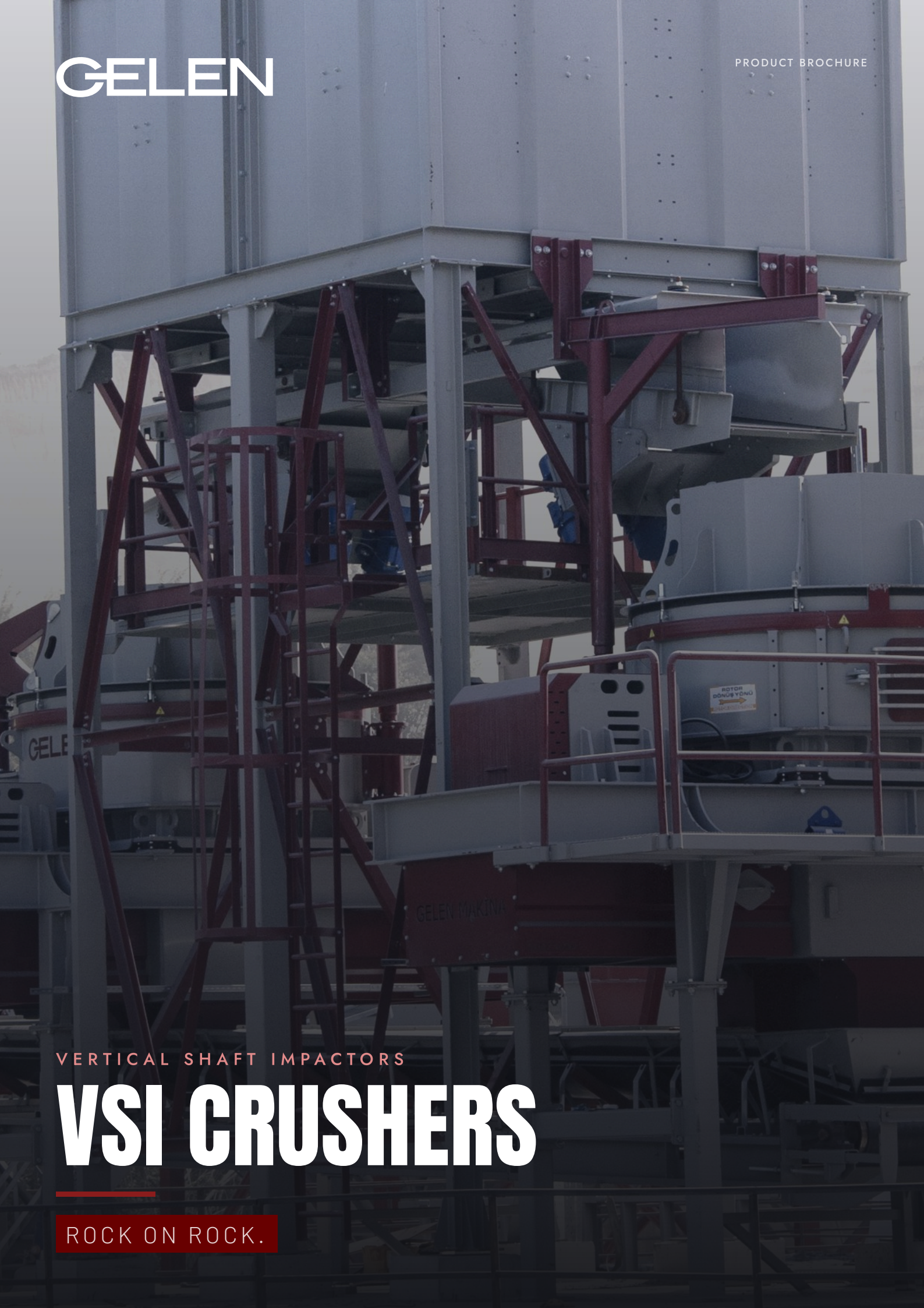
GELEN

PRODUCT BROCHURE



VERTICAL SHAFT IMPACTORS

VSI CRUSHERS

ROCK ON ROCK.

VERTICAL SHAFT IMPACTORS

COMBINING CRUSHING AND GRINDING FOR ABRASIVE, BRITTLE AND MOIST MATERIALS.

A closed rotor accelerates the feed to well over 200 km/h and throws it into a bed of its own material. Rock breaks rock, along its natural planes, into cubical grains — with almost nothing metallic to wear out. The economical way to make premium concrete and asphalt sand from abrasive, brittle or moist feed.

8
MODELS IN THE SERIES

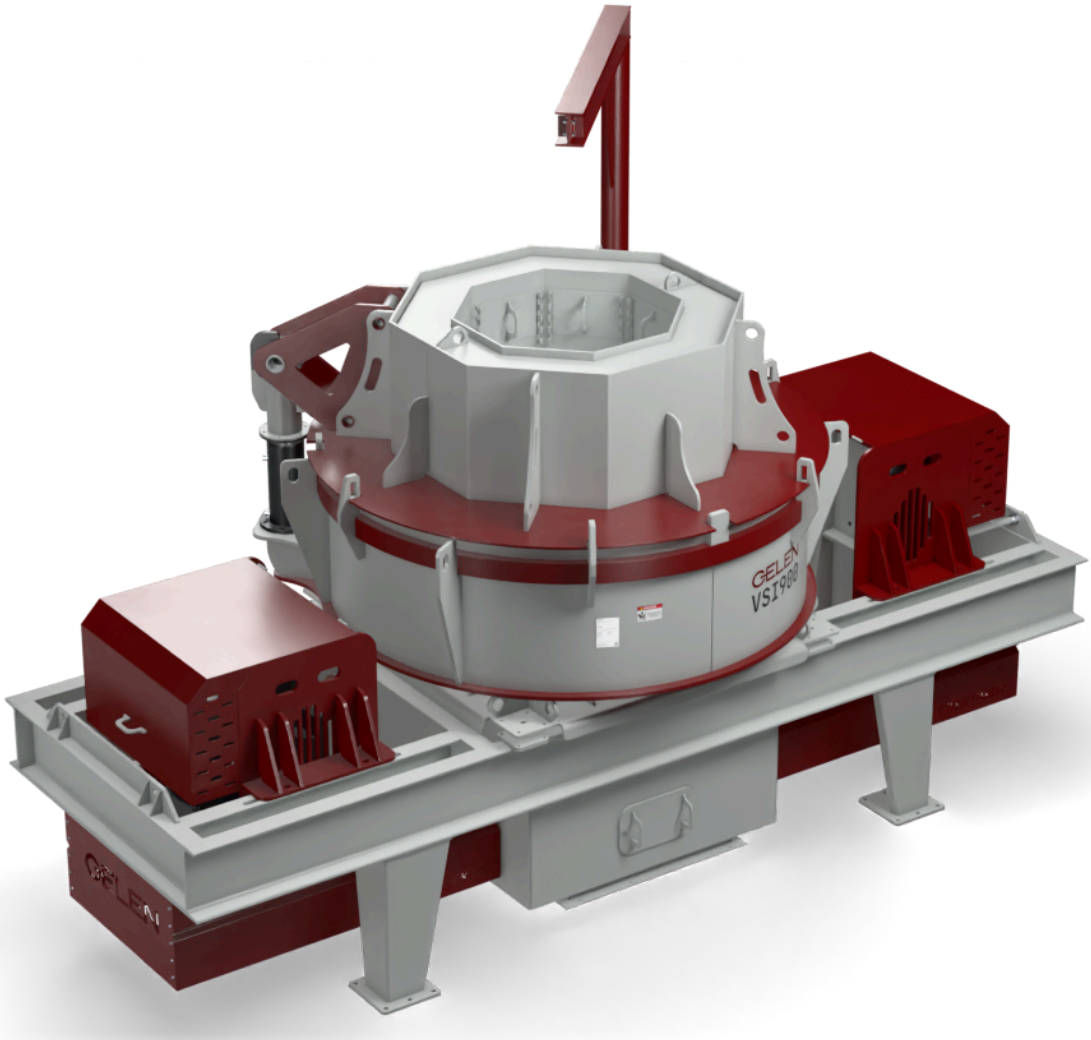
150 mm
MAX. FEED SIZE

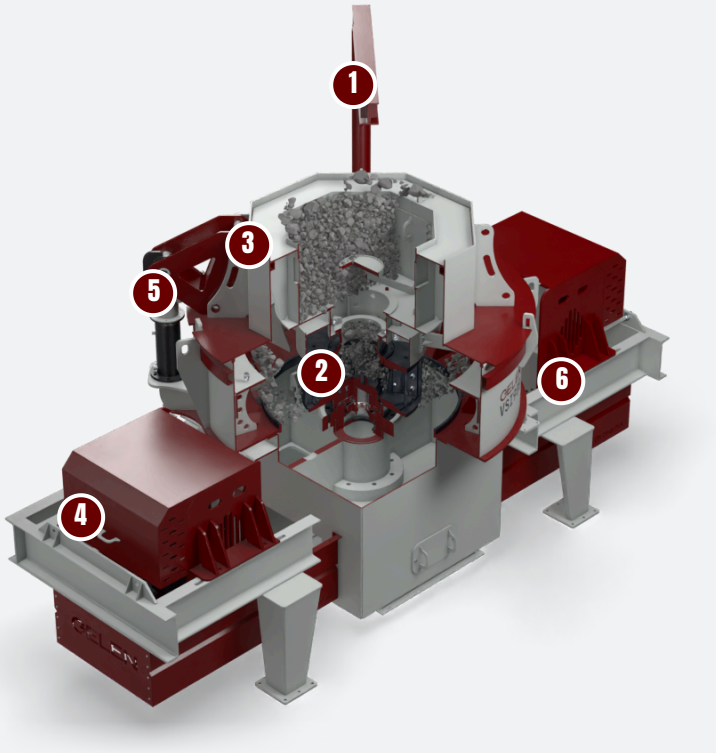
450 t/h
MAX. OUTPUT

630 kW
MAX. INSTALLED POWER

APPLICATIONS

MANUFACTURED SAND | CONCRETE & ASPHALT AGGREGATES | ABRASIVE ROCK | SLAG & INDUSTRIAL MINERALS | CUBICAL SHAPING





DESIGN

ANATOMY OF A VSI.

The chamber is lined with the material being crushed. Wear parts are few, small and quick to change.

1 Central feed tube

Feed drops into the rotor centre; an optional cascade feed adds material around the rotor for extra throughput.

2 Closed rotor

Three-port closed rotor with replaceable tip and wear plates, self-lined by a bed of the feed material.

3 Rock-on-rock chamber

The rock shelf builds its own lining, so crushing happens rock against rock with minimum metal wear.

4 Twin-motor drive

Belt drive from one or two motors, up to 500 kW, with rotor speed set for the product required.

5 Hydraulic lid lift

The top opens hydraulically for rotor access and inspection.

6 Base frame and feet

The machine sits on its own fabricated skid with levelling feet and anchor plates, and the motors mount on the same frame. Platform and stairs for maintenance at rotor height are supplied with it.

Product quality

- Cubical grains for premium concrete and asphalt
- Consistent sand gradation, adjustable by rotor speed
- Removes flaky and elongated particles

Low wear

- Rock-on-rock crushing; the chamber lines itself
- Small, quick-change rotor wear parts
- Handles abrasive feed that would destroy a metal chamber

Versatile

- Closed rotor for sand, open rotor for coarser shaping
- Third or fourth stage in any circuit
- Moist and brittle feed without blinding







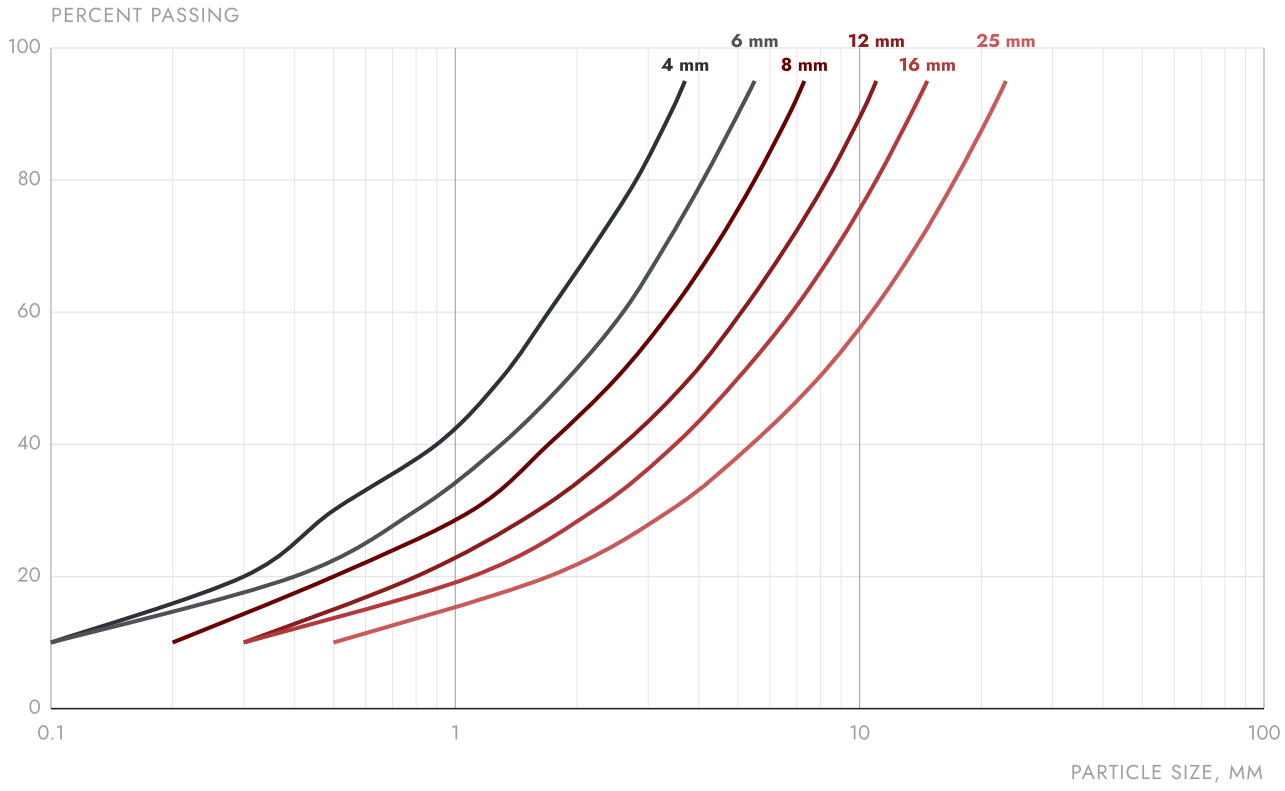
SPECIFICATIONS

VSI CRUSHERS - VERTICAL SHAFT IMPACTORS

MODEL	ROTOR DIAMETER mm	MAX. FEED SIZE mm	ROTOR SPEED m/s	OUTPUT mtph	POWER kW	WEIGHT kg
CLOSED ROTOR (CR) — SAND AND SHAPING						
VSI700-CR	700	40	45 - 70	50 - 100	120 - 150	6,800
VSI800-CR	800	40	45 - 65	115 - 185	220 - 264	8,900
VSI900-CR	900	50	45 - 65	250 - 350	320 - 500	13,600
VSI1000-CR	1000	60	40 - 60	350 - 450	400 - 630	19,000
OPEN ROTOR (OR) — LARGER FEED						
VSI700-OR	700	90	40 - 65	45 - 85	120 - 150	7,000
VSI800-OR	800	100	40 - 60	110 - 150	220 - 264	9,100
VSI900-OR	900	120	40 - 60	240 - 280	320 - 500	13,800
VSI1000-OR	1000	150	35 - 55	330 - 380	400 - 630	19,300

Values are nominal and depend on feed material, gradation and moisture. Metric units; an imperial edition of this brochure is available on request.

PRODUCT GRADATION

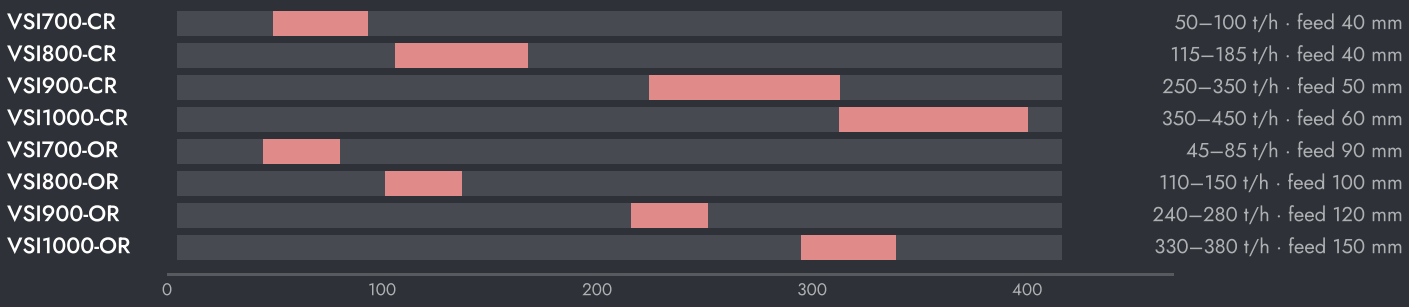


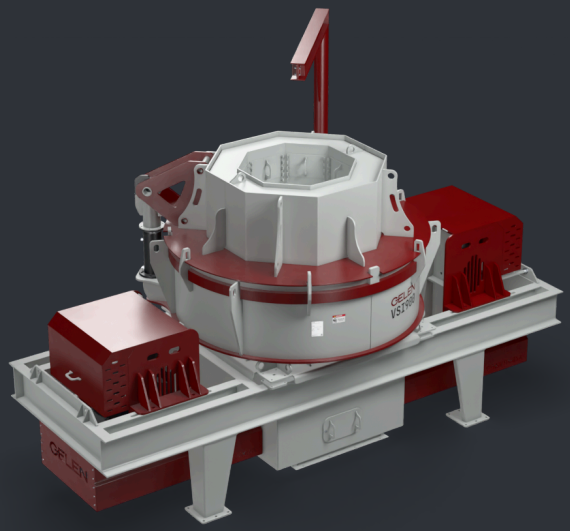
Technical graphs are for information only. Values are nominal and vary with feed material, gradation, moisture and operating conditions. Consult GELEN for your application.

CHOOSE YOUR MODEL

ONE SERIES. THE WHOLE RANGE.

Three closed-rotor models from 50 to 350 t/h and an open-rotor VSI900 for a 120 mm feed.





SETTING THE MACHINE

- Rotor speed — 35 to 70 m/s; higher speed for finer sand, lower for shaping.
- Rotor type — closed rotor (CR) for sand and shaping, open rotor (OR) for feed up to 150 mm.
- Cascade feed — a bypass around the rotor adds throughput at the cost of some reduction.

HOW TO CHOOSE

01 Closed rotor (CR) for sand and shaping; open rotor (OR) for a larger 120 mm feed.

02 Size on feed rate and feed top size; rotor speed then sets the sand gradation.

03 Run in closed circuit with a screen so only the oversize returns.

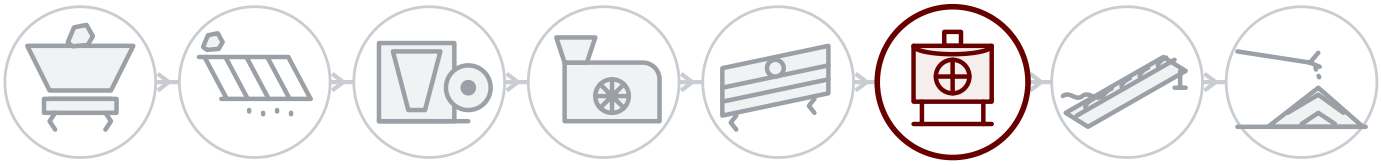


IN THE PLANT

WHERE IT WORKS.

A VSI runs in closed circuit with a fine screen after the secondary or tertiary stage. Its sand feeds the washing plant, or goes straight to the concrete batching plant.

TYPICAL PLANT FLOW



BEHIND EVERY MACHINE

Field service

Installation, commissioning and inspection by GELEN engineers, on site anywhere we sell.

Spares by serial number

Every machine has a serial and a QR on its nameplate. Scan it, and its parts list, manuals and service history open — and a spares order is one tap away.

Remote support

Production data, alarms and performance analytics from every connected plant, with support from the works.

CONTACT

TALK TO THE WORKS.

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SCAN FOR THE PRODUCT PAGE, CATALOGUE AND ENQUIRY FORM.

Full specifications, drawings and every other GELEN machine are in the Products Catalogue.

