

CIVIL

Allentown

SHOTCRETE TECHNOLOGY

A **Putzmeister** COMPANY



- New Construction
- Repair and Restoration
- Tunneling
- Mining
- Wet- and Dry-Process Shotcrete

CIVIL

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Repair and New Construction

Shotcrete is the preferred material in the construction of many new structures, especially those that have curved surfaces, such as tanks, domes and pools. After years of trial and error, contractors specializing in these structures have selected shotcrete because it reduces the cost of placement by minimizing the need for forms, provides the durability of concrete and is particularly suited for curved surfaces.

Repair and restoration of concrete is one of the fastest growing segments of the construction industry. This growth is not restricted to infrastructure, but extends to the private and industrial sectors. From tanks and pools, to chemical and automotive, to retaining walls and highway structures, the opportunities are endless. Shotcreting is often the best alternative when repair and restoration are being contemplated, and can be the ideal application method for both reinforced and non-reinforced construction.

Allentown Shotcrete Technology, Inc. offers a wide variety of models suitable for civil applications. Our commitment to shotcrete enables us to provide high quality solutions for:

New Construction

- Domes
- Homes
- Tanks
- Pools
- Infrastructure

Repair

- Bridges
- Dams and Reservoirs
- Parking Garages
- Seismic Retrofit
- Marine



▶ GUNNING MACHINES



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AG-15 Automatic Gun

- Industrial-grade air motor.
- Industrial-grade gear box.
- Rugged roller chain drive with automatic lubrication.
- Four-point precision pad adjusting system.
- Cast housing pivots for easy bowl removal.
- Abrasion-resistant wear plates — bolt to bowl.
- Long-life wear pad.
- Improved gooseneck for better material flow.
- Simpler setup of bowl and wear pad.
- Improved plumbing for more efficient air flow.



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Piccola

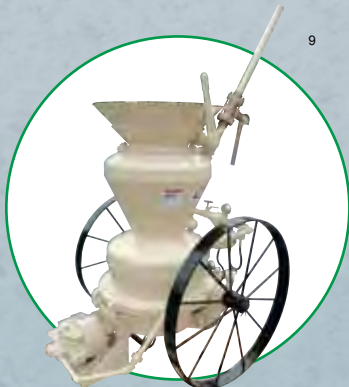
- Built to the Swiss design.
- Shotcreting machine for dry-mix process using the through-chamber rotor principle.
- Versatile, robust, requires little maintenance and is easy to operate.
- Includes a half-rotor and 1" (25mm) hose.
- Useful for small patches and thin linings.
- Can shoot up to 6 yd³/hr (4.6m³/hr)
- Standard 1.5" (38mm) hookup is used widely in repair and refractory applications.



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GM-060 Rotary Gun

- Has a worldwide reputation for ruggedness and reliability since 1957.
- Designed specifically for high-volume heavy civil construction dry-process shotcrete applications.
- Requires little maintenance and is easy to operate.
- Available with several power options, rotors and discharge sizes for optimum performance on every application.
- Can be ordered with a hopper vibrator, remote control and dust collector.



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N-TYPE Pneumatic Gun

- Allentown's N-type Pneumatic gun is a modern version of the original cement gun built by Allentown for a century.
- Most versatile machine available for the complete range of dry-process gunite, shotcrete and refractory applications.
- Ruggedly built to withstand hard, continuous use.
- Renowned for its ability to feed dry or damp, coarse or fine, and dense or lightweight materials at a smooth, accurately metered rate over 500' (152m) vertically or 1,000' (305m) horizontally.

PRE-DAMPENERS

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R-900

- Ease of operation and maintenance makes this unit Allentown's most popular rig.
- Designed for high-volume sand/cement gunning work or refractory gunning.
- Ideal for use with the N-2 gun, but will also feed any Allentown rotary gun.
- Tandem trailer-mounted unit.
- Mixes and delivers 8 to 10 tons/hr (7-9 tonnes/hr).

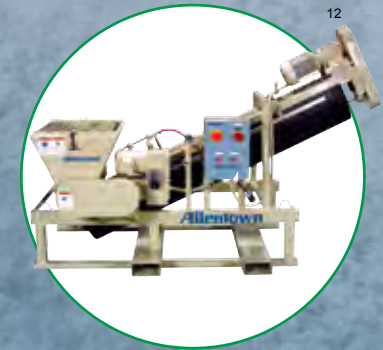
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PD-1/GRH Gunning Rig

- For use with packaged, pre-blended materials for shotcrete and refractory applications.
- Provides the opportunity to add a controlled amount of moisture to the bagged material as it is transported and fed into the gun.
- The addition of moisture, as much as 60 percent of the total water required, and the mixing action of the auger starts the hydration process long before the material reaches the nozzle.
- The controlled design or prebagged mixes ensure the amount of water added at the nozzle, in the split second that the material passes through the water ring, produces proper, in-place shotcrete.

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PD-1 Continuous Pre-Dampener

- Designed to be used with packaged, preblended materials for shotcrete and refractory applications.
- Provides the opportunity to add a controlled amount of moisture to the bagged material as it is transported and fed into the gun.
- Greatly reduces rebound.
- Eliminates dust, provides greater visibility for the nozzleman.
- Produces quality material in place.
- Reduces amount of wear on gun wear parts.

CONCRETING MACHINES

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TSV 3-6 Snorkel

- Ideal for fast and efficient concrete distribution, the TSV 3-6 Snorkel rides on rails set into tunnel formwork.
- The telescopic snorkel pipe can be turned 360 degrees rectangular to the formwork axle.
- Features a 10 hp (7.5kW) power pack for the snorkel system.
- The unit is linked to a 5" (127mm) diameter scissor pipe system, which also rides on rails.
- Capable of distributing up to 28' (8.53m) without the need for additional concrete pipe.
- Driving length can be increased by additional scissor pipes.

CONCRETING MACHINES

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BSA 100 Series

- Durable, global-use flatpack components.
- Ideal for long-distance applications including high-rise and civil construction, tunnels and mines.
- Rugged and easily towed.
- Heavy-duty tandem axles.
- Maximum output of 114 yd³/hr (87m³/hr).
- Maximum pressure of 1,030 psi (71 bar).

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BSA 2109 H-D

- Ideal for difficult jobs extending up to 800' (244m).
- Makes quick work of tough mixes.
- Convenient controls and rugged delivery cylinders.
- S-Valve and RS 900 Hopper.
- Maximum output of 124 yd³/hr (95m³/hr).
- Maximum pressure of 2,205 psi (152 bar).

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BSA 2110 HP-D

- Designed for jobs extending up to 800' (244m).
- Convenient controls are fully enclosed for weatherproof wear.
- Automatic central lubrication of the delivery cylinders.
- Heavy-duty tandem axles.
- Maximum output of 133 yd³/hr (102m³/hr).
- Maximum pressure of 3,190 psi (220 bar).

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BSA 14000 Series

- Highest pressures and outputs on the market today.
- Maximum volume at the greatest distances.
- Multiple equipment variations available.
- Great for tunnel construction and long-distance concrete pumping.
- Maximum output up to 260 yd³/hr (200m³/hr).
- Maximum pressure up to 3,626 psi (250 bar).

CHEMICAL/ACCELERANT DOSING PUMPS



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A10 Peristaltic

- Handles abrasive fluids with little wear since only the hose and hose inserts are in contact with the material.
- Hoses are constructed of natural rubber, Buna or EPDM within the pump's casing, providing high levels of volumetric accuracy for sampling, transfer and metering applications.
- Dry-run capability allows tank and line stripping.
- Seal-less design eliminates leaks, contamination and wear problems associated with difficult to seal products.
- Self-priming up to 29' 6" (9m).
- Reversible operation allows pumping in both directions.
- Pressures up to 116 psi (8 bar) at discharge.
- Available in air, electric and hydraulic power options.



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A20 Peristaltic

- The almost total vacuum of the pump transports high viscosity liquids.
- There are no valves or glands where crystals can build up and clog the pump.
- Absence of product slip in the hose gives a 100 percent volumetric efficiency.
- The hose is the only wear part and downtime is minimal.
- The pump can run dry as the hose is lubricated from outside.
- Pressures up to 116 psi (8 bar) at discharge.
- Available in air, electric and hydraulic power options.

ROBOTIC NOZZLE CARRIERS



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PM 407

- Modular flexibility and ease of use.
- Compact remote control allows freedom of movement and parameter control.
- All-wheel drive vehicle features high ground clearance and center pivot steering.
- Swing-out hopper makes cleanup simple.
- Telescoping arm reach from 7 – 28' (2 – 8.5m).
- Outputs from 141 – 706 ft³/hr (4 – 20m³/hr).



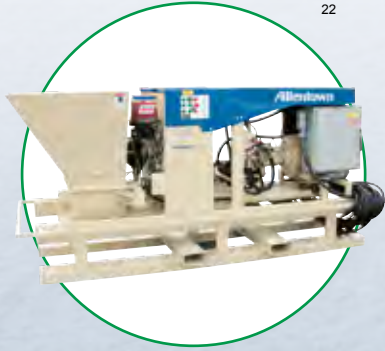
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PM 500

- Highly mechanized sprayed concrete system.
- For use in tunnels with average to large cross sections.
- Robust construction of the spray arm allows use of a peristaltic pump with a diameter of more than 3" (76mm).
- Guaranteed mobility, accuracy and absolute controllability.
- Convenient component access results in easy maintenance.

PUMPS

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POWERCRETER® 10

- Fills the void between small-line mechanical ball valve pumps and 5" (127mm) to 6" (152mm) cylinder-diameter concrete pumps.
- State-of-the-art electronic pump controls and hydraulic valves.
- Up to 2,085 psi (144 bar) material pressure.
- Compared to ball valve-type pumps, the Powercreter swing-tube design gives the operator the benefits of reversing for relieving pressure due to plugs, pumping difficult low slump or fiber mixes and lower maintenance costs.
- The 3" (76mm) material cylinders and variable, smooth hydraulics allow extremely controlled low output for specialized applications and maintain much of their output pressure when reducing to smaller diameter conveying lines.

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POWERCRETER® 20

- Allentown's answer for midrange pumping requirements.
- Rated for up to 17 yd³/hr (4.6m³/hr), this pump is chosen for a broader range of pumping applications than any other model.
- Can be fed by ready mix truck, on-site mixer, optional integrated batch or continuous mixer.
- Rugged, high pressure pumping system.
- Easily handles harsh mixes, including low cement, low moisture and refractory pumping castables.
- Ideal for large grouting applications and pump casting.
- Offers superb control for the most critical geotechnical and compaction grouting applications.
- When shotcreting, the fast switch-over of the swing tube reduces pulsing at the nozzle.

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POWERCRETER® 60 HP

- Powerful, high pressure model ideal for shotcrete applications.
- Rugged construction and an angled hopper.
- Proven Putzmeister S-Valve technology offers reliable and long-lasting performance.
- Smooth operation with twin-shifting cylinders.
- Offers a maximum volume output of 60 yd³/hr (46m³/hr).

COMBINATION MIXER-PUMPS

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POWERCRETER® Magnum

- The most versatile concrete repair pump manufactured by Allentown.
- Conveys low slump repair materials over long distances.
- 5 ft³ (1.4m³) mixer capacity.
- Energy provided by the remixer in the receiving hopper keeps thixotropic mixes in optimal condition for pumping.
- Powerful 46 hp (34kW) Deutz diesel engine.

Covering the World with Shotcrete Solutions for 100 Years

From the beginnings of shotcrete over 100 years ago, the Allentown name has been synonymous with the process of spraying mortar onto a surface at a high velocity. In its first iteration as The Cement Gun Company, the organization capitalized on the fact that only certain mix designs placed by a genuine "Cement Gun" could be classified as its registered trademark "Gunite."

Today, Allentown Shotcrete Technology, Inc. is the industry leader in the design and manufacture of wet- and dry-process shotcrete equipment including:

- Gunning Machines
- Pre-Dampeners
- Pumps
- Combination Mixer Pumps
- Mixers
- Chemical Additive Pumps
- Nozzle Carriers
- Mortar Machines
- Concreting Machines
- Parts and Accessories

Committed to serving customers with the industry's best service, as well as dependable, high performance equipment, Allentown is now a Putzmeister America company. Known and respected worldwide for its full line of concrete and material placing equipment, Putzmeister combines its products and industry expertise with Allentown's to offer over 50 complementary products. The organization now provides the world's most comprehensive range of sprayed concrete equipment for large and small applications in refractory, underground, mortar and civil work.

Allentown Shotcrete Technology: the only name you need to know for shotcrete.



For model specifications and available options, please consult model specification sheets or contact the factory.



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