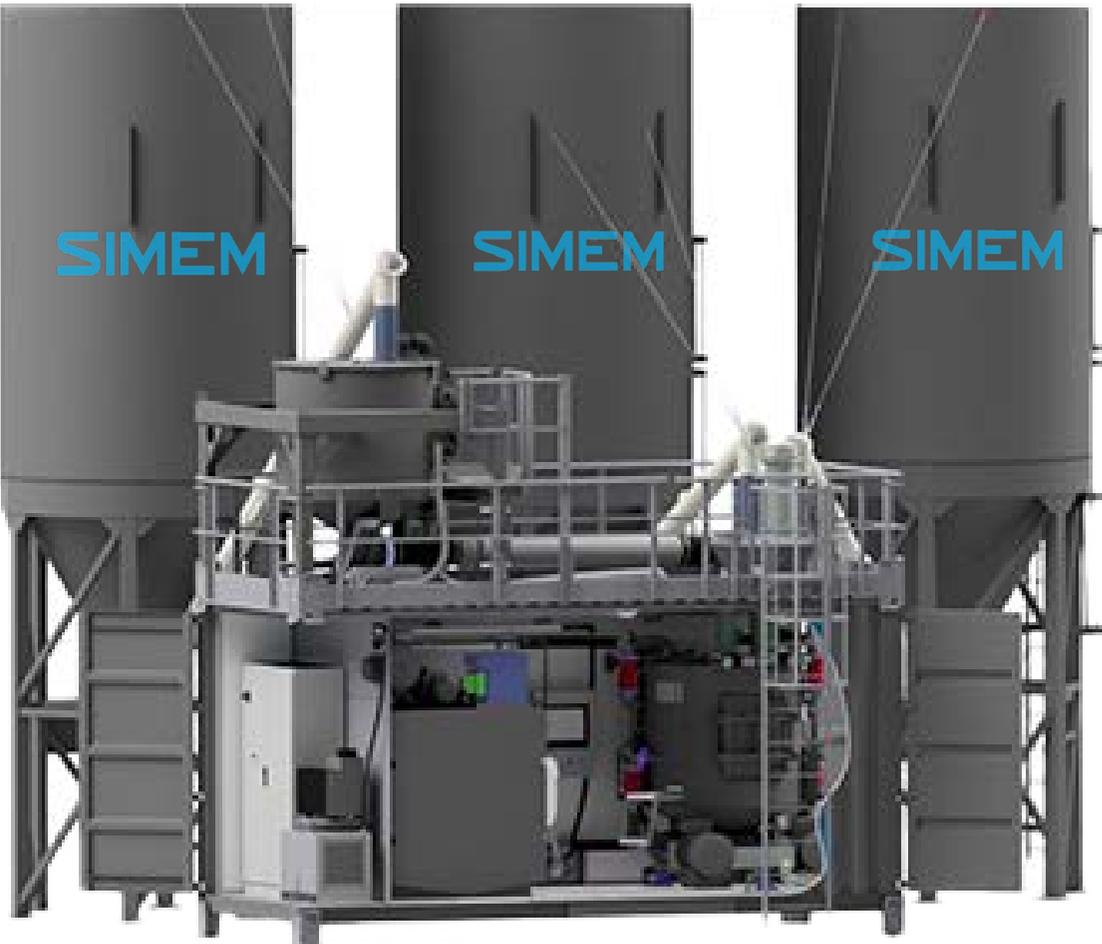




SIMEM Underground Solutions

a SINGLE SOURCE SUPPLIER of Colloidal Mixing Plants and Pumping Systems for Tunnel and Ground Stabilization Grouting.

Over 25 years experience delivering comprehensive plant solutions worldwide.



SealCrete Model: SC30 Pictured

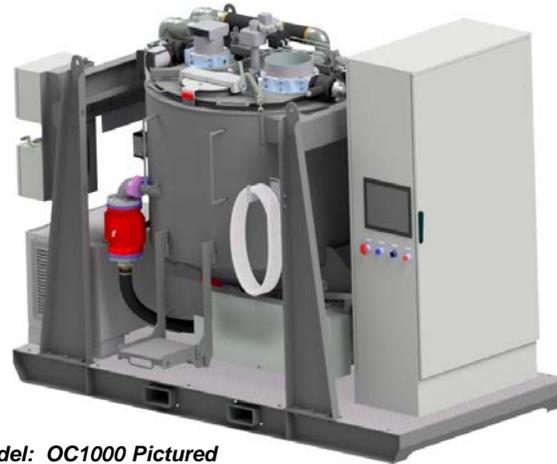


- Colloidal Mixing Technology
- Fully Automatic Grout Plants
- Hydrated Bentonite Systems
- Lightweight Cellular Concrete Plants
- TBM Injection Module Systems
- Pumping Systems and Pig Launchers
- Segment Plants, Molds, & Carousel Systems
- Shotcrete Plants

A site-ready skid-mounted plant solution featuring the VortiMix high shear colloidal mixer, which delivers unmatched mixing quality for maximum grout strength and is proven to reduce cement consumption up to 10%. The multi-language, image-based automation system allows for repeated batch operation or for remote call batch operation, no fulltime operator required. This combination of mixing technology and automation reduces project costs significantly and includes real-time batch statistics and plant performance data accessed through a secure client login.

Base Unit

- Galvanized Skid-Mounted Assembly
- Contents
 - VortiMix Colloidal Mixer
 - Hot-Dipped Galvanized Mixing Tank
 - SuperWash Automatic Mixer Wash System
 - Fully Automatic Plant Operation
- Auxiliary Equipment Available
 - Skid Mounted Pump Systems
 - Portable Silos & Bulk Bag Unloaders
 - Agitation/Hydration Tanks
 - Foam Generators
 - Admix Dosing Systems
- Applications
 - Bi-Component Grout
 - Lightweight Cellular Concrete
 - Injection Grouting
 - Ground Stabilization



Model: OC1000 Pictured



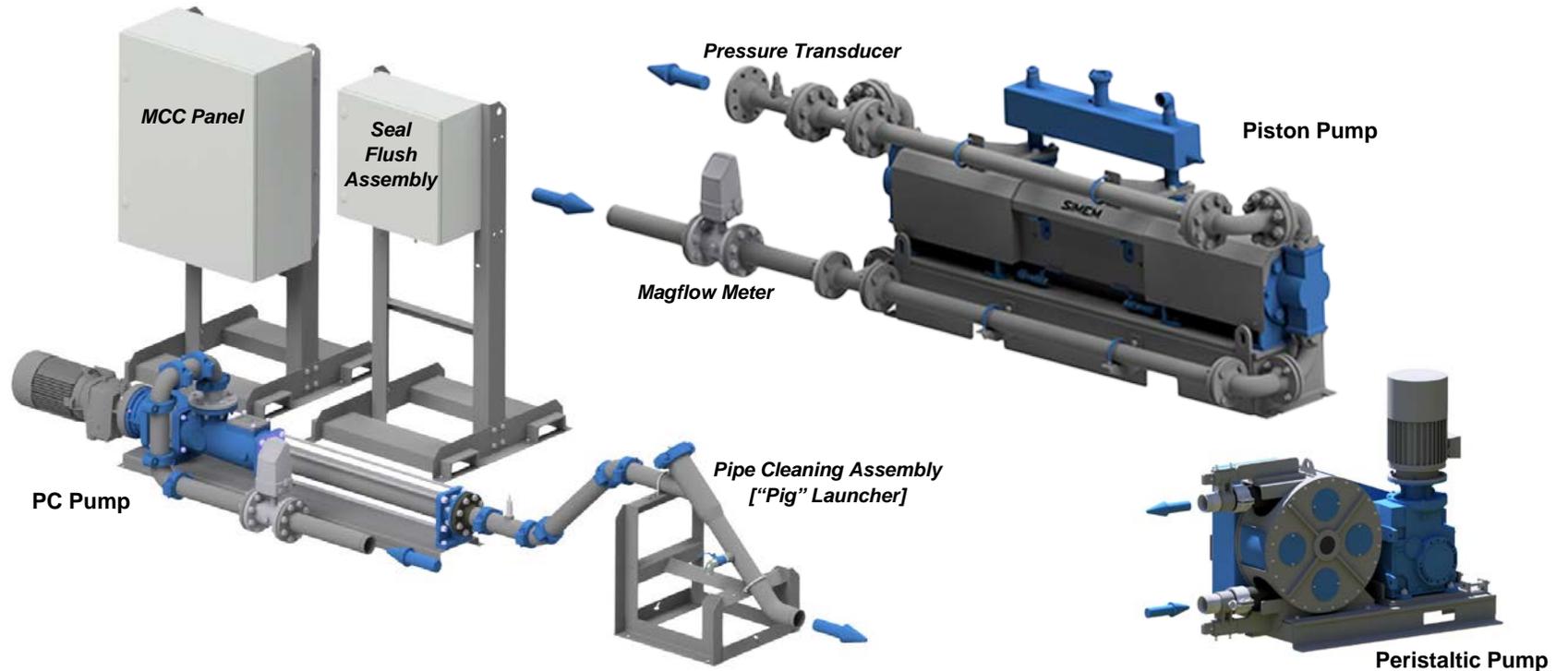
TECHNICAL DATA

MODEL	MAX CAPACITY	COLLOIDAL MIXER SIZE	AGITATION TANK (Recommended)	AUTOMATIC WASH SYSTEM	TOTAL PLANT POWER
OC500	6-10 m ³ /h (8-13 yd ³ /h)	VM500	2000 l (528 gal)	Option	45 kW (with Superwash)
OC1000	12-20 m ³ /h (16-26 yd ³ /h)	VM1000	5000 l (1321 gal)	Option	55 kW (with Superwash)

Pumping system design must consider many factors prior to operation. Matching a pumping solution for a specific project application requires extensive knowledge to ensure a pumping system performs as intended. Simem Underground Solutions, and its decades of experience with long-distance pumping of bi-component grouts, cellular concrete, and hydrated bentonite, designs and assembles complete systems guaranteed to perform. System types incorporate piston, peristaltic, progressive cavity, centrifugal, and air-diaphragm pumps. Systems come complete with associated power control units, instrumentation, and pipe cleaning assemblies. Systems are prepared for field connection as independent components, skid-mounted, or fully containerized.

Pumping Systems

- We Pump
 - Bi-Component Grout
 - Lightweight Cellular Concrete
 - Hydrated Bentonite
 - Cement Slurries
- Auxiliary Equipment Available
 - Hydraulic Power Units
 - MCC Panels
 - Pump Seal Flush Systems
 - Magflow Meters
 - Pressure Transducers
 - Pipeline “pig” Launchers
- Applications
 - TBM’s
 - Injection Grouting
 - Soil Mixing
 - Slurry Walls



TECHNICAL DATA

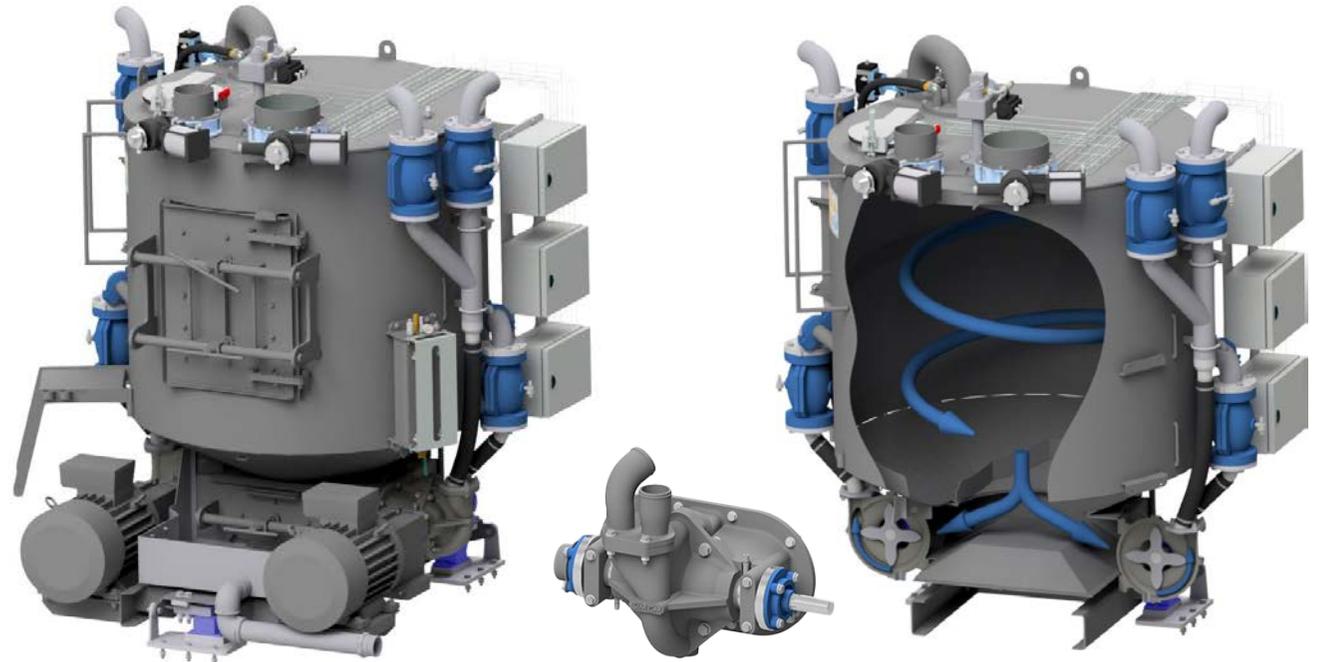
PUMP TYPE	FLOW RANGE	MAX PRESSURE	POWER
PERISTALTIC	2.2-40 m ³ /h (10–176 gpm)	15 bar (218 psi)	1.5–18.5 kW (2–25 hp)
PERISTALTIC – High Pressure	2.3-30 m ³ /h (10–132 gpm)	25 bar (360 psi)	3.7–30 kW (5–40 hp)
PROGRESSIVE CAVITY (PC)	2-40 m ³ /h (8.8–176 gpm)	36 bar (522 psi)	7.5–75 kW (10–100 hp)
PISTON	10-35 m ³ /h (110–154 gpm)	70 bar (1000 psi)	56-93 kW (75-125 hp)



By utilizing a mill that applies a high-shearing effect on cement makes the VortiMix a “true” colloidal mixer. The combination of energy, mixing tool RPM, and the tight tolerance of its cast housing reduces cement particles into a highly fine substance. The VortiMix delivers a mix stability unmatched by traditional mixing methods and has proven to reduce cement consumption by 10%. The mixing vessel doubles as the weighing system for ingredients and when incorporated with an automatic washing system, wash cycle water used within the next batch. This design and function leaves no waste following the production cycle.

Mixer Unit

- Hot-Dipped Galvanized Mixing Vessel
 - Cast Colloidal Mill Housing
 - Wear Resistant Material
 - Split Casting – Easy Maintenance
 - Mechanically Sealed Mixing Shaft
 - Integrated Automatic High-Pressure Self-Cleaning Wash System
 - Applications
 - Bi-Component Grout
 - Lightweight Cellular Concrete
 - Jet Grouting
 - Deep Soil Mixing
- ❖ Capable of mixing down to a 0.5:1 – Water Cement Ratio (by weight)



Model: VM2000 Pictured

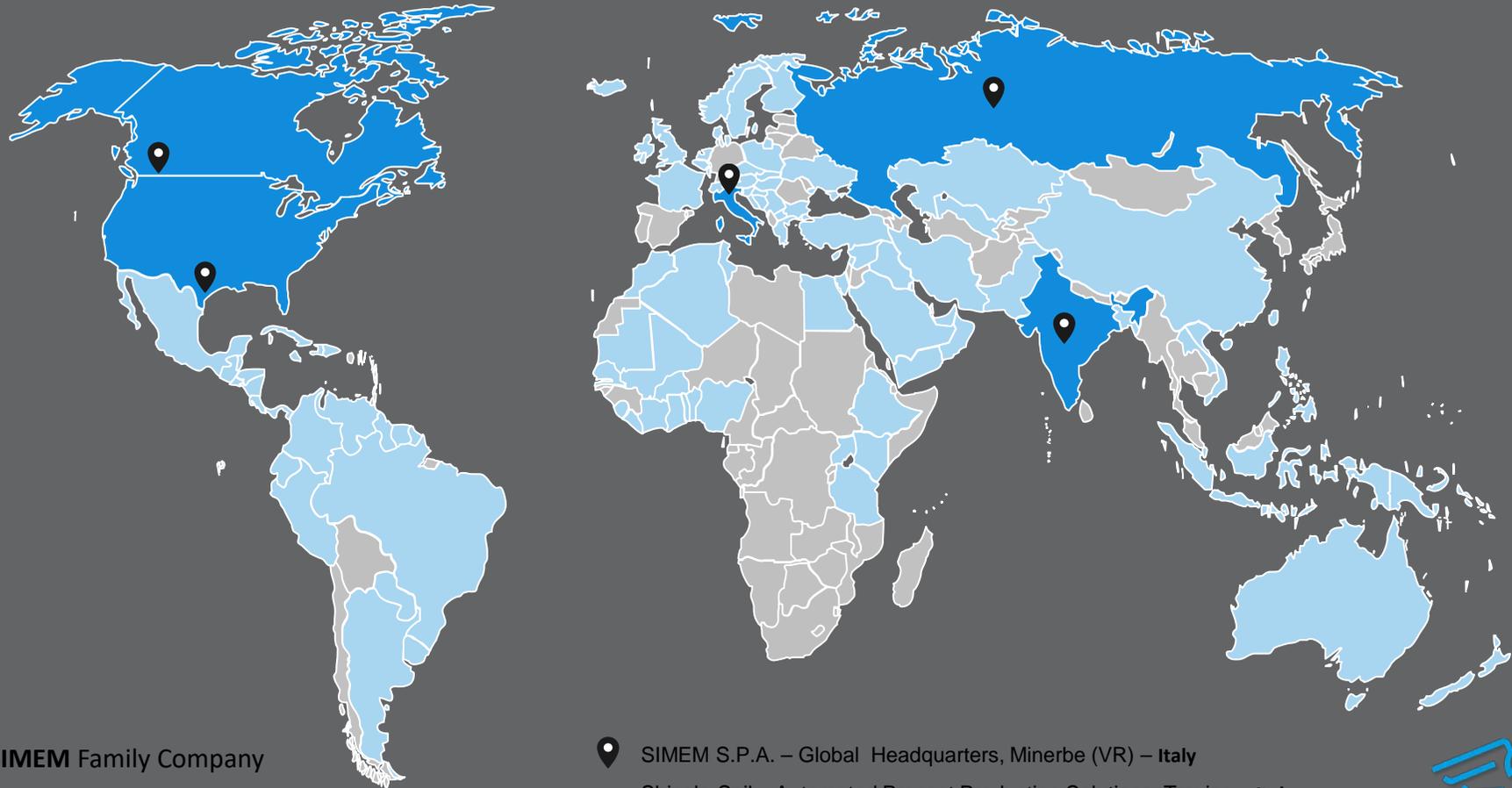
Colloidal Mill

VortiMix Flow Diagram

TECHNICAL DATA

MODEL	BATCH SIZE	MAXIMUM CAPACITY	COLLOIDAL MILLS
VM500	500 l (132 gal)	7.5 m ³ /h (9.8 yd ³ /h)	One x 22 kW (30 hp)
VM1000	1000 l (264 gal)	15 m ³ /h (19.6 yd ³ /h)	One x 30 kW (40 hp)
VM2000	2000 l (528 gal)	30 m ³ /h (39.2 yd ³ /h)	Two x 30 kW (40 hp)

SIMEM WORLDWIDE



- **SIMEM** Family Company
- Dealer Representation
- Direct Client Activity

- SIMEM S.P.A. – Global Headquarters, Minerbe (VR) – Italy
- Shiaslo-Spil – Automated Precast Production Solutions, Treviso – Italy
- SIMEM Underground Solutions – Tunnelling/Mining, Abbotsford, BC – Canada
- SIMEM America – Concrete Technologies, Texas – USA
- SIMEM Construction & Environmental Engineering PVT. LTD – Vadodara-Gujarat - India
- SIMEM Solutions – Concrete Technologies, Yaroslavl – Russian Federation



SIMEM Underground Solutions