

# Brick Industry: How Do You Choose an Impactor?



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As the housing market takes off, the brick industry kicks into high gear. As a result, we find ourselves installing more and more brick-specific impactors. These machines are engineered specifically for the brick industry, because a fine grinded product from moist material is a necessity. Crushing and extruding shale and clay is a sticky process.

Quite a few brick manufacturers still use antiquated hammer mill crushers. These are high wear, high maintenance machines, given the abrasiveness and moisture content of the shale and clay materials being processed. Impact crushers for the brick industry are designed to deal with the abrasive materials and specifically, the higher moisture. They are equipped with electric heating in the inlet chute and on the adjusting aprons of the machine. The heating dries the material so that it doesn't stick and plug within the machine. The impactors are also equipped with an air cannon that discharges a blast of air every 30 seconds or so to keep fines from plugging up inside the machine.



These are the common traits of brick-specific impactors, but that's where the similarities between machines end. If you want to maximize value, here's what to look for when comparing impactors for the brick industry.

## **Operating cost**

Initial sale price is one thing but daily operating costs over time is quite another. Operating cost analysis can save you numerous dollars over the life of a machine. Look closely at manufacturers' estimated operating costs per ton. Make sure to get a written wear cost estimate



## **Wear parts**

Parts replacement is a big factor in operating cost. Getting the best value from wear parts is a balancing act between parts cost and the labor and downtime involved to replace them. Hammer mills use manganese hammers and abrasion-resistant steel wear parts. These alloys do not last very long in these types of applications. With today's technology in wear parts, you see a lot more high chrome white iron and ceramic alloy technology that are extremely wear-resistant. The ceramic alloys can be more expensive, but they will more than make up for the initial cost in reduced downtime and labor.





### **Adjustable third apron**

Brick-specific impactors can incorporate an additional third apron, which aggregate-type crushers typically don't have. Some brick crushers have only two aprons, with the second apron being extended in length. A third apron that is independently adjustable gives more control over product sizing. The result is a more efficient product sizing during the first pass through the machine. With only 2 aprons, the product reduction is less effective, resulting in more oversize product recirculating back to the machine. This reduces output while increasing energy consumption—both of which impact daily operating costs.



## Heat adjustment

Heat keeps material moving. The amount of heat utilized depends on the moisture content of the material and the ambient temperature. There are a few things to look for when it comes to heat:

- Adjustable heat You don't need tons of heat when you're processing a drier mixture. Look for heat adjustable up to 250 degrees Fahrenheit.
- Heat zones Material may move along just fine in one chamber, but not in another. Zoned heat adjustment can help optimize your processing.
- Ramp-up Some brands of heating take a full 24 hours to reach temperature, while others can take as little as two hours. There are two consequences to a long ramp-up: you have to keep the heat on 24/7, and in the case of maintenance or repair (when it is necessary to turn off the heat), you're going to be down a lot longer than you want to be.

## Look for brick experience

The main thing to look for when it comes to impactors in the brick industry is experience. It's a unique industry and not all manufacturers will have the ideal equipment.

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