About the Cover
Telsmith’s distinctive nameplate is carved in granite. From the earliest times, granite has symbolized unyielding strength and steadfastness. It is a symbol that continues today at Telsmith, where the building of reliable, long-lasting products and enduring customer relationships is a way of life.
TELSMITH
Impactors

America's First Choice of Processing Equipment for Quarrying • Mining • Recycling

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Impact crushers are used in quarry applications for primary, secondary, or tertiary crushing. They may also be used in recycling asphalt or concrete.

Telsmith engineers will work with you to determine the best crusher for your application. This type of up-front planning means greater reliability, less maintenance and reduced operating costs.

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Early Telsmith impactor operating in a quarry circa 1964.

Telsmith's solid, dynamically balanced primary impactor rotor is 100% fabricated.
TelSmith’s Primary Impactors are versatile. They are typically used in both stationary and portable applications for processing materials in quarries and metallic mines.

Specify one of three Primary Impact Crusher Models when you need high production and high reduction ratios. Model 4246 is incorporated in both portable and stationary installations. Models 4856 and 6071 are best suited for stationary installations.

With the largest explosion chamber in the industry, these crushers have capacities of up to 2,100 TPH. An adjustable breaker bar controls product sizes ranging from 2”x0” to 8”x0”.

TelSmith Model 4246 Primary Impact Crusher at final stages of assembly.

This Model 6071 Primary Impact Crusher, operating in a Midwest limestone quarry, produces an average of more than 1,200 tons per hour.
### Production Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Feed Opening W x H (in.)</th>
<th>Max. Feed Size (in.)</th>
<th>Capacity TPH (Note 1)</th>
<th>Recommended H.P.</th>
<th>RPM Range</th>
<th>Normal Product Range (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4246</td>
<td>46 x 60</td>
<td>36</td>
<td>250-600</td>
<td>300-500</td>
<td>480-770</td>
<td>2-5</td>
</tr>
<tr>
<td>4856</td>
<td>56 x 85</td>
<td>46</td>
<td>600-1100</td>
<td>400-700</td>
<td>420-670</td>
<td>2-6</td>
</tr>
<tr>
<td>6071</td>
<td>71 x 100</td>
<td>60</td>
<td>1100-2100</td>
<td>800-1500</td>
<td>330-540</td>
<td>4-8</td>
</tr>
</tbody>
</table>

### Dimensional Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Weight (lbs.)</th>
<th>Side Plate Thickness (in.)</th>
<th>Crushing Chamber Vol.</th>
<th>Discharge Opening W x L (in.)</th>
<th>Liner Thickness (in.)</th>
<th>Liner Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>4246</td>
<td>59,500</td>
<td>1-1/4</td>
<td>158 ft³</td>
<td>46 x 98</td>
<td>1</td>
<td>Manganese and abrasion resistant steel</td>
</tr>
<tr>
<td>4856</td>
<td>94,200</td>
<td>1-1/2</td>
<td>300 ft³</td>
<td>56 x 125</td>
<td>1-1/2</td>
<td></td>
</tr>
<tr>
<td>6071</td>
<td>195,000</td>
<td>2</td>
<td>403 ft³</td>
<td>71 x 113</td>
<td>1-1/2</td>
<td></td>
</tr>
</tbody>
</table>

### Engineering Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Rotor</th>
<th>Rotor Shaft</th>
<th>Impellers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Matl.</td>
<td>Dia. (in.)</td>
<td>Width (in.)</td>
</tr>
<tr>
<td>-------</td>
<td>-------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>4246</td>
<td>Fab.</td>
<td>38</td>
<td>45</td>
</tr>
<tr>
<td>4856</td>
<td>Steel</td>
<td>43</td>
<td>55</td>
</tr>
<tr>
<td>6071</td>
<td></td>
<td>57</td>
<td>70</td>
</tr>
</tbody>
</table>

*Note 1: Capacities shown are average for medium hard limestone and are to be used as a guide only. Actual capacity will vary with the nature and hardness of the feed, size and gradation, motor horsepower, operating speed, etc.*
Features

Half of upper section hydraulically opens for easy access to internal components.

Hydraulically-movable feed plate permits quick release of low-bridged rock.

Manganese steel Spira-Sleeve breaker bars. Spiral ribs promote rotation when struck by rock producing an even wear pattern, and prevent binding to the breaker bars.

State-of-the-art welding techniques provide for a rugged, fabricated steel frame that is reinforced at critical areas for maximum strength.

Cast manganese impeller bars are fixed and supported on the back side by machined surfaces in the fabricated steel rotor.

Rotor disc plates are flame cut, milled to machine tolerance and chamfered. Then, the weldment is preheated, welded continuously using submerged arc process, normalized and finish machined for assembly.

Rotor is statically and dynamically balanced, minimizing vibration. Rotor assembly has tremendous crushing inertia.
Manganese steel plate liners are interchangeable. Wedge/Spud locks speed removal and replacement of liners. Access doors on each side allow easy, safe entry for maintenance and inspection.

Ring-feder locking rings permit removal of shaft from rotor. Shaft is a heat treated alloy steel forging.

Split bearing housing allows removal of bearings without removing rotor.

Options
- V-belt drive(s)
- Drive guard(s)
Telsmith's Horizontal Shaft Impactors (HSI) are designed for maximum reduction in single stage crushing.

High chrome alloy hammers provide longer wear life due to their inherent abrasion resistant characteristics. Rotors are hard-surfaced in critical wear areas and thermal stress relieved.

Seven different sizes are available with capacities ranging from 50 to 660 TPH.

**Options**
- V-belt drive(s)
- Closed circuit feed housing adapter
- Feed housing extension
- Drive guard(s)

Rotor assembly is dynamically balanced at maximum RPM for smooth operation.

Heavy duty hydraulic cylinders open upper frame to allow easy access for inspection and maintenance.

Especially popular in concrete recycling applications as shown here, an HSI can reduce feed material to base size product.

HSI Impactors have two aprons that adjust individually to control product size.
**HSI Features**

- Upper apron
- Adjustable apron supports
- Lower apron
- Alloy steel liners
- Wedges
- Hammers
- Rotor

Precision machined surface provides 100% backing for the hammers. Wedges provide positive locking and allow for easy removal of hammers. Retaining caps prevent end movement.

Shaft and rotor assembly features ring-fedders which provide a positive lock of shaft and rotor without press-fits or keys.

Patented hammer and wedge design incorporates four wearing surfaces for maximum utilization of hammers.

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**Illustration of Hammer Wear Pattern**

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**Capacities (tons per hour)**

<table>
<thead>
<tr>
<th>APPLICATION</th>
<th>HSI 3036</th>
<th>HSI 4230</th>
<th>HSI 5242</th>
<th>HSI 5252</th>
<th>HSI 5263</th>
<th>HSI 6263</th>
<th>HSI 6284</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1/2&quot; Product Recycling Concrete w/Rebar</td>
<td>50-75</td>
<td>60-90</td>
<td>85-120</td>
<td>110-180</td>
<td>190-250</td>
<td>250-350</td>
<td>300-450</td>
</tr>
<tr>
<td>3/4&quot; Product Recycling Asphalt</td>
<td>65-95</td>
<td>75-115</td>
<td>110-150</td>
<td>140-200</td>
<td>240-300</td>
<td>300-375</td>
<td>350-500</td>
</tr>
<tr>
<td>Feed Opening (Height x Width)</td>
<td>17&quot;x36&quot;</td>
<td>16&quot;x31&quot;</td>
<td>24&quot;x43&quot;</td>
<td>24&quot;x53&quot;</td>
<td>24&quot;x64&quot;</td>
<td>30&quot;x64&quot;</td>
<td>30&quot;x85&quot;</td>
</tr>
<tr>
<td>Maximum Feed Size</td>
<td>9&quot;</td>
<td>12&quot;</td>
<td>16&quot;</td>
<td>16&quot;</td>
<td>16&quot;</td>
<td>20&quot;</td>
<td>20&quot;</td>
</tr>
</tbody>
</table>

Capacities are estimated and may vary for each application.
## Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>HSI 3036</th>
<th>HSI 4230</th>
<th>HSI 5242</th>
<th>HSI 5252</th>
<th>HSI 5263</th>
<th>HSI 6263</th>
<th>HSI 6284</th>
</tr>
</thead>
<tbody>
<tr>
<td>Side Liner Thickness</td>
<td>1/2&quot;</td>
<td>1-1/4&quot;</td>
<td>1-1/4&quot;</td>
<td>1-1/4&quot;</td>
<td>1-1/4&quot;</td>
<td>1-1/4&quot;</td>
<td></td>
</tr>
<tr>
<td>Curtain Liner Thickness</td>
<td>1&quot;</td>
<td>3&quot;</td>
<td>3&quot;</td>
<td>3&quot;</td>
<td>3&quot;</td>
<td>3&quot;</td>
<td></td>
</tr>
<tr>
<td>Liner Plate Material</td>
<td></td>
<td></td>
<td></td>
<td>Chrome Iron Alloy / A.R. Steel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hammer size</td>
<td>3&quot;x8&quot;x36&quot;</td>
<td>3&quot;x11&quot;x30&quot;</td>
<td>5&quot;x14&quot;x21&quot;</td>
<td>5&quot;x14&quot;x26&quot;</td>
<td>5&quot;x14&quot;x21&quot;</td>
<td>5&quot;x14&quot;x21&quot;</td>
<td></td>
</tr>
<tr>
<td>Hammer Bar Material</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Hammer Wear Surfaces</td>
<td>21.2&quot;</td>
<td>30&quot;</td>
<td>40&quot;</td>
<td>40&quot;</td>
<td>40&quot;</td>
<td>48&quot;</td>
<td>48&quot;</td>
</tr>
<tr>
<td>V-Belts</td>
<td>75-100</td>
<td>100</td>
<td>200</td>
<td>250</td>
<td>300</td>
<td>400</td>
<td>600</td>
</tr>
<tr>
<td>Horsepower Required</td>
<td>7,300 lbs.</td>
<td>19,500 lbs.</td>
<td>29,300 lbs.</td>
<td>37,500 lbs.</td>
<td>48,000 lbs.</td>
<td>61,500 lbs.</td>
<td>83,000 lbs.</td>
</tr>
</tbody>
</table>

- Recycling concrete or asphalt is an excellent application for HSI crushers due to their high reduction ratios and large feed openings.

- Backing supports on rotor being finish machined for precise fit of hammers.
Due to the unpredictable and constantly changing feed gradations during recycling operations; the product gradation must be viewed as a range.

Gradations may vary widely based on apron settings, speed and feed gradation.
Reversible Impact Crushers

TelSmith's reversible impact crushers are typically used for normal secondary reduction of low silica stone.

The crusher's ability to operate in either direction reduces the frequency of maintenance. Replaceable upper and lower breaker plates can be set individually to allow different products from either direction of rotation.

Asphalt Crushers

These crushers are able to accept reclaimed asphalt pavement and separate the parent stone from the asphalt matrix without further reduction of the stone.

Options for Asphalt and Reversible Impact Crushers

- V-belt drive
- Drive guard

This TelSmith Asphalt Recycling System includes a large capacity, low feed height hopper, 42" x 22' heavy-duty feed conveyor, a 45R Reversible Asphalt Crusher and a 36" x 36' product conveyor.
Transfer hood with curtain prevents material fly-back for safe operation.

Replaceable cast manganese steel alloy swing hammers.

Telsmith's 45R rotor and apron assemblies feature hardened alloy steel rolls, breaker plates, forged steel main shaft, and split pillow block bearing housing.

Typical asphalt recycling plant installation featuring Telsmith 45R Crusher operating at capacities up to 300 TPH.

Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Feed Opening</th>
<th>Rotor Size Dia. x Length</th>
<th>Hammers/Breaker Bar Sleeves</th>
<th>Weight (lbs.)</th>
<th>H.P.</th>
<th>Speed RPM</th>
<th>Capacities TPH</th>
</tr>
</thead>
<tbody>
<tr>
<td>4050R</td>
<td>15&quot;x50&quot;</td>
<td>40&quot;x49&quot;</td>
<td>4 or 6</td>
<td>82</td>
<td>30,300</td>
<td>200-300</td>
<td>550-950</td>
</tr>
<tr>
<td>45R</td>
<td>24&quot;x50&quot;</td>
<td>40&quot;x49&quot;</td>
<td>4</td>
<td>93</td>
<td>22,300</td>
<td>200</td>
<td>450</td>
</tr>
</tbody>
</table>
Telsmith Hammermills are used to reduce milled asphalt to the proper feed size for inclusion in asphalt mixes. Capacities range from 25 to 50 TPH.

Options
- V-belt drive
- Drive guard

Hammermill Features

Complete rotor assembly with hammers and bearing caps.

Specifications and Dimensions

<table>
<thead>
<tr>
<th>Model</th>
<th>Max. Feed Size</th>
<th>Rotor Dia.</th>
<th>Rotor Width</th>
<th>Feed Opening A</th>
<th>Feed Opening B</th>
<th>Overall Size C</th>
<th>Overall Size D</th>
<th>Overall Size E</th>
<th>Overall Size F</th>
<th>Discharge Opening G</th>
<th>Discharge Opening H</th>
<th>Weight (lbs.)</th>
<th>HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2420</td>
<td>5'</td>
<td>24&quot;</td>
<td>20&quot;</td>
<td>21-1/4&quot;</td>
<td>21&quot;</td>
<td>3'</td>
<td>3' 4&quot;</td>
<td>3' 6-1/4&quot;</td>
<td>5-1/4&quot;</td>
<td>2' 11&quot;</td>
<td>22-1/2&quot;</td>
<td>2,870</td>
<td>50</td>
</tr>
</tbody>
</table>
Telsmith’s Family of Products

Please ask for a free brochure on any of the products listed below:

- Crushers of all Types
- Stratacrawler Series
- Vibrating Screens
- Feeders
- Washing Equipment
- Conveyors
- Portable Plants
- Complete Systems

With Telsmith’s policy of constantly improving its products, specifications are subject to change without notice. Actual dimensions, clearances, weights, and other specifications may vary due to fabrication variables, options, or custom engineering.

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