

REFRACTORY



OVER A CENTURY OF SHOTCRETE SOLUTIONS

Putzmeister Shotcrete Technology brings you the world's most complete offering of solutions and equipment for sprayed concrete. We purchased Allentown Equipment with its more than 100 years of shotcrete expertise and combined it with Putzmeister's innovative concrete technologies and experience. Now Putzmeister Shotcrete Technology brings world-class support for all your needs in the refractory, underground, mortar and civil industries.

YOUR WORLDWIDE PARTNER FOR QUALITY AND INNOVATION

Covering the world with shotcrete solutions, Putzmeister has earned a reputation for excellence and expertise built on a commitment to application-oriented engineering and customer service.

Today, Putzmeister Shotcrete Technology leads the industry in the design and manufacture of wet- and dry-process shotcrete equipment including:

- Gunning machines
- Pre-dampeners
- Mixers
- Pumps
- Combination mixer-pumps
- Chemical additive pumps
- Nozzle carriers
- Mortar machines
- Concreting machines
- Parts and accessories





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Shotcrete is the ideal process for refractory lining and spraying castables. Used since 1915 to install and repair linings in industrial melting and firing facilities, it minimizes the use of forms, provides the durability of concrete, and is perfectly suited for formless applications.

Wet- and dry-process shotcreting of specialty, heat-resistant material has been used for relining in blast furnaces, ladles and casting facilities, petroleum plants, cement plants, and more. The shotcrete process allows for new installations during downtime. It also enables “hot” installation of certain materials as a routine part of the production cycle — another advantage of this unique construction method.

THE ONLY SHOTCRETE EQUIPMENT YOU NEED

The industry leader in refractory placement technology, Putzmeister delivers dependable, high-performance equipment backed by the industry's best service.

Putzmeister offers a wide variety of equipment geared for use in the refractory industry. Small gunning machines easily accomplish patch work without disruption to operations. Mid-sized trailer-mounted units feature small footprints that allow them to easily navigate the refractory plant to the placement location, while larger units can be stationed outside and have the power to pump the shotcrete via hoses over long distances to the exact point of placement.

Additionally, all of your hose, nozzle and accessory needs can be met by Putzmeister Shotcrete Technology.

Respected worldwide for our comprehensive range of sprayed concrete equipment, we offer more than 50 complementary products for large and small applications.

GUNNING MACHINES

PICCOLA | DRY PROCESS

Built to the Swiss design for use with packaged, preblended materials for shotcrete and refractory applications. These shotcreting machines for dry-mix process use the through-chamber rotor principle.

- Versatile, robust, easy to operate
- Requires minimal maintenance
- Shoots up to 6 yd³/hr (4.6m³/hr)
- Standard 1.5 in (38mm) outlet diameter is used widely in refractory applications



GRH-610 ROTARY GUN | DRY PROCESS

The proven design of this machine's moving friction-sealed rotor meters material into the air stream, while the hydrostatic transmission drive gives precise rotor speed with electric, diesel or gasoline engine power.

- Uses a single-point clamping system
- Simple to set up, operate, disassemble and clean up
- Ideal for dry-process shotcrete or refractory application, thin linings, small patch work and production gunning
- Designed for use with packaged, preblended materials for shotcrete and refractory applications



N-TYPE PNEUMATIC GUN | DRY PROCESS

N-TYPE guns are a modern version of the original cement gun built by Putzmeister for more than 100 years. They are the most versatile machines for the complete range of dry-process gunite, shotcrete and refractory applications.

- Ruggedly built to withstand hard, continuous use
- Renowned for ability to feed dry or damp, coarse or fine, and dense or lightweight materials at a smooth, accurate rate over 500 ft (152m) vertically or 1,000 ft (305m) horizontally



S-1-10 SINGLE TANK GUN | DRY PROCESS

These units are ideal for many refractory applications, such as hot-gunning or carbon-injecting electric furnaces, and patching other high-temperature processing vessels.

- Feeds dry material at an accurate rate from 50 to 500 ft (15 to 152m) vertically or horizontally



S-2-45 SINGLE TANK GUN | DRY PROCESS

These units feature a unique feedwheel system and 1.5 in (38mm) outlet diameter. The gun delivers material smoothly and accurately over a range of granular sizes and moisture contents.

- Load-cell weighing system allows for preset injection amounts
- Ideal for refractory applications
- Thousands of units in use worldwide



PRE-DAMPENERS

R900 BATCH | DRY PROCESS

Ease of operation and maintenance makes this unit a popular choice. It's designed for high-volume sand/cement gunning work or refractory gunning. Ideal for use with the N-TYPE Pneumatic Gun, it will also feed any Putzmeister rotary gun.

- Tandem axle trailer-mounted unit
- Mixes and delivers 8-10 tons/hr (7-9 tonnes/hr) of material
- Includes a water meter and spay bar for pre-dampening



PD-1 CONTINUOUS | DRY PROCESS

This unit allows for the controlled addition of moisture to bagged material as it passes through the water ring. Pre-dampening eliminates static electricity while greatly reducing dust and rebound, providing greater visibility for the nozzleman.

- Produces proper, in-place shotcrete
- Reduces wear on gun components



PD-1/GRH GUNNING RIG | DRY PROCESS

This unit combines the proven success of the GRH rotor gun with the most popular Putzmeister pre-dampener. The addition of moisture – up to 30 percent of the total water required – and the mixing action of the auger starts the hydration process before the material reaches the nozzle.

- Controls addition of moisture as the material passes through the water ring
- Produces proper, in-place shotcrete
- Designed for use with packaged, preblended materials for shotcrete and refractory applications



COMBINATION MIXER-PUMPS

MAGNUM | WET PROCESS

Putzmeister's most versatile mixer-pump conveys low-slump concrete and packaged high-performance materials over long distances. Energy provided by the remixer in the receiving hopper keeps thixotropic mixes in optimal condition for pumping.

- 5 ft³ (142L) mixer capacity
- Powerful 46 hp (34kW) Deutz diesel engine
- Can handle up to 1/2 in (13mm) aggregate



MR-2200 | WET PROCESS

This unit combines the proven high performance of a TK 10 and a 2,200 lb (1mt) pan-type mixer in a convenient, practical and functional configuration. Features include added horsepower; a high-shear, high-efficiency mixer; and innovative microprocessor controls.

- Wear parts provide superior reliability
- 3 in (76mm) material cylinders, swing-tube and outlet minimize line reduction requirements
- Trailer-mounted and completely self-contained



MR-3300 | WET PROCESS

The proven high production of a TK 20 refractory pump combines with a 3,300 lb (1.5 mt) capacity pan-type mixer in a convenient, practical and functional configuration. This extremely versatile machine offers numerous features that together greatly simplify mobilization, setup, production and cleanup. Its production and reliability are unmatched by any other machine.

- All functions easily controlled by one operator
- Trailer-mounted and completely self-contained



MR-1T | WET PROCESS

This durable and reliable mixer-pump has proven invaluable to the refractory industry. The high performance of a TK 20 combines with a 1,500 lb (680kg) pan-type mixer in a convenient, practical and functional configuration. Using the proven-reliable Putzmeister S-Valve with splined shaft, the machine offers consistent performance.

- Compact, maneuverable design and small footprint allows for setup in tight spaces and promotes easy transport and storage
- Removable hopper extension promotes easy cleanout and access to parts for maintenance
- Trailer-mounted and completely self-contained



MIXERS

MRV-2200 SHEAR FORCE | WET PROCESS

Based on Putzmeister's successful high-production mixer-pump rigs, this machine uses a unique paddle design, including abrasion-resistant steel and hard-faced paddles. The mixer discharge easily fits over the hopper of a trailer- or forklift-skid mounted pump.

- Field-proven to provide faster mixing times
- Engineered to be high-shear, high-energy and extremely efficient



PUMPS

Additional models available.

THOM-KATT® TK 10 | WET PROCESS

This proven pump fills the void between small-line mechanical ball valve pumps and 5-6 in (127-152mm) cylinder-diameter concrete pumps. The swing-tube design gives operators the benefit of reversing to relieve pressure due to plugs, pumping difficult low-slump or fiber mixes and lower maintenance costs. The 3 in (76mm) material cylinders and variable, smooth hydraulics allow extremely controlled low output for specialized applications.

- Delivers up to 2,085 psi (144 bar) material pressure
- Maintains output pressure when reducing to smaller-diameter conveying lines
- Uses state-of-the-art electronic pump controls and hydraulic valves



THOM-KATT® TK 20 | WET PROCESS

As Putzmeister's answer for mid-range pumping requirements, this high-pressure pumping system is rated for outputs up to 17 yd³/hr (13m³/hr). It is chosen for a broader range of shotcrete applications than any other model. When shotcreting, the fast switchover of the swing tube reduces pulsing at the nozzle.

- Easily handles harsh mixes, including low-cement, low-moisture and refractory pumping castables
- Offers superb control for the most critical applications
- Can be fed by a ready mix truck, on-site mixer, or optional integrated batch mixer





Not all parts are created equal. Putzmeister offers longer lasting, better performing parts under increased wear conditions. Our in-stock inventory includes more than 20,000 parts totaling more than \$40 million dollars. This means greater savings and less downtime.

Putzmeister Shotcrete Technology's highly trained customer support group provides dedicated support to keep you operating at peak performance.

Authorized Distributor



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