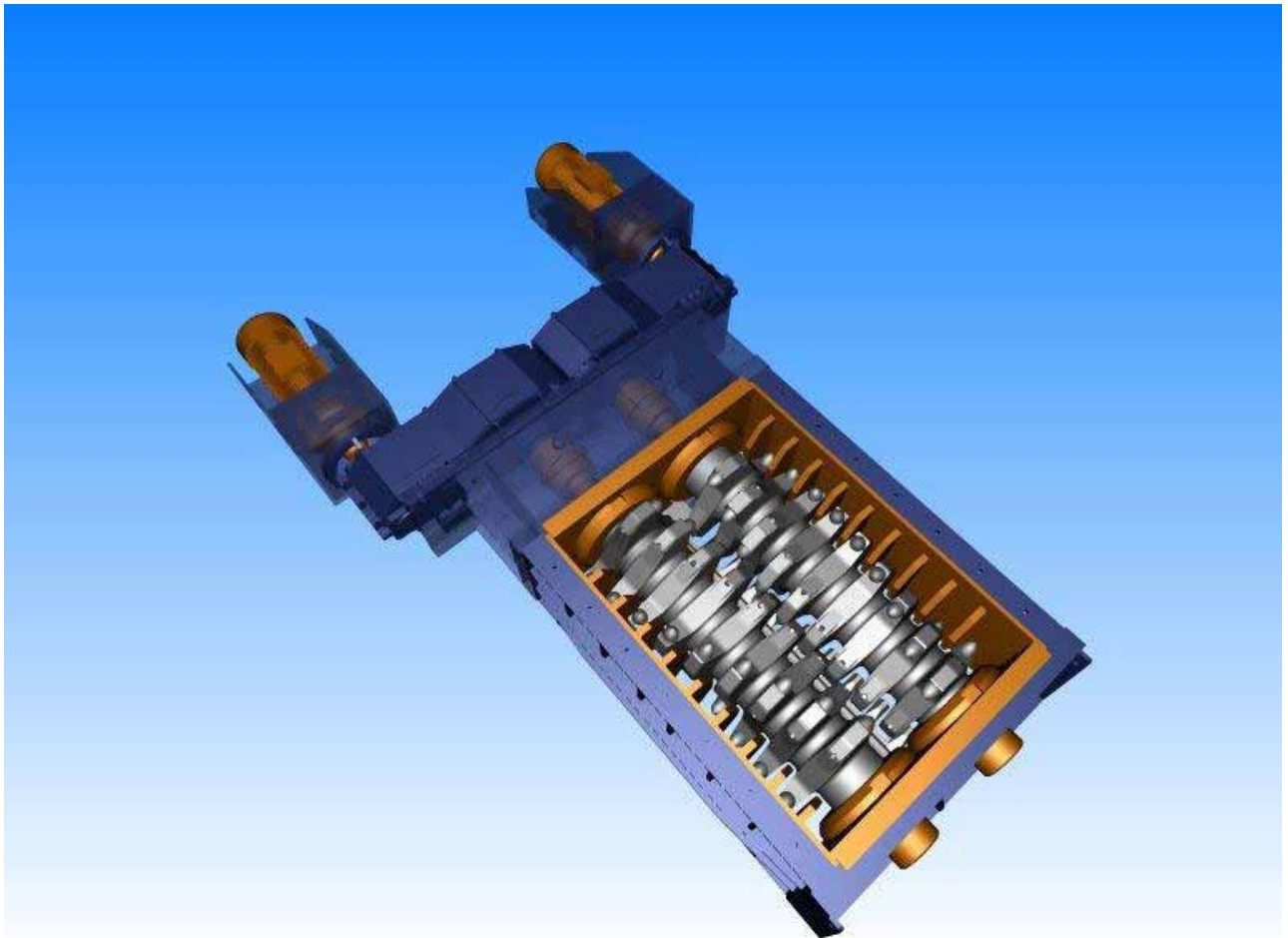
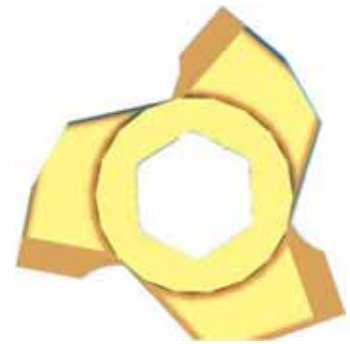


Mineral Sizers



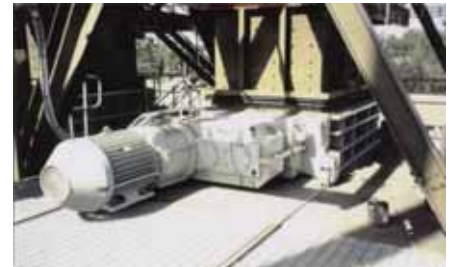
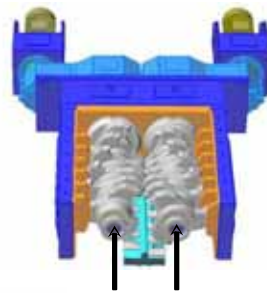
MINERAL SIZERS / ROLL SIZERS
FOR
PRIMARY / SECONDARY AND TERTIARY APPLICATIONS



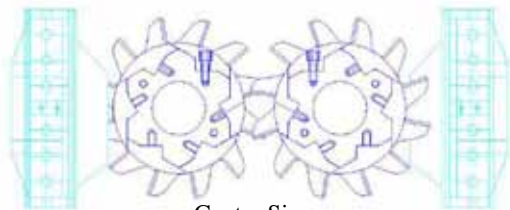
Manufacture a range of Single shaft and Twin shaft Roll Sizers. These heavy duty low profile machines can reduce minerals at high tonnage throughputs using minimal installed primary power. The Roll sizer can be configured to operate in two ways depending on material output size required. Through the centre (Centre Sizers) or down the sides (Side Sizers). All Sizers are designed to be twin drive or single drive. The range consists of the following size machines, defined by the centre distance between the main rotors.



- 550 Series Centre Sizer, Side Sizer
- 630 Series Centre Sizer, Side Sizer
- 800 Series Centre Sizer, Side Sizer
- 1000 Series Centre Sizer
- 1275 Series Centre Sizer
- 1450 Series Centre Sizer
- 1660 Series Centre Sizer



Shaft centre distance determines size of machine and selected by maximum lump size being fed into Roll Sizer



Centre Sizer
Shaft rotate inwards

Side Sizer
Shafts rotate outwards

The Roll Sizer is ideally suited to Static, Semi mobile and mobile installations, low overall weight Compact design and all crushing forces kept within the actual body of the sizers, allows for a more cost effective design without any major foundations.





SLOW SPEED ROLL SIZER CONCEPT

The Mineral Sizer twin rotating shaft concept was developed in the late 1970's. It was discovered that by using relatively slow speed turning shafts with large teeth protruding from them and rotating together that large volumes of material could be passed. The high torque and shearing force would crush the oversize material and reduce it to the required specified size producing minimal fines, dust, with low noise and power consumption.

This new concept revolutionized the underground coal mining sector, reducing blockages at transfer points.

The popularity of this relatively new concept has developed areas that require the use of this particular machine.

The Sizer can easily cope with very soft stick material as well as dry and hard rock types.

All kinds of applications have been presented to the Sizer due to it been able to achieve throughputs up to and exceeding 10,000 tonnes per hour. With material feed sizes over 2 meters cubed.

The Mineral Sizer has been developed to be installed in Primary, Secondary and Tertiary application with an outfeed size of 35mm been achieved.



Performance features of a Roll Sizer.

Low shaft rotor speed.
Low wear on working parts
Low noise levels
Low generation of fines
Creates a minimum of dust.
Crushing forces are kept within the sizer housing.
Simple maintenance schedules.
Modular construction of machine, easy to assemble and disassemble.
Teeth and wearparts can be replaced in situ, reduced down time.
Compact design with low feed heights.
Continuously rated power and throughputs.
Roll Sizer Construction.

Roll Sizer Construction.

The Mineral Sizer is made up of several key components.

1. Prime Mover (can be Electric Motor, Diesel Engine, Hydraulic Drive)
2. Fluid Coupling and Housing (Electric Motor, Diesel Engine)
3. Heavy Duty Design Gearbox (continuously rated)
4. Main Shaft Support Frame
5. Main Shafts and Support Bearings
6. Toothed Segments
7. Wear Plates/Cleaning Combs.

The Mineral Sizer support housing is fully fabricated, stress relieved and close toleranced machine.

The housings are all doweled and fastened together with high tensile fasteners.

The main shafts are machined from EN24 solid steel bar.

Support bearings are of the highest quality and housed within their own fully sealed capsules.

The Mineral Sizer tooth segments are cast from high wear steel or profiled from a selection of impact and wear grade steel plate.

The Heavy Duty reduction gearbox is the heart of the Mineral Sizer. Designed and manufactured to withstand the continuous requirements of a Mineral sizer.

Fully fabricated housing, stress relieved and close tolerance machined, fully doweled assemble and bored. Houses the machined, carburized and ground gears.





The gears are shrunk mounted onto their mating shafts and when assembled into the gearbox housing, provide a gear train to give the require gearbox reduction. Input and output shafts are splined to give simple assembly and better drive reducing damage through the continuous shock loading the roll sizer receives.

Wear Plates and Cleaning combs are fully fabricated from a high grade wear and impact resistant steel. They are all designed to be easily removed or replaced.

The whole assembled construction creates a reliable heavy duty machine suited to the required application. Giving total reliability, continuous duty cycles and throughputs that a customer requires.

Installation And Operation

The Mineral Sizer can be installed in many ways, Static Structure, Wheeled Trailer, Track Mounted or Semi Mobile. The Sizer can be directly loaded or fed by way of a feeder.

The Mineral Sizer is fitted with built in protection devices in case of a stall or Jam of the Rotors. The devices monitor the rotor speeds, fluid coupling, speed and oil temperature. On sensing a stall the device produces a signal to shut down the machine a warning is then shown on the control panel.

If the Mineral Sizer has stopped and has a full load of material in the chamber it can be started under full load. No Digging out is required.

All Mineral Sizers come complete with a tool box containing the correct tools to disassemble the Mineral Sizer.

A Fully Comprehensive Instruction, operation manual and spare parts list, fusible plugs for fluid coupling, air breather filters, oil sampling kit.

There are only four main spherical roller bearings that support the main shafts that require a small amount of grease on a daily basis. This is usually supplied by the onboard automatic lubrication system.

The Reduction gearbox has its own oil to lubricate the gears and spherical roller bearings. A site glass is used to monitor the level.

The Mineral Sizer is simple to operate and maintain. Lowering the cost of operation and product production.



Roll Sizer Engineering and Manufacture

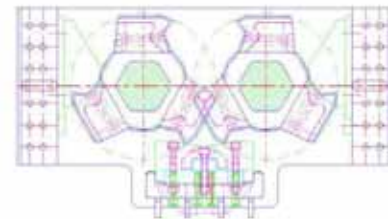
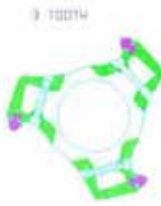
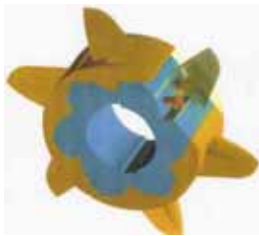




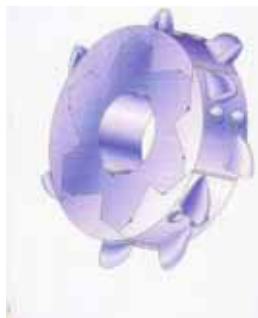
TOOTH AND ROTOR DESIGN

The Mineral Sizer will be configured with the appropriate tooth and rotor configuration to suit the Application that the machine has been selected for.

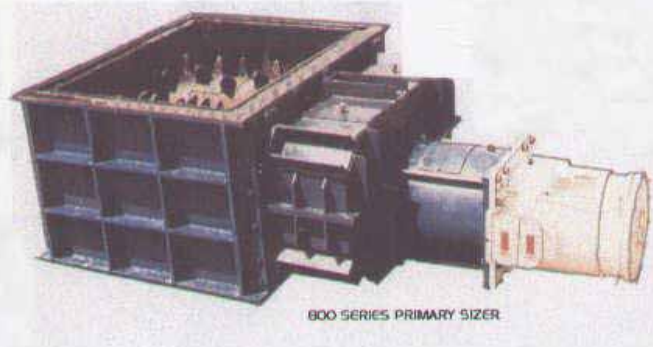
Primary Sizers can be configured with 3 tooth, 4 tooth and 6 tooth Segments, Solid hook type and heavy Duty replaceable caps or segments. The wearing caps or segments are manufactured using high wear and tough materials. Additional Hardfacing can also be applied to give a more long term usage Of the crushing rotors. The primary Sizer can be equipped with an adjustable breaker bar that is mounted Between and under to main rotors.



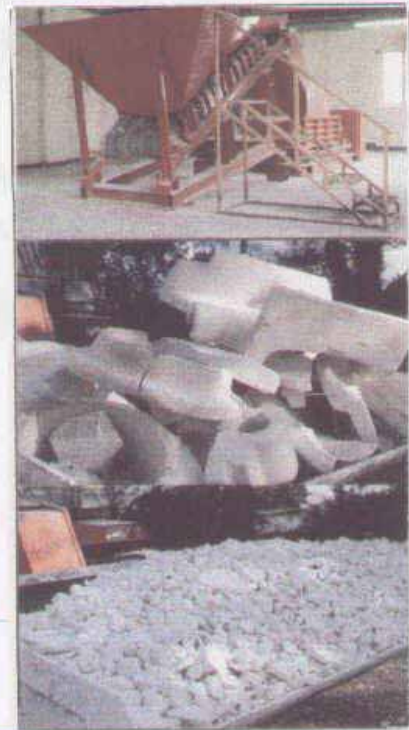
Secondary and Tertiary Roll Sizers will be configured with multi toothed segments that are bolted to the segment holder mounted on the main rotors.



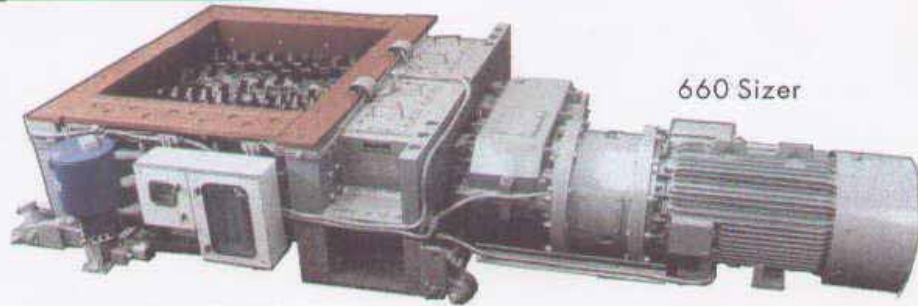
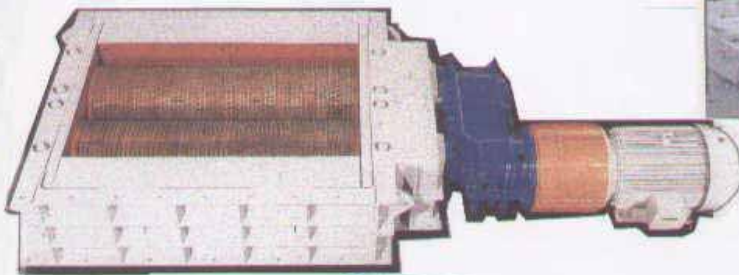
RANGE OF MINERAL SIZERS



800 SERIES PRIMARY SIZER



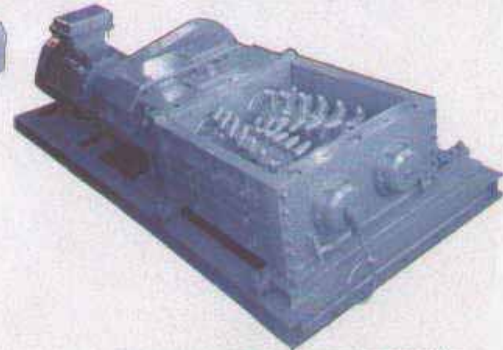
600 SERIES SIDE SIZER



660 Sizer



1.64 M SERIES PRIMARY SIZER



490 SERIES PROTOTYPE BREAKER FOR THE CERAMIC INDUSTRY, COMPLETE WITH SHAFT ENCODER.

GENERAL ARRANGEMENT OF A ROLL SIZER/MINERAL SIZER

