



OSBORN

an Astec Industries Co.



Double Roll Crushers

Double Roll Crusher

Osborn Double Roll Crushers can be used for primary and secondary crushing. The Double Roll Crusher is generally regarded as a 4:1 feed to product ratio crusher, however in some instances, dependent upon material friability and hardness, it is possible to achieve a 6:1 crushing ratio. The feed material should enter the centre of the gap between the two rolls and spread across the full roll width for maximum efficiency and this ensures a uniform product size distribution.

For strict coal product specifications the Osborn Double Roll Crusher is preferred. It is important to understand the material characteristics, as the type of coal will often vary considerably. Hardness, rock content, friability and moisture content are the major factors that need to be identified, together with the crusher capacity, maximum lump size, required product size and the amount of fines that are acceptable.

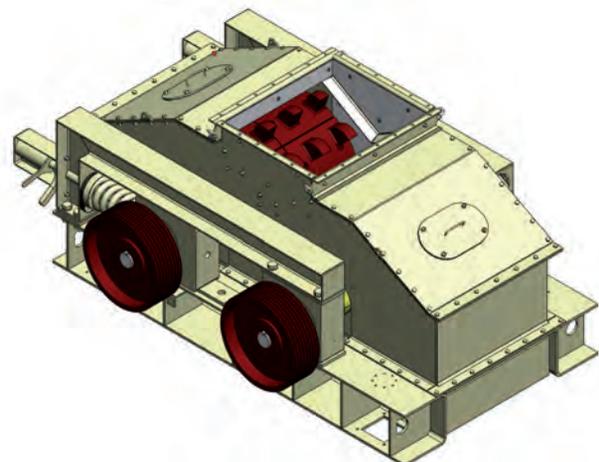
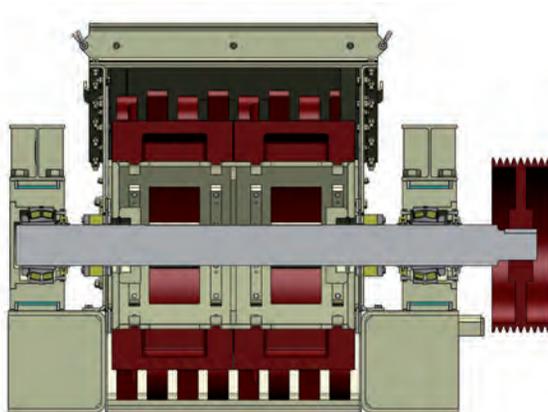
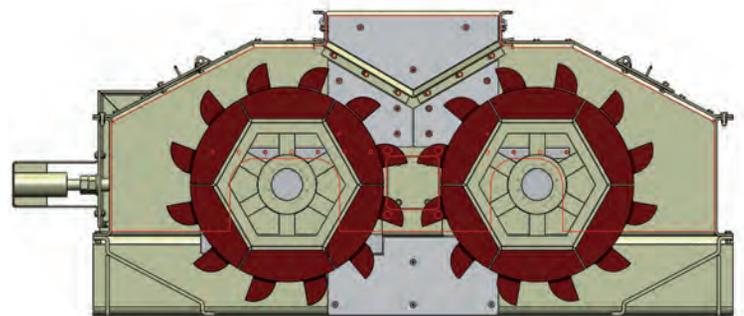
Efficient crushing will lower the power requirements and increase the life of the crusher segments. When the correct crushing ratio is used and the optimum roll diameters selected, the segments will grip the feed material more efficiently and it will also not allow pieces to roll on top of the segments due to the incorrect nip angle, this assists in reducing wear.

Crushing rolls and drive

Each roll assembly comprises of renewable and reversible toothed segments, bolted and keyed to a robust hexagonal hub with the nuts inside the hub. Locking nuts are securely located in fabricated pockets in the drum. This enables removal and replacement of segments from the outside using only one tool (Allan Key). Bolt heads are protected from excessive wear by being counter sunk in recesses on each segment. Teeth are arranged in a staggered formation on the segments to prevent tooth on tooth impact. Tooth proportions are designed for the particular product requirements.

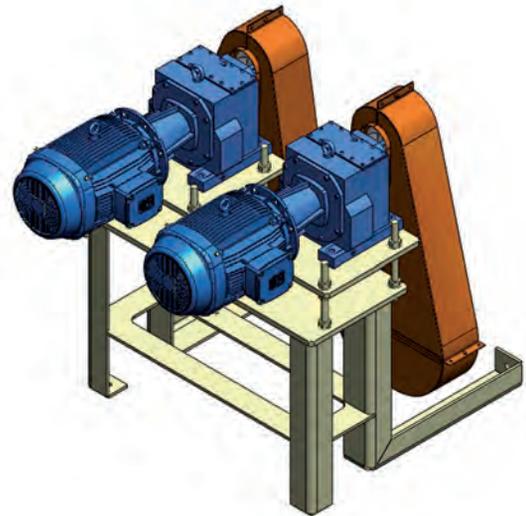
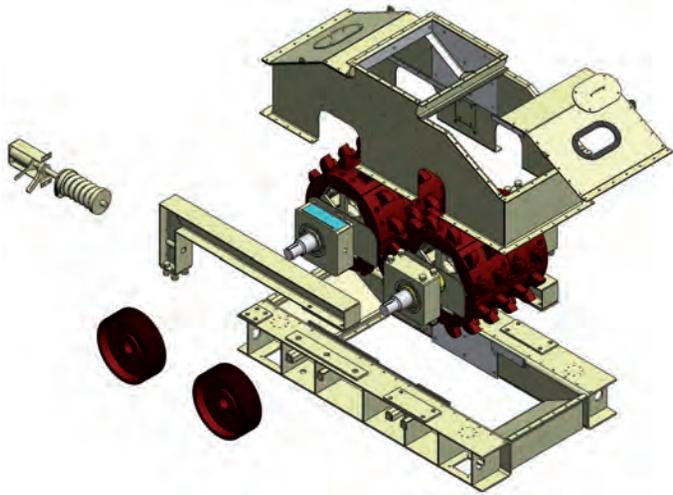
The rolls are separately driven by two identical motors, through sets of vee belts which are connected between the gearbox pulley and the flywheels. The drive arrangement is free standing with the electric motors mounted on adjustable base plates.

Crusher Model Dia x Width mm
24 x 48
30 x 36
30 x 54
30 x 72
36 x 36
36 x 54
36 x 72



Frame and Canopy

Fabricated channel beams serve as the main frame support. For ease of adjustment, machined low friction polymer pads are provided. Inspection doors are provided at the roll ends on the non-drive side as well as on the crusher ends. Flanges are provided on the top for connecting a feed chute.



Application Data

Customer		Contact Person	
Phone No.		Phone No.	
Fax.No		Date	
MATERIAL			
Type			
Loose Bulk Density		Kg/m ³	
Compressive Strength		Mpa	
Abrasiveness	High	Medium	Low
Moisture Content		% Max	% Min
Shape of Material			
DUTY			
Capacity		mtph	
Max.Feed Lump Size		mm	
Min. Feed Lump Size		mm	
Feed Analysis	Size	- mm	- mm
	% Passing	%	%
Product Size Req'd		mm	

Machine selection is depend on the accuracy of the information provided

Release Mechanism

Uncrushable material entering the rolls will load the springs causing them to compress and allow the passing of the non crushable objects. Compression springs are fitted at one end and act on the bearing housings of one roll. Spring adjustment bolts and shim plates are fitted for adjusting the roll position. Hydraulic roll adjustment and force relief cylinders can be supplied instead of the springs as an optional extra.



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CoalCrush/0813/Rev2

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