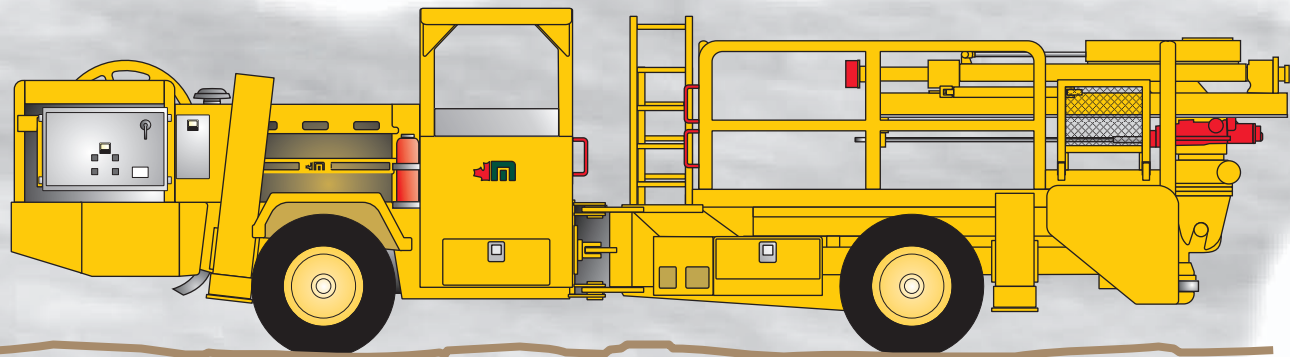




# Series-900 Scissor Bolter

First introduced in 1984, the MacLean Scissor Bolter has evolved into a complete ground support system for underground hard rock mines. The benefits of safety, productivity, versatility and quality of installation combine to provide the ideal tool for the mine development cycle and rehabilitation operations.



## FEATURES:

- Self-propelled, high speed four wheel drive carrier
- Hydraulic positioning, rock drilling/bolting systems
- Electric hydraulic control system with remote drive capability
- Operating protocol prevents exposure to loose rock hazards
- Multiple types of bolts can be installed (rebar, mechanical anchor, friction bolts)
- Long hole drilling capability
- High capacity storage for bolting supplies
- Elevated working platform

## BENEFITS:

### **Safety**

- All operations carried out from beneath supported ground
- Scissor platform enables correct scaling/barring practices to be carried out and facilitates mesh/screen placement
- Physical effort and fatigue are minimized compared to traditional rock bolting methods

### **Productivity**

- The scissor bolter is designed for one-man operation
- Single pass drilling allows for rapid installation of bolts
- Mesh/screen manipulation system ensures tight and accurate positioning (necessary for shotcrete spraying applications)

- Transverse feed enables drilling and bolting of a complete ring from a single set up

### **Performance**

- Reduction in development cycle time
- Installation of ground support to design specifications

### **Versatility**

- Changes between bolt types require no additional set-up time
- Cable bolting and mine services drilling and installation can be carried out simultaneously

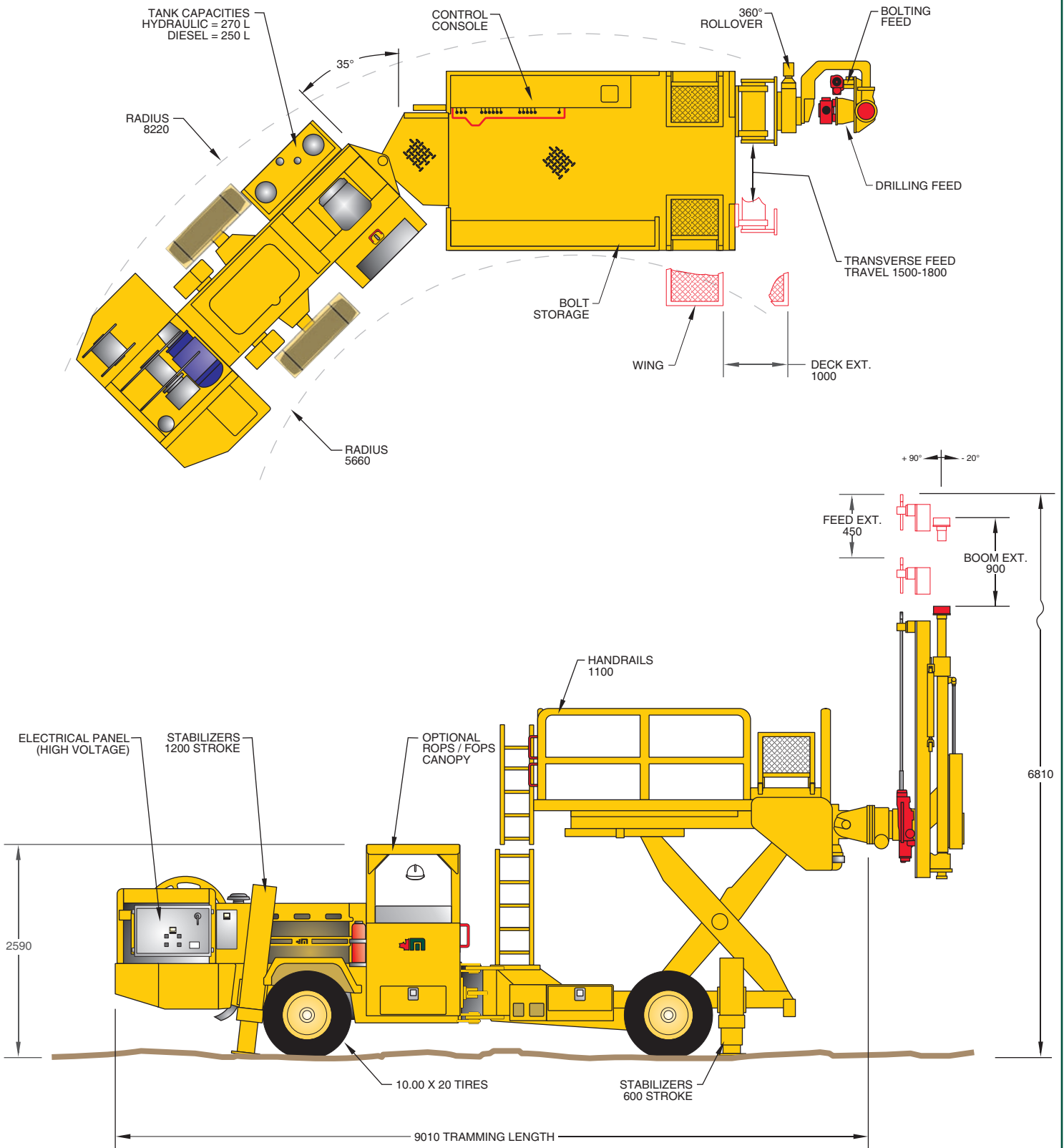
### **Cost**

- The proven lowest cost ground support system for hard rock mines

# APPLICATIONS:

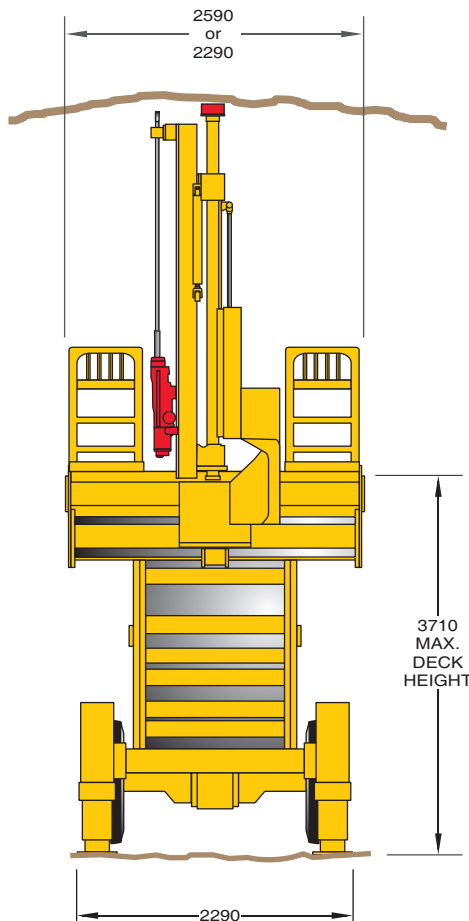
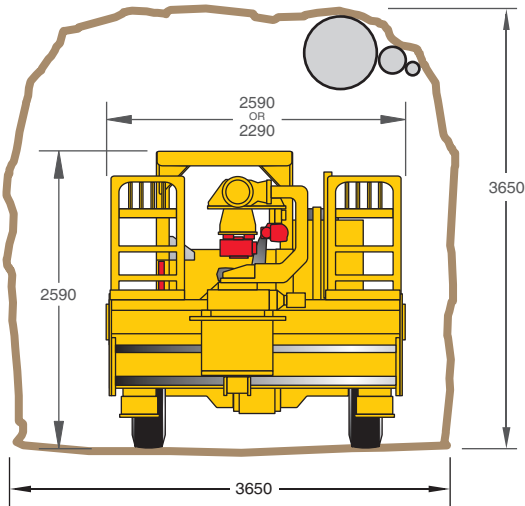
## Installation of ground support systems in:

- Development drifts and tunnels - 3.6m x 3.6m x 6.5m
- Incline and decline ramps
- Room and pillar mining operations
- Cut and fill stopes
- Mine rehabilitation operations
- Mine services installation and face preparation
- Long hole drilling and cable bolting



## DIMENSIONS - STANDARD

- Length: . . . . . 9010 mm (tramming)  
. . . . . 10400 mm (boom deployed)
- Width: 2290 or 2590 mm (on application)
- Height: . . . 2590 mm (with ROPS or Cab)
- Turning radius: Inner . . . 5660 mm (Inner)  
. . . . . Outer . . 8220 mm (Outer)
- Shipping weight: . . . . . 22,000 kg



## TECHNICAL SPECIFICATIONS

### OPERATING SYSTEM SERIES 900 BOLTER

#### CARRIER - MACLEAN SERIES 944

- Deutz 1013C diesel engine, 4-cylinder, 115kW, liquid cooled
- Clark 32000 Series, 3-speed powershift transmission
- New Holland D65 axles; 13,400kg capacity; 10° oscillation (front axle)
- Internal wet disc brakes; driveline brake (spring applied, hydraulically released)
- Braking system to CAN/CSA-M424-3-M90 Standard
- Steering - 35° centre articulation; dual steer cylinders; stick steer control
- 10:00 x 20 mine-rated, solid tires
- 24-volt electrical system; 80-amp alternator
- Exhaust (heat shielded); catalytic purifier
- Air cleaner
- 250-litre fuel tank
- Speed range (level):
  - 1st gear . . . . . 4 km/h
  - 2nd gear . . . . . 8 km/h
  - 3rd gear . . . . . 14 km/h
  - 15% ramp . . . . . 4.5 km/h
- Maximum Grade . . . . . 20%

#### WORKING PLATFORM

- 2440 x 4000 mm deck area
- 1000 mm hydraulic deck extension
- Ladder access
- 1900 mm scissor lift; cylinder safety interlocks (CAN3.B354.2.98 Standard)
- Bolt rack; mesh/screen hooks
- Tool storage
- Working lights
- Dash assembly; remote driving station
- Wing extensions
- Safety rails and chains

## TECHNICAL SPECIFICATIONS

### OPERATING SYSTEM - SERIES 900 BOLTER

#### POSITIONING SYSTEM

- 110° Rotary Actuator (for boom deployment from deck)
- Transverse feed, 1800 mm travel
- 360° Hydraulic Rollover
- Boom with 60° pivot, 900 mm crowd for stinger
- Mast interlock safety system
- Levelling jacks (4): 1200 mm stroke (forward); 600 mm stroke (telescopic)

#### DRILLING AND BOLTING SYSTEMS

- Drill feed, hydraulic chain drive (length to suit application)
- Rock drill Furukawa HD-90, with saddle
- Hydraulic long hole centralizer
- Hydraulic bolting feed with rotary head

#### ELECTRIC HYDRAULIC CONTROL SYSTEM

- 45 kW power pack with 100 cc and 45 cc piston pumps
- Cable reel with level winder and "last wind" brake interlock
- Controls - electric (discreet) or hydraulic proportional valves
- Auxilliary 24-volt electric pendant
- 24-volt deck-mounted remote drive system
- Emergency stop activation stations
- Ground fault system customer specific

#### AIR/WATER SYSTEM

- High pressure water pump (regulated)
- Water hose reel
- 10 l/second piston compressor
- Rock drill lubricator with interlock
- Oil cooler
- Wash wand

#### MISCELLANEOUS EQUIPMENT

- Fire suppression system
- Articulation lock bar
- Tow lugs

#### FACTORY OPTIONS\*

- Certified ROPS Canopy
- Enclosed cab
- Caterpillar™ 938-G power train
- Mercedes 900 Series engine
- Hydraulic drill options to suit customer fleet
- Combination impact/rotation head for friction bolts
- Electric "Swellex" pump
- High voltage configuration (380, 460, 575 &c.)
- Automatic fire detection system
- Spare wheel

\* All options must be pre-approved by  
MacLean Engineering & Marketing Co. Ltd.



Designed and manufactured by

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