

# Product Specifications For R1700



## Engine

<b>Engine Model</b>	Cat® C13
<b>Engine Power - Stage V Engine - ISO 14396:2002</b>	345 hp
<b>Engine Power - Tier 3 Engine - ISO 14396:2002</b>	361 hp
<b>Engine Power - VR Engine - ISO 14396:2002</b>	361 hp
<b>Note (1)</b>	Power ratings apply at a rated speed of 1,800 rpm for LRCs (VR and Tier 3/Stage IIIA) engines when tested under the reference conditions for the specified standard.
<b>Note (2)</b>	Power ratings apply at a rated speed of 2,050 rpm for HRC (Stage V) engine when tested under the reference conditions for the specified standard.
<b>Note (3)</b>	All rating conditions are based on ISO/TR14396, inlet air standard conditions with a total barometric pressure of 100 kPa (29.5 in Hg), with a vapor pressure of 1 kPa (0.295 in Hg), and 25° C (77° F). Performance measured using fuel to EPA specifications in 40 CFR Part 1065 and EU specifications in Directive 97/68/EC with a density of 0.845-0.850 kg/L @ 15° C (59° F) and fuel inlet temperature 40° C (104° F).
<b>Note (4)</b>	No engine derating required up to 2895 m (9,500 ft) altitude for Stage V engines, 3505 m (11,500 ft) altitude for Tier 3/Stage IIIA engines, and 3200 m (10,500 ft) for Tier 2/Stage II VR engines.
<b>Note (5)</b>	Optional Ventilation Reduction package available.
<b>Note (6)</b>	Optional engine with emissions equivalent to Tier 3 and Stage IIIA is also available.

Note (7)

Optional engine meeting the U.S. EPA Tier 4 Final and EU Stage V emission standards is also available.

# Operating Specifications

Nominal Payload Capacity	33069 lb
Gross Machine Mass - Loaded	138316 lb
Static Tipping Load - Straight Ahead - Lift Arms Horizontal	83218 lb
Static Tipping Load - Full Turn - Lift Arms Horizontal	69635 lb
Breakout Force - Lift and Tilt	53330 lb

# Weights

Operating Mass*	95189 lb
Operating Mass* - Front Axle	38358 lb
Operating Mass* - Rear Axle	56831 lb
Operating Mass + Rated Payload*	128258 lb
Operating Mass + Rated Payload* - Front Axle	91412 lb
Operating Mass + Rated Payload* - Rear Axle	36846 lb
Note	*Calculated weights.

# Transmission

Forward - 1	3 mile/h
Forward - 2	5.7 mile/h
Forward - 3	10.2 mile/h

<b>Forward - 4</b>	17.9 mile/h
<b>Reverse - 1</b>	3.7 mile/h
<b>Reverse - 2</b>	6.5 mile/h
<b>Reverse - 3</b>	11.6 mile/h
<b>Reverse - 4</b>	20.2 mile/h

## Hydraulic Cycle Times

<b>Raise</b>	6.8 s
<b>Dump</b>	3.3 s
<b>Lower, Empty, Float Down</b>	2.9 s
<b>Total Cycle Time</b>	13.2 s

## Bucket Capacities

<b>Bucket Capacities</b>	5.7-8.6 m <sup>3</sup> (7.5-11.2 yd <sup>3</sup> )
<b>Dump Bucket - 1 - Standard Bucket</b>	7.5 yd <sup>3</sup>
<b>Dump Bucket - 2</b>	8 yd <sup>3</sup>
<b>Dump Bucket - 3</b>	8.6 yd <sup>3</sup>
<b>Dump Bucket - 4</b>	9.4 yd <sup>3</sup>
<b>Dump Bucket - 5</b>	9.8 yd <sup>3</sup>
<b>Dump Bucket - 6</b>	10.5 yd <sup>3</sup>
<b>Light Material Bucket</b>	11.2 yd <sup>3</sup>
<b>Ejector Bucket</b>	7.6 yd <sup>3</sup>

<b>Bolt Together Bucket (1)</b>	8.9 yd³
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<b>Bolt Together Bucket (2)</b>	9.8 yd³
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# Turning Dimensions

<b>Outside Clearance Radius</b>	272 in
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<b>Inner Clearance Radius</b>	123.5 in
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<b>Axle Oscillation</b>	8°
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<b>Articulation Angle</b>	44°
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# Tires

<b>Tire Size</b>	26.5R25
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# Service Refill Capacities

<b>Cooling System</b>	19.8 gal (US)
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<b>Engine Crankcase</b>	9.8 gal (US)
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<b>Hydraulic Tank</b>	35.7 gal (US)
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# Service Capacities - Not Refill

<b>Fuel System</b>	128.4 gal (US)
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<b>DEF Tank</b>	7.1 gal (US)
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<b>Front Differential and Final Drive</b>	39 gal (US)
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<b>Rear Differential and Final Drive</b>	37.2 gal (US)
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<b>Transmission</b>	14.2 gal (US)
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# R1700 Standard Equipment

## **POWER TRAIN**

Brakes, full hydraulic enclosed wet multiple-disc (SAFR)

Engine:

- Cat C13 6 cylinder, diesel

- Air-to-air aftercooler (ATAAC)

Filter, engine, remote mounted

Fuel priming aid

Pre-cleaner, engine air intake

Torque converter with automatic lock up clutch

Transmission:

- Electronic Clutch Pressure Control (ECPC)

- Automatic planetary power shift (4F/4R)

- Transmission neutralizer

Traction control

## **ELECTRICAL**

Alarm, reversing

Alternator, 150 amp

Battery disconnect switch, ground level

Batteries, low maintenance

Diagnostic connector

Engine shutdown switch

Lighting LED

- External, front, rear

- Stop, dual

Receptacle group, auxiliary start

Starter, electric, 24-volt

Starting and charging system

## **OPERATOR ENVIRONMENT**

Automatic Brake Application (ABA)

Cab, ROPS and/or Falling Object Protective Structure (FOPS) certified

Color Multi Purpose Display (CMPD):

- Front and rear brake gauges

- Transmission pressure

- System diagnostics

Control units, roof mounted (with service panel access)

Electrohydraulic implement controls (single joystick)

Horns, electric

Instrumentation/gauges:

- Speedometer/tachometer

- Fuel level

- Hydraulic oil temperature

- Engine coolant temperature

Light, warning, residual brake

Monitor, door latch

Mounts, radio and speaker (×2)

Operator Presence System

Seat:

–Seat, suspension, air

–Seat belt, retractable

Storage box, enclosed, 5 liter (3 gal)

Coat hook

Cup holder

Armrests and kneepads, independently adjustable

## **TIRES, RIMS, AND WHEELS**

Tires must be selected from the Mandatory Attachments section (choose between):

–Tire, 26.5 × R25, VSMS2 Bridgestone

–Tire, 26.5 × R25, VSDL Bridgestone

Rims:

–Tubeless, set of 4

## **TECHNOLOGY**

Product Link™ Elite – machine health and information

## **OTHER STANDARD EQUIPMENT**

Brake axle cooling

Bucket dump (5.7 m<sup>3</sup>/7.5 yd<sup>3</sup>)

Bucket lip:

–Modular weld on

Decals, International Picto Graphics

Fenders, front, rear

Firewall

Fuel tap, manual shutoff

Guards, engine and transmission

Handholds

Handrails, quick release

Lift arm positioner for return to dig

Lubrication System:

–Semi central

Oil filter, transmission oil, long life

Operation and Maintenance Manual

Radiator grill, swing out

Wear bars:

–Fuel tank

–Hydraulic tank

Window:

–Window, single pane

## **R1700 Optional Equipment**

## **POWER TRAIN**

Engine options:

- Engine, Ventilation Reduction (VR)

- Engine, Stage 3

- Engine, Stage V

Park brake switch engagement – push to apply/pull to apply

Radiator, high efficiency

Reversible steering

## **ELECTRICAL**

Battery disconnect switch, in cab

Lighting LED:

- Service bay

- Truck loading

Switch isolation

## **OPERATOR ENVIRONMENT**

Operators station ROPS/FOPS enclosed

Camera, rear view

Seat:

- Seat, suspension, TEE, air

- Seat cover

Secondary Steering System

## **TECHNOLOGY**

Command for Underground\* – machine pre-requisites

Autodig, underground

Cat Production Measurement (CPM) Payload Weighing System

Tire monitoring

\*Please consult with your regional commercial or technology representative prior to upgrading your machine to Command for Underground.

## **TIRES, RIMS, AND WHEELS**

Rims:

- Spare, tubeless

- Rim identification numbering

## **OTHER OPTIONAL EQUIPMENT**

Brake Release Arrangements, includes Steering Release:

- Recovery hook

- Recovery bar

Bucket:

- Various sizes, Dump (6.1 m<sup>3</sup>/8.0 yd<sup>3</sup>, 6.6 m<sup>3</sup>/8.6 yd<sup>3</sup>, 7.2 m<sup>3</sup>/9.4 yd<sup>3</sup>, 7.5 m<sup>3</sup>/9.8 yd<sup>3</sup>, 8.0 m<sup>3</sup>/10.5 yd<sup>3</sup>)
- Bolt-together (6.8 m<sup>3</sup>/8.3 yd<sup>3</sup>, 7.5 m<sup>3</sup>/9.8 yd<sup>3</sup>)
- Light material (8.6 m<sup>3</sup>/11.2 yd<sup>3</sup>)
- Ejector (5.8 m<sup>3</sup>/7.6 yd<sup>3</sup>)

Bucket lip:

- Bolt-on lip
- Durilock™
- Lip fully welded or tack welded

Cutting edge:

- Modular weld on
- Bolt-on half arrow
- Durilock

Heel shrouds

Mechanically Attached Wear Plate System (MAWPS)

Wear bars, ejector and dump buckets

Wear liner

Fast Fill System:

- Coolant
- Engine oil
- Fuel
- Hydraulic oil
- Transmission oil

Fire Suppression System – Ansul, wet

Fluids:

- Arctic Fuel
- Arctic Coolant

Guards, light and window

Handrails, additional

Lifting Group, Mine Transfer

Lubrication System:

- Automatic

Reflective tape

Ride Control System

Service tools

Vandalism covers

Wear bars:

- Cab

Window:

- Window, dual pane