

# Super Turbo Bolter

And associated drilling equipment  
for mining and civil engineering



Solutions from Materials Technology



Minova manufacture a range of compressed air operated, telescopic leg type drilling/bolting machines. These are lightweight, high performance machines, which were developed originally for the mining industry.

The design of the machines makes them readily adaptable to different types of drilling and bolting applications, and as such they can be used in the tunnelling and civil engineering industries. The machines offer flexibility, rapid set-up, low maintenance and operation costs and ease of use.

Minova are able to provide design proposals for the mount and operation of machines to suit different application.

## Minova Super Turbo Bolter



The flagship of the Minova range of machines is the Super Turbo Bolter, which has been designed for the drilling and installation of roofbolts and long tendons, and is supplied in five standard sizes.

### Benefits to the user:

- **Leg Extension**

Due to the side mounting of the motor the design of the Super Turbo Bolter enables it to achieve greater extension on two leg stages than other machines on 3 stages.

This is very important since there is almost 50% more thrust developed when drilling or installing a bolt using the Super Turbo Bolter as compared to other machine types which require a 3<sup>rd</sup> stage leg for similar reach.

Other benefits of this design arrangement are faster drilling times and less drill steel changes.

- **Impact Resistant and Hard Wearing Leg Material**

The Super Turbo leg assembly is made of fundamentally different materials and construction technique when compared to other machines which gives it a much longer operational life and resistance to damage. This gives the user longer machine availability rates and reduces leg replacement costs.

- **High Performance Piston Motor**

The Super Turbo Bolter is powered by a four cylinder high performance and low maintenance motor. This motor design gives higher and consistent power output with longer service intervals.

- **Lightweight and strong**

The careful selection of materials and design allows the Super Turbo to be the lightest and strongest machine available which enables it to operate reliably and effectively in even the toughest mining environments.



### Power requirements

(Super Turbo Bolter & Twin Leg Super Turbo Bolter)

Operating air pressure	400 kPa – 620 kPa	60 – 90 psi
Air consumption	2.8 – 3.4 m <sup>3</sup> /min	100 – 120 cfm
Water pressure	1030 – 2755 kPa	150 – 400 psi
Water volume	9 – 18 litres/min	2 – 4 gal/min

### Performance

(at 90psi operating pressure)

Thrust at stage 1	10.1 kN	2250 lbs
stage 2	8.3 kN	1800 lbs
stage 3	6.3 kN	1400 lbs

### Chuck speed and torque

Free rotation speed	500 rpm	550 rpm	600 rpm
Output torque at stall	235 Nm 175 ft.lb	200 Nm 150 ft.lb	165 Nm 125 ft.lb
Maximum torque	350 Nm 265 ft.lb	350 Nm 265 ft.lb	350 Nm 265 ft.lb

### Specifications

Part Number	No.of stages	Closed height	Extended height	Weight
ST 1000/500 3S	3	1000 mm	3000 mm	37.5 kg
ST 1200/700 3S	3	1200 mm	3800 mm	40.5 kg
ST 1345/900 2S	2	1345 mm	3450 mm	40.5 kg
ST 1500/1300 2S	2	1500 mm	3900 mm	43.0 kg
ST 1700/1500 2S	2	1700 mm	4600 mm	45.5 kg
Chuck size	19mm hex. standard (other options available)			

### Features of the Super Turbo Bolter

- High speed drilling and bolt insertion
- Effective high performance thrust
- High torque motor
- Optional chuck speed
- Lightweight
- Reduced noise and vibration
- Balanced for ease of handling
- Two and three stage machines available
- Suitable for roof bolting and cable bolting
- UK Coal Approved Ref: RJB 31G





# Minova Twin Leg Super Turbo Bolter



The Twin Leg Super Turbo is the latest development from Minova UK. Designed primarily for cable bolting in mines with reduced air power, the Twin Leg Super Turbo develops double the thrust of the standard machine, offering maximum drilling rates and easier operator control.

## Performance

Thrust at 90psi (6 bar)

stage 1	20 kN	4500 lbs
stage 2	16 kN	3600 lbs
stage 3	12.6 kN	2800 lbs

Thrust at 60psi (4 bar)

stage 1	13 kN	3000 lbs
stage 2	11 kN	2400 lbs
stage 3	8.4 kN	1900 lbs

## Chuck speed and torque

at 90psi (6 bar)

Free rotation speed	500 rpm
Output stall torque	235 Nm 175 ft.lb

at 60psi (4 bar)

Free rotation speed	420 rpm
Output stall torque	156 Nm 120 ft.lb

## Specifications

Machine	Closed height	Stroke	Extended height	Weight
Two stage 1000	1070 mm	1330 mm	2400 mm	55 kg
Three stage 1000	1100 mm	2000 mm	3100 mm	58 kg
Two stage 1200	1270 mm	1730 mm	3000 mm	60 kg
Three stage 1200	1300 mm	2600 mm	3900 mm	63 kg

## Features of the Twin Leg Super Turbo Bolter

- Ultra high performance thrust even at low air pressures
- Twin leg increases stability
- High speed drilling and cable insertion
- High torque motor
- Optional chuck speed
- Reduced noise and vibration
- Balanced for ease of handling
- Two, three and four stage machines available
- Suitable for roof bolting and cable bolting
- Improved life and lower wear
- UK Coal Approved Ref: RJB 31G



# Minova Remote Rib Bolter



A versatile bolting system for a variety of strata reinforcement applications.

## Machine Specifications

	Closed Height	Extended Height	Weight
Drill/Feed unit	1700 mm	Stroke 1200 mm	45 kg
Stinger	2400 mm	4300 mm	30 kg

(other heights available)

## Recommended pressures and flows

Operating air pressure	400 kPa – 620 kPa	60 – 90 psi
Air consumption	2.8 – 3.4 m <sup>3</sup> /min	100 – 120 cfm
Water pressure	1030 – 2755 kPa	150 – 400 psi
Water volume	9 – 18 litres/min	2 – 4 gal/min

## Drill/feed unit performance

Output torque at stall	235 Nm	175 ft.lb
Chuck speed	500 rpm	
Thrust at 620 kPa (90 psi)	10 kN	2250 lbs
Retract force	3.7 kN	830 lbs

## Stinger performance

Thrust at 620 kPa (90 psi)	10 kN	2250 lbs
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## Features of the Remote Rib Bolter

- Eliminates vibration problems
- High speed drilling
- Power retract
- Remote Controls on Umbilical
- 360° rotation
- Easy and safe operation
- Low maintenance cost
- Mounting option available
- UK Coal Approved Ref: RJB 375G



# Minova Stinger



The Minova Stinger is a lightweight aid to safe and efficient roof bolting.

Versatile uses include locating and supporting 'W' straps and mesh during roof bolt installations.

The provision of a control handle allows the operator to remain under supported ground giving added protection.

## Specifications and Machine Details

Closed height	2400 mm	7' 10"
Extended height	4300 mm	14' 0"
Weight	30 kg	66 lb
Operating pressure	620 kPa	90 psi
Thrust at 620 kPa	10 kN	2250 lbs
(other heights available)		

## Features of the Minova Stinger

- Supplied with top spike or mesh catcher
- Easy to handle
- One size for a full range of roadway heights
- Power retract
- Low maintenance costs
- Latest technology and approved materials
- Twin foot spikes giving good stability
- Built in dump valve prevents damage and over pressurising of the leg
- UK Coal approved Ref: RJB 367C



Details of the Stinger tops



## Other technologies available include:

- **Rock bolting systems**  
*resin capsules, roof bolters and bolts*
- **Ground support**  
*high volume output grouts for strata support*
- **Sprayable membranes**  
*polymer systems for strata control*
- **Strata injection systems**  
*for ground consolidation and water sealing*

# Minova Remote Cable Bolter



The Minova Remote Cable Bolter is designed for rapid, large diameter and long hole drilling with unrivalled performance.



## Machine Specifications

	Closed Height	Extended Height	Weight
Drill unit	1000 mm	2300 mm	35 kg
Stinger	2400 mm	4300 mm	30 kg

(other heights available)

## Recommended pressures and flows

Operating air pressure	400 kPa – 620 kPa	60 – 90 psi
Air consumption	2.8 – 3.4 m <sup>3</sup> /min	100 – 120 cfm
Water pressure	1030 – 2755 kPa	150 – 400 psi
Water volume	9 – 18 litres/min	2 – 4 gal/min

## Drill unit performance

Output torque at stall	235 Nm	175 ft.lb
Chuck speed	500 rpm	
Thrust at 620 kPa (90 psi)		
Stage 1	10 kN	2250 lbs
Stage 2	8.3 kN	1854 lbs

## Stinger performance

Thrust at 620 kPa (90 psi)	10 kN	2250 lbs
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## Features of the Minova Remote Cable Bolter

- Eliminates vibration problems
- Remote Controls on Umbilical
- Effective high performance thrust
- High torque motor
- Optional chuck speed
- Light weight and Reduced noise
- Low maintenance cost
- UK Coal Approved Ref: RJB 375G

#### Important notice

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