

# CMB RS150 Rockstar Cone Crusher

Designed, Developed and Manufactured by CMB International

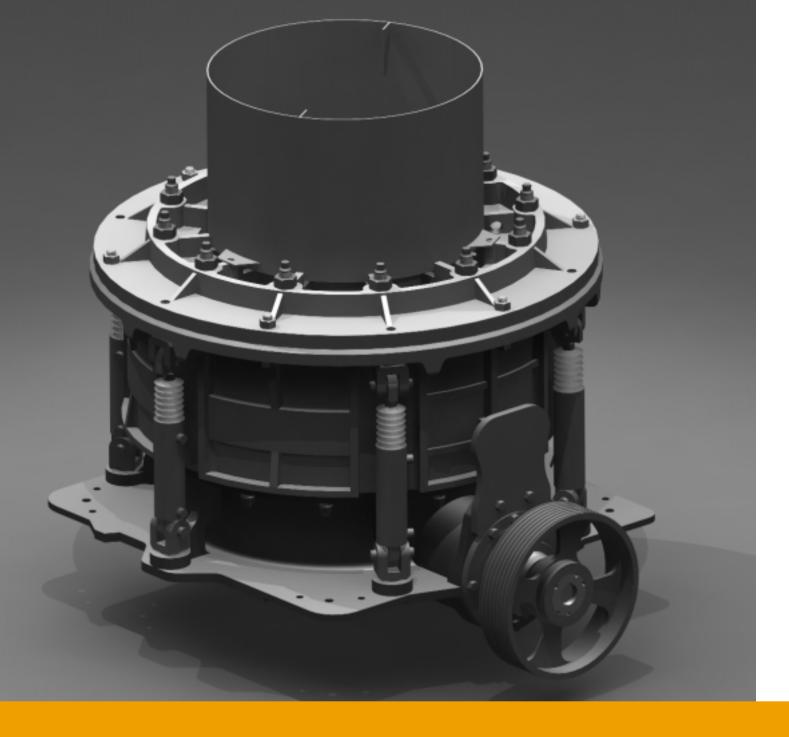












### INTRODUCTION

The CMB 150 Rockstar, a modern cast steel all roller bearing cone crusher features hydraulic adjustment which enables the operator to rapidly change the discharge setting, if necessary during the crushing operation. The machines hydraulics also incorporate tramp metal release, automatic reset and an unblocking feature which will clear the crushing chamber in a matter of minutes.

Re- metalling is carried out with the crushing head in situ.

The short shaft configuration, which requires no top bearing, enables all major components to be removed from above, and demands minimal head room for installation and maintenance.

The proven all roller bearing design provides for lower power consumption, long life, easy spares availability and the need for a more compact lubrication system.





### Product features:

- High outputs of good product shape
- Unattended operation
- Fast and simple adjustment
- Minimal maintenance
- Large unobstructed feed opening.





## HYDRAULIC CONTROL

The controls of the Rockstar comprise a contactless in-cylinder transducer, and an operating console which can be positioned within 4.5m from the crusher. Quick release self-sealing couplings are used to connect the twin hydraulic hoses that run between the crusher and console.



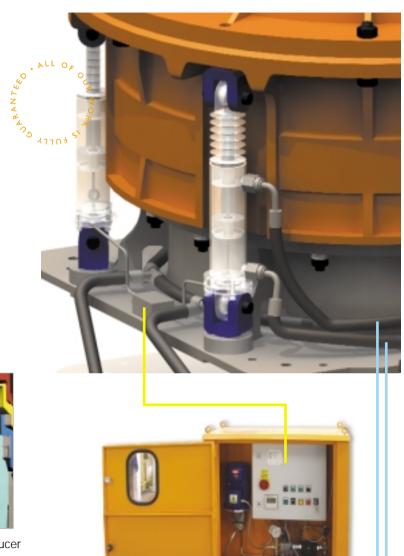
The console houses the fluid tank, motorised hydraulic pump, valves, full plc instrumentation and push button controls. There is an option for complete remote control operation, so the crusher can be operated from a control room any reasonable distance away.



The hydraulic system is able to clear the crushing chamber of obstructions whilst returning the crusher to its pre-set dis-charge settings.



Schematic showing transducer returning upperframe to original position.







### CHASSIS CONSTRUCTION

### Mainframe

The lower mainframe is a heavy duty alloy cast steel construction, which has been heat treated to ensure the required level of toughness. The central boss, which houses the mainshaft, is supported by three massive ribs and the countershaft housing.

### **Upper Frame**

The cast steel upper frame is supported by six hydraulic double action cylinders. The unit is machined to provide accurate location for the concave support bowl assembly, which is bolted to the upper frame.







## Wedge Assembly

The wedge assembly is a high grade cast iron taper ring machined to correspond with the inner tapered surface of the mainframe. Composite bearing pads are bonded to its outer surface which grip on the inner bore of the upper frame. The wedge pressure against the upper frame is adjusted by means of 12 studs.

CMB have optimised the wedge geometry to enable easy adjustment.









### CRUSHING COMPONENTS



#### Mechanical Sealing

The internals of the Rockstar are fully protected by an advanced sealing arrangement.

comprising upper and lower piston rings and twin banks of upper and lower replaceable labyrinth seals.



#### All Roller Bearing Construction

The Rockstar is equipped with a proven combination of Taper and radial roller bearings.

These provide long trouble free service, and minimise friction losses. Utilising these generously proportioned heavy duty bearings also eliminates the need for a large oil tank and ensures consistently accurate alignment of gears, sealing rings and the crushing members themselves.



#### **Concave Support Bowl**

The cast steel concave support bowl is accurately machined to support the concave

ring and is shaped to receive a plastic metal backing for the crushing member. Is lower face is provided with a machined tapered face to form a locked engagement with the upper frame.



The mainshaft is an alloy-steel forging, fully heat treated for strength. The lower section of the shaft is shrunk into the central boss of the mainframe whilst the upper section is machined and ground to carry the roller bearings.



#### Eccentric

The eccentric is steel casting machined on special fixtures to achieve the optimised throw to maximise production and product shape. The unit is iiq drilled to accommodate the rotary seal ring and gear.



#### Cone head

The cast steel cone head in machined internally to accept a large capacity taper roller bearing, and a top radial roller bearing. Externally the lower section is machined to accept the mantle

and shaped to allow plastic metal backing to be poured behind the mantle during re-metals.



#### Mantle and Concave

Both mantle and concave are cast from high grade manganese steel. The both parts are machined to ensure accurate location in their mating parts.



#### **Gear and Pinion**

The machine cut bevel gear and pinion are manufactured form alloy steel forgings, the teeth of both components are induction

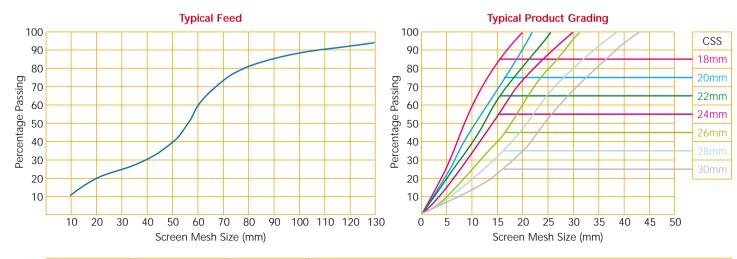
hardened to ensure long life. The pinion is located on the counter shaft by a special locking ring, and the gear is keyed and capscrewed to the eccentric.

Induction hardening of gear teeth provides both enhanced resistance to wear and greatly improves fatigue resistance.

### **SPECIFICATIONS**

### Note:

Capacity based on crushing clean, dry stone with a bulk density of 1.6 tonnes/m<sup>3</sup>



Cone Model	Max Feed Size	Min Setting	Approx Capacities Tonnes/hr.						
RS150 Std.	mm	mm	18	20	22	24	26	28	30
	150	18	105-115	115-130	120-135	125-140	130-140	130-140	130-140

### Rockstar RS150 Dimensions in mm

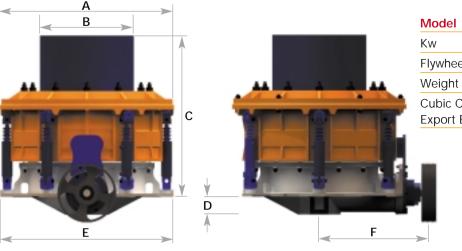
B 1000 C Max: 1837

Min: 1610

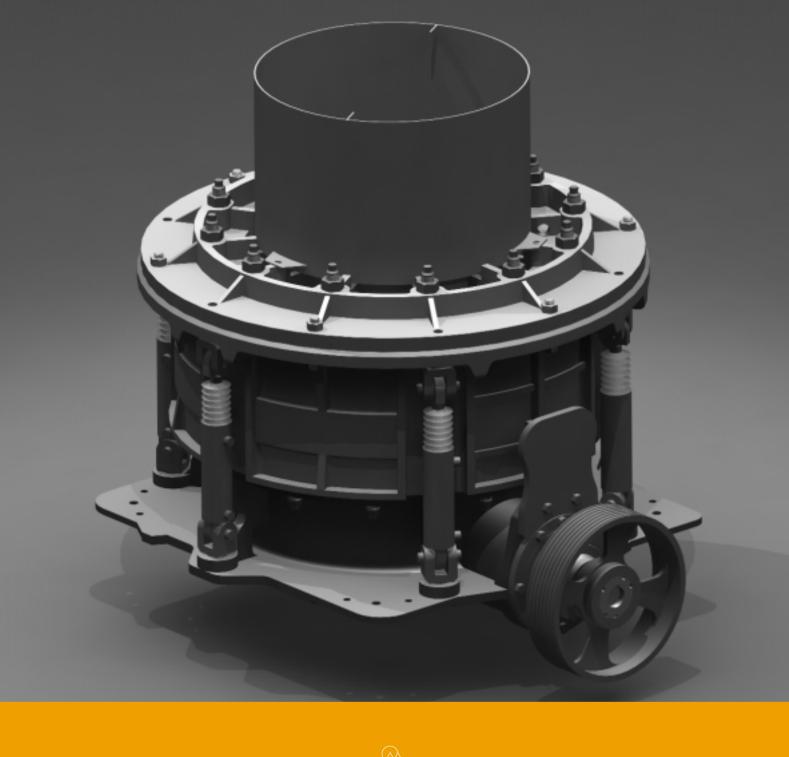
D 190E 1870

**A** 1880

**F** 1160



Model	RS150		
Kw	132 - 150		
Flywheel RPM	710 - 930		
Weight	12,000Kg		
Cubic Contents Export Boxed	21m³		







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