

# ROLL CRUSHERS

Single, Double, Triple & Quad



[mclanahan.com](http://mclanahan.com)



**McLanahan builds Single Roll Crushers, Double Roll Crushers, Triple Roll Crushers and Quad Roll Crushers, with various models of each design.** McLanahan's heavy-duty fabricated steel frame design, abrasion-resistant steel plate liners and easy-to-maintain parts mean decades of productive service.

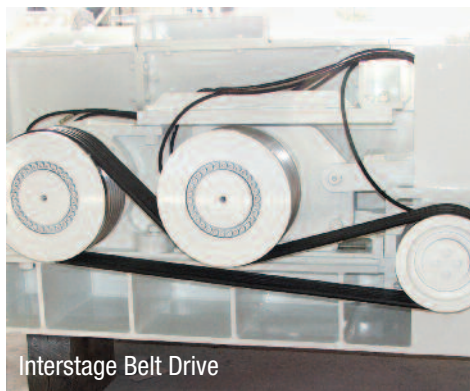


Roll Crushers use a combination of compression and shear force with up to four crushing rolls to reduce a variety of friable materials, such as coal, salt, coke, gypsum, potash, lignite, trona, lime, limestone, glass, phosphate (and many others with similar characteristics) to a desired sized-cubical product with minimum fines. Roll Crushers are not intended to crush hard rock such as granite or basalt where Jaw Crushers, Cones and Impactors are applied.

Horizontal crushing rolls are supported through the steel roll shafting by roller bearings. A Single Roll Crusher crushes against a curved plate; a Double Roll Crusher is designed to crush against two opposing rolls; a Triple Roll Crusher uses a single roll mounted over a double roll and the Quad Roll Crusher is designed with a double roll mounted over another double roll. Both the Triple and Quad Roll Crushers provide two-stage reduction.

McLanahan's roll elements can be designed to meet any application. They are available in a variety of diameters, widths, configurations and surface patterns and can be a solid, cast shell with a through shaft, flanged stub shafts or segmented bolted to hubs or a barrel. Roll and crushing plate tip elements are produced in our foundry and are cast from iron, manganese and alloy steels of up to 500 Brinell hardness. For maximum wear life, McLanahan provides weld-on carbide teeth and can apply overlay hard facing to any applicable surface.

Driven by electric motors and V-belts, all McLanahan Roll Crushers have increased efficiency, high through-put for increased production and low roll speeds that minimize dust and fines. The low headroom, compact design reduces installation costs.



Interstage Belt Drive



Double Roll Crusher

McLanahan Roll Crushers are designed for safe operation with exposed moving components guarded in accordance with MSHA and OSHA. In case of jamming or plugging of the rolls, underspeed detection de-energizes the electric motor.

#### Features Include:

- Heavy-Duty, Fabricated Steel Frames
- Abrasion-Resistant Steel Plate Liners
- Alloy-Carbon Steel Shafting
- Spherical Roller Bearings
- Cast Iron Or Steel Crushing Rolls And Segments
- Automatic Spring And Toggle Tramp Relief
- Product Size Adjustability
- Zoned Lubrication – Manual Or Automatic





## SINGLE ROLL CRUSHERS

UP TO 6:1 FEED-TO-PRODUCT REDUCTION RATIO

A single drive utilizes a gear and pinion transfer to apply the appropriate speed to the crushing roll.



### Cobra

Used in the primary reduction of clean coal, frozen coal, sand cores, resin, lime, coke, salt and other similar material. Ideal for wet, sticky feeds.

### Black Diamond

Used in the primary reduction of coal, salt, soft shale, cinders, brick, coke, phosphate and other similar material. Ideal for slabby or wet, sticky feeds.

### Super Black Diamond

Used in the primary reduction of shale, slate, gypsum, bauxite, coal with friable refuse and other medium-hard feeds. Ideal for slabby or wet, sticky feeds.

### Rockmaster

Used in the primary reduction of rock, ore, mine refuse and ROM coal. Ideal for slabby, or wet, sticky feeds.

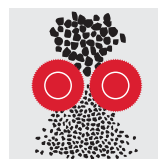
### Shale King

Used in the primary reduction of harder rock. Ideal for oil shale and material of similar hardness.

## DOUBLE ROLL CRUSHERS

UP TO 4:1 FEED-TO-PRODUCT REDUCTION RATIO

Available in either a single or dual drive motor, depending on the application. Single drive units transfer power to the opposing roll via an interstage belt drive.



### Black Diamond

Used for the secondary and tertiary reduction of clean coal, coke, salt, trona, quicklime, pebble lime, burnt lime, glass and other similar materials.

### Heavy Duty

Used for the secondary, tertiary and fourth-stage reduction of harder materials such as ROM coal with refuse, limestone, gypsum, bauxite, oil shale, various ores and other materials of similar hardness.

**McLANAHAN OFFERS PARTS AND SERVICE  
24 HOURS A DAY, EVERY DAY!**



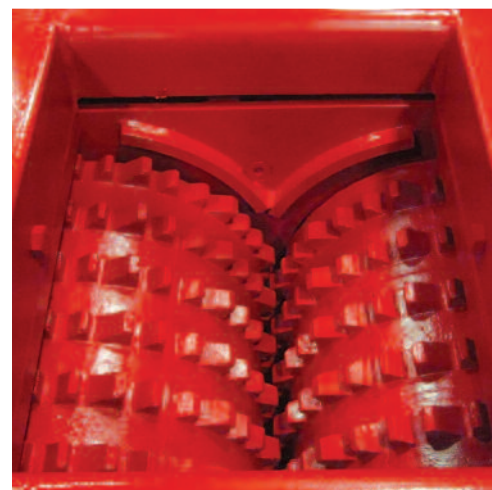
Interstage Belt Transfer



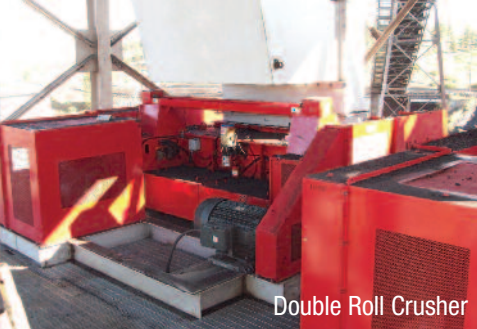
Single Roll Crusher



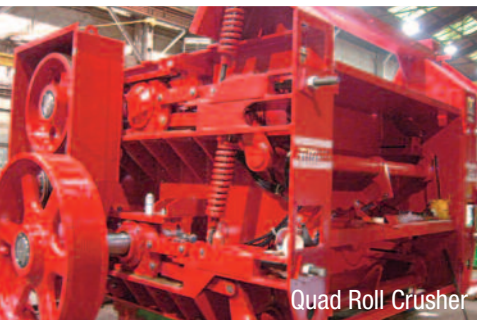
Single Roll Crusher



Double Roll Crusher



Double Roll Crusher



Quad Roll Crusher



Hook On Bolt-On Roll Segments



Automatic Toggle Mechanism



Interstage V-Belt Transfer

## TRIPLE ROLL CRUSHERS

Available in single, dual or three motor drive depending on crusher model and application. Utilizes gear and pinion, chain and sprocket or interstage belts to transfer roll rotation.



### Standard Duty

Used in the two-stage reduction of clean coal, salt, coke, glass and other similar material.

### Medium Duty

Used in the two-stage reduction of harder coal and feeds containing medium-hard shale and other similar material.

### Super Duty

Used in the two-stage reduction of harder coal and ROM feeds containing up to 10% hard rock and other similar material.

## QUAD ROLL CRUSHERS

Available in single, dual or four motor drive depending on crusher model and application. Utilizes gear and pinion, chain and sprocket or interstage belts to transfer roll rotation.



### Standard Duty

Used in the two-stage reduction of clean coal, salt, coke, glass and other similar materials.

### Medium Duty

Used in the two-stage reduction of harder coal and feeds containing medium hard shale and other similar material.

### Abrasive Duty

Used in the two-stage reduction of hot, abrasive feeds, such as sinter, iron ore, coke and other similar materials.

### Super Duty

Used in the two-stage reduction of ROM coal and other similar material containing moderate percentages of medium to hard refuse.

## McLanahan Offers The Widest Range Of Processing Equipment Available:

Roll Crushers | Hammermills | Impact Crushers | Jaw Crushers | DDC-Sizers  
Rotary Coal Breakers/Scrubbers/Screens | Feeders & Feeder-Breakers | Stage Loader Crushers

### Other Equipment:

Recessed Plate Filter Press | Cyclones | Dewatering Screens | Pug Mill Mixers  
Pumps | Sampling Systems | Separators | Thickeners/Clarifiers

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