



Putzmeister



Underground equipment:

Tunnelling and Mining

Who we are, what we do

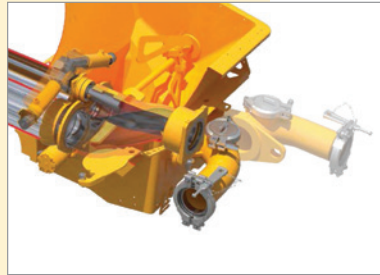
Putzmeister is a worldwide leading solution provider for pumping, mixing and placing concrete, mortar and industrial solids.

Applying our know-how in concrete pumping, for over 30 years Putzmeister has been designing, developing and producing concrete spraying equipment for mines and tunnels.

The experience acquired over these years together with ongoing investment in research and development have made Putzmeister a leading company in this field of application. We expand our product range for underground works, offering state-of-the-art equipment for saving costs and time, always with safety first.

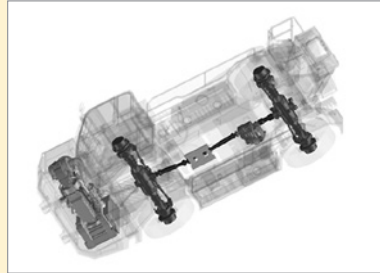
Own Technology

Putzmeister has been world famous as the manufacturer of **concrete pumps** par excellence for close to 60 years. The concrete pump mounted on the equipment is specially designed for concrete spraying, guaranteeing high performance, low pulsations and a long life for the wear parts.



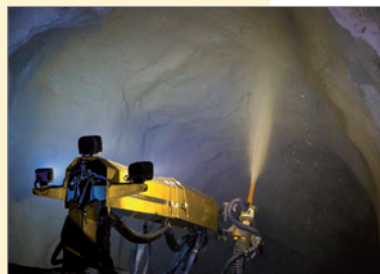
Putzmeister concrete pump

The **chassis** is designed to meet underground demands and made of high-resistance steel to stand the harshest working conditions. Its 4-wheel-drive, 4-wheel steering and crab-mode provide manoeuvrability in difficult driving situations.



Robust chassis

Designed for shotcrete, with a maximum vertical spraying reach of 17 m and remote control operated, the robust **spraying arm** found in Putzmeister equipment allows the operator to carry out a smooth and accurate application.



Spraying arm

The Putzmeister control system **monitors the correct relation** of accelerator dosage and concrete being pumped. In addition, it manages the correct functioning and security of the concrete pump. Finally, it collects the spraying data for download and processing.



Software de control

Underground logistics



Mixkret

	Mixkret 4	Mixkret 5	Mixkret 3
Dimensions (L x W x H)	6,595 x 2,200 x 2,500 mm	7,340 x 2,200 x 2,500 mm	6,770 x 2,200 x 1,900 mm
Concrete capacity	4 m ³	5 m ³	3 m ³
Diesel Engine	130 kW	168 kW	106 kW
Chassis	Robust with heavy - duty axles		
Transmission	Hydrostatic progressive system with continuous variation (ICVD)		
Cabin	FOPS/ROPS certified, closed optional		

Low-profile concrete mixers range with a concrete capacity of 3, 4 or 5 m² to complement the concrete spraying process. Robust design ideal for mining and equipped with a powerful engine with AAC (Automatic Altitude Compensation) system that enables its operation at high altitude offering the same performance..

Batchkret 20



Max. output	20 m ³ /h
Hoppers with electric vibrator	2 x 7 m ³
Concrete conveyor belt	14 m
Useful vibrated concrete capacity	500 l per cycle
Batching booth	Designed to house station management and control equipment
Feeding system configuration	Silo, Big-bag or Bag-cutting hopper

Shotcrete batching plant specially designed for the underground mining and construction industry, combines top-of-the range performance with a minimum footprint.

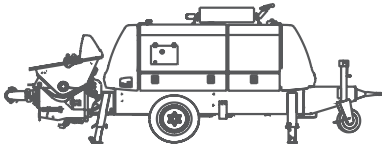
Minecharge



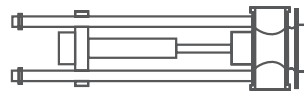
Dimensions (L x W x H)	7,885 x 2,200 x 2,500 mm
Max. charging reach (Vertical / Horizontal)	9 m / 7 m
Charging head	Hose pusher
Diesel engine	130 kW
Chassis	Robust with heavy-duty axles
Transmission	Hydrostatic progressive system with continuous variation (ICVD)

Robust equipment with robotic charging arm designed for up-holes. Synchronized with your emulsion charging unit's election.

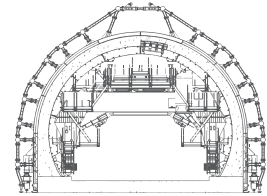
Integrated secondary concrete lining solutions for tunnels



BSA stationary concrete pumps



FORMKRET formwork filling system



Kern bespoke formworks

Formkret: Innovative 2-way valves filling system

The Automated Formwork Filling System is regulated by a set of 2-way valves integrated in the formwork structure, and connected by a single delivery line that links the entire system in sequential rows.

The concrete flow into the formwork is regulated by a diversion valve to ensure that the filling rate is synchronized on both sides. The diversion valve, regulated by the

concrete pump, switches the concrete flow automatically between both 'halves'.

As the concrete reaches the optimal filling level in each row, the valves close, re-directing the concrete towards the delivery line, and allowing the formwork filling process to continue sequentially towards the next row. The operation of the 2-way valve is done automatically by radio remote-steered hydraulics.

Safety & environment

- Automation means reduced workforce onsite

Speed

- Faster overall tunnel construction
- Quicker hydrostatic filling process

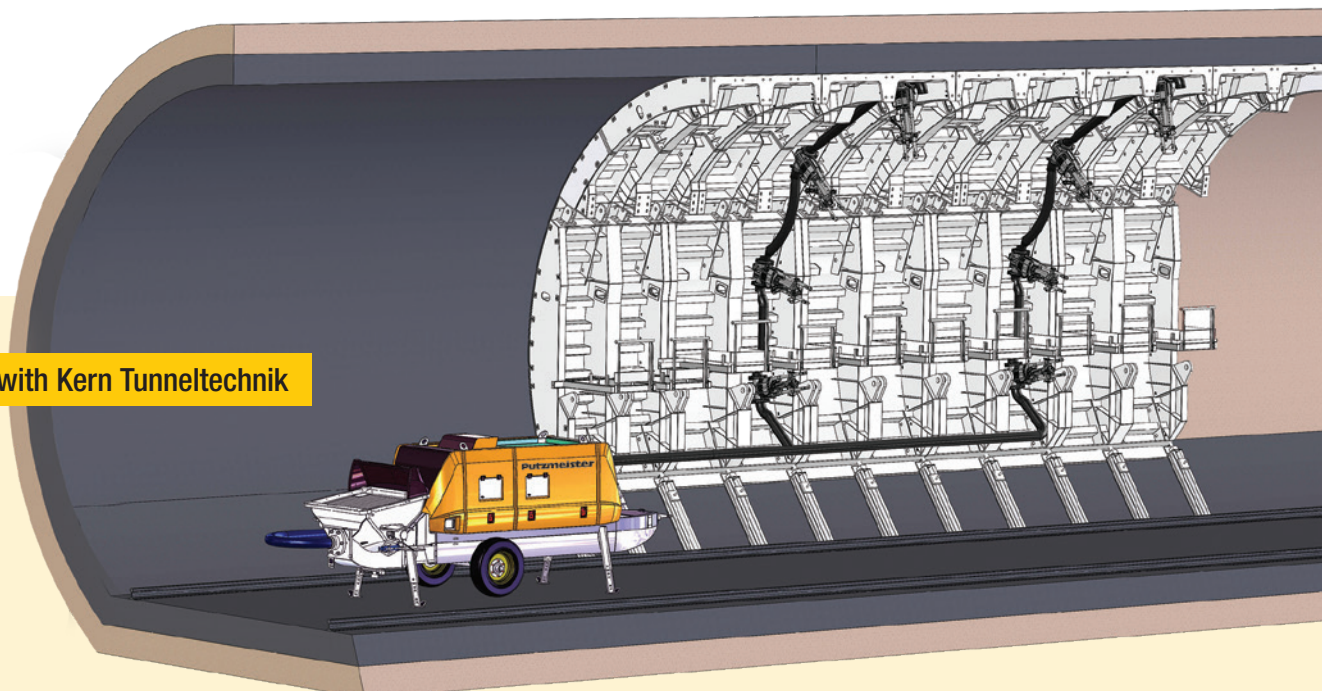
Savings (time + costs)

- Reduced labor-related needs

Simultaneity

- Compact structure allows simultaneous work

In collaboration with Kern Tunneltechnik





Concrete spraying equipment

SPM 500 Wetkret



Dimensions (L x W x H)	7,800 x 2,400 x 3,000 mm
Max. spraying reach (Vertical / Horizontal)	17 m / 15 m
Concrete flow (teor.)	4 – 30 m ³ /h
Aditive pump	30 – 700 l/h
Optional compressor (electric or diesel)	11 m ³ /min
Diesel engine	70 kW

Optimum performance in tunnels and medium and large galleries and slopes, demonstrating efficiency and reliability in numerous projects around the world.

Wetkret 5



Dimensions (L x W x H)	8,700 x 2,400 x 3,000 mm
Max. spraying reach (Vertical / Horizontal)	17 m / 15 m
Concrete flow (teor.)	4 – 30 m ³ /h
Aditive pump	Peristaltic 100 – 1.200 l/h Screw 100 – 600 l/h
Optional compressor (electric or diesel)	Variable, 10.5 m ³ /min
Diesel engine	119 kW, Tier 4i
Hydro Scaling (optional)	90 l/min, 180 bar

Sophisticated concrete spraying in tunnels and medium and large galleries and slopes, ensuring the utmost in safety and accuracy.

Wetkret 4



Dimensions (L x W x H)	9,200 x 1,900 x 2,200 mm
Max. spraying reach (Vertical / Horizontal)	7.5 o 10 m / 8 m
Concrete flow (teor.)	4 – 20 m ³ /h
Aditive pump	60 – 500 l/h
Optional compressor (electric or diesel)	8 m ³ /min
Diesel engine	106 kW, Tier 3 or Tier 4f
Closed cabin (optional)	

Ideal for narrow galleries in mining, thanks to its heavy-duty chassis with compact size and reduced turning radiuses. It boasts two spraying arm versions



Concrete spraying equipment

SPM 4210 Wetkret

Dimensions (L x W x H)	7,100 x 2,000 x 2,500 mm
Max. spraying reach (Vertical / Horizontal)	10 m / 8 m
Concrete flow (teor.)	4 – 20 m ³ /h
Additive pump	60 – 500 l/h
Optional compressor (electric or diesel)	6.5 m ³ /min
Diesel engine	55 o 72 kW



With heavy-duty axles and a reinforced turning system, it lends itself to the harsh conditions of underground mining in galleries and small and medium tunnels.

Wetkret 3

Dimensions (L x W x H)	4,475 x 1,870 x 2,549 mm
Max. spraying reach (Vertical / Horizontal)	8.79 m / 7 m
Chassis	Crawler with support legs
Additive pump (optional)	60 – 500 l/h
Tilting system (optional)	+/- 30°
Diesel engine	17.9 kW



Designed for the spraying of concrete in small tunnels with difficult access, the machine is mounted on a compact crawler chassis with an optional tilting system.

SPM 715 Synchro

Chassis	Trailer or Stationary
Type	Electric or Diesel
Concrete flow (teor.)	4 – 18.2 m ³ /h
Additive pump	4 – 400 l/h
Árido máx.	16 mm



Piston pump for shotcrete equipped with an additive pump that is synchronized with the concrete flow. High-level pumping technology in a compact, user-friendly design.



Training

Proficient shotcrete operators enjoy not only a safer workplace, but also optimize your project's efficiency by reducing operative costs and trimming timelines.

With our operator courses, the professional skills of your operators are improved and so is the use of your human resources. We offer courses for all levels and we have personnel authorized by EFNARC to certify your shotcrete operators as Nozzlemen.

The seminars and workshops for our clients are at their facilities and at the job site.

- **Operator training**
- **Nozzleman course**
- **Maintenance course**
- **Simulator-based shotcrete operator course**
- **EFNARC certification**



Wide stock of parts available worldwide

We know that availability of parts is essential to keeping machines running and ensuring project efficiency and productivity. With both our own warehouses as well as a stock of spare parts from our distributors around the world, we can ensure the availability of parts and maintain a high level of service for our customers.

To ensure the highest level of availability of parts in a project, especially in locations that are remote from supply vendors, we offer spare parts containers configured in accordance with the features of your machinery park.

Genuine Parts by Putzmeister

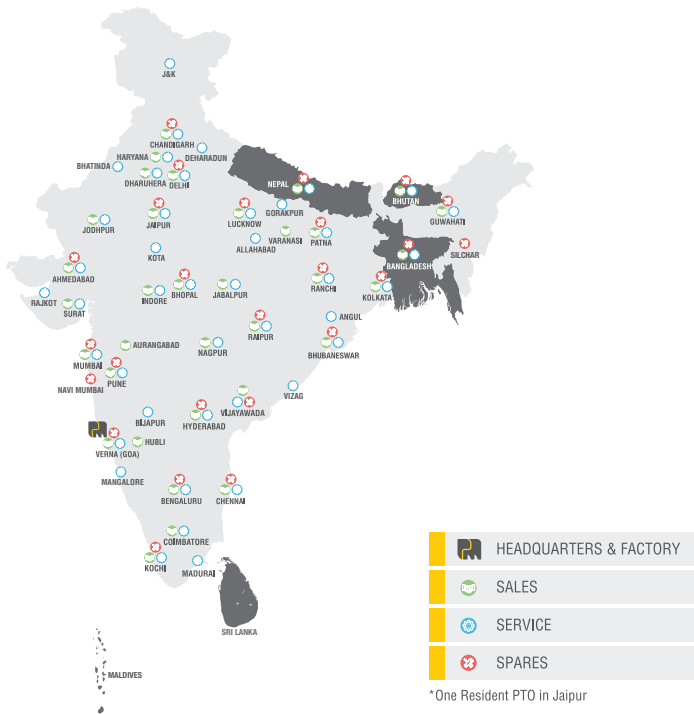
Putzmeister Concrete Solutions

#PMknows

Putzmeister is a world leading solution provider for pumping, mixing and placing concrete, mortar and industrial solids. For over 60 years Putzmeister Concrete Solutions have been utilized by construction, infrastructure, mining, energy and environment sectors in a wide range of environments and application conditions all over the world. Whatever the construction challenge, Putzmeister has the experience and know-how to provide you with the right equipment, application support and guidance, service, training and spare parts. When you invest in Putzmeister, you don't just get concrete equipment – you get an integrated solution to help you make the most out of your investment and improve your profitability.

#PMCares

After Sales & Parts Service - India
Operation & SAARC Countries



Putzmeister Concrete Equipment Range



BATCHING PLANT
30 / 60 / 120 m³/hr



TRUCK MIXER
6, 7, 8 and 10 m³



STATIONARY PUMP
20 – 100 m³/hr



PLACING BOOM
28, 32 and 35



MOBILE LINE PUMP
40 – 70 m³/hr



TRUCK MOUNTED PUMP
Horizontal Reach: 31.4 – 37.6 m
Vertical Reach: 35.6 – 41.6 m



TELEBELT
Horizontal Reach: 31.8 – 61 m
Vertical Reach: 16.78 – 34.70 m



GYPSUM PLASTERING
2000 - 3000 sq.ft / day
Hor: 30 m or Ver: 15 m

SAND-CEMENT PLASTERING/GROUTING
2500 - 3500 sq.ft / day
Hor: 25-70 m or Ver: 20-50 m

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