LOW-PROFILE CONCRETE MIXER FOR MINING

Putzmeister
Underground Technology
PUTZMEISTER CONCRETE SPRAYING TECHNOLOGY

MIXKRET 5: COMPACT, STRONG AND VERSATILE

The low-profile concrete mixer for mining Putzmeister MIXKRET 5 has been designed and developed to complete and improve the total concrete spraying process. The concrete mixing drum has a maximum concrete capacity of 5m³. The equipment optionally includes a liquid additive discharging system to optimize shotcrete additive logistics. The 6-cylinder, 168 kW (225 HP) engine provides great climbing and driving power, as well as the possibility to work it at great height.

The longitudinal cabin and the rear night-vision camera facilitate driving with the best possible visibility at all times. A compact design with heavy-duty axles, both directional and powered, offer great mobility and maneuverability through galleries and tunnels with small cross sections. In order to guarantee full safety during down slope routes MIXKRET 5 includes an automatic speed regulation system, which allows traveling at full load with total safety.
CONCRETE MIXING DRUM: 5 m³ FOR MIXING, TRANSPORTING AND DISCHARGING

The transport capacity of the robust concrete mixer is 5 m³, which enables savings on each journey. The low position of its gravity center offers a reliable and stable behavior during the transport, improving safety. The technology used in the design of the drum and blades ensures optimal concrete mixing, as well as quick and effective discharging. MIXKRET 5 is equipped with a heavy-duty ancillary transmission that provides high load and rotation capacity.

The concrete mixing drum is made of wear-resistant steel with a high elasticity index in order to extend the working life of the equipment and maximize its performance and value. The hydraulic anti-pouring lid enables concrete transport through steep slopes without loss of material. The equipment has an external control panel in the rear area and a control panel in the driving cabin to control the hydraulic drum (mixing, transporting and discharging). The discharging chute can be oriented and adjusted in height, which facilitates discharging material to equipment which is not located in line or at the same level.

168 kW (225 HP) DIESEL ENGINE: GREAT CLIMBING AND DRIVING POWER

MIXKRET 5 is equipped with a powerful 6-cylinder, 168 kW (225 HP) engine with ACERT technology, which provides a great traction and driving capacity, superior to other equipment of the same range available in the market. The Diesel engine has an AAC (Automatic Altitude Compensation) system that enables its operation at high altitude offering the same performance. The electronic engine control provides a perfect balance of durability, fuel efficiency and low emissions, so it offers the best possible performance with the lowest consumption.

The machine is equipped as standard with electronic engine control, minimizing the ventilation requirements. This electronic engine control allows for the total control of the operation temperature, avoiding overheating.

MIXKRET 5 includes an easy-to-use electronic display to record and diagnose failures, minimizing maintenance periods. The easy access to daily service points simplifies tasks and reduces the time dedicated to scheduled maintenance procedures.

TRANSMISSION AND AXLES: STURDINESS AND MANEUVERABILITY

The hydrostatic transmission with geared motor has electronically controlled continuous variation and ensures the correct relationship between engine torque and speed, reducing fuel consumption and noise levels. MIXKRET 5 has heavy-duty, state-of-the-art planetary axles, both directional and powered, which offer great mobility and maneuverability in galleries and tunnels with small sections. Its rear axle oscillates, offering greater absorption through uneven terrains on the maximum load area.

To ensure full safety over down slope movement, MIXKRET 5 includes an automatic speed regulation system that enables full-load traveling at the maximum safe speed.

BRAKES AND WHEELS: SAFETY AND PROTECTION

The service brakes in both axles are multidisc in oil bath, hydraulically driven with two independent circuits. This system provides great braking power and long work life, even under the most demanding conditions. The equipment also has a hydrostatic holding system used to lower the speed in slopes,
curves and cross sections, minimizing the use of the service brakes. The combined use of service brakes and hydrostatic holding enables to reduce the operation costs and ensures a safe and speedy transport.

The negative-coupling parking brake in both axles allows to park the machine in a safe way. The equipment also includes a brake unblocking system to tow the equipment if necessary.

**MIXKRET 5** is equipped as standard with mine wheels, ensuring the maximum protection of the equipment in rough conditions, besides an excellent productivity, long tyre life and comfortable driving.

**DRIVING CABIN: ERGONOMIC DESIGN AND PERFECT VISIBILITY**

The equipment has an easy-to-access driving cabin with wide front visibility. For back drive **MIXKRET 5** has a night-vision camera with infrared lighting that facilitates moving back without the aid from anyone and without the need for stepping down from the cabin, reducing working time and increasing safety. The cabin is designed under ergonomics standards to minimize the driver fatigue and increase productivity. On customer demand, **MIXKRET 5** is available with closed cabin with air conditioning and heating.

**DIMENSIONS AND TURNING RADIUS**

**TRANSPORT DIMENSIONS**

**MAXIMUM LONGITUDINAL GRADIENT WHILE DRIVING**

**TURNING RADIUS**

**4-WHEEL STEERING WITH CRAB MODE**
Concrete drum for mixing, transporting and discharging

**Maximum concrete capacity**: 5 m³ (6.54 yd³)

**Operation of concrete mixing drum**: Hydraulic

**Adjustable turning speed in both directions**: 0 – 18 rpm

**Discharge height**: 1.066 - 1.403 mm (3.5 - 4.6 ft)

**Discharging chute length**: 530 - 880 mm (1.74 - 2.89 ft)

**Height adjustable (electro-hydraulically)**

**Inspection covers**: 2

**Anti-spillage rear hatch**: Hydraulic opening and closing

**Control panel**: External right-hand side and in cabin

**Anti-rotation safety lock**: Manual

**Diesel engine**

- **Type**: 6 cylinders
- **Maximum power**: 168 kW (225 HP) at 2,200 rpm
- **Cooling**: Water
- **Engine emissions**: In accordance with EU-Stage III A / EPA-Tier 3
- **Catalyst**: EZ Purmuffer
- **Fuel tank**: 265 l
- **AAC system**: Automatic altitude compensation

**Transmission and axles**

- **Transmission**: Hydrostatic progressive system with continuous variation (ICVD), gearbox and hydraulic variable motor, no gears to change
- **Operation**: Continuous without interruption of traction, self-adjusting based on power requirement (load and slope)

**Driving and steering**

- **Axle type**: Heavy-duty directional planetary axles
- **Front axle**: Fixed and directional
- **Rear axle**: Swing and directional

**Electronic speed control system (inclinometer)**

**Tyres/Wheel rims**: For mining, 12.00 - R20

**Brakes**

- **Service brakes**: On both axles, multi-disc in oil bath, hydraulic with independent circuits
- **Parking brakes (negative)**: On both axles, internal SAHR discs, hydraulic operation

**Performance**

- **Maximum speed**: 20 km/h (12.4 mph)
- **Maximum climbing capacity at full load**: 30% (SAE standard)

**Other features**

- **Cabin**: FOPS / ROPS certified
- **Driving lights**: LED, 2 front + 2 rear
- **Working lights**: LED, 4 front + 4 rear
- **Rear camera**: Night-vision
- **Water tank**: 200 l
- **Manual fire extinguisher**: 6 kg
- **Omnidirectional beacon**: Amber
- **High-pressure water pump for cleaning**: With hose winding system and gun
- **Operator-presence detection system**: Driver seat
- **Automatic greasing system**:

**Weight**

- **10,500 kg without load (23,148.52 lb) / 23,000 kg (50,706.28 lb) with load**

**Optional equipment**

- **Additive discharging system (tank + pump)**: 120 l
- **Fire suppression system, automatic / manual operation**
- **Closed driving cabin**
- **Air-conditioning and heating**
- **Flowmeter for water pump**
- **Tramming direction lights**

Consult Putzmeister for special configurations
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. It is this experience and search for added value for our customer that makes us different.

We offer perfectly synchronized equipment, tailored to our customer’s needs and the toughest working conditions. The low-profile concrete mixer line Putzmeister MIXKRET has been designed and developed to complement and improve the concrete spraying process. The versatile MIXKRET can also be used for the transport of additives. Thanks to its powerful engine, the compact and strong equipment makes for the perfect complement.

Putzmeister:
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Strategic alliance for the development of concrete spraying technology