

# R1700G

Underground Mining Loader



## Engine

Engine Model	Cat® C11 ACERT™	
Gross Power – VR Engine – SAE J1995	263 kW	353 hp
Gross Power – Tier 3 Engine – SAE J1995 (1st-3rd gear/4th gear)	242/263 kW	324/353 hp

## Operating Specifications

Nominal Payload Capacity	– Tramming	14 000 kg	30,865 lb
	– Truck Loading	12 500 kg	27,558 lb
Gross Machine Mass		52 500 kg	115,745 lb

## Bucket Capacities

Bucket Capacity	4.6-8.8 m <sup>3</sup>	6.0-11.5 yd <sup>3</sup>
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## R1700G Features

### One Supplier

*Caterpillar designed and manufactured major power and drive train components for reliability and performance.*

### Reliable and Durable Engine

*The Cat C11 engine offers the perfect balance between power, robust design and economy.*

### Power Shift Transmission

*Reliable and rugged design to deliver power and efficiency for peak power train performance.*

### Hydraulics

*Perfect balance between low effort controls and powerful hydraulics for smooth and fast cycle time.*

### Durable Structures

*The heavy duty frame is designed and built to absorb twisting, impact and high loading forces for maximum durability and reliability.*

### Comfortable Cab

*Ergonomically designed for all-day comfort, control and productivity.*

### Enhanced Serviceability

*Designed with improved service points and grouped service locations to simplify maintenance and repair.*

### Built in Safety

*Safety is not an after thought, but an integral part of all machine and system design.*

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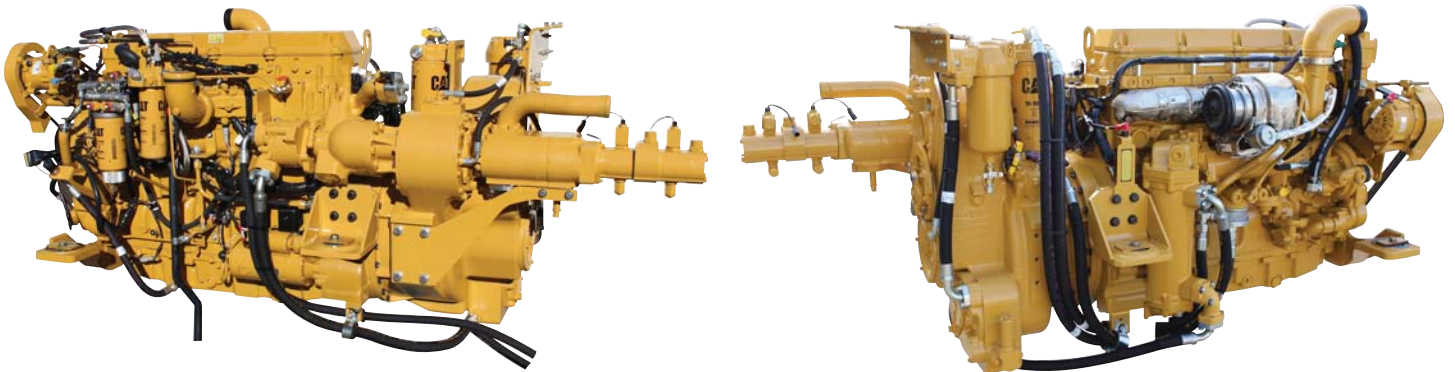


**The R1700G underground loader is designed for high production, low cost-per-ton loading and tramming in underground mining applications. Compact design with agile performance, rugged construction and simplified maintenance ensures excellent productivity, long life and low operating costs.**

**Engineered for performance, designed for comfort, built to last.**

# Power Train – Engine

The Cat C11 engine is built for power, reliability and efficiency.



The Cat C11 engine provides unequalled lugging force while digging, tramping and traversing steep grades. Torque rise effectively matches transmission shift points for maximum efficiency and fast cycle times. Mechanically Actuated, Electronic Unit Injection (MEUI™) high-pressure, direct injection fuel system electronically monitors operator demands and sensor inputs to optimize engine performance. Air-to-air aftercooling provides improved fuel economy by packing cooler, denser air into cylinders for more complete combustion of fuel and lower emissions. Oil cooled pistons increase heat dissipation and promote longer piston life. The crankshaft is forged and induction hardened for long-term durability.

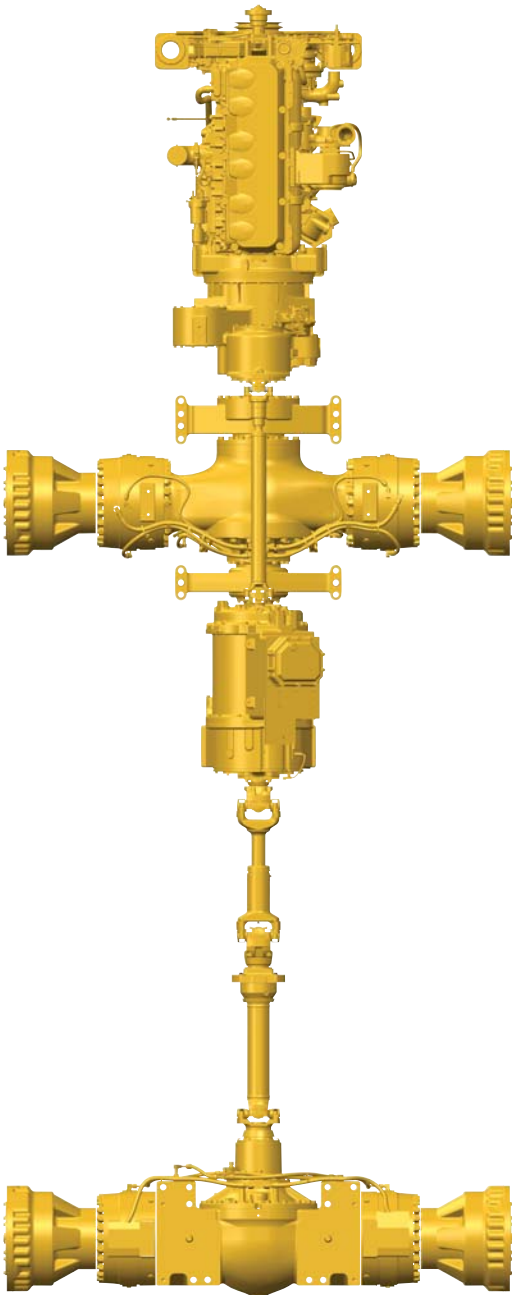
The Cat C11 engine features the optional Ventilation Reduction Package. The VR Package incorporates selective engine hardware and software to minimize diesel particulate matter in the engine exhaust. Engines equipped with the VR Package feature a significant ventilation rate reduction, maintains fuel consumption, and maintained or improved product performance. VR Package availability is subject to regional regulatory compliance. Optional U.S. EPA Tier 3 and EU Stage III compliant engine is also available.

A Cat Diesel Particulate Filter can be used with the VR engine package. This filter compliments the VR engine by further reducing particulate matter in the exhaust. Requires the use of 15 PPM ultra low sulfur diesel and CJ-4 low ash engine oil.



# Power Train – Transmission

More power to the ground for greater productivity.



## Power Shift Transmission

The Cat four-speed planetary power shift transmission is matched with the Cat C11 engine to deliver constant power over a wide range of operating speeds.

## Robust Design

Designed for rugged underground mining conditions, the proven planetary power shift transmission is built for long life between overhauls.

## Torque Converter

High capacity torque converter delivers more power to the wheels for superior power train efficiency.

## Electronic Auto Shift Transmission

The electronic auto shift transmission increases operator efficiency and optimizes machine performance. The operator can choose between manual or auto shift modes.

## Transmission Neutralizer

Using the left brake pedal, the operator can engage the service brakes and neutralize the transmission, maintaining high engine rpm for full hydraulic flow, enhancing digging and loading functions.

## Final Drives

Cat final drives work as a system with the planetary power shift transmission to deliver maximum power to the ground. Built to withstand the forces of high torque and impact loads, double reduction final drives provide high torque multiplication to further reduce drive train stress.

## Oscillating Rear Axle

Oscillating rear axle ensures four-wheel ground contact for maximum traction and stability at all times.

## Brakes

Fully enclosed oil immersed disc brakes incorporate independent service and parking brake pistons. Hydraulic actuated independent circuits provide improved performance and reliability.

# Hydraulics

Cat hydraulics deliver the power and control to keep material moving.



## Hydraulic System

Powerful Cat hydraulics deliver exceptional digging and lifting forces and fast cycle times.

## Lift and Tilt System

High hydraulic flow rates provide fast hydraulic cylinder response and powerful lift forces. Large-bore tilt and lift cylinders deliver exceptional strength, performance and durability.

## Pilot Controls

Low effort, pilot operated joystick implement control with simultaneous lift and tilt functions optimizes operating efficiency. Optional hydraulic controls enable an ejector bucket to be controlled from a switch on the bucket control joystick.

## Steering System

STIC™ control system integrates steering and transmission functions into a single controller for maximum responsiveness and smooth control.

## Optional Ride Control

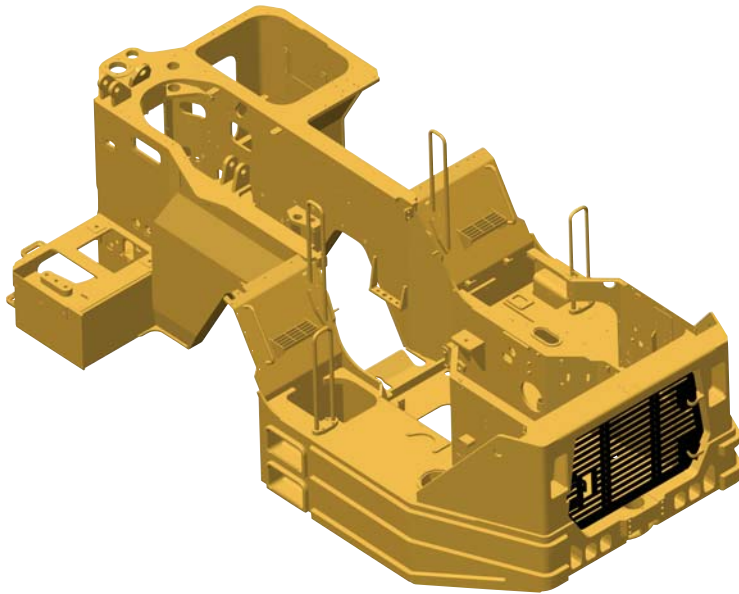
The optional ride control system uses a nitrogen filled oil accumulator in the hydraulic lift circuit to act as a shock absorber for the bucket and lift arms. The lift arm and bucket response to movement is dampened over rough ground, reducing fore and aft pitch, improving cycle times and load retention. A smoother, more comfortable ride gives operators the confidence to travel at higher speeds during load and carry operations.

## Cat Hydraulic Hose

Field proven Cat high pressure XT hydraulic hoses are exceptionally strong and flexible for maximum system reliability and long life in the most demanding conditions. Reusable couplings with O-ring face seals provide superior, leak free performance and prolong hose assembly life.

# Structures

Rugged Cat structures – the backbone of the R1700G's durability.

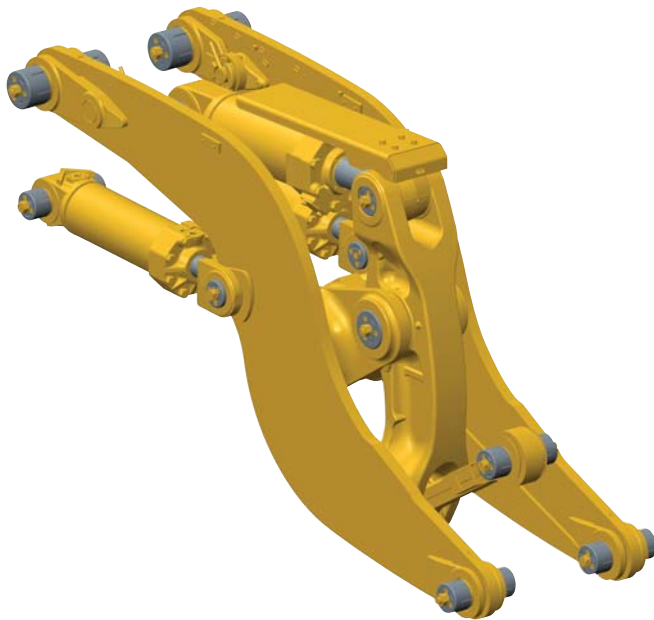


## Frame Design

The frame is engineered to withstand extreme forces generated during loading and tramming cycles. Precision manufacturing process ensures all structures are consistently built to high quality. Deep penetration and consistent welds throughout the frame ensures structures are solidly fused to provide sturdy platform for the linkage and the axles. The design and manufacturing quality of Cat LHD frames have been proven by our customers, many of whom reuse frames during machine rebuilds to get 2nd and 3rd lives out of their LHD's.

## Hitch

Spread hitch design widens the distance between upper and lower hitch plates to distribute forces and increase bearing life. Thicker hitch plates reduce deflection. The wide opening provides easy service access. Upper and lower hitch pins pivot on roller bearings to distribute horizontal and vertical loads over a greater surface area. Shim adjusted preload reduces maintenance time. An on-board steering frame lock pin is fitted to prevent articulation during maintenance and service.



## Sealed Pins

Sealed colleted pins are fitted to all major bucket and lift arm hinge points for longer pin and bushing life. This reduces maintenance costs and extends service intervals. The sealed joints retain lubrication and prevent contaminant entry.

## Z-bar Loader Linkage

Proven Z-bar loader linkage geometry generates powerful breakout force and an increased rack back angle for better bucket loading and material retention. Heavy duty steel lift arms with cast steel cross tube ensures extreme loads encountered during loading and tramming are efficiently dissipated for long service life.

# Operator Comfort

Ergonomically designed for all-day comfort, control and productivity.

The operator station is ergonomically designed for total machine control in a comfortable, productive and safe environment. All controls, levers, switches and gauges are positioned to maximize productivity and minimize operator fatigue.

## Protective Structure

Integral to the cab and frame, the Rollover Protective Structure (ROPS) and the Falling Objects Protective Structure (FOPS), are resiliently mounted to the frame to isolate the operator from vibration for a more comfortable ride.

## Optional Enclosed Cab

Optional sound-suppressed ROPS cab provides a quiet, secure working environment. Large window openings offer excellent visibility in all directions. Enclosed design provides fresh, pressurized, temperature-controlled air circulation for a more comfortable working environment.

## STIC Steering and Transmission Integrated Control

STIC provides effortless control of the machine by a single controller. Simple side-to-side motion articulates the machine. Directional shifting (forward/neutral/reverse) is controlled using a three position rocker switch. The thumb operated buttons control gear selection.

## Monitoring System

Cat Electronic Monitoring System (Cat EMS) continuously provides critical machine data to keep the machine performing at top production levels.

## Pilot Controls

Low-effort pilot operated joystick controls integrate steering, transmission and implement functions for smoother, faster cycles with less operator fatigue.







# Buckets

Rugged performance and reliability in tough underground mining applications.

## Buckets

Cat LHD buckets deliver unmatched productivity and structural reliability to help lower your cost-per-ton. Buckets are available in a range of sizes to suit most material types and densities.

Our bucket design is also improved with the use of 2 types of cast corners to help strengthen the side plate to bucket lip joint as well as allowing for various cutting edges.

## Optional Wear Packages

Weld-on wear plates in high wear areas are standard. Additional wear packages, including sacrificial wear strips and Cat heel shrouds protect the edges from damage and reduce the need for costly bucket rebuilds.

## Bucket Selection

Cat underground loader buckets are available in two styles to meet a range of loading, hauling and dumping conditions.

- Dump buckets
- Ejector buckets

## Optional Cutting Edges

Cat half arrow and cast half arrow cutting edges extend bucket life in high wear applications.

An additional weld-on GET option is the Cat weld-on GET. Available weld-on GET offers more wear material to maximize system wear life and bucket protection. Downtime is also reduced by an even wear rate between corners and edge segments, allowing both to be replaced at the same time.

Cat Mechanically Attached Shrouds (MAS) are also available on the R1700G buckets to provide non weld-on option for hardware selection to better suit application.

The MAS can be further protected with the installation of the Cat Mechanically Attached Wear Plates (MAWPS) to protect the bucket base and cutting edge.



# Serviceability

More time for production.



## Service Access

Easy access to daily service points simplifies servicing and reduces time spent on regular maintenance procedures.

## Ground-Level Access

Allows convenient servicing to all tanks, filters, lubrication points and compartment drains. Electric fuel priming. Engine oil and fuel filters installed on cold side of engine.

## Air Filters

Radial seal air filters are easy to change, reducing time required for air filter maintenance.

## Sight Gauges

Fluid level checks are made easier with sight gauges.

## Diagnostics

Cat Electronic Technician (Cat ET) service tool enables quick electronic diagnosis of machine performance and key diagnostic data for effective maintenance and repairs.

## Sealed Electrical Connectors

Electrical connectors are sealed to lock out dust and moisture. Harnesses are covered for protection. Wires are color and number coded for easy diagnosis and repair.

## Scheduled Oil Sampling

S-O-S<sup>SM</sup> helps avoid minor repairs becoming major ones. Sample point adapters fitted standard to machine.

# Customer Support

Cat dealer services keep underground mining equipment productive.

Cat dealers offer solutions, services and products that help lower costs, enhance productivity and manage your operation efficiently. From the selection of Cat equipment until the day you rebuild, trade or sell it, the support you get from your Cat dealer makes the difference that counts.



## Dealer Capability

Cat dealers will provide the level of support you need, on a global scale. Dealer expert technicians have the knowledge, experience, training and tooling to handle your repair and maintenance needs, when and where you need them.

## Product Support

When Cat products reach the field, they are supported 24/7 by a worldwide network of reliable and prompt parts distribution facilities, dealer service centers, and technical training facilities to keep your equipment up and running.

## Service Support

Cat equipment is designed and built to provide maximum productivity and operating economy throughout its working life. Cat dealers offer a wide range of service plans that will maximize return on your investment, including:

- Preventive Maintenance Programs
- Diagnostic Programs, such as Scheduled Oil Sampling and Technical Analysis
- Rebuild and Reman Options
- Customer Support Agreements

## Technology Products

Cat dealers offer a range of advanced technology products designed to improve efficiency, productivity and lower costs. VIMS™ Gen 3 and Command for Underground options available from factory.

## Operator Training

Today's complex products require operators have a thorough understanding of machine systems and operating techniques to maximize efficiency and profitability. Your Cat dealer can arrange training to improve productivity, decrease downtime, reduce operating costs, enhance safety, and improve your return on investment.

## Application Awareness

Application and site-specific factors, such as: material density, loading position, grades, speeds, and haul road design influence operating and maintenance costs. Your Cat dealer can provide you with the understanding to optimize productivity and the total cost of ownership.

## [www.cat.com](http://www.cat.com)

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at [www.cat.com](http://www.cat.com).





# Safety

Designed with safety as the first priority.

## Product Safety

Caterpillar has been and continues to be proactive in developing mining machines that meet or exceed safety standards. Safety is an integral part of all machine and systems designs.

## Engine Shut Off Switch

A secondary engine shutoff switch is located at ground level.

## Integral ROPS Cab

Integral to the cab and frame, the ROPS is resiliently mounted to the frame to isolate the operator from vibration for a more comfortable ride.

## Brake Systems

Four corner oil-cooled braking system provides excellent control. The service brake system is actuated by modulated hydraulic pressure, while the parking brake function is spring applied and hydraulic released. This system assures braking in the event of loss of hydraulic pressure.

## Standard Safety Features

Anti-skid upper deck surfaces, ground level compartment sight gauges, increased visibility, 3-point access to cab and machine, push out safety glass, suspension seat, inertia reel retractable seat belt, lift arm support pins, hot and cold side of engine, steering frame lock, hinged belly guards.

## SAFETY.CAT.COM™

For more complete information on safety, please visit <http://safety.cat.com>.

# R1700G Underground Mining Loader Specifications

## Engine

Engine Model	Cat C11 ACERT	
Gross Power – VR Engine – SAE J1995	263 kW	353 hp
Gross Power – Tier 3 Engine – SAE J1995 (1st-3rd gear/4th gear)	242/263 kW	324/353 hp
Bore	130 mm	5.1 in
Stroke	140 mm	5.5 in
Displacement	11.1 L	680 in <sup>3</sup>

- Power ratings apply at a rated speed of 1,800 rpm when tested under the reference conditions for the specified standard.
- Ratings based on SAE J1995 standard air conditions of 25° C (77° F) and 100 kPa (29.61 Hg) barometer. Power based on fuel having API gravity of 35 at 16° C (60° F) and an LHV of 42 780 kJ/kg (18,390 BTU/lb) when engine used at 30° C (86° F).
- Engine derate will commence at an altitude of 3050 m (10,006 ft).
- Optional Ventilation Reduction Package available.
- Optional Tier 3 engine package is compliant with U.S. EPA Tier 3 and EU Stage III emission standards.

## Operating Specifications

Gross Machine Mass	52 500 kg	115,745 lb
Static Tipping Load Straight Ahead Lift Arms Horizontal	31 781 kg	70,065 lb
Static Tipping Load Full Turn Lift Arms Horizontal	26 306 kg	57,995 lb
Breakout Force (SAE)	20 885 kg	46,051 lb

## Weights

Empty	38 500 kg	84,878 lb
Front Axle	16 940 kg	37,346 lb
Rear Axle	21 560 kg	47,532 lb
Loaded	51 000 kg	112,436 lb
Front Axle	37 077 kg	81,741 lb
Rear Axle	13 923 kg	30,695 lb
Loaded – Trimming	52 500 kg	115,743 lb

## Transmission

Forward 1	4.7 km/h	2.9 mph
Forward 2	8.3 km/h	5.2 mph
Forward 3	14.3 km/h	8.9 mph
Forward 4	24.1 km/h	15 mph
Reverse 1	5.4 km/h	3.3 mph
Reverse 2	9.4 km/h	5.8 mph
Reverse 3	16.4 km/h	10.2 mph
Reverse 4	25.3 km/h	15.7 mph

## Hydraulic Cycle Time

Raise	6.8 Seconds
Dump	2.9 Seconds
Lower, empty, float down	2.4 Seconds
Total Cycle Time	12.1 Seconds

## Bucket Capacities

Dump Bucket – 1	4.6 m <sup>3</sup>	6 yd <sup>3</sup>
Dump Bucket – 2	5 m <sup>3</sup>	6.5 yd <sup>3</sup>
Dump Bucket – 3 (Standard Bucket)	5.7 m <sup>3</sup>	7.5 yd <sup>3</sup>
Dump Bucket – 4	6.6 m <sup>3</sup>	8.6 yd <sup>3</sup>
Dump Bucket – 5	7.3 m <sup>3</sup>	9.5 yd <sup>3</sup>
Dump Bucket – 6	8.8 m <sup>3</sup>	11.5 yd <sup>3</sup>
Ejector Bucket	5.6 m <sup>3</sup>	7.3 yd <sup>3</sup>

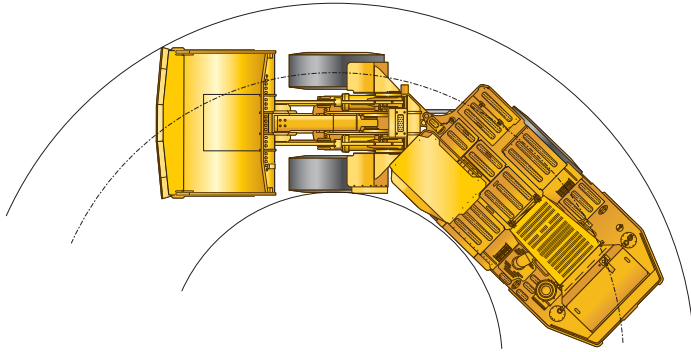
- High penetration bucket versions also available.

# R1700G Underground Mining Loader Specifications

## Turning Dimensions

Outside Clearance Radius**	6878 mm	270.8 in
Inner Clearance Radius**	3229 mm	127.1 in
Axle Oscillation	8°	
Articulation Angle	44°	

\*\*Note: Clearance Dimensions are for reference only.



## Tires

Tire Size	26.5 × 25 36 PLY VSMS
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## Service Refill Capacities

Engine Crankcase with Filter	34 L	8.98 gal
Transmission	47 L	12.4 gal
Hydraulic Tank	125 L	33 gal
Cooling System	63 L	16.6 gal
Front Differential and Final Drives	61 L	16.1 gal
Rear Differential and Final Drives	61 L	16.1 gal
Front Differential and Final Drives (With Axle Oil Cooler)	90 L	23.8 gal
Rear Differential and Final Drives (With Axle Oil Cooler)	90 L	23.8 gal
Fuel Tank	569 L	150.3 gal
Secondary Fuel Tank (If Equipped)	446 L	117.8 gal

## Standards

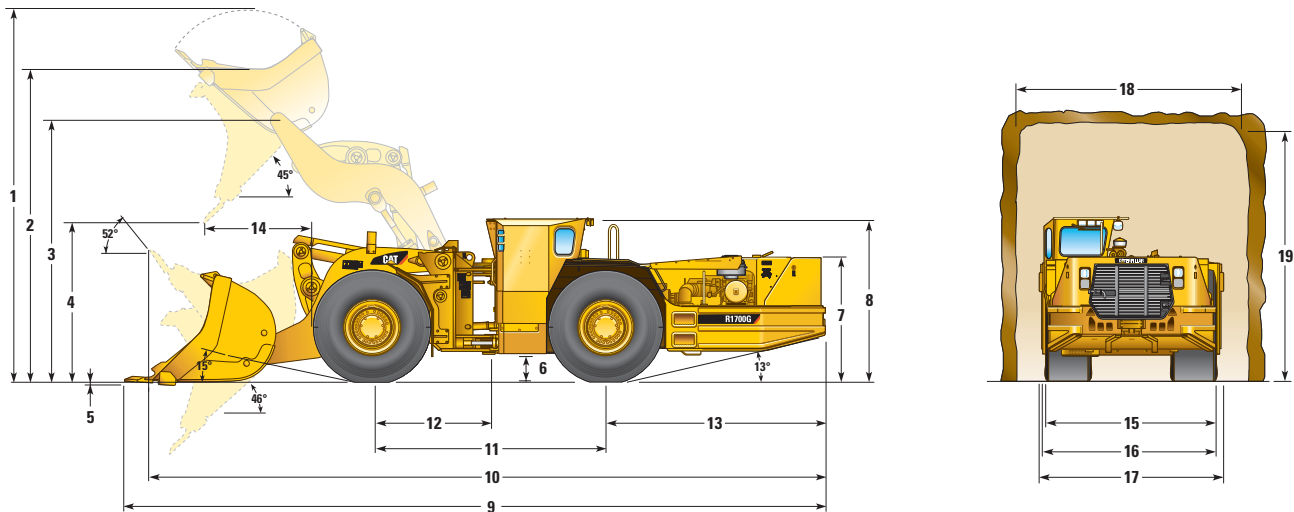
Brakes	ISO 3450, AS2958.1, CAN-CSA424.30-M90
Cab/FOPS	BS EN ISO 3449, SAE J231, AS2294.3
Cab/ROPS	ISO 3471, SAE J1040, AS2294.2, EN13510



# R1700G Underground Mining Loader Specifications

## Dimensions

All dimensions are approximate.

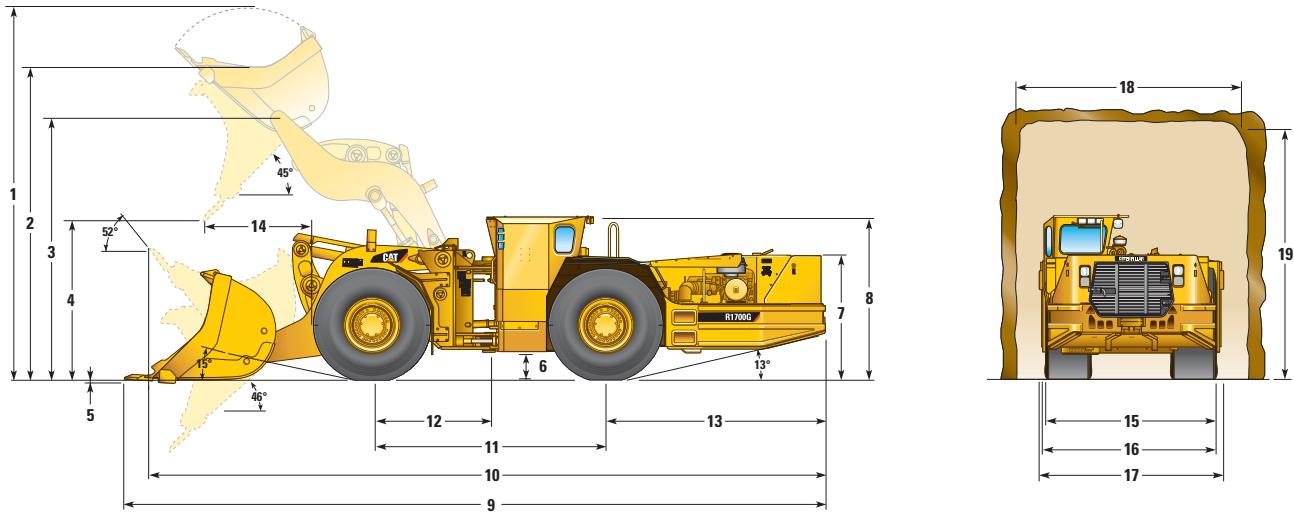


	256-0862		255-9970		252-7194		226-5404	
	Dump Bucket	Dump Bucket	Dump Bucket	Dump Bucket	Dump Bucket	Dump Bucket	Dump Bucket	Dump Bucket
Bucket Capacity	4.6 m <sup>3</sup>	6.0 yd <sup>3</sup>	5.0 m <sup>3</sup>	6.5 yd <sup>3</sup>	5.7 m <sup>3</sup>	7.5 yd <sup>3</sup>	6.6 m <sup>3</sup>	8.6 yd <sup>3</sup>
	mm	in	mm	in	mm	in	mm	in
Bucket Width over Cutting Edge	2672	105.2	2672	105.2	2772	109.1	2932	115.4
<b>1</b> Height – Bucket Raised	5511	217.0	5511	217.0	5606	220.7	5680	223.6
<b>2</b> Height – Max Dump	4899	192.9	4899	192.9	4899	192.9	4899	192.9
<b>3</b> Height – Max Lift Bucket Pin	4104	161.6	4104	161.6	4104	161.6	4104	161.6
<b>4</b> Height – Dump Clearance at Max Lift	2648	104.3	2524	99.4	2443	96.2	2392	94.2
<b>5</b> Height – Digging Depth	5	0.2	15	0.6	20	0.8	26	1.0
<b>6</b> Height – Ground Clearance	429	16.9	429	16.9	429	16.9	429	16.9
<b>7</b> Height – Top of Hood	1968	77.5	1968	77.5	1968	77.5	1968	77.5
<b>8</b> Height – Top of ROPS	2557	100.7	2557	100.7	2557	100.7	2557	100.7
<b>9</b> Length – Overall (Digging)	10 746	423.1	10 915	429.7	10 973	432.0	11 105	437.2
<b>10</b> Length – Overall (Tramming)	10 447	411.3	10 549	415.3	10 589	416.9	10 663	419.8
<b>11</b> Length – Wheelbase	3680	144.9	3680	144.9	3680	144.9	3680	144.9
<b>12</b> Length – Front Axle to Hitch	1840	72.4	1840	72.4	1840	72.4	1840	72.4
<b>13</b> Length – Rear Axle to Bumper	3439	135.4	3439	135.4	3439	135.4	3439	135.4
<b>14</b> Length – Reach	1526	60.1	1639	64.5	1741	68.5	1768	69.6
<b>15</b> Width – Overall Tire	2650	104.3	2650	104.3	2650	104.3	2650	104.3
<b>16</b> Width – Machine without Bucket	2689	105.9	2689	105.9	2689	105.9	2689	105.9
<b>17</b> Width – Machine with Bucket	2790	109.8	2790	109.8	2894	113.9	3050	120.1
<b>18</b> Recommended Clearance Width	4000	157.5	4000	157.5	4000	157.5	4000	157.5
<b>19</b> Recommended Clearance Height	4000	157.5	4000	157.5	4000	157.5	4000	157.5

# R1700G Underground Mining Loader Specifications

## Dimensions

All dimensions are approximate.



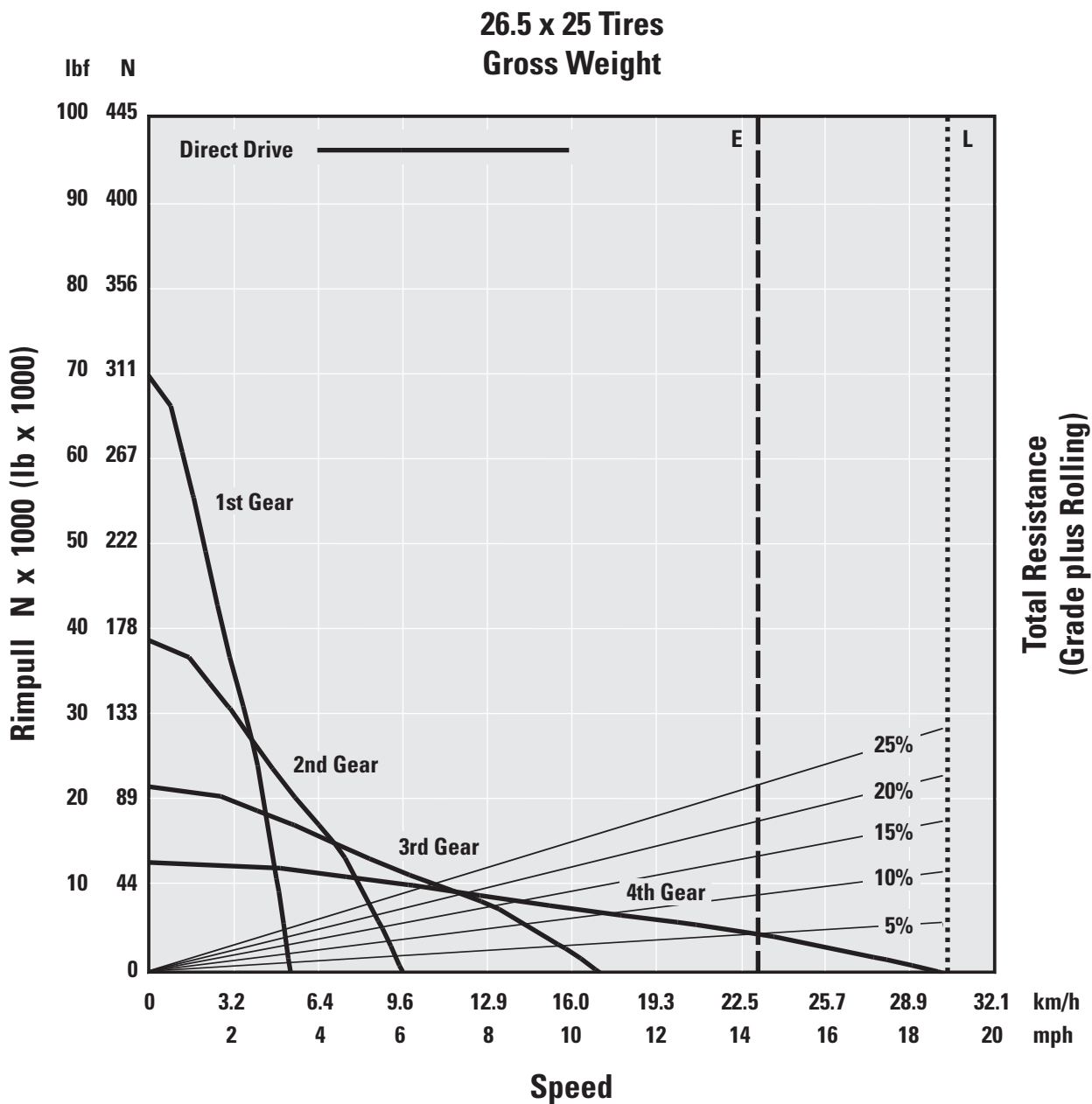
	256-0356		256-0386		281-1125	
	Dump Bucket	Dump Bucket	Dump Bucket	Dump Bucket	Ejector Bucket	Ejector Bucket
Bucket Capacity	7.3 m <sup>3</sup>	9.5 yd <sup>3</sup>	8.8 m <sup>3</sup>	11.5 yd <sup>3</sup>	5.6 m <sup>3</sup>	7.3 yd <sup>3</sup>
	mm	in	mm	in	mm	in
Bucket Width over Cutting Edge	2982	117.4	3492	137.5	2780	109.4
<b>1</b> Height – Bucket Raised	5751	226.4	5751	226.4	5858	230.6
<b>2</b> Height – Max Dump	4899	192.9	4899	192.9	4913	193.4
<b>3</b> Height – Max Lift Bucket Pin	4104	161.6	4104	161.6	4104	161.6
<b>4</b> Height – Dump Clearance at Max Lift	2320	91.3	2320	91.3	2352	92.6
<b>5</b> Height – Digging Depth	33	1.3	33	1.3	76	3.0
<b>6</b> Height – Ground Clearance	429	16.9	429	16.9	429	16.9
<b>7</b> Height – Top of Hood	1968	77.5	1968	77.5	1968	77.5
<b>8</b> Height – Top of ROPS	2557	100.7	2557	100.7	2557	100.7
<b>9</b> Length – Overall (Digging)	11 207	441.2	11 207	441.2	11 132	438.3
<b>10</b> Length – Overall (Tramming)	10 724	422.2	10 724	422.2	10 706	421.5
<b>11</b> Length – Wheelbase	3680	144.9	3680	144.9	3680	144.9
<b>12</b> Length – Front Axle to Hitch	1840	72.4	1840	72.4	1840	72.4
<b>13</b> Length – Rear Axle to Bumper	3439	135.4	3439	135.4	3439	135.4
<b>14</b> Length – Reach	1836	72.3	1836	72.3	1738	68.4
<b>15</b> Width – Overall Tire	2650	104.3	2650	104.3	2650	104.3
<b>16</b> Width – Machine without Bucket	3104	122.2	3610	142.1	2902	114.3
<b>17</b> Width – Machine with Bucket	2689	105.9	2689	105.9	2689	105.9
<b>18</b> Recommended Clearance Width	4000	157.5	4000	157.5	4000	157.5
<b>19</b> Recommended Clearance Height	4000	157.5	4000	157.5	4000	157.5

# R1700G Underground Mining Loader Specifications

## Gradeability/Speed/Rimpull

To determine gradeability performance: Read from gross weight down to the percent of total resistance. Total resistance equals actual percent grade plus rolling resistance. As a general guide use 2% for rolling resistance in underground application or refer to the Caterpillar Performance Handbook. From the total resistance point, read horizontally to the curve with the highest obtainable gear, then down to maximum speed. Usable rimpull will depend upon traction available and weight on drive wheels.

- - - - - Typical Field Empty Weight  
 ..... Loaded Weight



E – Empty 38 500 kg (84,878 lb)  
 L – Loaded 51 000 kg (112,436 lb)



# R1700G Standard Equipment

## Standard Equipment

Standard equipment may vary. Consult your Cat dealer for details.

### ELECTRICAL

- 12V Power Supply in Cab
- Alternator, 95-amp
- Auxiliary Start Receptacle
- Battery Disconnect Switch, Ground Level
- Circuit Breaker, 80-amp
- Corrosive Protection Spray
- Diagnostic Connector
- Electric Starting, 24-volt
- Engine Shutdown Switches
  - Rear Right Hand Side
- External Lighting System, Front, Rear, Halogen Work Lights
- Low Maintenance Batteries
- Reversing Alarm
- Starting and Charging System

### OPERATOR ENVIRONMENT

- Cat Electronic Monitoring System (Cat EMS)
- Electric Horns
- Gauges
  - Engine Coolant Temperature
  - Transmission Coolant Temperature
  - Hydraulic Oil Temperature
  - Fuel Level
  - Speedometer
  - Tachometer
- Indicator Lights
  - Alert Warning Light
  - Residual Brake Pressure
- Low Hydraulic Level Warning
- Open Operator Station ROPS/FOPS Structure
- Operator Presence System (Auto Park Brake)
- Pilot Hydraulic Implement Controls, Single Joystick
- Push Button Panel for Lights
- Suspension Seat with Retractable Seat Belt
- STIC Steering

### POWER TRAIN

- Cat C11 ATAAC Diesel Engine, 6-Cylinder
- Brake Axle Cooling
- Electric Fuel Priming Pump
- Engine Air Intake Precleaner
- Engine Oil Filter, Remote Mounted
- Heat Shields
- Long Life Coolant
- Planetary Powershift Transmission with Automatic Shift Control, 4 Speed Forward/4 Speed Reverse
- Radiator, Cross Flow
- Radiator Cap Manual Release
- Rims, 5-Piece, Tubeless
- SAFR™ Full Hydraulic Enclosed Wet Multiple-Disc Brakes
- Torque Converter
- Transmission Neutralizer
- Transmission Filter Drain Tap

### OTHER STANDARD EQUIPMENT

- Brake Light
- Bucket Control Group, Standard
- Bucket, Dump
- Bucket Lip, Hardox 450 Bucket
- Bucket Positioner, Return To Dig
- Catalytic Exhaust Purifier/Muffler Group
- Decals, International Picto Graphics
- Engine and Transmission Belly Guards
- Fenders, Front, Rear
- Firewall
- Fuel Lines Double Braided (Stainless Sleaving)
- Hand Hold (Access On/Off Top Deck)
- Hydraulic Oil Cooler – Swing Out Rear Frame
- Operator and Maintenance Manual, English
- Protection Wear Bars 100 × 50 mm (4 × 2 in)
- Rims, 5-Piece, Tubeless
- Semi Centralized Lubrication Points
- S-O-S Port
  - Coolant
  - Engine Oil
  - Hydraulic Oil
  - Transmission Oil
- Swing Out Radiator Grill
- Tires and Rims: A tire must be selected from the mandatory attachments section of the machine price list. Base machine price includes a standard tubeless rim allowance only.

## Optional Equipment

Optional equipment may vary. Consult your Cat dealer for details.

- Battery and Engine Shutdown Switch
  - Ground Level Isolation, In Cab Isolation Switch
- Brake Pressure Gauges
- Brake Release Arrangements, (Requires Lines Steering Release)
  - Recovery Hook
  - Recovery Bar
- Buckets
  - Bucket Profile Standard or High Penetration
    - Bucket, Light Weight Material (8.8 m<sup>3</sup>/11.5 yd<sup>3</sup>) (Requires Control Group, Heavy Duty)
  - Ejector Bucket Installed
  - Various Sizes, Dump (4.2 m<sup>3</sup>/5.5 yd<sup>3</sup> to 7.3 m<sup>3</sup>/9.5 yd<sup>3</sup>), Ejector (5.7 m<sup>3</sup>/7.5 yd<sup>3</sup>)
- Bucket, Control Group, Heavy Duty (Required for Light Weight Buckets)
- Bucket, Corners
  - Cast Corner, Shark Ready
  - Cast Corner, (All Other Hardware)
- Bucket Hardware
  - Cutting Edge, Cat Weld-on
  - Cutting Edge, Half Arrow, Flat
  - Heel Shrouds, Ejector and Dump Buckets
  - Mechanically Attached Shroud (MAS)
  - Mechanically Attached Wear Plate System, Cutting Edge Protection (MAWPS)
  - Mechanically Attached Wear Plate System, Bottom Protection (MAWPS)
  - Protector Pads (Bottom of Bucket)
  - Wear Bars, Ejector and Dump Buckets
  - Wear Liner (5.7 m<sup>3</sup>/7.5 yd<sup>3</sup> Dump Bucket)
- Bucket Lip
  - Lip Fully Welded or Tack Welded
  - Lip Bare (No Hardware)
  - MAS Ready (Mechanical Attached Shroud)
- Camera, Color Rear Facing
- Cover, Anti Vandalism for Shipping
- Draw Bar Attachment, Bolt-on
- Engine Options
  - Diesel Particulate Filter (for use with VR Engine only)
  - Engine, Ventilation Reduction (VR)
  - Engine, Tier 3
- Fast Fill System
  - Coolant
  - Engine Oil
  - Fuel (Single or Dual Tanks)
  - Hydraulic Oil
  - Transmission Oil
- Fire Suppression System
  - Ansul, Dry Powder
  - Foam, Water Based
- Fluids
  - Arctic Fuel
  - Arctic Coolant
- Front Light Protectors
- Fuel System
  - Dual Fuel Tanks
  - Fuel System Manual Shut Off Tap
- Guards
  - Guard, Rear Side Quarter Window
  - Guard Duo Cone Seal
- Handrails
  - Hand Hold (Access on/off top deck)
  - Fold Down
- Hydraulic System
  - Ejector Bucket Ready
  - Alternate Implement/Pilot Control Configuration
- Lubrication System
  - Automatic
  - Centralized
- Lighting
  - External Lighting System, Front, Rear, LED Work Lights
- Mine Transfer
  - Mine Transfer Ready Rear Frame (Tack Welded)
  - Lifting Group, Mine Transfer
- Operators Station ROPS/FOPS Enclosed
  - Air Conditioning
  - Cab Pressurizer and Filter
  - Duct, Window Demister
  - Dome Light
  - Heater
  - Radio Ready Compartment for Radio and Speakers
  - Strut, Cab Door
- Operators Station FOPS Open
  - Removable Canopy
- Operator and Maintenance Manual
  - Chinese
  - French
  - Indonesian
  - Portuguese
  - Russian
  - Spanish
- Park Brake Switch Engagement
  - Push to Apply
  - Pull to Apply
- Payload Control System
  - Payload Control System (PCS)
  - Loadrite L2180
- Remote Control Interface (excludes Transmitter and Receiver)
  - Cattron
  - RCT
- Reversible Steering
- Reflective Tape
- Ride Control System
- Rim
  - Rim Identification Numbering
  - Spare (Tube or Tubeless)
  - Tube Type
- Seats
  - Seat Covers, Tee, Air and Standard
  - Suspension Seat Tee, Vinyl
  - Suspension Seat Tee, Air
  - Suspension Seat Air Vinyl
- Secondary Steering System
- Service Tools
  - Recovery Bar (for use with Brake Release, Recovery Bar System)
  - Reference Parts Manual for Additional Tooling Available
- Switches
  - Additional Engine Shutdown, Mounted LHS
  - Engine Shutdown, Fire Suppression Activation
  - Idle Timer
  - Engine Shutdown/Idle Timer
  - Transmission Neutralizer Override Switch
- Technology
  - Command for Underground
  - Vital Information Management System (VIMS) Gen 3
  - Electronic Access Module (Required with Automation)
- Tire Arrangements
  - Tire, 26.5 × R25 VSMS L-5S Bridgestone
- Wear Protection Bars
  - Cab/ROPS
  - Hydraulic Tank
  - Radiator
  - Wear Plate, Rear Underneath
- NOTE: Not all features are available in all regions. See your Cat dealer for more information.

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