

Impact Crusher Model Selection and Technical Parameter Guide

Product Range

Impact crushers use a high-speed horizontal rotor and blow bars to reduce medium-hard materials by repeated impact. Model selection must match feed size, target capacity, product grading and the complete screening circuit.



PFV Series 15-800 t/h

PFW Two-Chamber Large feed

PFW Three-Chamber Finer shaping

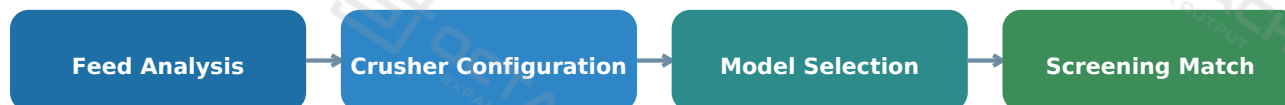
Stationary / Mobile Plant options

Selection Inputs

Confirm these items before comparing crusher models.

Selection Input	Required Information
Feed material	Limestone, dolomite, concrete, asphalt or other medium-hard material
Maximum feed size	Largest actual lump after feeding or pre-screening
Required capacity	Continuous plant output in t/h
Final product	Required aggregate sizes and screen aperture
Abrasion level	Silica / quartz content and expected wear condition
Installation	Stationary, wheeled mobile or crawler mobile

Selection Flow



Selection rule

Select by feed, chamber type and screening circuit - not rated capacity alone.

PFV Series Impact Crusher Technical Parameters

Models

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Maximum feed

100-400 mm

Capacity range

15-800 t/h

Rotor size

850-1800 mm

Model	Rotor Size (mm)	Feed Opening (mm)	Max. Feed Size (mm)	Capacity (t/h)	Motor Power (kW)	Dimensions (mm)
PFV-0807	Ø850 × 700	400 × 730	≤100	15-30	30-45	2119 × 1654 × 2200
PFV-1010	Ø1000 × 1050	500 × 1080	≤150	40-70	55-75	2319 × 2001 × 2558
PFV-1210	Ø1250 × 1050	450 × 1060	≤150	70-120	110-132	2585 × 2053 × 2809
PFV-1214	Ø1250 × 1400	450 × 1440	≤200	100-150	132-160	2582 × 2403 × 2809
PFV-1315	Ø1320 × 1500	550 × 1530	≤300	130-280	200	2930 × 2761 × 3053
PFV-1320	Ø1320 × 2000	610 × 1900	≤350	180-400	250-280	3224 × 3175 × 2706
PFV-1520	Ø1500 × 2000	830 × 2040	≤350	300-550	220-250 × 2	3959 × 3564 × 3330
PFV-1820	Ø1800 × 2000	1260 × 2040	≤400	600-800	315-400 × 2	4400 × 3866 × 4009

Parameter notes

- Actual capacity varies with feed gradation, material density, moisture, abrasivity and screen return load.
- Maximum feed size must be checked against the largest actual lump, not the average feed size.
- Final motor and electrical configuration must match site voltage, frequency and starting method.

PFV and PFW Configuration Comparison

Chamber selection by feed size and crushing duty

Configuration	Reference Feed Size	Reference Capacity	Crushing Duty	Main Selection Reason
PFV Series	≤100-400 mm	15-800 t/h	General coarse and secondary crushing	Wide model and capacity range
PFW Two-Chamber	≤500-700 mm	130-480 t/h	Larger feed and coarse crushing	Shorter crushing path and larger feed acceptance
PFW Three-Chamber	≤250-350 mm	90-350 t/h	Medium and fine crushing	Additional impact stage and better shaping

Quick Configuration Guide

PFV Series

100-400 mm feed

Choose for a broad model range, conventional coarse crushing and secondary aggregate production.

PFW Two-Chamber

500-700 mm feed

Choose when larger feed acceptance and coarse reduction are the main requirements.

PFW Three-Chamber

250-350 mm feed

Choose when an additional impact stage is needed for finer output and improved particle shape.

Selection note
Feed acceptance, impact path and final grading must be reviewed together; chamber type is not selected from capacity alone.

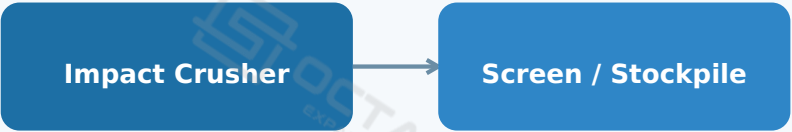
Feed Size, Output and Crushing Circuit Selection

Selection Factor	Recommended Check	Effect on Selection
Maximum feed size	Confirm the largest actual lump	Determines feed opening and rotor size
Feed gradation	Check coarse and fine percentages	Affects chamber loading and capacity
Final output	Confirm screen products and apertures	Determines impact gap and circuit type
Moisture and clay	Check sticky material content	Affects chamber flow and screening
Abrasivity	Check silica and quartz content	Determines blow bar material and wear cost
Return load	Confirm closed-circuit volume	Affects actual crusher and screen capacity

Circuit Options

Open Circuit

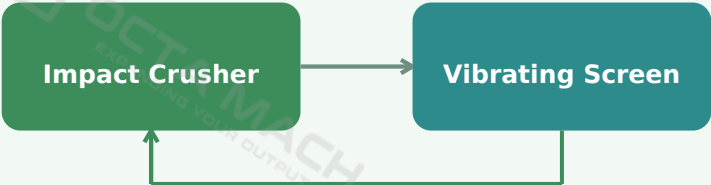
Material passes through the crusher once.



Use where a wider final grading is acceptable.

Closed Circuit

Oversize from the screen returns to the crusher.



Use where stable final grading and tighter size control are required.

Impact Crusher Blow Bar Material Selection

Match toughness, wear resistance and feed conditions

Blow Bar Material	Impact Resistance	Wear Resistance	Suitable Condition
Manganese Steel	High	Moderate	Large feed and high shock loading
Martensitic Steel	Medium to high	Medium to high	Recycling and general rock crushing
High-Chromium Alloy	Lower	High	Controlled limestone and asphalt feed
Ceramic Composite	Depends on matrix	Very high in selected duties	Stable feed with high wear demand

Material selection rule

Select blow bars from feed impact load, abrasivity, silica content and metal contamination. Hardness alone does not define service life.

Review Before Selection

- ✓ Maximum lump size and feed consistency
- ✓ Silica / quartz content and expected wear rate
- ✓ Rebar or tramp-metal risk in recycled feed
- ✓ Required particle shape and fines limit
- ✓ Planned replacement interval and maintenance access

Impact Crusher Main Wear Parts and Maintenance Indicators

Main Wear Parts

Blow bar

Primary impact element

Side liner

Protects the crusher housing

Rotor

Carries and accelerates the blow bars

Locking wedge

Secures the blow bar in the rotor

Impact plate

Redirects material into the rotor zone

Feed liner

Protects the inlet area

Bearing housing

Supports high-speed rotor rotation

Check Wear Parts When

- ✓ Capacity decreases
- ✓ Product becomes coarser
- ✓ Rotor vibration increases
- ✓ Blow bars wear unevenly
- ✓ Impact gap cannot remain stable

Maintenance control

Uneven blow-bar wear changes rotor balance and product grading. Inspect the locking system, impact gap and liner condition at each replacement.

Application	Recommended Configuration	Key Control Point
Limestone aggregate	PFV or PFW three-chamber	Feed size and final grading
Coarse limestone crushing	PFW two-chamber	Large feed and shock loading
Concrete recycling	PFV or mobile impact crusher	Rebar removal and blow bar toughness
Asphalt recycling	PFV or mobile configuration	Fine generation and feed temperature
Temporary project	Wheeled mobile impact crusher	Transport and setup frequency
Quarry-face operation	Crawler mobile impact crusher	Ground mobility and onboard equipment

Application boundary

Impact crushers are suited to limestone, concrete, asphalt and other medium-hard materials where high reduction and cubical shape are required. For quartz-rich or highly abrasive rock, compare blow-bar wear cost with a cone-crusher circuit.

Final Model Selection Checklist

Complete the circuit review before confirming the crusher model

Selection Checklist

- ☒ Material name confirmed
- ☒ Maximum feed size confirmed
- ☒ Feed gradation available
- ☒ Required capacity confirmed
- ☒ Final product sizes confirmed
- ☒ Abrasion level reviewed

- ☒ Blow bar material selected
- ☒ Open or closed circuit confirmed
- ☒ Screen capacity checked
- ☒ Mobile or stationary layout confirmed
- ☒ Power supply confirmed
- ☒ Maintenance access confirmed

Final selection should be based on feed characteristics, chamber configuration, wear cost and the complete screening circuit - not rated capacity alone.

Document use

Use this checklist with feed test data, plant layout and screening requirements before confirming the equipment scope.