



Putzmeister

Underground Technology

CONCRETE SPRAYING



SPM 500 WETKRET

Thanks to its long spraying reach, the SPM 500 WETKRET concrete spraying system is ideal for shotcreting medium and large tunnels, caverns and slopes. With its optimal ground clearance, the carrier is suitable for steep slopes.

AVAILABLE AS DIESEL DRIVE VERSION



SPM 5314 WETKRET ROADSTER

SPM 5314 WETKRET ROADSTER is the versatile and flexible solution for medium to large sections of tunnels, caverns and slopes. Designed to be mounted on a 2 or 3 axle truck, the equipment provides a high degree of mobility.

AVAILABLE AS DIESEL DRIVE VERSION



SPM 4210 WETKRET

With heavy-duty axles and a reinforced turning system, the SPM 4210 WETKRET is ideal for the rough working conditions in mining. The dual, proportional remote control allows an easy control of the spraying arm movements.

AVAILABLE AS DUAL DRIVE VERSION



SPM 4210 WETKRET ROTOR

The SPM 4210 WETKRET ROTOR version is ideal for mechanized dry mix shotcreting in mining, offering the same level of sturdiness in the chassis as the standard model.

CONCRETE TRANSPORT



MIXKRET 5 MIXKRET 4

The low-profile concrete mixer line (4 or 5 m³) for mining provides great climbing and driving capacity. With the option of an additive discharging system, MIXKRET is the perfect complement for the concrete spraying process in mining.



CEMKRET 8

CEMKRET 8 is designed to optimize the logistics of underground mining operations. Due to its four electric vibrators and the capacity of the two augers, the time needed for unloading cement and dry mix is reduced to a minimum.

PUTZMEISTER CONCRETE SPRAYING TECHNOLOGY

Spraying arms specially designed by Putzmeister for concrete spraying provide the operator with the best operability and highest degree of ergonomics. The heart of the equipment is a Putzmeister concrete

synchronization of additive and concrete flow, guaranteeing a homogeneous, high-quality shotcrete mixture. An ideal mix-ratio of shotcrete and additives reduces the rebound and thus enhances productivity. Specially designed for the rough working conditions in mining and



Hydropower projects



Tunnel lining



Slope stabilization



Rock-support in mining

pump of superior quality - no other brand has pumped the same amount of m³ of concrete worldwide. With its large diameter and long stroke, pulsations are minimized and the lifetime of the wear parts increased. The additive dosing of the concrete spraying equipment allows the

tunnelling, the carriers of the equipment are extremely robust and durable. In order to provide the best possible configuration according to the working environment, the machine is completed by a range of optional equipment in accordance with customers' requirements.

EFFICIENCY AND RELIABILITY PROVEN AT MINING AND TUNNELLING JOB-SITES WORLDWIDE

SPARE PARTS & AFTER SALES SERVICE

Putzmeister is committed to a fast response to every customers' need, be it spare parts, technical assistance or training. Our backoffice technicians are at your disposal to provide a remote solution to technical problems over the phone, saving costs and time. For emergencies, Putzmeister offers a 24-hour / 7 days technical service hotline, available to all customers worldwide requiring troubleshooting or technical assistance. A qualified technician is available to provide telephone assistance and support 24 hours a day / 7 days a week / 365 days per year. With an extensive worldwide network of after-sales service technicians, Putzmeister quickly responds

if assistance is required on the jobsite. The qualified staff of our subsidiary or partner located closest to you provides you with a fast and reliable service. Putzmeister's worldwide warehouses guarantee the availability of spare parts at the moment they are needed.

TECHNICAL HELPLINE FOR EMERGENCIES. TELEPHONE ASSISTANCE AND SUPPORT 24-HOURS A DAY / 7 DAYS A WEEK +34 91 428 81 00



TRAINING

In order to train your staff to use shotcreting equipment more efficiently, Putzmeister technicians are certified as 'Nozzlemen' by the European Federation for Specialist Construction Chemicals and Concrete Systems (EFNARC). Our qualified technicians provide your operators and maintenance staff with the required knowledge and skills, on site or at our premises, to increase the productivity and working life of your concrete spraying and transport equipment.

EFNARC CERTIFIED PUTZMEISTER STAFF TO TRAIN YOUR OPERATORS AND TECHNICIANS

PUTZMEISTER CONCRETE TRANSPORT EQUIPMENT

In addition to its concrete spraying range, Putzmeister offers low-profile concrete and cement transporting equipment for underground mining operations, designed and developed to complement the concrete spraying process. Its powerful engines provide great driving power, and with the ICVD drive system (Integrated Continuously Variable Drive) it is possible to drive through the entire speed range without interrupting the tractive force, increasing comfort for the driver and reducing fuel consumption.



Concrete transport and mixing



Cement and dry mix transport

THE PERFECT COMPLEMENT FOR THE CONCRETE SPRAYING PROCESS IN MINING



CONCRETE SPRAYING



SPM 500
WETKRET

| DIMENSIONS | |
|----------------------------------|------------------|
| Length | 7.800 mm |
| Width | 2.400 mm |
| Height | 3.000 mm |
| Turning radius: outer / inner | 6.370 / 2.628 mm |

| SPRAYING ARM | |
|-----------------------|-----------|
| Max. spraying reach: | |
| Vertical / horizontal | 17 / 15 m |
| Min. working section: | |
| Vertical / horizontal | 3 / 2,8 m |

| CONCRETE PUMP | |
|-----------------|--------------------------------|
| Pump | Double-piston, hydraulic drive |
| Output (theor.) | 4 – 30 m³/h |
| Max. pressure | 75 bar |

| ADDITIVE PUMP | |
|------------------|--------------|
| Adjustment range | 30 - 700 l/h |
| Additive tank | 1.000 l |

SYNCHRONIZED WITH CONCRETE PUMPING

| VEHICLE | |
|------------------|----------------------------|
| Chassis | Off-road, rigid |
| Engine | Diesel, 4 cylinders, 70 kW |
| Max. speed | 20 km/h |
| Climbing ability | 35 % |

| COMPRESSOR (OPTIONAL) | |
|-----------------------|--------------------|
| Power | Electric or Diesel |
| Performance | 75 or 70 kW |
| Max. air flow | 11 m³/ min |
| Max. working pressure | 7,5 or 7 bar |



SPM 5314
WETKRET ROADSTER

| DIMENSIONS | |
|-----------------|--------------------|
| Length | 9.400 mm |
| Width | 2.480 mm |
| Height | 3.950 mm |
| Turning radius: | According to truck |

| SPRAYING ARM | |
|-----------------------|-----------|
| Max. spraying reach: | |
| Vertical / horizontal | 14 / 14 m |
| Min. working section: | |
| Vertical / horizontal | 4,5 / 7 m |

| CONCRETE PUMP | |
|-----------------|--------------------------------|
| Pump | Double-piston, hydraulic drive |
| Output (theor.) | 4 – 30 m³/h |
| Max. pressure | 60 bar |

| ADDITIVE PUMP | |
|------------------|--------------|
| Adjustment range | 30 - 700 l/h |
| Additive tank | 1.000 l |

SYNCHRONIZED WITH CONCRETE PUMPING

| VEHICLE | |
|---------|--------------|
| Chassis | Not included |

| COMPRESSOR (OPTIONAL) | |
|-----------------------|------------|
| Power | Electric |
| Performance | 63 kW |
| Max. air flow | 10 m³/ min |
| Max. working pressure | 7,5 bar |



SPM 4210
WETKRET

| DIMENSIONS | |
|----------------------------------|------------------|
| Length | 7.100 mm |
| Width | 2.000 mm |
| Height | 2.500 mm |
| Turning radius: outer / inner | 6.650 / 3.950 mm |

| SPRAYING ARM | |
|-----------------------|-------------|
| Max. spraying reach: | |
| Vertical / horizontal | 10 / 8 m |
| Min. working section: | |
| Vertical / horizontal | 2,5 / 2,4 m |

| CONCRETE PUMP | |
|-----------------|--------------------------------|
| Pump | Double-piston, hydraulic drive |
| Output (theor.) | 4 – 20 m³/h |
| Max. pressure | 65 bar |

| ADDITIVE PUMP | |
|------------------|--------------|
| Adjustment range | 60 - 500 l/h |
| Additive tank | 400 l |

SYNCHRONIZED WITH CONCRETE PUMPING

| VEHICLE | |
|------------------|---|
| Chassis | Off-road, articulated |
| Engine | Turbo Diesel, 4 cylinders, 55 kW or 72 kW |
| Max. speed | 20 km/h |
| Climbing ability | 35 % |

| COMPRESSOR (OPTIONAL) | |
|-----------------------|--------------------|
| Power | Electric or Diesel |
| Performance | 37 or 55 kW |
| Max. air flow | 6,8 m³/ min |
| Max. working pressure | 7,5 or 7 bar |



SPM 4210
WETKRET ROTOR

| DIMENSIONS | |
|----------------------------------|------------------|
| Length | 7.230 mm |
| Width | 2.000 mm |
| Height | 2.500 mm |
| Turning radius: outer / inner | 6.650 / 3.950 mm |

| SPRAYING ARM | |
|-----------------------|-------------|
| Max. spraying reach: | |
| Vertical / horizontal | 10 / 8 m |
| Min. working section: | |
| Vertical / horizontal | 2,5 / 2,4 m |

ROTOR

| CONCRETE PUMP | |
|-----------------|----------------------------------|
| Rotor | Two plates rotor, electric drive |
| Output (theor.) | 9,5 m³/h |
| Max. pressure | 5 bar |

| ADDITIVE PUMP | |
|------------------|--------------|
| Adjustment range | 60 - 500 l/h |
| Additive tank | 400 l |

SYNCHRONIZED WITH CONCRETE PUMPING

| VEHICLE | |
|------------------|----------------------------------|
| Chassis | Off-road, articulated |
| Engine | Turbo Diesel, 4 cylinders, 55 kW |
| Max. speed | 20 km/h |
| Climbing ability | 35 % |

| COMPRESSOR (OPTIONAL) | |
|-----------------------|------------|
| Power | Electric |
| Performance | 75 kW |
| Max. air flow | 11 m³/ min |
| Max. working pressure | 7,5 bar |

CONCRETE TRANSPORT



MIXKRET

| DIMENSIONS | | |
|------------------|----------|----------|
| | MIXKRET5 | MIXKRET4 |
| Length | 7.340 mm | 6.595 mm |
| Width | 2.200 mm | 2.200 mm |
| Height | 2.500 mm | 2.500 mm |
| Turn. rad. outer | 6.000 mm | 5.770 mm |
| Turn. rad. inner | 2.400 mm | 2.400 mm |

| CONCRETE DRUM | | |
|---------------|-----------|----------|
| | MIXKRET5 | MIXKRET4 |
| Capacity | 5 m³ | 4 m³ |
| Operation | Hydraulic | |

| DIESEL ENGINE | | |
|---------------|---------------------------|------------------|
| | MIXKRET5 | MIXKRET4 |
| Type | Turbo diesel, 6 cylinders | |
| Power | 168 kW 225 HP | 130 kW 174 HP |
| rpm | 2.200 | |

| TRANSMISSION | | |
|--------------|--|----------|
| | MIXKRET5 | MIXKRET4 |
| Type | Hydrostatic with continuous variation (ICVD) | |
| Drive | 4WD / 4WS | |

| AXLES | | |
|-------|-----------------------|----------|
| | MIXKRET5 | MIXKRET4 |
| Type | Heavy-duty planetary | |
| Front | Fixed and directional | |
| Rear | Swing and directional | |

| PERFORMANCE | | |
|-----------------------|----------|----------|
| | MIXKRET5 | MIXKRET4 |
| Maximum speed | 20 km/h | |
| Max. climbing ability | 30 % | |



CEMKRET 8

| DIMENSIONS | |
|----------------------------------|------------------|
| Length | 7.297 mm |
| Width | 2.200 mm |
| Height | 2.500 mm |
| Turning radius: outer / inner | 5.770 / 2.400 mm |

TRANSPORT TANK

| CONCRETE DRUM | |
|----------------------|---------------------|
| Capacity | 8,25 t |
| Operation | Hydraulic |
| Max. discharge speed | 50 t/h 0,8 t/min |

| DIESEL ENGINE | |
|---------------|---------------------------|
| Type | Turbo diesel, 6 cylinders |
| Power | 130 kW at 2.200 rpm |

| TRANSMISSION | |
|--------------|--|
| Type | Hydrostatic with continuous variation (ICVD) |
| Drive | 4WD / 4WS |

| AXLES | |
|-------|-----------------------|
| Type | Heavy-duty planetary |
| Front | Fixed and directional |
| Rear | Swing and directional |

| PERFORMANCE | |
|-----------------------|---------|
| Maximum speed | 20 km/h |
| Max. climbing ability | 30 % |

PRODUCT RANGE
Putzmeister offers the right equipment for concrete spraying work in underground mines and all kinds of tunnel constructions. Our concrete spraying equipment applies shotcrete in mines and tunnels all over the world, with spraying reaches of up to 17m and output rates of up to 30 m³/h.

The main components of Putzmeister concrete spraying equipment, spraying arm, concrete pump, chassis and control software are designed, developed and produced in-house in order to offer perfectly synchronized equipment, tailored to our customers' needs and the toughest working conditions.

The concrete spraying range is complemented by concrete and cement transporting equipment to optimize the logistics of underground mining operations.