



Cat® RB220

Roof Bolter

Specifications

Dimensions (approximate)

Overall length with ATRS	25 ft 2 in
Chassis overall width	9 ft .5 in
Drill boom feed	4 ft 4 in
Maximum boom separation	16 ft 2 in
Minimum boom separation	3 ft 6 in
Minimum tramming height	
with 28x12-15 tires	2 ft 8 in
with 32x12.5-15 tires	3 ft 2 in
with 35x15-15 tires	3 ft 3.5 in
ATRS reach	
with 28x12-15 tires	8 ft
with 32x12.5-15 tires	8 ft
with 35x15-15 tires	8 ft
Ground clearance	
with 28x12-15 tires	6 in
with 32x12.5-15 tires	8 in
with 35x15-15 tires	9.5 in
Chassis height	
with 28x12-15 tires	2 ft 3 in
with 32x12.5-15 tires	2 ft 5 in
with 35x15-15 tires	2 ft 6.5 in
Wheelbase	6 ft 7 in
Inside turn radius	9 ft 6 in
Outside turn radius	21 ft 6 in
Steering articulation	80° total
Tram speed	
fast	0 - 130 fpm
slow	0 - 65 fpm
Drilling feed thrust (maximum)	10,000 lbs
Drilling torque (variable)	310 ft lbs
Bolt tightening torque (adjustable)	190 ft lbs

Drive Train

Four wheel planetary drive; each drive consists of a Fairfield W3B torque hub along with a Char-Lynn series 2000 hydraulic motor.

Automatic Parking Brake

Two spring applied, hydraulic released, fail safe brakes at front of machine.

Hydraulics

Pump

Four stage gear pump rated at 35/35/15/15 gpm at 1,770 rpm with spline fit to pump motor.

Reservoir:

150 gal capacity reservoir with 7 micron return filtration, filter by-pass and “in tank” strainer.

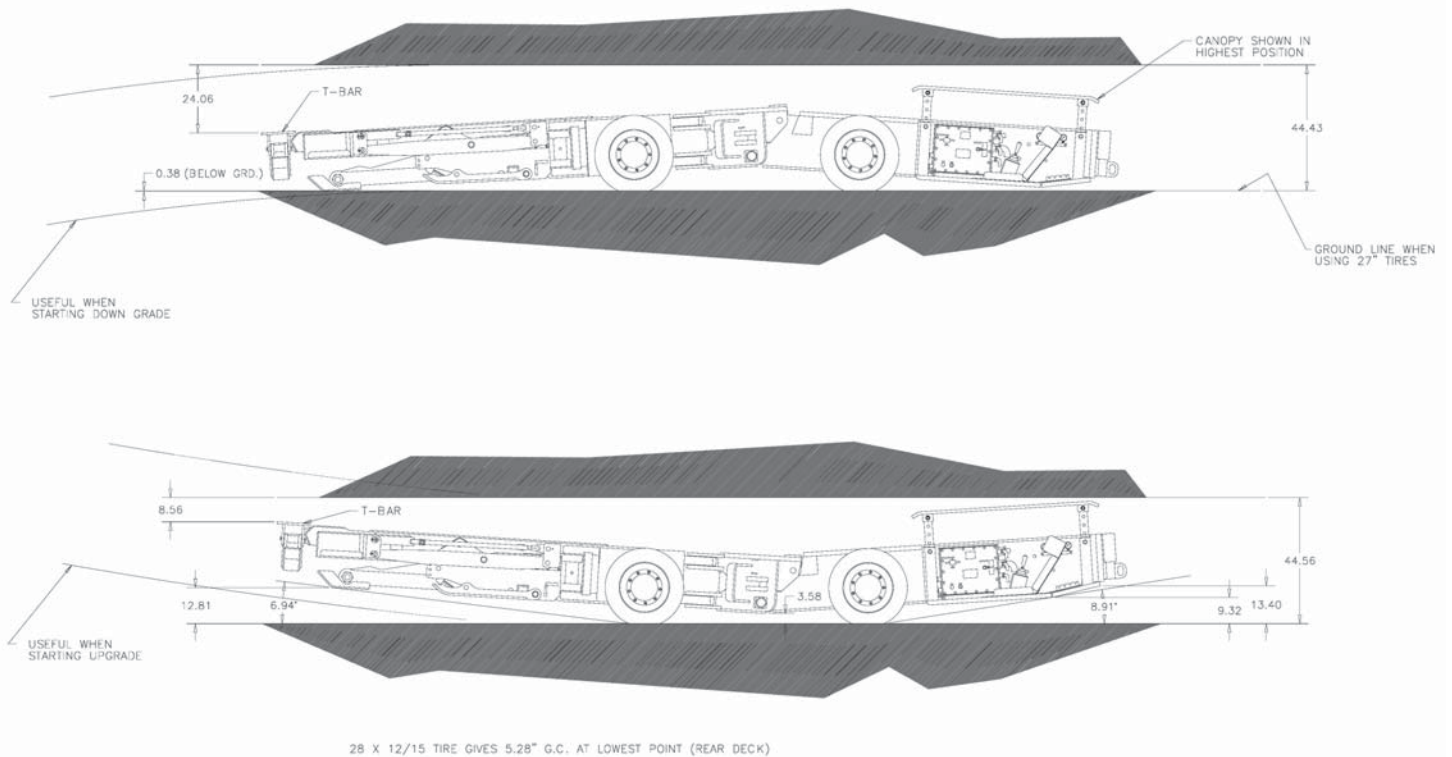
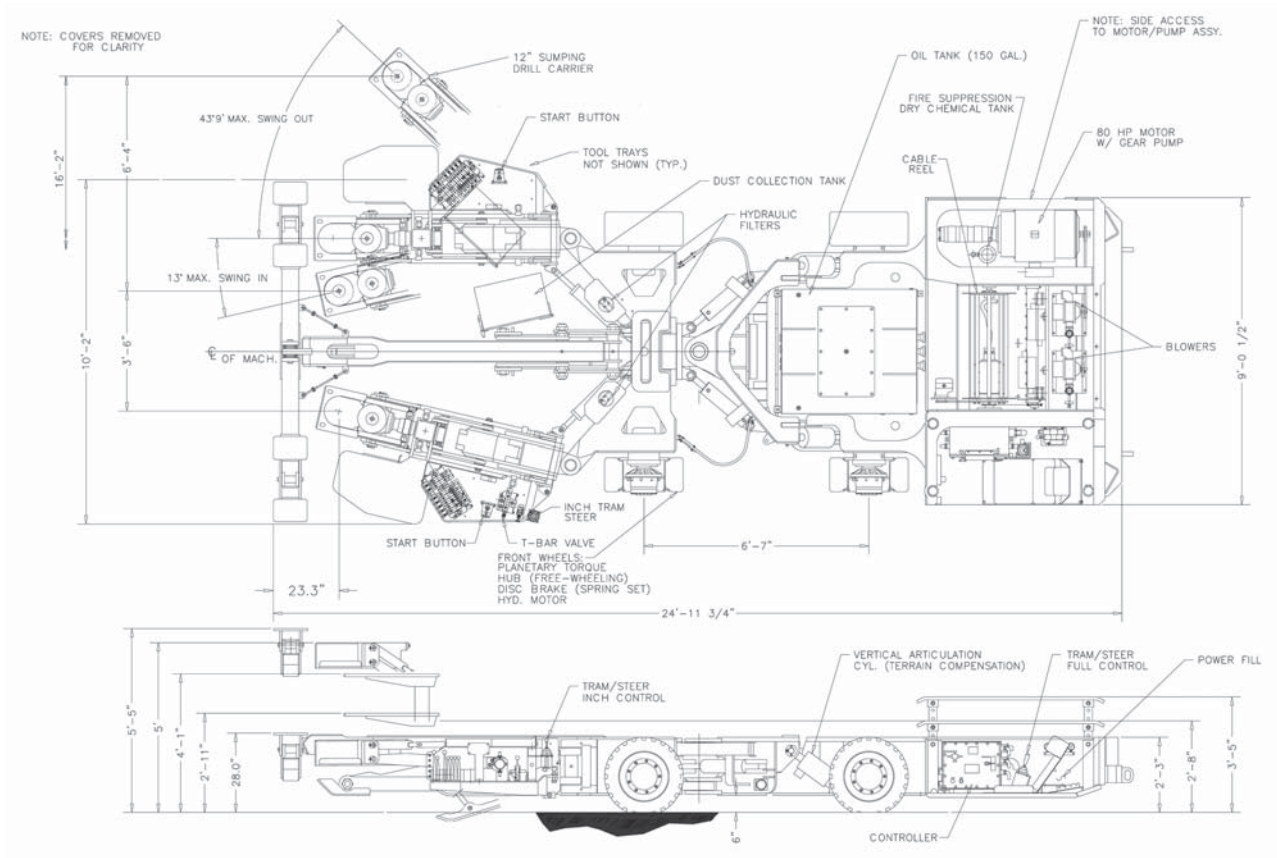
Hydraulic Hose:

All main systems hoses are two wire braid rated at 9,000 psi burst pressure; MSHA 2G flame resistant approved; all fittings JIC

Sumping Cylinder:

Four (4) 1.5 in bore, double acting cylinders two per drilling assembly.

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Hydraulics (continued)

Stab Foot Cylinder

- Two (2) 4 in bore, double acting cylinders, one per drilling assembly.

Boom Swing Cylinder

- Two (2) 3.5 in bore, double acting cylinders, one per drilling assembly.

Steering Cylinder

- Two (2) 4 in bore, double acting cylinders.

Boom Feed Cylinder

- Two (2) 6.5 in bore, double acting cylinder on each boom with in line check valve, one per drilling assembly.

Drill Station Canopy Cylinder

- Two (2) double stage 3.5 in outer bore and 2.25 in inner bore, double acting cylinder per drill station with pilot operated check valve, one per drilling assembly.

Vertical Articulation Cylinder

- Two (2) 6 in bore, double acting cylinders that vary the angle of approach and departure for the rear of the roof bolter from up to 15 degrees rear for improved terrain compensation in adverse conditions.

Valve Banks

- All valve banks are spring returned, bi-directional with main relief set at 2,000 psi. All other pressures are set for each function accordingly.
 1. One (1) cable reel and vertical articulation valve bank
 2. One (1) steering valve bank controlled by means of a joystick valve.
 3. One (1) ATRS and vertical articulation valve bank.
 4. Two (2) boom function valve banks, one per drilling assembly.
 5. One (1) tram valve bank controlled by means of a joystick valve in operators compartment
 6. One (1) inch tram valve bank at rear of operators side drilling assembly.

Electrical

Start

- Push buttons at tram and drill stations.

Stop

- Tape switch (panic strip) at tram and drill stations that de-energize electrical system and applies automatic brake.

Controller

- Size 4 vacuum contactors, 1.5 KVA transformer and 150 amp circuit breaker.

Fire Suppression

- Four point, 20 lbs tank, multi-purpose, ABC dry chemical fire suppression system manually actuated from operator's compartment and remote location.

Center Section

- Extra strength dual application joint welded from high strength steel with pivot pins; complete with horizontal self-aligning pivot thrust bearings.

Frame

- Low profile with bends utilized where applicable to reduce the number of indeterminate stresses introduced by welding.

Operator's Drill Station Area

1. Hydraulically operated drill boom and stab foot functions.
2. ATRS function control and all other positioning function control.
3. 1 in thick, hydraulically adjustable drill station canopy on each drilling assembly.
4. Storage tool tray on each boom for drill steel, starter steel, drill bits and etc.
5. Inch tram function control (left hand drilling assembly only).
6. Vertical articulation function control.

Tram Station Area

1. 1 in thick manually adjustable canopy.
2. Heavy duty seat.
3. Full tram function control.
4. Steering function control.
5. Vertical articulation function control.
6. Cable reel function control.
7. Four pressure gauges.
8. Power fill function control.

Reservoir Fill System

- Power hydraulic fill, allows hydraulic oil to be added to reservoir without hand pumping.

Manual

- Two parts manuals.
- Two operation/maintenance manuals/troubleshooting guides.
- One LinkOne CD which includes all above manuals in electronic format.

Miscellaneous

- Seven (7) oil sampling kits.

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Roof Bolter Options (must choose)

Voltage/Blower Option

440 Volt AC, Roots Whispair Blower - electrical system with pump motor rated at 80 hp; blowers rated at flows to 81 CFM at 20" Hg. Each vacuum blower is directly belt driven from the electric motor by means of sheaves and "v" belts.

Lighting Option

MCI Fluorescent Lighting, High - area lighting with one headlight on front and rear for high seam applications up to 10 ft.

Cable Reel Option

19 in diameter for #2/3C Round Cable - 210 ft capacity horizontal type reel for recommended #2/3C, GGC round trailing cable. Unit is supplied with 20 ft of recommended cable.

Tram Canopy Option

Tram Canopy, 2 ft 8 in minimum height - manually adjustable tram canopy with a minimum height of 2 ft 10 in and a maximum height of 3 ft 10 in at 8.5 in ground clearance.

Drill Chuck Option

Dry/Deep Splined Chuck - chuck protrudes above drill head by 1/8 in with no need for drill chuck retention.

ATRS Option

10 ft Reach, 10 Wide Crossbeam - T-Bar with 10 ft wide crossbeam including rockers arms one primary ATRS cylinder; one secondary cylinder.

Tire/Wheel Option

Four 32x12.5-15, 32 in Foam Filled Tires - 20 ply, 32 in maximum form diameter foam filled tires mounted on rim assemblies.

Drill Speed Option:

650 RPM Maximum Drill Speed — generated by means of a 1.25" gear width hydraulic motor.

Roof Bolter Options (must choose)

Controller Cover/Oil Level Switch Option:

Oil Level Switch, Light & Low Oil Shutdown - above cover assembly with the addition of a low oil level switch that will electrically shut machine down before oil is dangerously low.

Oil Filter Brand Option:

Schroeder "Spin-On" Oil Filter — 7 micron return side filter. The filter is equipped with by-pass and external dirty filter indication.

Blower Exhaust Location Option:

Left Side, Operator's Side - at rear of machine.

Roof Bolter Accessories:

- Pre-Duster Installation - remote tank with a 0.4 cu. ft. capacity that removes larger dust particles automatically, when stab cylinder is activated.
- Grease Zone Lubrication Installation
- Torque Gauge Installation — monitor the amount of torque being applied to the roof bolts during installation (one gauge for each drilling assembly).

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at mining.cat.com and www.cat.com

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