

Impact Crusher Model Selection Guide

Selection logic overview: material, feed size, capacity, discharge size

Selection should start from the working condition, not from model name

A correct impact crusher selection reviews material type, maximum feed size, required capacity, final discharge size, installation type and wear-part strategy together. The same PF model can perform differently when material hardness, moisture, feed gradation or downstream screening changes.

Field condition review before model selection



Site material, feed size and line layout should be reviewed before model confirmation.

Practical selection path



Use this flow as a review sequence. Do not finalize the model by capacity alone if feed size, discharge size, abrasiveness or spare-parts plan is unclear.

Selection points that affect model confirmation

Selection Point	What It Means	Why It Matters
Material Type	Limestone, concrete waste, asphalt, dolomite, coal gangue	Determines crushing duty and basic wear condition
Maximum Feed Size	Largest side length of incoming material	Must match feed opening and chamber capacity
Required Capacity	Target output in t/h	Determines model size, motor power and line matching
Discharge Size	Required final product range	Affects impact plate gap and screen matching
Abrasiveness	Low, medium or high wear condition	Influences blow bar and liner material
Installation Type	Stationary or mobile impact crusher	Affects layout, foundation, conveyors and quotation scope

Why this guide matters

The model table gives a direction. Final selection requires a combined review of feed size, required output, material condition, discharge range and plant layout.

Capacity margin

If required output is close to the upper capacity range, reserve margin for moisture, hardness, uneven feeding and blow bar wear.

Wear-part strategy

A correct blow bar and liner plan reduces downtime and prevents low-price equipment from becoming high-cost operation.

Feed Size and Capacity Matching Reference

Use this page to connect maximum feeding side length and required output with possible PF model directions. The recommended model should still be checked against material hardness, moisture, discharge size and wear-part plan.

Feed Size Requirement	Capacity Requirement	Suitable Model Direction	Typical Application
≤100 mm	15-30 t/h	PF-0807	Small secondary crushing, small aggregate production
≤150 mm	30-50 t/h	PF-1008	Small to medium crushing line
≤150 mm	50-80 t/h	PF-1010	Medium secondary crushing
≤200 mm	70-120 t/h	PF-1210	Medium-capacity aggregate production
≤300 mm	130-180 t/h	PF-1214	Medium to high output limestone or concrete crushing
≤350 mm	160-250 t/h	PF-1315	High-capacity secondary crushing
≤350 mm	200-300 t/h	PF-1320	High-output aggregate line
≤400 mm	300-350 t/h	PF-1515	Large-capacity impact crushing application

Selection warning notes

Condition	Possible Problem	Selection Advice
Feed size close to limit	Chamber load may become unstable	Choose a larger model or improve pre-screening
Capacity near upper range	Output may drop with hard or wet material	Reserve capacity margin
Clay or moisture in feed	Feeding and discharge may become less smooth	Review feeder and screen arrangement
Highly abrasive material	Blow bar and liner wear may increase	Confirm wear-part material before order
Very fine discharge needed	More impact adjustment may be required	Check screen matching and return crushing

Feed size direction reminder

≤100 mm	PF-0807
≤150 mm	PF-1008 / PF-1010
≤200 mm	PF-1210
≤300 mm	PF-1214
≤350 mm	PF-1315 / PF-1320
≤400 mm	PF-1515

Check feed opening and chamber loading before final model confirmation.

Feed opening note

Check feed opening and maximum feed size together before final model confirmation.

PF Series Working Condition Selection Matrix

This matrix turns the model table into a practical selection view. It should be used as a model direction guide, not as a final guarantee of output under every material condition.

Model	Feed Size Level	Capacity Level	Suitable Working Condition	Key Review Point
PF-0807	≤100 mm	15-30 t/h	Small output, small feed secondary crushing	Confirm whether output demand is stable and low
PF-1008	≤150 mm	30-50 t/h	Small to medium output crushing	Suitable for smaller aggregate or recycling tasks
PF-1010	≤150 mm	50-80 t/h	Medium secondary crushing	Check discharge size and screen matching
PF-1210	≤200 mm	70-120 t/h	Medium-capacity crushing line	Review feeding continuity and motor power
PF-1214	≤300 mm	130-180 t/h	Medium to high capacity aggregate crushing	Good model direction for ≤300 mm feed
PF-1315	≤350 mm	160-250 t/h	High-output secondary crushing	Confirm blow bar material and wear-part plan
PF-1320	≤350 mm	200-300 t/h	High-capacity aggregate production	Requires stable feeding and downstream screening
PF-1515	≤400 mm	300-350 t/h	Large output impact crushing	Check foundation, motor power and complete line layout

Quick model direction cards

Small Output
PF-0807 / PF-1008

Medium Output
PF-1010 / PF-1210

Feed Size ≤300 mm
PF-1214

160-250 t/h
PF-1315

200-300 t/h
PF-1320

300-350 t/h
PF-1515

Temporary / Recycling
Mobile impact crusher

Matrix note Final model confirmation should also consider material hardness, abrasiveness, moisture, discharge size, feeding method, screen configuration and spare-parts plan.

Stationary vs Mobile Impact Crusher Selection

Impact crusher selection also depends on plant layout. A stationary PF impact crusher is usually used in a fixed crushing line, while a mobile impact crusher is selected when site movement, recycling work or faster deployment is required.

Selection Item	Stationary Impact Crusher	Mobile Impact Crusher
Best Application	Long-term quarry, aggregate plant, cement material crushing	Temporary site, recycling project, road construction
Installation	Requires foundation and fixed plant layout	Faster setup and relocation
Equipment Scope	Main crusher with separate feeder, conveyor and screen	Integrated feeder, crusher, conveyor and control system
Capacity Stability	Good for continuous fixed-site production	Depends on mobile plant configuration
Site Flexibility	Low relocation flexibility	High relocation flexibility
Civil Work	Foundation and structure required	Reduced foundation work
Maintenance	Easier workshop-style maintenance	Requires mobile service and on-site inspection
Cost Focus	Lower single-machine cost	Higher mobility and integrated system value

When to choose each configuration

Choose stationary impact crusher when

- The crushing plant will run in one fixed location.
- The capacity requirement is stable.
- The project needs long-term aggregate production.
- Separate feeder, screen and conveyor systems are already planned.

Choose mobile impact crusher when

- The project site changes frequently.
- The material is construction waste, concrete waste or road material.
- Fast installation and relocation are required.
- Integrated feeding, crushing and conveying are needed.

Quotation scope note For mobile impact crusher, clarify feeder type, crusher model, conveyor arrangement, power system, chassis type and spare parts.

Common Selection Mistakes

Mistake	Why It Causes Problems	Better Selection Practice
Selecting only by capacity	Capacity changes with material and feed condition	Check feed size, hardness, moisture and discharge size together
Ignoring maximum feed size	Oversized material may overload the chamber	Match feed size with feed opening and pre-crushing plan
Not confirming discharge size	Final product may not meet screen or aggregate requirement	Review impact plate gap and screening system
Ignoring abrasiveness	Wear cost may become too high	Select proper blow bar and liner material
Treating mobile and stationary machines as the same	Layout, maintenance and cost structure are different	Confirm project duration and site movement requirement
No spare-parts plan	Downtime may increase after wear parts are consumed	Include blow bars, impact plates, liners and bearings in the quotation

Final model confirmation checklist

Information required before model confirmation

- ☐ Material to be crushed
- ☐ Stationary or mobile installation
- ☐ Maximum feed size
- ☐ Feeding equipment requirement
- ☐ Required capacity
- ☐ Screening and conveyor arrangement
- ☐ Required discharge size
- ☐ Power supply
- ☐ Material hardness
- ☐ Spare blow bar and liner requirement
- ☐ Abrasiveness level
- ☐ Site condition
- ☐ Moisture or clay content
- ☐ Destination and packing requirement
- ☐ Crushing stage

Final recommendation logic

- Small feed and low output

PF-0807 / PF-1008
- Medium output

PF-1010 / PF-1210
- Feed size up to 300 mm

PF-1214
- Capacity around 160-250 t/h

PF-1315
- Capacity around 200-300 t/h

PF-1320
- Large output around 300-350 t/h

PF-1515

Technical note: A correct model is selected by matching material condition, feed size, capacity, discharge requirement, installation type and wear-part strategy. The lowest price model is not always the most economical choice if it increases wear cost, downtime or re-crushing work.