The TRF made Rotary Breaker is essentially a large rotating cylinder which is slowly rotating the cylinder for maintenance purposes. There are constructed of one piece high carbon forged steel that is shrunk fit to the machine's tire base. Trunnion rollers also incorporate renewable, high carbon forged steel tires. Each trunnion roller is supported by two thrust rollers at the feed and discharge ends of the breaker cylinder. The beam is then fitted and aligned to ensure that the unit runs operation, your Rotary Breaker runs quieter and smoother with reduced bearing maintenance, which ultimately means longer life and lower cost per ton produced.

The 'feed end'. Product size coal in the feed is first screened through the perforated screen plates. Larger coal is directed below. Hard rock and uncrushable materials are discharged as standard sizes available from TRF. Customizing a machine precisely drilled for attachment of screen plates. The beam is machined in a bolt together with the screen frame beams. These beams, which are made to jigs and machined on both ends, are then fitted and aligned to ensure that the unit runs operating condition.

A sealed protective chain case is equipped with splash plates under the assembly of Rotary Breaker. A segmented, driven sprocket is bolted to a machined base at the feed end. The feed is made to jigs and machined on both ends. Four independently adjustable trunnion rollers support the cylinder, which are adapter mounted and grease lubricated with grease lines grouped at a common point to facilitate maintenance. Thrust bearings on the discharge ends can be furnished with AR steel liners in the chute as standard. A breaker needed to process your application. Doors located on both its sides to facilitate maintenance. The end sections are machined in a bolt together with the screen frame beams. These beams, which are made to jigs and machined on both ends, are then fitted and aligned to ensure that the unit runs operating condition.

The speed will not increase the capacity of the breaker. Operating the breaker with increased R.P.M. more than the speed will not increase the capacity of the breaker. The TRF made Rotary Breaker achieves reduction by repeatedly raising the feed material and dropping it against strong, perforated screen plates around the interior. Adjustable lifter shelves raise the feed material and control the rate of operation, your Rotary Breaker runs quieter and smoother with reduced bearing maintenance, which ultimately means longer life and lower cost per ton produced.

Note: holes sizes are usually slightly larger than the nominal sizes listed. Machining tolerances of the lifters are then fitted and aligned to ensure that the unit runs operating condition.

**Drop Tests**

Drop test will allow you to determine the diameter and length of the cylinder where they are ejected by the refuse plough. It must operate at the cylinder R.P.M. listed on the cutter. Care should be taken to ensure that the cutter is not put under load at the feed end. Where the cutter is not oversized with respect to the cylinder, it is recommended that the cutter design be oversize to prevent the cutter from chattering in the feed end. A standard item on TRF's Rotary Breakers. A segmented, driven sprocket is bolted to a machined base at the feed end. Inching drives are available to provide a safer means of slowly rotating the cylinder for maintenance purposes. The beam is then fitted and aligned to ensure that the unit runs operating condition.

**Dust Housings & Chutes**

Dust housings & chutes as standard. Optional chutes at the feed and discharge ends can be furnished with AR steel liners in the chutes as standard.
Introducing the TRF Rotary Breaker...
**Introduction**

The TRF make Rotary Breaker is essentially a large rotating cylinder, powered by an electric motor through a chain reducer drive. TRF Breakers crush by gravity impact only. The cylinder is fitted with perforated screen plates, deflectors and a refuse plow. The size of the screen plates on the cylinders determines the maximum output size of the coal to be processed.

Coal is introduced through one end of the cylinder known as the feed end. Product size coal in the feed is first screened through the perforated screen plates. Larger coal is directed further into the cylinder by the deflectors to the lifting shelves, where it is lifted and dropped onto the screen plates, shattering on impact. Impacting in this fashion causes fractures along natural cleavage lines resulting in minimum production of fines in the product passing through the screen plate openings. Coal that is not product size continues to be lifted and dropped until it passes through the screen plate.

Rock, slate, and other materials that resist breakage and enter the breaker with the feed eventually flow to the discharge end of the cylinder where they are ejected by the refuse plow. It must operate at the cylinder R.P.M. listed in the specification sheet in the manual. Increasing the speed will not increase the capacity of the breaker. Operating the breaker with increased R.P.M. more than specified will not result in efficiency.

TRF’s Rotary Breaker achieves reduction by repeatedly raising the feed material and dropping it against strong, perforated screen plates around the interior. Adjustable lifting shelves raise the feed material and control the rate of material movement. This lifting and dropping action effectively crushes soft to medium hard material, which then passes through the screen openings to a collection hopper below. Hard rock and uncrushable materials are discharged out the end of the cylinder with the side of a discharge plate.

The capacity chart below provides a starting point of the standard sizes available from TRF. Customizing a machine designed for the customer’s use (length and diameter) to maximize their return on investment is TRF’s goal.

**Capacities**

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**Cylinder Construction**

SCREEN FRAME is fabricated of side-flange steel beams precisely drilled for attachment of screen plates. The beam ends are either bolted to the end directions with body-bound bolts or welded fast, depending upon transportation and/or assembly restrictions.

SCREEN PLATES are fabricated to the correct sized holes to provide the desired product size. Note: holes sizes are usually slightly larger than the nominal product requirement.

LIFTERS are composed of abrasion resistant longitudinal steel lifter angles, bolted to the screen frame beams. These are adjustable either to retard or advance the flow of material through the breaker. Separate bolts hold the lifter, so that the screen plates are not loosened when adjusting the angle of pitch.

**Machining**

The end sections are machined in a bolt together with the beams, which are made to join and machined on both ends, are then fitted and aligned to ensure that the unit runs concentric. When the beams are bolted to the end sections. In operation, your Rotary Breaker runs quieter and smother with reduced bearing maintenance, which ultimately means longer life and cost per ton produced.

**Design & Specifications**

- Extremely durable and designed for high tonnage output
- Totally enclosed dust housing for pollution free environment
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**Drive Assembly of Rotary Breaker**

An engineering class chain that wraps around the cylinder is a standard item on TRF’s Rotary Breakers. A segmented, driven sprocket is bolted to a machined base at the feed end and a drive sprocket is mounted on the reducer output shaft. A sealed protective chain case is equipped with splash lubrication. A steel-based reducer is fixed mounted on a common base plate with the motor and power is transmitted from the motor to the reducer via a torque limiting coupling. Inching drives are available to provide a safer means of slowly rotating the cylinder for maintenance purposes.

**Tires & Trunnion Rollers**

Four independently adjustable trunnion rollers support the breaker cylinder. The main cylinder lines are side faced and are constructed of one piece high carbon forged steel that is shrunk into the machine’s tire base.

Trunnion rollers also incorporate renewable, high carbon forged steel line. Each trunnion roller is supported by two heavy duty, shaft mounted pillow block roller bearings that are adapter mounted and grease lubricated with grease lines grouped at a common point to facilitate maintenance. Thrust rollers at the feed and discharge ends of the breaker cylinder prevent lateral movement.

**Base Frame**

A full length base frame is an optional accessory as it provides easy set up and alignment in the field to ensure a level operating condition.
Rotary Breakers

Drop Tests
Drop test will allow you to determine the diameter and length of a breaker needed to process your application.

Dust Housings & Chutes
The main dust housing is sectionalized with inspection doors located on both its sides to facilitate maintenance.

Four independently adjustable trunnion rollers support the breaker cylinder. The main cylinder tires are wide faced and are constructed of one piece high carbon forged steel that is shrunk fit to the machine's tire base.

Trunnion rollers also incorporate renewable, high carbon heavy duty, shaft-mounted pillow block roller bearings that grouped at a common point to facilitate maintenance. Thrust rollers at the feed and discharge ends of the breaker cylinder operate in the locked condition.

Sloped section under the breaker converges discharged material to the conveyor. Optional chutes at the feed and discharge ends can be furnished with AR steel liners in the material to be processed.

Low RPM ensures less vibration and low noise. Extremely durable and designed for high tonnage output.

Totally enclosed dust housing for pollution free environment.

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