

ZB21 Hydraulic bolter



Safety



Reliability



Productivity



Drilling equipment

Bolter hydraulics	Variable displacement piston pumps with load-sensing for bolter head and boom movements
Controls	Intelsense control system incorporating these features: collaring, anti-jamming, auto return to start position following hole completion, and control levers for operating bolter head

Drilling equipment

Boom quantity	1	
Boom coverage (height)	6 900 mm	22 ft. 3 in
Boom coverage (width)	7 700 mm	25 ft. 2 in
Boom extension	1 200 mm	3 ft. 11 in
Feed extension	427 mm	1 ft. 5 in
Stinger extension	452 mm	1 ft. 6 in
Boom roll over	360 deg	
Carousel capacity	9 bolts	
Available bolt lengths		
5	1 524 mm	5 ft.
6	1 829 mm	6 ft.
7	2 134 mm	7 ft.
8	2 438 mm	8 ft.
Bolter position	Inline	
Drill		
Montabert	JZD08 (8 kW), JZD10 (10 kW) or JZD12 (12kW)	
Leveling jacks		
Front (standard with unit)	2	
Rear (standard with unit)	2	

ZB21

Drilling electrics

JZD08, JZD10, JZD12	One 56 kW (75 hp) TEFC electric motor (voltage as per application) NEMA 4 panels	
Power requirements (configuration dependent)		
380 V	64.5 kW min	106.2 kW max
440 V	66.0 kW min	106.2 kW max
480 V	64.5 kW min	106.2 kW max
525 V	64.5 kW min	106.2 kW max
575 V	64.5 kW min	106.2 kW max
Cable reel capacity (voltage dependent)		
min	75 m	246 ft.
max	110 m	360 ft.

Weights

Operating weight (base unit)	15 300 kg	33,660 lbs.
Operating weight (fully optioned)	17 100 kg	37,620 lbs.

Driving speeds forward and reverse

1st gear (0% grade)	5.0 km/h	3.1 mph
2nd gear (0% grade)	10.0 km/h	6.3 mph

Powertrain

General		
Exhaust system	Diesel oxidation catalyst	
Exhaust system optional	Diesel particulate filter	
Fuel tank capacity	63 L	17 US Gal.
Transmission		
Dana T12000 series w/ integrated torque converter		
Shifting	Powershift	
Speeds	2 forward/2 reverse	
Axles		
Front and rear	Dana 112	
Differential	No-spin	
Brakes - service	Enclosed wet disc	
Brakes - parking	Hydraulically-released/spring-applied	
Oscillation angle	+/- 7 deg	
Tires		
Size	Solid, lugged 12.00 - 20	

Carrier hydraulics

General	Variable displacement piston pumps with load sense	
Oil tank volume	180 L	48 US Gal.
Tank filling	Mechanical pump	
Tank filling optional	Electric pump and/or Wiggins	
Steering hydraulics	Variable displacement piston pumps with load sense; two double-acting steer cylinders	
Brake system	Variable displacement piston pumps with load sense; two double-acting steer cylinders	

Carrier electrics

Alternator	24V/60A
Batteries	2 x 12 V
Starter	24V heavy-duty
Tram lights	2 front/2 rear
Drill lights	4 front

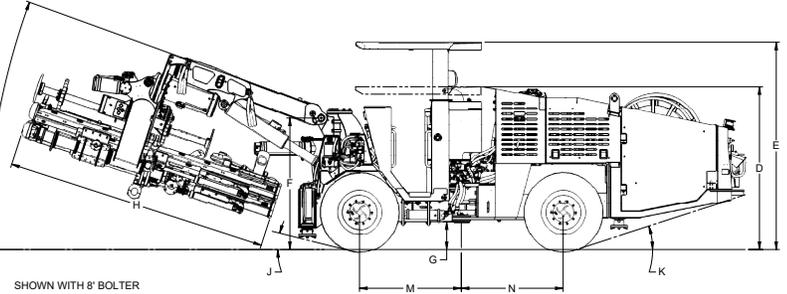
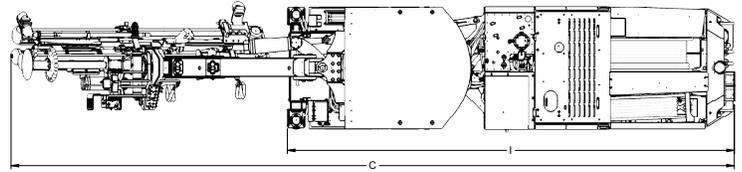
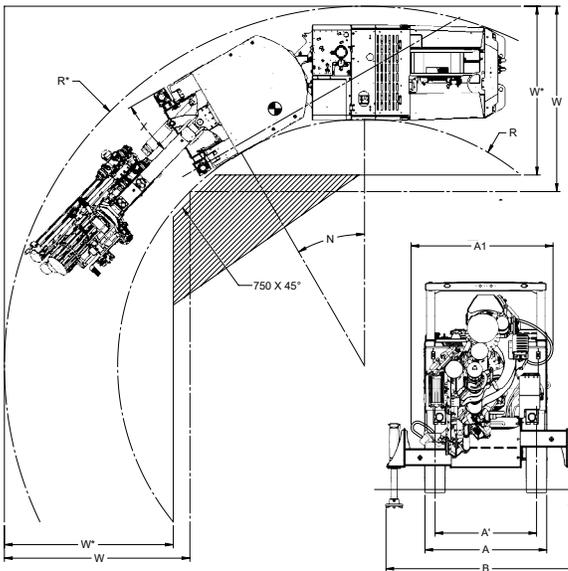
Operator console

Canopy	FOPS/ROPS certified - ISO 3449 (2005) and ISO 3471 (2008)
Cabin (optional)	FOPS/ROPS Certified Enclosed Cabin - ISO 3449 (2005) and ISO 3471 (2008)
Seat	Mechanical suspension seat

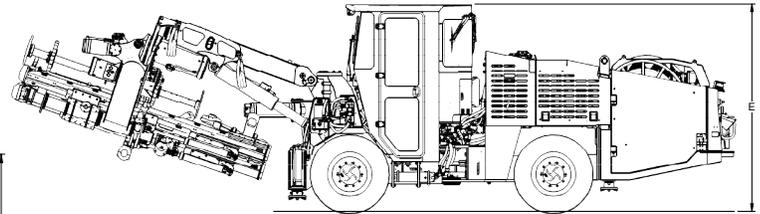
Engine specifications

Engine	Cummins QSB3.3
Certification	EPA Tier 3, MSHA, Canmet
Displacement	3.3 L
Output	74 kW (99 hp) @2600 rpm
Maximum torque	415 Nm (306 ft.-lbs.) @1600 rpm
Cooling type	Water cooled, charge air cooled

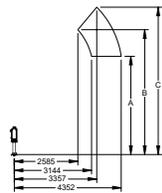
General specifications



SHOWN WITH 8' BOLTER

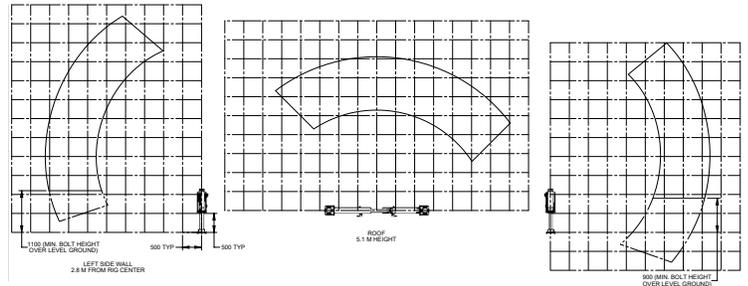


BACK HEIGHT CAPABILITY			
BOLTER	A (MIN)	B (OPTIMAL)	C (MAX)
5'	2893	4603	5522
6'	3178	4779	5698
7'	3481	4906	5825
8'	3785	5083	6002



Overall dimensions

A	Maximum width	1 680 mm	5 ft. 6 in
A'	Track width	1 400 mm	4 ft. 7 in
A1	Maximum Width (including hoses)	1 950 mm	6 ft. 4 in
B	Maximum width with outriggers extended	2 747 mm	9 ft.
C	Total length (configuration dependent)		
	Min (with 5' bolting head)	9 476 mm	31 ft. 1 in
	Max (with 8' bolting head)	9 940 mm	32 ft. 7 in
D	Height with canopy in collapsed position	2 210 mm	7 ft. 3 in
E	Height with canopy in drill/tram position	2 852 mm	9 ft. 4 in
F	Height to boom center	1 810 mm	5 ft. 11 in
G	Ground clearance	381 mm	1 ft. 3 in
H	Bolter length		
	Min (with 5' bolting head)	2 686 mm	8 ft. 9 in
	Max (with 8' bolting head)	3 607 mm	11 ft. 10 in
I	Carrier length	6 123 mm	20 ft. 1 in
J	Approach angle	14 deg / 25% grade	
K	Departure angle	18 deg / 32% grade	
L	Outer boom angle	20 deg	
M	Articulation to front axle	1 400 mm	4 ft. 7 in
N	Articulation to rear axle	1 400 mm	4 ft. 7 in
T	Jack lift	223 mm	8 in



Minimum mine dimensions

W	90 deg aisle width	3 295 mm	10 ft. 9 in
W*	Chamfered corner aisle width	3 000 mm	9 ft. 10 in

Turning radius

R	Inner	4 385 mm	14 ft. 4 in
R*	Feed Clearance/Outer Radius	6 396 mm	20 ft. 11 in
N	Turning Angle	30 deg	
X	Boom swing angle	19 deg	

Coverage dimensions

Sidewall coverage distance from rig center (configuration dependent)

	Min (with 5' bolting head)	1 519 mm	4 ft. 11 in
	Max (with 8' bolting head)	3 383 mm	11 ft. 1 in

Operating heights

Bolting head size	Operating height	Drill depth	Bolt head length	Bolt head length with 200 mm x 200 mm plate option selected	Drill steel length
JZD12 or JZD08 Drifter					
5 ft. bolting head	2 893 mm 9 ft. 5 in	1 630 mm	2 694 mm	2 762 mm	1 870 mm 6 ft. 2 in
6 ft. bolting head	3 178 mm 10 ft. 5 in	1 935 mm	2 998 mm	3 066 mm	2 175 mm 7 ft. 2 in
7 ft. bolting head	3 481 mm 11 ft. 5 in	2 240 mm	3 303 mm	3 371 mm	2 476 mm 8 ft. 2 in
8 ft. bolting head	3 785 mm 12 ft. 5 in	2 545 mm	3 608 mm	3 676 mm	2 784 mm 9 ft. 2 in
JZD10 Drifter					
5 ft. bolting head- (Base with JZD 08)	3 080 mm 10 ft. 1 in	1 630 mm	2 694 mm	2 762 mm	1 870 mm 6 ft. 2 in
6 ft. bolting head	3 367 mm 11 ft. 1 in	1 935 mm	2 998 mm	3 066 mm	2 175 mm 7 ft. 2 in
7 ft. bolting head	3 671 mm 12 ft. 1 in	2 240 mm	3 303 mm	3 371 mm	2 476 mm 8 ft. 2 in
8 ft. bolting head	3 977 mm 13 ft. 1 in	2 545 mm	3 608 mm	3 676 mm	2 784 mm 9 ft. 2 in

Standard and optional features

LCD dash	●
ROPS/FOPS certified canopy - ISO 3449 (2005) and ISO 3471 (2008)	●
Mechanical suspension seat	●
Joystick boom/drill controls	●
LED working lights	●
Parking brake	●
Articulation lock brace mounted to machine	●
5 ft. bolter head	●
Komatsu JZD08 drifters	●
Fixed centralizers	●
5.5 kW air compressor	●
Water pump	●
Cable reel	●
Mechanical fill for hydraulic tank	●
Outriggers	●
Intelsense	●
Single 10 lb fire extinguisher	●
Water flushing	●
Back-up alarm	●
Centralized carrier lubrication station	●
Various voltages: 380V / 50Hz, 440V / 60Hz, 480V / 60Hz, 525V / 50Hz, 575V / 60Hz	○
Rear view camera	○
11 kW air compressor	○
85 m hose reel	○
Fire suppression system (manually actuated)	○
Fire suppression system (manually actuated) with Checkfire System	○
Hydro Expanding Bolt Unit	○
Pressure washer with 20 m reel (standard finish)	○
Pressure washer with 20 m reel (stainless steel finish)	○
Secondary 20 lb fire extinguisher	○
Electric fill for hydraulic tank	○
Wiggins fill for hydraulic tank (standalone or with electric fill)	○
Wiggins fill for fuel tank	○
Centralized greasing for boom	○
Carrier Auto lubrication system	○
Grease station with hose reel and drum pump	○
Wheel chocks with bracket	○
Drill on diesel power (available only with JZD10)	○
Fiberglass exhaust wrap	○
Wye-Delta starter	○
Cable hangers	○
Red/Green directional lights (front and rear)	○
Beacon light kit	○

Standard and optional features

Brake lights	○
Front electronic curtain	○
Jump start receptacle	○
Air/water maintenance kit	○
Rear-mounted reel control box	○
Dewatering pump ready (pump not included)	○
Abrasion resistant boom hosing	○
Trailing cable (standard, extended length with cable hangers)	○

Bolting options

Bolting heads to suit 6 ft., 7 ft. and 8 ft. bolts	○
Adjustable carousel for two bolt lengths	○
Resin injection system	○
Hydraulic centralizers	○
Mesh handler	○
Cartridge resin/cement injection system (23 mm, 25 mm, 28 mm, 30 mm, 32 mm)	○
Friction bolt options in 33 mm and 46 mm	○
Chemical bolt installation kit with square, hex and hangar bolt driver	○
Mechanical bolt installation (hex and square drive) covering: #5, #6, #7 bolts	○

Cabin/canopy options

CB radio mount	○
CB radio antenna	○
Radio with speakers	○
Rock guard	○
Floor mat	○
Seatbelt sensor	○
Door sensor (cabin only)	○
Manual controlled spot lights (canopy only)	○
Joystick controlled spot lights (cabin only)	○

Environmental packages

Standard altitude package (Up to 3000 masl @ 40°C)	○
Corrosive environment package includes the following corrosion-resistant components: hydraulic cylinders, radiator, hose ends/fittings on all air/water lines and Nema 4X rated MCP enclosure	○
Low ambient temperature package includes corrosive environment package, low ambient cooler, oil heater, low viscosity fluids, tram range (-40°C to +10°C), drill range (-20°C to +10°C)	○

Flushing options

Water flushing + air blast	○
Water flushing + air blast + air mist	○

● standard equipment

○ optional equipment

Other options available - ask your Komatsu service representative

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