

# MOBILE MINING



SCALE **BOSS**<sub>3D</sub>

*AHEAD OF THE GRADE*



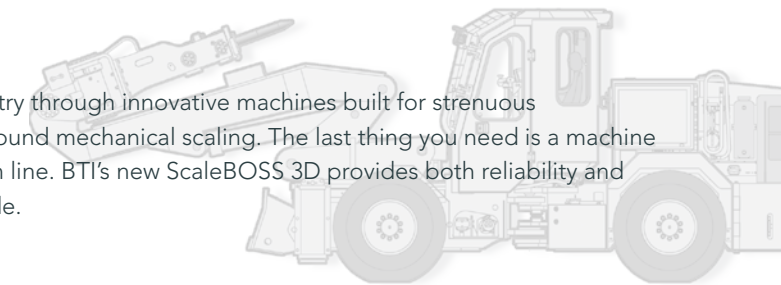
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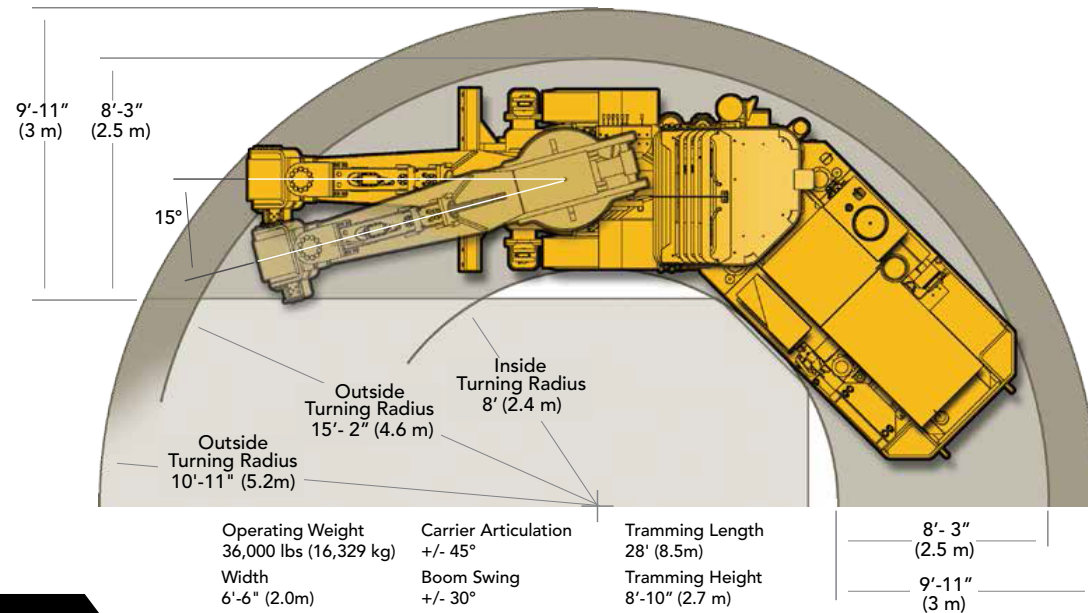
# TOUGH CONDITIONS CALL FOR TOUGH MACHINES



## MACHINES BUILT FOR THE UNDERGROUND

For over fifty years, BTI has worked to evolve the mining industry through innovative machines built for strenuous environments. And nothing is more demanding than underground mechanical scaling. The last thing you need is a machine that doesn't perform or compromises safety on the production line. BTI's new ScaleBOSS 3D provides both reliability and enhanced safety underground, keeping you ahead of the grade.





## SUPERIOR COVERAGE IN A SMALLER PACKAGE

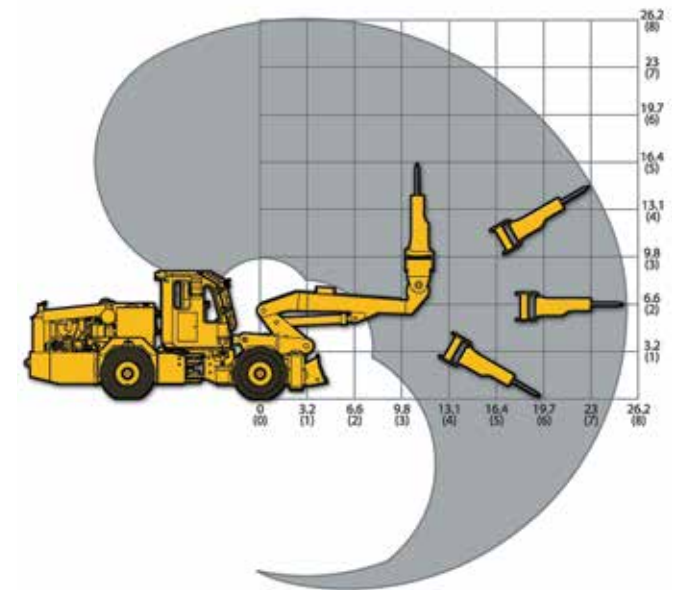
### FLEXIBILITY AND SAFETY COME STANDARD

The new ScaleBOSS 3D Scaler is for a new generation of mining productivity and safety. Its five-axis boom offers enhanced flexibility and superior coverage where other scalers fail. The heavy-duty, compact construction makes

it easy to maneuver while withstanding severe conditions. Ergonomic ROPS/FOPS certified operator cabin and HVAC system maintains excellent personnel safety while providing high visibility and comfort.

### FEATURES

- ⊕ Heavy-duty compact construction
- ⊕ Optimal for 3 x 3 to 5½ x 5½ meter headings
- ⊕ Five-axis boom for excellent maneuverability
- ⊕ Powerful and reliable Deutz diesel engine
- ⊕ Spherical roller bearing articulation joint designed for long life
- ⊕ Closed Loop Hydraulic Wheel Drive with separate reservoir, 4 wheel drive and traction control
- ⊕ Spring Apply Hydraulic Release(SAHR) parking / emergency brake in each hydraulic wheel motor.
- ⊕ Closed-loop hydraulic wheel end service brakes via
- ⊕ Pump-over-center swash plate
- ⊕ Heavy-duty mining tires
- ⊕ Load-sensing hydraulic circuit for boom and steering Functions
- ⊕ Dedicated open-center hydraulic circuit for breaker fire Function
- ⊕ 24Vdc / 80 amp electrical circuit with CANBus based system, proportional electro-hydraulic control and touch-screen human interface
- ⊕ Ergonomic ROPS/FOPS certified operator cabin with excellent visibility and operator comfort, complete with HVAC
- ⊕ Heavy duty fabricated boom structures with versatile feed, robust slew bearing, and dual rotary actuators for optimized coverage
- ⊕ CX8SB (800 ft-lb class) scaling breaker



### CLEANER AIR WITH EASY-PEASY MAINTENANCE

Built with our Hydraulic Wheel Drive (HWD) and Advanced Braking & Tramming Control System (ABT, patent pending), the ScaleBOSS 3D gains more traction and power with fewer emissions than conventional mechanical systems. Hydraulic braking means no brake pads to service or replace. With a dedicated, open-center hydraulic circuit for the breaker function, it's easy to identify and address maintenance issues. Cylinders and hydraulic components are protected to avoid damage from contamination.



# TECHNOLOGY TO STAY AHEAD OF THE GRADE

## MASTER YOUR MACHINE

Our system continually monitors your machine for improved performance and response. With real-time central monitoring and diagnostics, operator duties are simplified. The system gauges your engine, hydraulics system, traction control, wiring harness, coils, joysticks, sensors, system pressures, fluid levels and temperatures while keeping a log of machine hours, errors, faults, temperatures and pressures.

# OPERATOR COMFORT



## OPERATOR COMFORT

Our ROPS/FOPS certified cabin is fitted for complete operator comfort and safety. Every ScaleBOSS offers BTI's ergonomic seat with joystick control, HVAC system, safety glass windows with front rock guard and rubber isolators between the cabin and chassis for comfort during tramming and scaling.



# SPECS

## HYDRAULIC BREAKER

|                    |              |
|--------------------|--------------|
| CX8SB              |              |
| Impact energy      | 800 ft-lbs   |
| Impact rate        | 600-1500 bpm |
| Hydraulic pressure | 2,000 psi    |
| Oil Flow           | 12-24 gpm    |
| Weight             | 735 lbs      |

## CARRIER

|                                     |               |
|-------------------------------------|---------------|
| Engine                              | TCD2012L04 2V |
| Power rating at 2,300 RPM           | 129 hp        |
| Torque                              | 384 ft-lbs    |
| Tramming speed on flat              | 14 mph        |
| Tramming speed on 1:7               | 5 mph         |
| Articulation                        | +/- 45°       |
| Axle oscillation                    | +/- 8°        |
| Four wheel drive, hydraulic         |               |
| Traction control system             |               |
| Tires                               | 12.00 R20     |
| Service brakes                      | hydrodynamic  |
| Emergency/Park brakes               | SAHR          |
| Fuel reservoir, volume              | 50 gal        |
| Fire extinguisher                   | 20 lb         |
| Dry element air intake              |               |
| Catalytic exhaust purifier/silencer |               |
| Central lubrication system          |               |

## BOOM

|               |         |
|---------------|---------|
| Boom swing    | +/- 30° |
| Breaker tilt  | 180°    |
| Breaker swing | +/- 90  |

## HYDRAULIC SYSTEMS

|                                     |                       |
|-------------------------------------|-----------------------|
| Hydraulic pumps                     | 2 variable<br>1 fixed |
| Propel circuit pressure             | 6,175 psi             |
| Steering/boom circuit pressure      | 3,400 psi             |
| Breaker circuit pressure            | 2,700 psi             |
| Propel circuit reservoir            | 30 gal                |
| Steering/boom circuit reservoir     | 35 gal                |
| Breaker circuit reservoir           | 23 gal                |
| Filtration                          | 10 micron             |
| Air/oil hydraulic coolers           | 3                     |
| Low oil indicator on all reservoirs |                       |
| Mineral hydraulic fluid             |                       |
| Manual oil fill pump                |                       |

## ELECTRICAL SYSTEM

|                                                                                              |
|----------------------------------------------------------------------------------------------|
| 24 Vdc 80 amp alternator                                                                     |
| 2 X 195 Ah 12V batteries, in series                                                          |
| CANBus based electronic control Health monitoring and diagnostics for engine and HWD systems |
| Flame retardant wiring                                                                       |
| Lockable battery disconnect                                                                  |
| FWD/REV high output LED drive and work lights                                                |
| Rear red marker/brake lights and back-up alarm                                               |
| Horn                                                                                         |
| 12V 12.5A auxiliary power outlet                                                             |
| Steer by wire, joysticks integrated into operator seat arm rest                              |

## OPERATOR CABIN

|                                                         |
|---------------------------------------------------------|
| ROPS/FOPS Certified                                     |
| Windshield wipers/washer system                         |
| HVAC (heating, ventilation, air conditioning)           |
| Safety glass windows, with rock guard over front window |
| Rubber-damped for comfort during tramming and scaling   |

## OPTIONS

|                                            |
|--------------------------------------------|
| Pusher blade                               |
| Breaker auto-lube system w/ air flush      |
| Boom auto-lube system                      |
| Dust suppression system                    |
| Fire suppression system                    |
| Parking brakes release system              |
| Radio remote control                       |
| BX10SB (1,000 ft-lb class) scaling breaker |
| Stereo system                              |
| High altitude package                      |
| Exhaust wrap & manifold coating            |
| Fuel fast fill                             |



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