

When Low Cost-Per-Ton-Crushed and Control Over Product Size Matter!



Applications:

The Pennsylvania Crusher Coalpactor has compiled an extensive performance record within the power industry. It is highly effective for the size reduction of coals and ideally suited for fluid bed boiler plants. It is also used in the steel industry for crushing metallurgical coal for coke.

The Coalpactor's popularity is the result of its ability to maintain top size and provide low cost-per-ton crushed while keeping fines at a minimum.

Design Concept

The crushing chamber is formed by a pair of curved breaker plate assemblies on opposite sides of the rotor assembly. This rotor assembly includes several rows of forged steel swing-hammers. The rotor is reversible, enabling the operator to change its direction. This equalizes wear on the opposite face of the hammer, maintaining each hammer at maximum sharpness and effectiveness.

As material enters the crusher chamber, it is struck in mid-air by the hammers. Size reduction occurs at this stage by what is termed "free-air impact."

The broken material is then driven against the breaker plates and ricochets repeatedly between the plates and the hammers as it is swept downward. Properly sized material then exits through the open bottom of the crusher.

Size Control

As the hammers rotate downward, the clearance between the hammer tips and the breaker plates grow progressively smaller until, at the lowest point, a critical clearance exists that produces the desired final size.

This gradual reduction of the clearance produces a smooth flow and gradual size reduction of material through the crusher, resulting in a low horsepower demand and – because the crushing action is almost entirely by impact with only minor material attrition between the hammer tips and breaker plates – minimal generation of fines. Additionally, fully-adjustable breaker plates handle high moisture-content materials with no problem.

Advantages

- Lower cost-per-ton-crushed than comparable crushers.
- Lower horsepower demand than comparable crushers.
- Control over product size, with minimum fines.
- Little or no loss of capacity or crushing efficiency when crushing high moisture content materials.
- Less chance of damage to the crusher from uncrushables.
- Hammers normally last longer than in crushers with grates.

OUR FLAGSHIP BRANDS



Construction

Frame

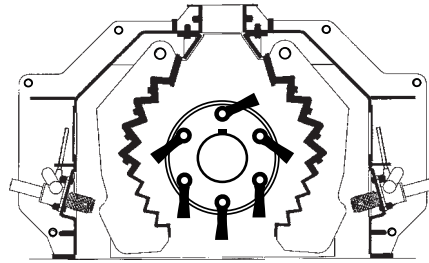
The frame is fabricated of thick steel plates and shapes and is equipped with replaceable, abrasion-resistant steel liners. When the doors on either side of the rotor are swung back, the rotor assembly, breaker plates, and liners are almost totally exposed for maintenance.

Breaker Plate Assemblies

The breaker plate assemblies consist of carbon-manganese steel plates mounted on an adjustable frame. Synchronous gear jacks are supplied as standard in order to control the clearance between the hammer tips and breaker plates.

Rotor Shaft

The shaft is machined from forged steel and drilled to enable hydraulic removal of the bearing from the shaft to expedite bearing replacement.



New Retrofit Design!

Based on feedback from our Coalpactor users, we've completely changed the cage assembly to provide improved wear life, easier change-out and less maintenance.

Advantages of the new design:

- Doubles the amount of crushing surfaces, going from 8 to 16 surfaces on either side of the rotor.
- The wear plates have been improved with a higher hardness material.
- Decreased depth of grooves between crushing surfaces.
- Less maintenance when changing out plate segments.
- Cast segments are one quarter the length of the cage.
- Plate segments are interchangeable from top to bottom with any area on the cage.

This new design is now standard on all new machines and easily retrofitted to existing machines. Contact our customer service team for more information about retrofitting your machine.

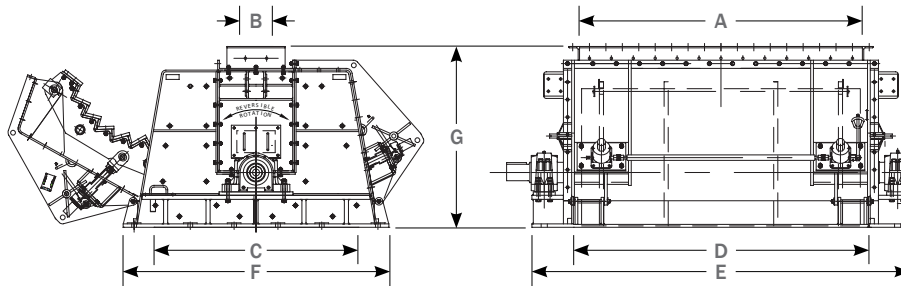
Hammers, Hammer Suspension Discs and Bars

Hammers are forged of tough alloy steel, then differentially heat-treated for maximum life. The massive hammer suspension discs are cut from carbon-manganese steel, keyed to the rotor shaft and securely clamped with a massive lock nut. All discs are drilled to permit alternate hammer arrangements. The suspension bars extend the entire length of the rotor assembly and support the hammers. Both ends are drilled and tapped to facilitate their removal when changing hammers.

Bearings and Bearing Housings

Spherical roller bearings with tapered bore are standard. These are mounted in split pillow-block housings with seals. The rotor shaft is drilled to enable hydraulic loosening of the bearing from the rotor shaft for replacement.

Dimensions and Weights



| MODEL | IN (MM) | | APPROXIMATE LAYOUT DIMENSIONS* AND SHIPPING WEIGHTS** | | | | | WEIGHT LBS (KG) |
|-------|--------------------|-----------|---|-----------------|-----------------|----------------|-------------|--------------------|
| | INPUT OPENING A | B | DISHARGE OPENING C | D | LENGTH E | WIDTH F | HEIGHT G | |
| 9-38 | 37-3/8" (949) | 10" (254) | 58" (1473) | 39-3/8" (1000) | 58-3/8" (1482) | 80" (2032) | 49" (1245) | 10,000 (4,526) |
| 15-44 | 73" (1854) | 12" (305) | 74-1/2" (1892) | 78-3/4" (2210) | 109-1/2" (2781) | 97" (2464) | 66" (1676) | 31,000 (14,061) |
| 19-44 | 85-1/2" (2172) | 12" (305) | 74-1/2" (1892) | 87" (2851) | 112-1/4" (2851) | 97" (2464) | 66" (1676) | 34,000 (15,422) |
| 23-44 | 102" (2591) | 12" (305) | 74-1/2" (1892) | 107-3/4" (2737) | 138-1/2" (3518) | 97" (2464) | 66" (1676) | 40,300 (18,280) |
| 23-50 | 102" (2591) | 13" (330) | 74-5/8" (1895) | 107-3/4" (2737) | 138" (3505) | 97-1/8" (2467) | 70" (1778) | 42,000 (19,051) |
| 707 | 106" (2692) | 19" (483) | 126" (3200) | 108" (2743) | 154" (3912) | 147" (3734) | 106" (2692) | 90,850 (41,209) |

* Certified drawings will be furnished for installation. Installation supervision is available.

** All weights are for 4 rows of hammers, except for Model 707 which has 6 rows of hammers.

OUR FLAGSHIP BRANDS

