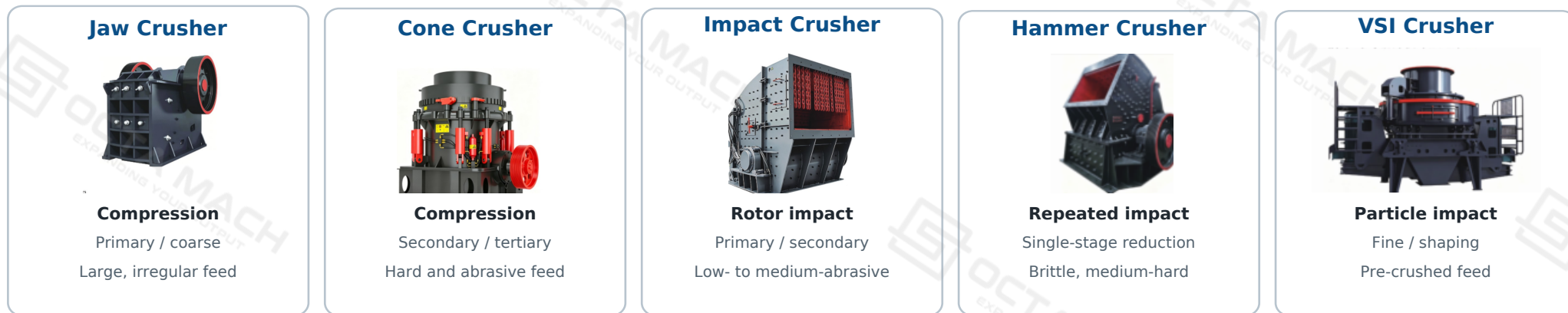


Rock Crusher Types and Specification Range

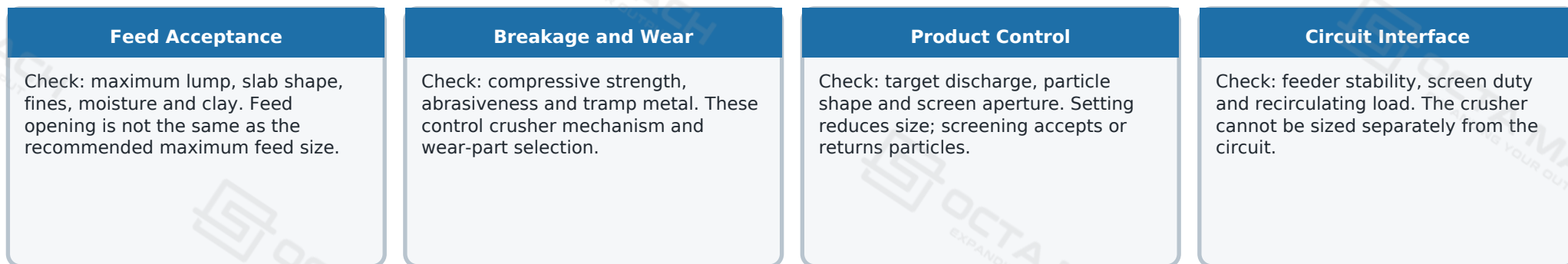
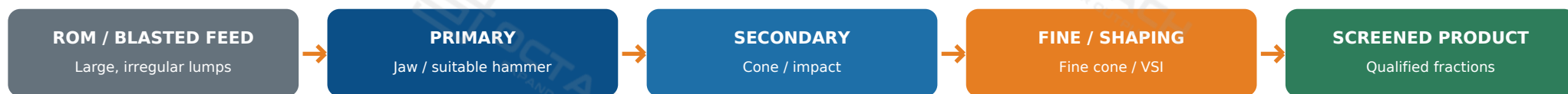
Crusher families, breakage principles and process position

Rock crushers are classified by the force that breaks the material and by the stage they occupy in the circuit. Jaw and cone crushers apply compression; impact, hammer and vertical-shaft machines use dynamic impact. The correct category is determined by feed size and shape, rock strength and abrasiveness, required reduction, product shape and downstream screening.

Five Crusher Categories



Process Position and Selection Logic



Rock Crusher Types and Specification Range

Jaw crusher model families, feed openings and setting ranges

Jaw Crusher Families



PRIMARY / COARSE COMPRESSION

Jaw crushers reduce rock by intermittent compression between a fixed plate and a moving plate. PE machines cover conventional primary and coarse duties. PEX models use longer, narrower chambers for smaller discharge openings. The C80-C200 European family provides larger feed openings, wedge-type setting adjustment and higher installed power for large primary duties.

Main Jaw Specification Range

Jaw family	Model range	Feed geometry / limit	Discharge or setting	Drive and machine range
PE conventional jaw	PE-150x250 to PE-1500x1800	Feed opening 150x250 to 1500x1800 mm; maximum feed 125-1200 mm	Discharge opening 10-350 mm	Eccentric shaft 180-275 r/min; motor 5.5-280 kW
PEX fine jaw	PEX-150x750 to PEX-500x1500	Feed opening 150x750 to 500x1500 mm; maximum feed 120-350 mm	Discharge opening 18-120 mm	Eccentric shaft 300-330 r/min; motor 15-90 kW
European jaw	C80 to C200	Opening length 800-2000 mm; width 520-1500 mm; maximum feed 460-1400 mm	Catalogue discharge-port settings 70-300 mm	Speed 200-350 r/min; motor 75-400 kW; weight 9.8-139.6 t

How to Interpret the Jaw Ranges

Feed opening and maximum feed

The opening is the physical entrance. Recommended maximum feed is lower and must also allow for flat or elongated rock that can bridge across the chamber.

PE and PEX duty boundary

PE models cover broad primary and coarse duties. PEX models accept smaller feed and provide narrower discharge openings for intermediate jaw crushing.

C-series setting matrix

The catalogue links discharge-port settings with product-size bands. Final grading still depends on the screen aperture and closed-circuit return load.

Feed preparation

A grizzly or pre-screen should remove natural fines and prevent wet clay or undersize material from occupying the crushing chamber.

Rock Crusher Types and Specification Range

Hydraulic cone crusher cavity, inlet and minimum outlet ranges

Hydraulic Cone Crusher Families



SECONDARY / TERTIARY COMPRESSION

Hydraulic cone crushers continuously compress pre-crushed material between the mantle and concave. The HP family provides five cavity groups from extra coarse to extra fine. The CS variants use coarser profiles, while CH variants cover fine to extra-fine duties. Feed range and minimum outlet must be read together with the selected cavity; one machine model does not accept every listed feed size at every setting.

HP Multi-Cylinder Series

Series	Model range	Cavity options	Feed specification	Minimum outlet	Installed power
HP multi-cylinder	HP100-HP800	Extra coarse, coarse, middle, fine and extra fine	Open-side feed 33-450 mm; closed-side feed 20-352 mm	6-38 mm	90-630 kW

CS/CH Single-Cylinder Series

Series group	Models	Cavity duty	Maximum inlet	Minimum outlet	Installed power
CS coarse profiles	CS420, CS430, CS440, CS660	Extra coarse, medium coarse and coarse	200-560 mm	19-41 mm	90-315 kW
CH fine profiles	CH420, CH430, CH440, CH660, CH870, CH890	Fine, medium fine and extra fine	38-370 mm	4-25 mm	90-750 kW

Cavity and Feed-Control Notes

Cavity selection

A coarse cavity accepts larger feed but produces a larger minimum outlet. Fine and extra-fine cavities require correctly pre-crushed, controlled feed.

Choke feeding

Stable, evenly distributed chamber feed supports consistent reduction and liner wear. Segregated or intermittent feed changes power draw and product grading.

Outlet setting

The minimum outlet is a mechanical setting range, not the final product size. The screen aperture and return load determine finished fractions.

Unsuitable feed

Sticky clay, uncontrolled primary oversize and metal contamination should be removed or controlled before the cone crusher.

Rock Crusher Types and Specification Range

Impact, hammer and vertical-shaft crusher specification ranges

Impact, Hammer and VSI Families

Impact Crusher



ROTOR IMPACT

Parameter	Catalogue range
Series	PFW II/III; PFV-0807 to PFV-1820
Rotor range	PFW: 1150x1400 to 1400x1800 mm; PFV: 850x700 to 1800x2000 mm
Feed opening	PFW: 570x1430 to 1300x1530 mm; PFV: 400x730 to 1260x2040 mm
Maximum feed	PFW: 250-700 mm; PFV: 100-400 mm
Installed power	PFW: 132(160) to 250(315) kW; PFV: 30-45 to 315-400 x 2 kW
Control boundary	Hydraulic apron / impact-frame adjustment; final size by downstream screen

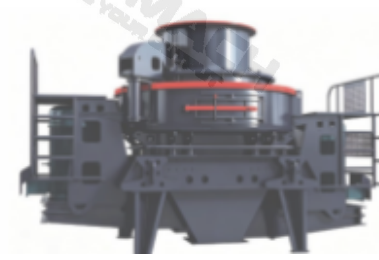
Hammer Crusher



REPEATED HAMMER IMPACT

Parameter	Catalogue range
Series	PCZ heavy and PC standard hammer crushers
Model range	PCZ1312-PCZ2125; PC-0706-PC-1622
Maximum feed	PCZ heavy: 500-1200 mm; PC standard: 200-500 mm
Installed power	PCZ: 110 x 2 to 400 x 2 kW; extended PCZ2125: 1250 kW, 6-pole
Discharge control	Model-specific adjustable discharge structure
Wear boundary	Hammer heads, rotor, counterattack plates and internal liners

VSI Crusher



ROCK-ON-ROCK / ROCK-ON-METAL

Parameter	Catalogue range
Series	5X7615, 5X8522, 5X9532, 5X1145, 6X1150, 6X1263
Optimal feed	Soft material: 35-60 mm; hard material: 30-50 mm
Rotor speed	900-1900 r/min, depending on model
Dual-motor power	75 x 2 to 315 x 2 kW
Process duty	Fine crushing, manufactured sand and final particle shaping
Control boundary	Feed gradation, rotor duty and downstream screening define final size

Rock Crusher Types and Specification Range

Operating conditions, application boundaries and model-selection inputs

Process Stage Map



Suitable Operating Conditions and Boundaries

Crusher	Normal duty	Suitable feed and material	Critical operating control	Primary wear / boundary
Jaw	Primary and coarse reduction	Large, irregular hard or variable rock; correctly sized slabs and lumps	Uniform feeder delivery; pre-screen natural fines; maintain feed-opening margin	Jaw plates and cheek plates; wet clay or slab bridging needs feed preparation
Cone	Secondary, tertiary and fine compression	Pre-crushed medium-hard to hard, abrasive stone or ore	Correct cavity and outlet setting; full, even chamber feed; control return load	Mantle and concave; not for uncontrolled oversize or sticky feed
Impact	Primary or secondary impact reduction	Low- to medium-abrasive limestone, selected aggregate and suitable recycled feed	Rotor speed, apron setting, metal removal and consistent feed bed	Blow bars and liners; high silica content can make wear uneconomic
Hammer	Single-stage or coarse-to-medium reduction	Brittle, medium-hard material where high reduction is required	Confirm feed size, moisture and tramp-metal control; monitor hammer balance	Hammer heads, rotor and counterattack plates; avoid highly abrasive or tough feed
VSI	Fine crushing and final shaping	Pre-crushed feed within the model-specific optimal range	Stable grading, controlled feed rate, rotor balance and downstream screening	Rotor tips, anvils and liners; no primary oversize or sticky feed

Selection Inputs Before Model Confirmation

Material and Feed Inputs

Feed basis: maximum lump and slab shape; feed-size distribution; rock strength and abrasiveness; moisture and clay content.

Process and Installation Inputs

Process basis: target discharge and number of stages; required product shape; screen aperture and return load; stationary, wheel-mounted or crawler installation.

Capacity note: actual output must be confirmed from feed gradation, density, moisture, crusher setting and screen recirculating load; catalogue capacity is not a universal operating value.