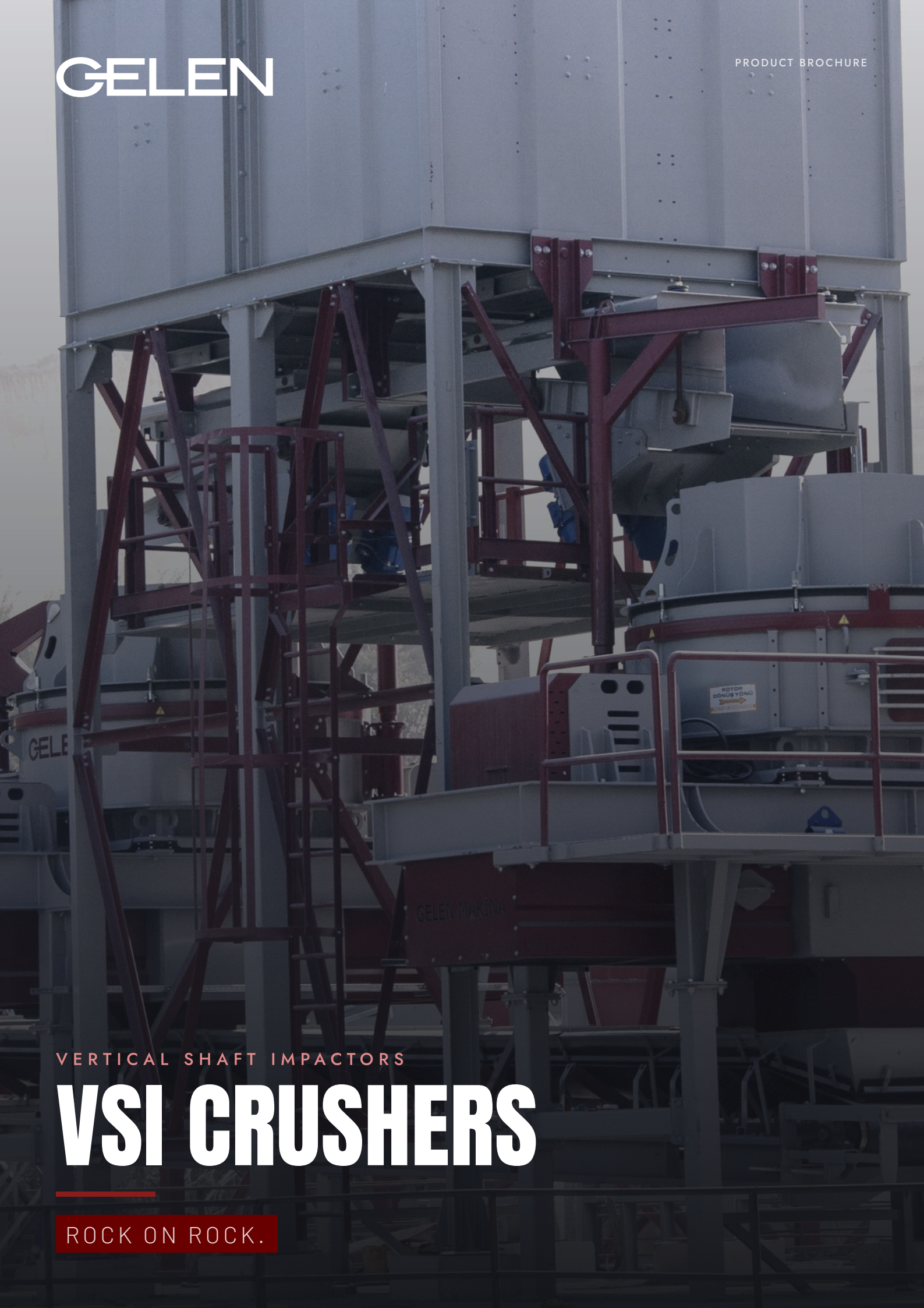
GELEN

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

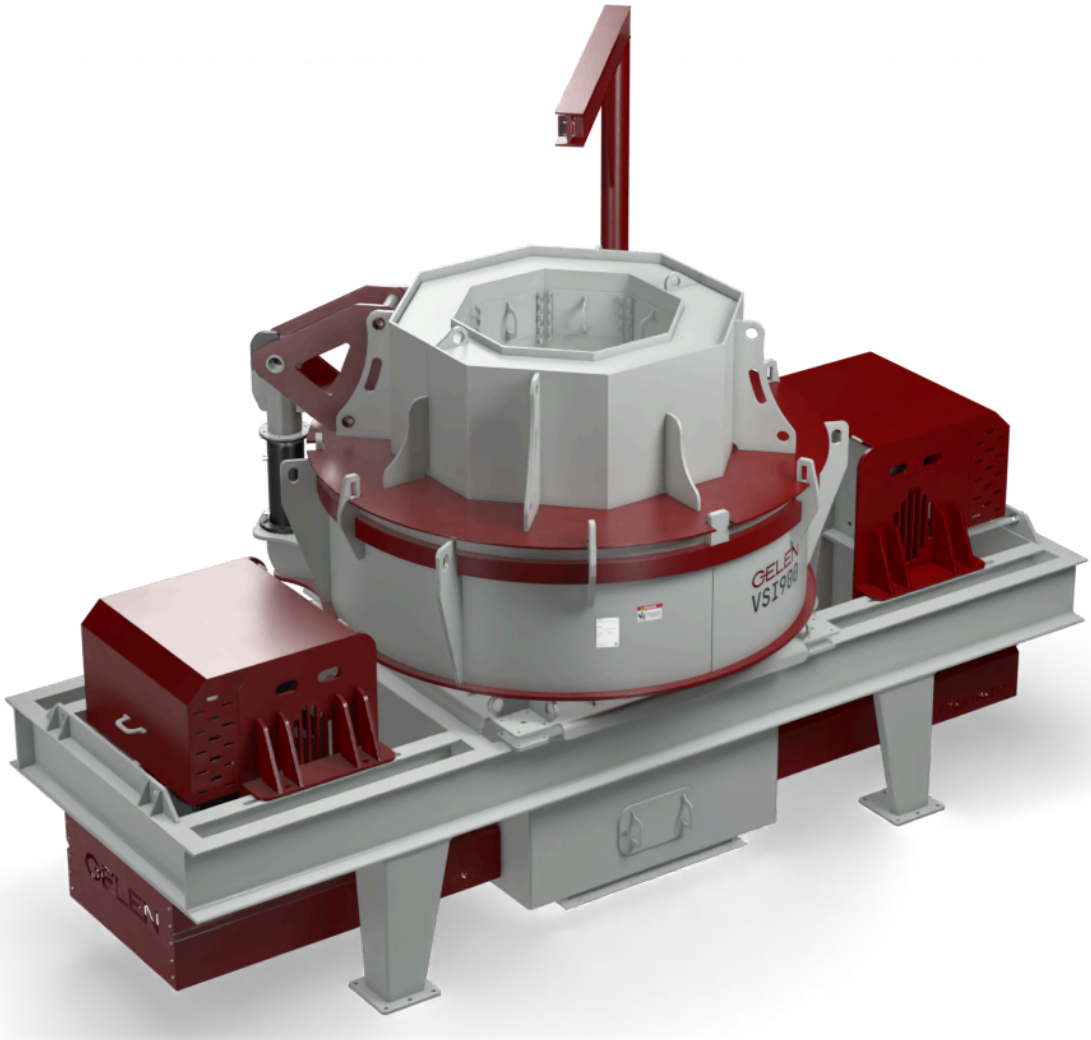
5.9 in
MAX. FEED SIZE

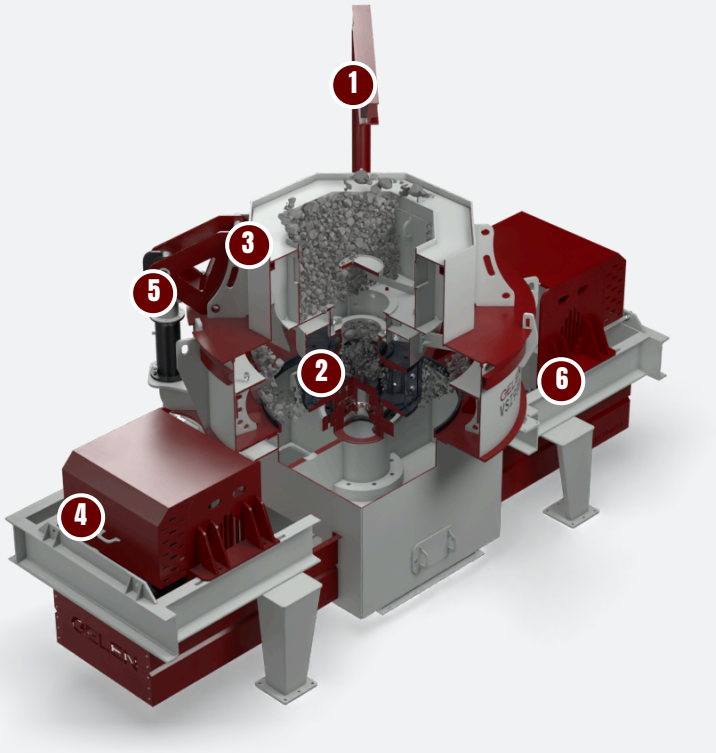
496 stph
MAX. OUTPUT

845 hp
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







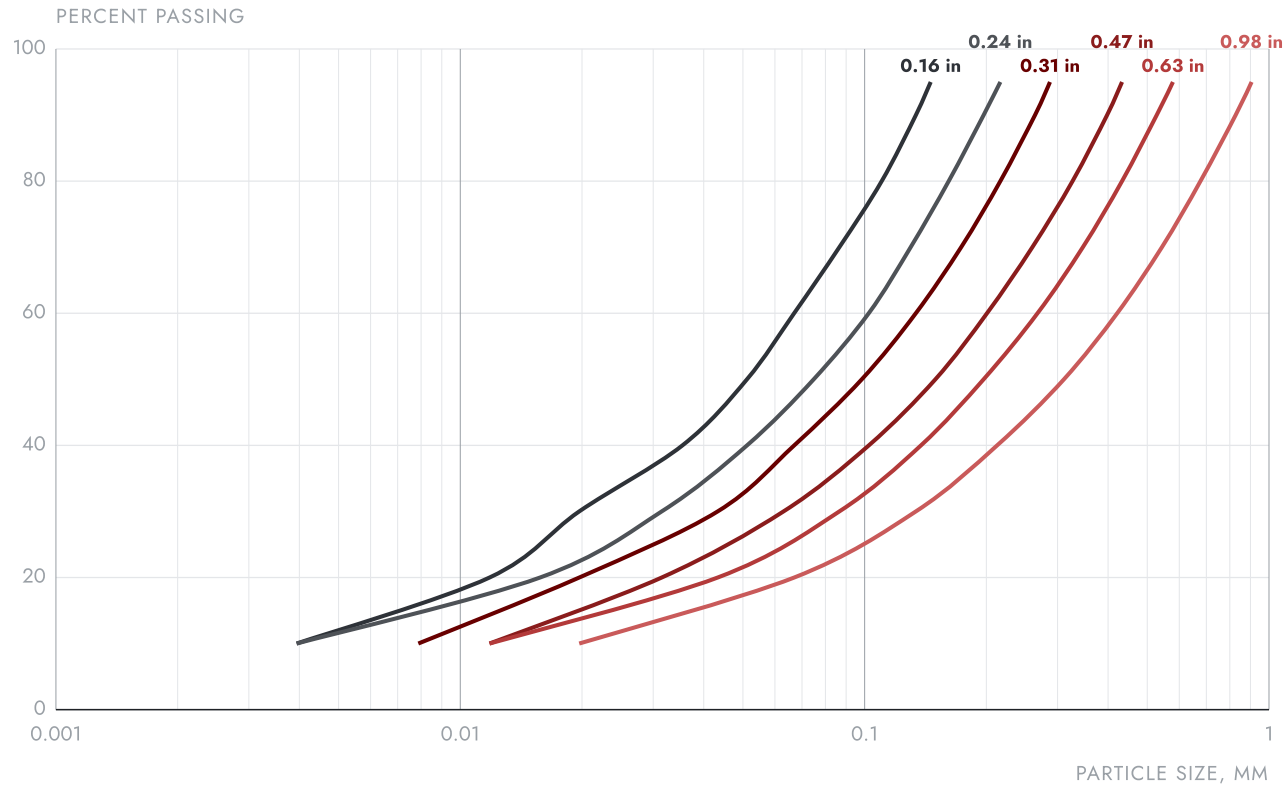
SPECIFICATIONS

VSI CRUSHERS - VERTICAL SHAFT IMPACTORS

MODEL	ROTOR DIAMETER in	MAX. FEED SIZE in	ROTOR SPEED ft/s	OUTPUT stph	POWER hp	WEIGHT lb
CLOSED ROTOR (CR) — SAND AND SHAPING						
VSI700-CR	27.6	1.6	148 - 230	55 - 110	161 - 201	14,991
VSI800-CR	31.5	1.6	148 - 213	127 - 204	295 - 354	19,621
VSI900-CR	35.4	2.0	148 - 213	276 - 386	429 - 671	29,983
VSI1000-CR	39.4	2.4	131 - 197	386 - 496	536 - 845	41,888
OPEN ROTOR (OR) — LARGER FEED						
VSI700-OR	27.6	3.5	131 - 213	50 - 94	161 - 201	15,432
VSI800-OR	31.5	3.9	131 - 197	121 - 165	295 - 354	20,062
VSI900-OR	35.4	4.7	131 - 197	265 - 309	429 - 671	30,424
VSI1000-OR	39.4	5.9	115 - 180	364 - 419	536 - 845	42,549

Values are nominal and depend on feed material, gradation and moisture. Imperial units converted from the metric originals; a metric edition of this brochure is available on request.

PRODUCT GRADATION

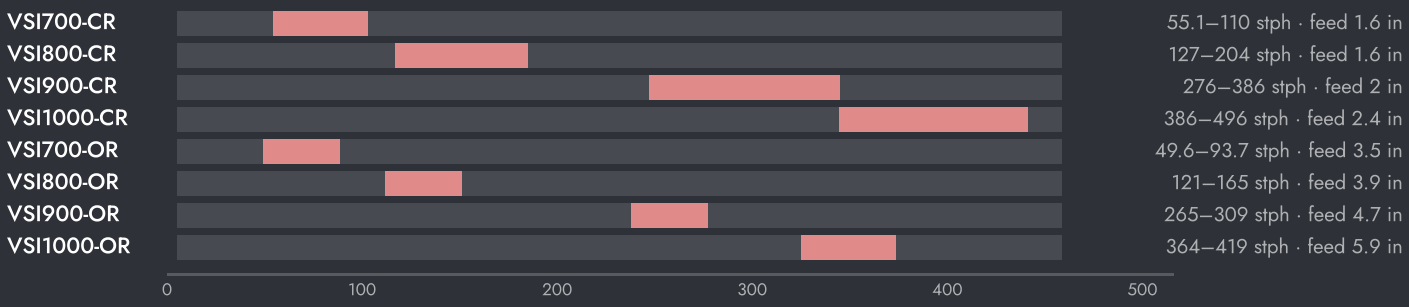


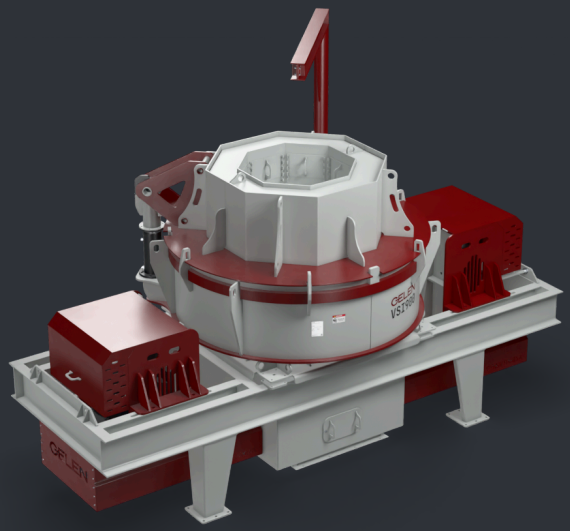
Technical graphs are for information only. Values are nominal and vary with feed material, gradation, moisture and operating conditions. Consult GELEN for your application.

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.

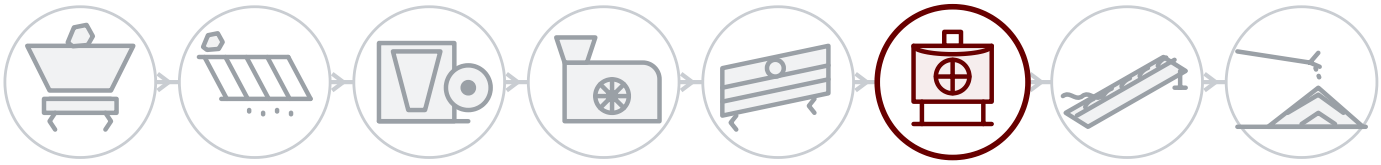


IN THE PLANT

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.

