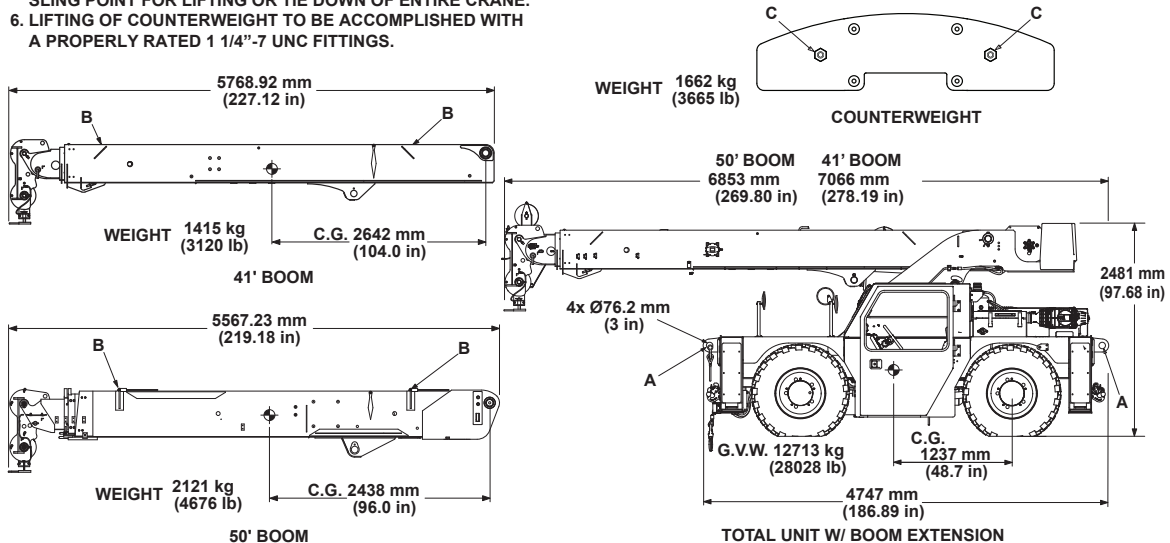


# Transportation and lifting data

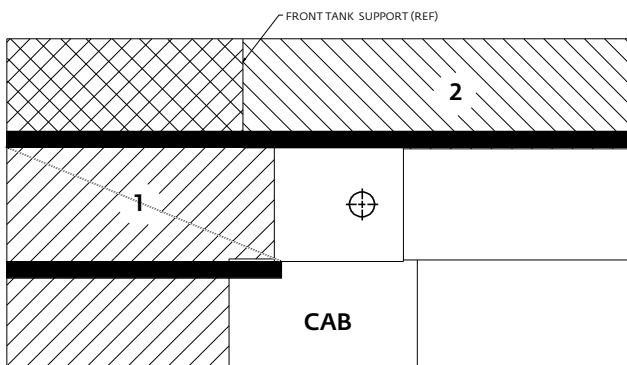
## TRANSPORTATION AND LIFTING DATA

- LIFTING OF ENTIRE CRANE OR MAJOR CRANE ASSEMBLIES MUST BE ACCOMPLISHED BY UTILIZING SPECIFIC FITTINGS INDICATED ON ADJACENT CHART. USE OF FITTINGS FOR PURPOSES OTHER THAN THOSE DESIGNATED ON CHART IS PROHIBITED. FITTING CAPACITIES ARE MAXIMUM ALLOWABLE LOADS PER INDIVIDUAL FITTING.
- RIGGING PERSONNEL SHALL BE RESPONSIBLE FOR PROPER SELECTION AND PLACEMENT OF ALL SLINGS AND LOAD HANDLING DEVICES.
- DIMENSIONS AND WEIGHTS SHOWN ARE ESTIMATED FOR LARGEST CONFIGURATION AVAILABLE. WEIGHTS DO NOT INCLUDE BOOM EXTENSION AND OR JIB, UNLESS OTHERWISE INDICATED.
- RIGGING PERSONNEL SHALL VERIFY DIMENSIONS AS REQUIRED FOR CLEARANCE.
- DO NOT USE COUNTERWEIGHT LIFT LOCATIONS OR BOOM SLING POINT FOR LIFTING OR TIE DOWN OF ENTIRE CRANE.
- LIFTING OF COUNTERWEIGHT TO BE ACCOMPLISHED WITH A PROPERLY RATED 1 1/4"-7 UNC FITTINGS.

| FITTING | NO. / UNIT |      |     |          | BOOM |      | CWT  |           | CAPACITY-TONNES [TONS] |           |         |           |
|---------|------------|------|-----|----------|------|------|------|-----------|------------------------|-----------|---------|-----------|
|         |            | LIFT | TOW | TIE DOWN | LIFT | LIFT | LIFT | TOW       | TIE DOWN               |           |         |           |
|         |            |      |     |          |      |      |      |           | FORE & AFT             | SIDE      | DOWN    |           |
| A       | 4          | X    | X   | X        |      |      |      | 25.4 [28] | 25.4 [28]              | 25.4 [28] | 7.3 [8] | 25.4 [28] |
| B       | 4          |      |     |          | X    |      |      | 1.8 [2]   |                        |           |         |           |
| C       | 2          |      |     |          |      | X    |      | 1.7 [1.9] |                        |           |         |           |



## LOAD DISTRIBUTION FOR CARRYDECK



Maximum allowable uniformly distributed load:

**AREA 1**  
8165 kg (18,000 lb)

OR

**AREA 2**  
5897 kg (13,000 lb)

- Maximum travel speed with any or all loads - 4,0 kmh (2.5 mph)
- Loads to be transported on smooth level firm surfaces only.
- Boom must be retracted and in center forward position, and lowered as much as the load allows.
- Pick and carry loads may be transported on either Deck Area 1 or Deck Area 2; combined loading of Deck Area 1 and Deck Area 2 not permitted.
- Lifting is not permitted when carrydeck is loaded except for loading and unloading carrydeck.
- The maximum pick and carry loads may be transported on deck area 1 provided the load is centered over the front axle and cribbed directly on the frame rails.

# Load handling

## WEIGHT REDUCTIONS FOR LOAD HANDLING DEVICES

| 4,6 m (15 ft) FIXED OFFSETTABLE EXTENSION |                 |
|---|-----------------|
| *Stowed                                   | N/A             |
| *Erected                                  | 295 kg (650 lb) |

\*Reduction of main boom capacities

When lifting over swingaway and/or jib combinations, deduct total weight of all load handling devices reeved over main boom nose directly from swingaway or jib capacity.

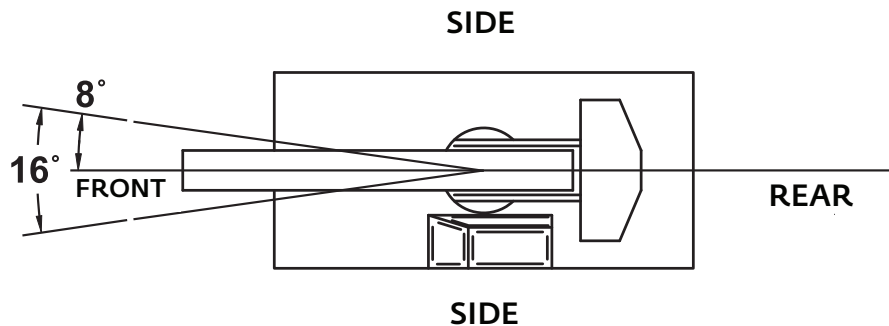
| HOOK BLOCKS AND HEADACHE BALLS       |                  |
|--------------------------------------|------------------|
| 18 t (20 USt), two-sheave hook block | 176 kg (388 lb)+ |
| 5,7 t (6.25 USt) downhaul weight     | 48 kg (105 lb)+  |

+Refer to rating plate for actual weight

NOTE: All load handling devices and boom attachments are considered part of the load and suitable allowances MUST BE MADE for their combined weights. Weights are for Grove furnished equipment.

| TIRE INFLATION - BAR (PSI) |            |  |
|----------------------------|------------|--|
| SIZE<br>(FRONT & REAR)     | PLY RATING | LIFTING SERVICE, GENERAL<br>TRAVEL & EXTENDED TRAVEL |
|                            |            | STATIC & 4,0 KM/H (2.5 MPH)                          |
| OUTRIGGER R4 385/65 D22.5  | 16         | 8,6 (125)  |

## LIFTING AREA DIAGRAM



## LINE PULLS AND REEVING INFORMATION

| HOISTS            | CABLE SPECS.  | PERMISSIBLE LINE PULLS | NOMINAL CABLE LENGTH |
|-------------------|---|------------------------|----------------------|
| Main (41 ft boom) | 14 mm (9/16") 6x19 class<br>Bridon EEIPS (XXIPS)<br>Min. breaking strength<br>16,780 kg (37,000 lb) | 3856 kg (8500 lb)*     | 72 m (235 ft)        |
| Main (50 ft boom) | 14 mm (9/16") 6x19 class<br>Bridon EEIPS (XXIPS)<br>Min. breaking strength<br>16,780 kg (37,000 lb) | 3856 kg (8500 lb)*     | 84.7 m (278 ft)      |

The approximate weight of 14 mm (9/16") wire rope is 0,9 kg/m (0.59 lb/ft).

\*With certain boom and hoist tackle combinations, the allowable line pull may be limited by hoist performance. Refer to hoist performance table for lift planning to ensure adequate hoist performance on drum rope layer required.

## Superstructure



### Boom

5,5 m – 12,5 m (18 ft - 41 ft) full-power main boom. Three-section boom with two (2) powered sections.

Maximum tip height: 14,2 m (46.5 ft).



### \*Optional boom

5,3 m – 15,2 m (17.3 ft - 50 ft) full-power main boom. Four-section boom with three (3) powered sections.

Maximum tip height: 16,5 m (54 ft).



### \*Optional swingaway extension\*

4,6 m (15 ft) offsettable swingaway extension. Offsets 0°, 15° and 30° via pivoting boom nose. Stows alongside base boom section.

Maximum tip height: 21,18 m (69.5 ft).



### Boom nose

Nylatron sheaves mounted on heavy-duty needle roller bearings with removable pin-type rope guards. Quick reeve type boom nose with three-position (0°, +40°, and + 80°) pivoting to minimize head height requirements. Lowers head height by 0,4 m (1.3 ft).



### Boom elevation

Single double acting hydraulic cylinders with integral holding valves provides elevation from 0° to +72°.



### Anti-two block device

Standard anti-two block device, which, when activated, provides an audible warning to the operator and "locks-out" all functions whose movement can cause two-blocking.



### Rated Capacity Limiter (RCL)

Full-color, graphical display of boom angle, boom length, boom radius, rated load, and calculated load. Allows for operator inputs to set the crane configuration. RCL system is hardwired and calculates load via pressure transducers in the lift cylinder. Display includes a color-coded light bar and audible alarm with function cut-out if load exceeds the load chart parameters.



### Swing

Ball bearing swing circle with 360° continuous rotation. Worm gear and pinion driven by hydraulic motor.

Maximum speed: 2,0 rpm



### Hydraulic system

One pressure compensated variable displacement axial piston pump with load sensing.

Maximum output of: 130,6 lpm (34.5 gpm).

Maximum operating pressure: 241 bars (3500 psi).

Four-section valve bank, chassis mounted, operated via dash mounted, hydraulic pilot controls. 130,6 L (34.5 gal) hydraulic reservoir with sight level gauge and steel side plating to guard against side impacts.

5 micron return line filter with full flow by-pass protection and service indicator.



## Hoist specifications

Geroler motor driven with automatic spring-applied / hydraulically released wet brake. Drum rotation indicator in the hoist joystick control and hoist direction indicator light on dashboard.

Maximum hoist pull (first layer): 4282 kg (9440 lb)

Maximum permissible single line pull: 3856 kg (8500 lb)  
(3.5:1 design factor)

Maximum single line speed: 35,66 m/min (117 fpm)

Rope construction: 6X19 EEIPS/IWRC

Rope diameter: 14 mm (9/16 in)

Rope length: Main hoist 12,5 m (41 ft) boom: 72 m (235 ft)  
Main hoist 15,2 m (50 ft) boom: 84,7 m (278 ft)

Maximum rope stowage: Main hoist: 90,83 m (298 ft)

## Carrier



### Chassis

High-strength alloy frame constructed with integral outrigger housings; front and rear lifting, tie-down, and towing lugs. 5,57 m<sup>2</sup> (60 ft<sup>2</sup>) carrydeck size with 8165 kg (18,000 lb) deck only carrying capacity. Deck coated with anti-skid treatment.



### Outriggers

Hydraulically powered oblique-style single-stage outriggers that are independently controlled using the main control valve that provides 10,16 cm (4 in) of lift off the ground for leveling the crane. Outrigger cylinders have an integral holding valve.

Outrigger pad size:

27,3 cm x 40,64 cm (10.75 in x 16 in)

Maximum outrigger pad load:

13 608 kg (30,000 lb)



### Outrigger controls

Independent outrigger controls. 360° bubble level located inside cab.



### Engine (EPA Tier 4F)

Cummins QSF 3.8L, four-cylinder / turbo-charged diesel rated at 55.1 kW (74 hp) at 2200 rpm. Standard 120 V engine block heater and cold weather intake grid heater. Engine hour meter located in dash display. Alternator 145 amp.

Complies with EPA Tier 4 Final emissions standards without the use of an SCR or UREA injected DEF system.

Maximum torque: 399,9 N-m (295 ft lb) at 1300 rpm.

Note: Tier 4F engine required in North American countries.

Fuel requirements: Maximum of 15 ppm ultra-low sulfur diesel fuel

*\*Denotes optional equipment*

# Specifications



## Engine (EPA Tier 3)

\*Please consult factory for availability.

Cummins QSF 3,8L, four-cylinder / turbo-charged diesel rated at 74 kW (99 hp) at 2200 rpm. Standard 120 V engine block heater and cold weather intake grid heater. Engine hour meter located in dash display. Alternator 135 amp.

Maximum torque: 420,3 Nm (310 ft/lb).

Note: Required for sale outside of North American and European Union countries.



## Engine (Dual Fuel)

GM 4.3L EFI V-6 gasoline 90 HP @ 2200 rpm / LP gas engine (07 EPA) 87 HP @ 2200 rpm (LP tank not included) with engine shutdown feature and spark arrestor.



## Fuel tank capacity

100 L (26.4 gal)



## Transmission

Powershift with four speeds forward and three speeds reverse. Stalk mounted direction shifter with rotary gear selection.



## Operators control station

Frame mounted, open air style control station with cab shell includes all crane functions, driving controls, and overhead safety glass. Other standard equipment includes a deluxe seat with seat belt, hour meter, sight level bubble, and 1,13 kg (2.5 lb) fire extinguisher.

The dash panel includes a multi-cluster gauge showing fuel, water temperature, battery voltage and engine fault codes. An engine monitoring indicator lamp shows engine warning, stop engine, wait to start, transmission high temperature, low brake system pressure, and hydraulic oil temperature. The RCL display is mounted to the top of the front dash.



## \*Operators control station enclosed

Includes the standard cab shell with the addition of front, rear, and right side glass, a split (2 piece) hinged door with sliding glass, front windshield wiper and washer, hot water heater and defroster with fan and cab dome light are included.



## Electrical system

One 12 V maintenance-free battery, 1125 CCA each at 0°. 135 amp alternator.



## Drive

Two-wheel (front-wheel) as standard with four-wheel drive as an option. Drive axles supplied with planetary hubs and limited slip differential.



## Steering

Standard three steering modes. Front two-wheel, four-wheel coordinated, and four-wheel crab steer with electronic self alignment, three-position rocker selector on dash panel.

Outside turning radius:

Two-wheel steer: 5,32 m (17 ft 5.37 in)

Four-wheel steer: 2,86 m (9 ft 4.44 in)



## Axles

Front: Drive/steer in both two-wheel drive and four-wheel drive

Rear: Non-drive with steer in two-wheel drive, drive/steer in four-wheel drive

Front and rear axle are rigid mounted to frame. Rear axle offers 1.5° of oscillation with four-wheel drive option only.



## Brakes

Hydraulic actuated internal wet-disc service brake acting on all four wheels. Dash mounted toggle switch with light for activating or release of the dry disc parking brake mounted on the transmission output yoke.



## Tires

Standard: 385/65R 22.5 High traction tread radial type tires



## Light

Full lighting including turn indicators, head, tail, brake and hazard warning lights recessed mounted.



## Maximum speed

25.75 km/h (16 mph)



## Gradeability (theoretical)

40%.....(at engine stall) loaded

## Gross vehicle weight (GVW)

Open cab: 11 285 kg (24,877 lb)

Enclosed cab: 11 412 kg (25,160 lb)

## Miscellaneous standard equipment

- 18,14 t (20 USt) quick-reeve, two-sheave hook block
- Back-up motion alarm
- Outrigger motion alarm
- Hoist drum rotation indicator

## \*Optional equipment

- Auxiliary lighting: includes amber strobe light and boom mounted work lights
- Convenience package: includes front and rear pintle hitch and headlight/taillight grille covers
- Enclosed cab package: includes heater and defroster, cab dome light, all window glass, and two-piece split door
- Offsettable swing away boom extension with hook and downhaul weight
- Air conditioner
- Wire rope third wrap indicator with hoist function cut-out
- 4535 kg (10,000 lb) capacity hydraulic below-deck mounted tow winch
- Four-wheel drive with 1.5° rear axle oscillation
- Searcher hook

\*Denotes optional equipment

# Symbols glossary



Axles



Drive



Hoist



Rated Capacity Limiter (RCL)



Boom



Electrical system



Hook block



Rotation



Boom elevation



Engine



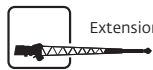
Hydraulic system



Speed



Boom extension



Extension



Insert



Steering



Boom length



Frame



Lights



Suspension



Boom nose



Fuel tank capacity



Oil



Swing



Brakes



Gear



Outrigger controls



Tires



Cab



Grade



Outriggers



Transmission



Counterweight



Heavy-duty jib



Radius