MINING
HANDLING
The Company

Founded in 1908, Bedeschi provides effective and reliable products in a wide variety of industries (bulk handling, container logistics, bricks) offering complete turn-key solutions for different product lines.

Limena, close to Venice, in the North Eastern part of Italy hosts the Company headquarters and the biggest manufacturing facility (the other being in Bergamo). Main mechanical components are manufactured in the state of the art automated Company workshops in order to keep always the highest quality and consistency in our deliveries. While the main functions are coordinated from the headquarters, the other branches (Bergamo, Genova, Miami, Kansas City, Dubai, Moscow...) assure prompt and effective service.

We assist you from the very beginning for the entire life of the project and over!

We cover each step of the project execution from the feasibility study and basic design to the assembly, installation, start up and for any need after commissioning, while the plant is in operation. We still proudly offer a TAILOR MADE solution for our Customers. Optimizing investment returns means well-designed installation and innovative mechanical solutions. Our products rate best in the market in terms of energy consumption operational costs and pollution control, as a result of our commitment to environment protection.
Mining Products

Apron feeders
- Inclined Feeders
- Horizontal Feeders
- Width up to 3000 mm
- Length up to 20 mt
- Hinged and curved pans by frontal scraper
- Perfect pans cleaning

Normal duty crushers
- For sticky materials compressive strength up to 800 kg/cm²
- Diameters up to 2000 mm
- Width up to 3000 mm
- Output up to 2500 t/h
- Scrapers for rollers cleaning

Heavy duty crushers
- Up to 2000 kg/cm² material compressive strength
- Diameters up to 1200 mm
- Width up to 3200 mm
- Output up to 2500 t/h

Stationary units
- Combination of inclined or horizontal apron feeder and roller crusher
- High volume Receiving hopper up to 200 m³
- Rear and side feeding of the hopper by dumpers

Semi-mobile units
- Skid mounted combination of inclined apron feeder and roller crusher
- Hopper’s feeding by payloader

Mobile units
- Crawler mounted combination of inclined apron feeder on roller crusher
- Self propelling units by diesel generator and hydraulic motors
- Hopper’s feeding by payloader
Working parameters

Outlet grain size, power and maintenance

In double roller sizers crushing technology, outlet granulometric size depends on:
- The gap between the two rollers
- The size, shape and number of teeth

The most important and qualifying tooth characteristics are:
- Number of teeth on each roller and position on the roller
- Tooth shape
- Tooth thickness

The wide selection of the number and the shape of teeth allows a great crushing flexibility. Low peripheral speed means low power consumption: many application tests confirm an average power absorption of 0.3-0.4 kW/h each Ton crushed. Another qualifying characteristic of the Bedeschi sizers, compared to the impact crushers, is that thanks to the design and operational qualities they are able to generate, during the process, a low quantity of fines particle even with hard and rocky material. This is an important advantage when the crushed material has to be operated by a modern vertical mill that works at high efficiency only when feed by granular material and minimal amount of fines particles.
Functioning principle

The rotors turn in opposite directions in order to allow the material to flow through the gap between the two toothed rollers. Rotating speed of the roller sizers is slightly different (10%-20%) in order to crush through compression strength and tensile and shear stress.

The peripheral speed of the rollers is slow, between 1.5 and 3 m/s, when compared to the impact machines speed, which is over 15 m/s. When the raw materials are plastic, a higher differential speed (20%) is selected. Raw materials are crushed by either compression strength or tensile and shear stress.

CRUSHING BY SHEARING AND TENSILE STRESS
When hard and rocky materials are processed, the differential speed is low (10% or less) to ensure that the compression strength effect is successful.

DIFFERENT SPEED FOR OBTAINING BOULDER BEST CRUSHING POSITION
The low peripheral speed is a particularly relevant factor because it allows for a remarkable reduction of the wear rate of sizer. Roller design allows a very high materials reduction ratio up to 1 to 10 at each crushing stage. Double roller sizers are equipped with scrapers which make it possible to keep the grooves and the work roller surface perfectly clean, avoiding any kind of clogging even with very sticky materials. Sizers can be installed to suit different installation requirements, even one on top of the other, with the primary crusher feeding the secondary crusher directly through a chute.
Nalco
(India)

National Aluminum Co., the Indian giant exploits several bauxite mines in central India and since 1985 has chosen Bedeschi as technological partner for all their crushing needs.

Bauxite can result in hard and sticky agglomerates sometimes very difficult to crush, Bedeschi experience with such difficult applications has brightly solved their needs since the very beginning.

This mutual partnership resulted in the supply, among others, of three giant double roll crushers RL 1600/2000, the latest being delivered these days.

<table>
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<th>Material:</th>
<th>bauxite</th>
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<tbody>
<tr>
<td>Density:</td>
<td>1.3 t/m³</td>
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<tr>
<td>Humidity:</td>
<td>9-17%</td>
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<td>Design capacity:</td>
<td>900 t/h</td>
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</table>
Shurovo  
(Russia)

Everybody knows that raw materials are natural products and each individual project is a new experience and a fascinating challenge and require specific solutions, especially when we treat moist materials both in hot and cold countries. Clearly, the conditions can be even worse in very cold countries, where very wet raw materials freeze, thereby causing further handling problems. In this case Bedeschi supplied a complete Mobile Crushing Unit to Shurovsky Cement in Russia. Bedeschi has a big know-how and a hundred year experience, in handling moist materials in extreme situation and creating new plant fit for cold countries, like in the former USSR countries or in Eastern Europe. Treating moist sticky materials has to be paid attention to the design of these machines, with special regard to size, shape, lining and construction features.

<table>
<thead>
<tr>
<th>Material</th>
<th>pre-crushed limestone</th>
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<tbody>
<tr>
<td>Density:</td>
<td>1.4%</td>
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<tr>
<td>Humidity:</td>
<td>up to 30%</td>
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<td>Design capacity:</td>
<td>450 t/h</td>
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