









# Truck-mounted concrete pumps M46 | M47

Lightweight top-performance packages on four axles

# Light in weight but heavy on benefits

Putzmeister

# More payload options and possible uses

Weighing less than 32 t, the M46/M47 is one of the lightest in its class and provides more than sufficient payload reserve.

The flexible 5-arm placing boom provides heavyweight performance and is extremely easy and safe to use. And on a four-axle chassis, it is astoundingly easy to move to the site of use.

The new machines are also setting new benchmarks in cost-effectiveness, dramatically reducing operating costs throughout the entire life cycle.

# Putzmeister promise

The name Putzmeister stands for machines that enable you to work with extreme productivity and go beyond purely being competitive. To this end, we provide extraordinarily innovative technologies alongside top quality and excellent service.

We are fully dedicated to supporting you both around the world and around the clock. And this is because every Putzmeister employee recognizes that your machine has important jobs to do.

**Your Putzmeister Team** 

# The M46/M47 in detail

### Lower maintenance costs

The M46/M47 enables you to work costeffectively. On the one hand, it allows you to be far more economical with functional fluids and your working time.

On the other hand, the reduced wear, daily maintenance and components optimized in terms of maintenance mean that the operating costs, service life and resale value are extremely attractive.

### Perfect boom design

The 5-arm boom with roll-Z fold system has excellent slip characteristics. It can be deployed quickly and makes optimum use of the effective horizontal reach of up to 46/47 m — and thus also maximizes the range of jobs it can take on.

The intelligent laying of the delivery line and the stiffness of the steel structure keep placing boom vibration to a minimum. Concrete distribution is safer and efficient.





### **Space-saving support**

Both the M46 and the M47 are fitted with the support system developed and optimized by Putzmeister. This technology enables the telescopic front support legs to be adjusted to pre-defined support position. The rear support legs are fully flexible. This is particularly beneficial on construction sites where space is extremely limited.

### Reliable safety

We have comprehensively taken into account all applicable standards and directives, providing an exceptionally high level of safety. This means that you are always driving and working on the right side of the law.

For example, ESC (Ergonic® Setup Control), the support system from Putzmeister, meets the DIN EN 12001:2012\* standard.

\* EN 12001:2012: This standard specifies automatic checking of the interplay between the support system, placing boom movements and the pumping function.

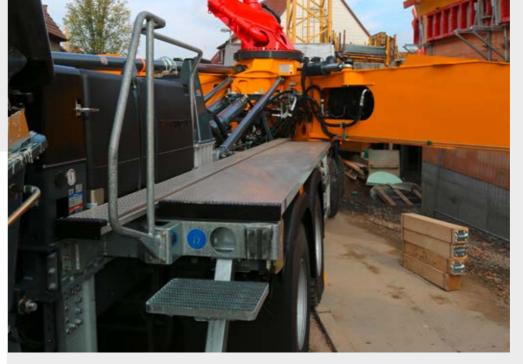
# Great technology in use

# Innovative solutions for high requirements – the M46 and M47

A large horizontal reach, small support dimensions, convenient operation and powerful pumps for all common types of concrete – the ideal qualities for supporting day-to-day use. Furthermore, these truck-mounted concrete pumps are not deterred by strict licensing regulations. Their low unloaded weight provides additional load capacity for functional fluids and accessories. The wide flatbed with anti-slip surface provides sufficient space in this regard. Ergonomic steps on the hopper enable easy cleaning.



A gross weight of less than 32 t provides a high capacity for payload and functional fluids. This ensures that the machines meet country-specific licensing regulations.



The wide flatbed with anti-slip surface offers a great deal of freedom of movement when working as well as simultaneously providing storage space.



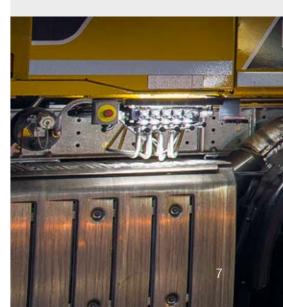


In comparison to the M47, the M46 has less horizontal reach but allows a higher boom tip load. This means that an end hose squeeze valve (EQV) and a divided end hose can be used.

# The benefits are best seen during operation

- A gross weight of less than 32 t incl. sufficient reserves for payload and functional fluids
- Smooth 5-arm placing boom thanks to intelligent laying of the delivery line and the harmonious continuity of the steel structure
- Efficient working thanks to consistent sophisticated ergonomics and Ergonic<sup>®</sup> 2.0, the innovative control hardware and software
- Maximum safety thanks to comprehensive consideration of applicable standards and directives
- Service-friendly thanks to optimized accessibility and consistent screw concept
- Minimal service costs thanks to maintenance-free components, standardised wear parts (e.g. only four standard elbow types) and smaller quantities of functional fluids

The distortion properties are better in comparison to the rigid frame, and provide the same elasticity as the chassis frame. This makes driving a pleasure, and increases the service life of the truck.



# Putzmeister quality work in detail

# Our sophisticated concepts save your money

How? Working in a team, we develop solutions that enable you to work cost-effectively, safely, conveniently and in an environmentally friendly manner. This includes, for example, the use of maintenance-free components, the automatic ESC support system and the centralized lubrication system and much more.



Innovation and quality can only be achieved with employees who think about their customers and about the future.

The machines are thoroughly tested in practice and on construction sites.



Maintenance-free components reduce operating and maintenance costs, for example thanks to wear-optimized standard elbows with long joins for maximum delivery line service life.



Combined centralized lubrication system:
The electrical centralized lubrication system for hopper, A-hinge and four-point bearing ensures that the service life of the components that are subject to high stress is maximized without any additional work or expense. The optional centralized lubrication system on the boom means that the daily inspection process can be further streamlined. We all know that time is money.





# Protection for the operator and the machine

Telescopic support legs that can be adjusted to pre-defined support position prove their value, particularly where space is extremely limited. ESC (Ergonic® Setup Control), the support system from Putzmeister, ensures absolute control, enabling you to work flexibly in accordance with the EN 12001:2012 standard.

Three defined support positions for the rear swinging support legs
Dimensions from the centre of the chassis: 1.50 m; 2.00 m; 4.70 m
Three defined support positions for the front telescopic support legs
Dimensions from the centre of the chassis: 1.25 m; 2.50 m; 4.20 m
Numerous flexible support configurations are possible



The improved boom hydraulics conserve valuable resources and hydraulic fluid. The optimized response characteristics of the boom, on the other hand, save valuable working time, as it is ready for use more quickly.

The sophisticated design of the delivery lines also plays a part here, as it is distinguished by low-tension monofix mountings and arm bolts that can be undone on both sides.

# Better service

All four screwed support cylinders have an identical design, meaning that they can be repaired directly on site using simple tools.

It is also possible to easily replace the screwed pipe bracket as the positions of the pipe bracket and the guided delivery line are precisely defined.



# Skilful interaction – long-lasting performance

# Pump, actuator, control system – trimmed for performance

Thanks to their ideally coordinated geometry, our concrete pumps are designed for all common types of concrete. The durable S transfer tube and the closed free-flow hydraulics circuit are essential for providing high performance with minimum consumption of resources. In addition, a new environmentally-friendly hydraulic fluid management system has been implemented.





# The S transfer tube ensures that even coarse mixes keep flowing

- The S transfer tube works quietly and quickly, even with stiff, wear-intensive coarse-grained mixtures
- Long service life and service intervals ensure a high degree of machine availability
- Extension of useful life thanks to mounted wear plates
- Easy replacement of the S valve
- Optimized switchover and reduced movement of the machine and boom

# EPS (Ergonic® Pump System) control system

EPS provides fully electronic regulation of the operation of the concrete pump, the motor and the placing boom. For you, that means:

- High machine availability thanks to high-quality components with low wear
- Optimized, smooth pumping process
- Reduced movement of the machine and boom
- With (Ergonic® Output Control), ideal motor speed for lowest consumption, wear and noise
- New EPS Plus (optional) offers three predefined hose pump programmes
- In addition, the agitator function can be automated (optional), depending on the pump control
- Fault management via EGD-RC (Ergonic® Graphic Display-Remote Control)

# You choose the power

Like all Putzmeister truck-mounted concrete pumps, the M46/M47 is available with different pumps with a delivery pressure of 85 bar: The 16H with two chromium-plated delivery cylinders (dia. 230 mm), which is cheaper in comparison, and the smoother 16HLS resp. 17iLS/19iLS (dia. 250 mm). They offer a delivery rate of up to 190 m³/h, but the LS version has a lower number of strokes and is thus subjected to less wear.

# The enhanced 17iLS/19iLS also offer numerous benefits and improvements:

- Fuel saving of up to 25 % with EOC
   2.0 (field tested with multiple pumps for international applications)
- More efficient pumping:

   Oil leaks prevented by improved sealing system
- Better pump start-up behaviour
- Longer service life thanks to robust S transfer tube bearing

# Pumps

Туре	Output m³/h	Pressure bar	Stroke mm	Cylinder Ø S mm	Strokes/min
16 H	160*	85	2100	230	31
16 H LS	160*	85	2100	250	26
17 i LS	170*	85	2100	250	27
19 i LS	190*	85	2100	250	30

All data represent theoretical maximum values.

\* Rod/piston side. Max. output and max. delivery pressures cannot be operated at the same time.

# The pump at a glance

- Pump geometry is optimally adapted to all common types of concrete
- Service-friendly control system with free flow hydraulics and thus consistently high hydraulic fluid quality
- Particularly wear-resistant S transfer tube design, which guarantees long service life
- Optimized hopper (screwed-in grille, improved shape and optimized S transfer tube storage)
- Agitator safety shutdown via RFID (Radio Frequency Identification), a detection system using electromagnetic waves, including start-up protection
- Smooth, optimized pumping with EPS and EOC protects the pump and the truck
- Optimized switchover with SN control and Push Over avoids wear-intensive pressure peaks
- Convenient and simple operation with Ergonic® 2.0, the latest concept for control hardware and software from Putzmeister
- Minimum operating costs thanks to maintenance-free components, good accessibility and significantly reduced volumes of fluid
- Easy replacement of components due to screw concept, e.g. support cylinder
- Optional agitator automatic system, whereby the direction of rotation corresponds to the pump direction
- Chrome-plated delivery cylinder particularly wear-resistant



# Extensive support for machine operators

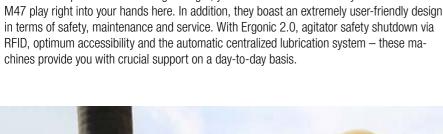
# Everything under control – everything at a glance

If both the output and the handling are right, you can work more efficiently. The M46 and M47 play right into your hands here. In addition, they boast an extremely user-friendly design in terms of safety, maintenance and service. With Ergonic 2.0, agitator safety shutdown via RFID, optimum accessibility and the automatic centralized lubrication system - these ma-





All possible displays and settings can be read optimally on the large, high-resolution colour display - EGD-RC (Ergonic® Graphic Display Remote Control).



# The new standardized remote control -Operation 2.0

The new radio remote control feels noticeably lighter, but also offers a large number of other benefits:

- All information and function buttons on the status display have symbols and LED backlighting
- Ergonomic boom control with two joysticks
- Convenient one-handed control (only with EBC) relieves the strain on the machine operator
- Can also be used as a cable remote control (e.g. where radio communication is prohibited)
- Easy replacement of the radio remote control thanks to radiomatic® iLOG technology
- Lithium ion battery for **a working** time of up to 17 hours
- **Optimum clarity** thanks to modern menu guidance and 3.5" colour dis-
- Leak-tight and robust thanks to encapsulated electronics
- Improved safety on the con**struction site** thanks to a pocket torch function on the remote control

### **Best possible access to all important components:** Makes maintenance and service work easier, saves time and money, and reduces stress.





Large water tank enables you to avoid having to fill up on a regular basis and therefore reduces working time. It also offers a large reserve for cleaning operations.



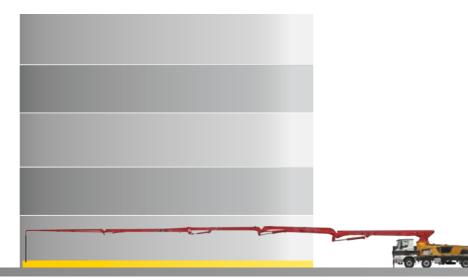
Agitator safety shutdown via RFID (Radio Frequency Identification): A detection system using electromagnetic waves, including anti-restart protection, ensures optimum safety for machine operators.



# Putzmeister clearly shows expertise

# Huge benefits – gain space

The M46 and M47 show their true potential at the site of use, where the 5-arm placing boom with roll-Z fold system reveals the best possible slip into buildings characteristics.



# Maximize reach achieve more

The optimized kinematics on the 5-arm placing boom ensure that the workspace is maximized and there is no noticeable "dead

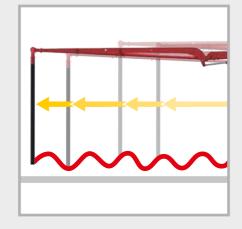


# The boom at a glance

- Approximately 46/47 m vertical reach with 5 arms in a roll-Z fold system
- No noticeable dead space, better flexibility
- Direct response characteristics of boom control
- Safety thanks to lowest possible boom
- Increased comfort due to EBC (optional) for vibration damping, one-handed control, limitation of the working range
- Maximum service life due to standard bends of 90° and 45° with extended joins on both sides
- Increased boom peak load (M46 only)
- Possible to use a 4 m end hose with squeeze valve and a divided end hose (M46 only)
- 4 m end hose with squeeze valve (also M47)

# EBC Basic vibration damping for increased productivity

The steady end hose can be moved easily and the concrete is cleanly inserted. The arm speed can be defined by each individual customer. The convenient fold-in and fold-out aid with automatic support cradle function reliably prevents damage to placing boom and vehicle.





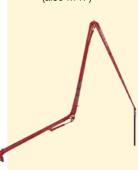
### EBC Basic:

EBC reduces vertical movement of the placing boom by approximately one-third, while simultaneously limiting end hose deflection in all directions.

# EBC Plus\* -Full control in one hand

The working range of the placing boom can be controlled and limited down to the tiniest detail by the programmable slewing gear and vertical corridor, as well as by the limiting and locking of individual arms. Add to that the ability to define the boom speed individually.

\* In addition to EBC Basic



# Narrow track

only with support

The optional OSS\*\* and ESC\*\*\* systems reduce the extent of supports at the maximum operating range. An additional working area is released by placing arm 1 in a vertical position.

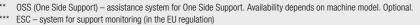
Power transmission with TRDI



S support (standard)



LF/RF support (left frontal/right frontal)





Left/right support (left narrow/right narrow)



F support (frontal)



L/R support Lo, L1, L2/Ro, R1, R2 (left/right)



14

# M46 and M47

# Placing boom M46

Folding type	5-arm Roll-Z fold system (RZ)
Vertical reach	45.5 m
Horiz. reach	40.5 m (gross)
Depth of reach	32.8 m
Unfolding height	11.1 m
End hose length	4 m
<b>Delivery lines</b>	DN 125
Slewing circle	365°

# Placing boom M47

Folding type	5-arm Roll-Z fold system (RZ)
Vertical reach	46.1 m
Horiz. reach	41.1 m (gross)
Depth of reach	32.4 m
Unfolding height	11.1 m
End hose length	3 m (standard) 4 m (restricted)*
Delivery lines	DN 125
Slewing circle	365°

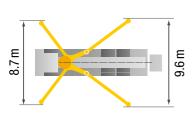
# General

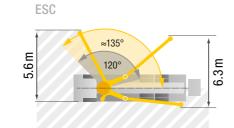
front / rear
8.7 m / 9.6 m
5.6 m / 6.3 m
5.6 m / 6.9 m
11.9 m
under 4.0 m

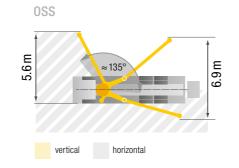
<sup>\*</sup> e.g. without end hose squeeze valve and dual-section end without concrete brake

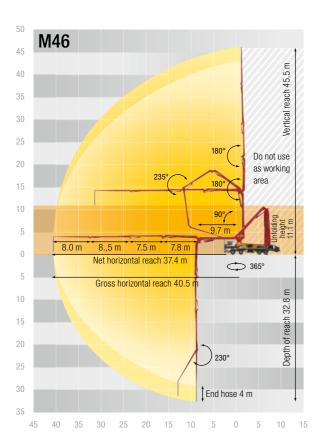
Support width based on center of support leg

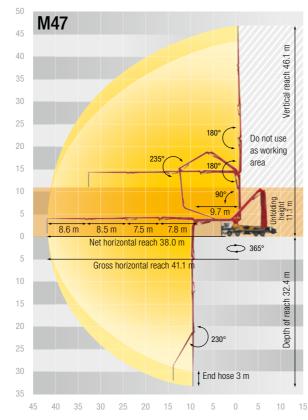
Standard













# **Equipment lines**

To make it easier to select from the numerous configuration options, three equipment lines, as well as a few option packages, are available.

### Standard line

This equipment includes components which Putzmeister considers to be an economic standard for working efficiently and safely. Combined with the "German/EU road use approval" option package, the machine is ready for use throughout Europe.

### **High line**

The high line provides easier operation, reduce maintenance costs and increased lighting comfort.

### **Exclusive line**

This line represents the highest equipment level offered by Putzmeister. It includes selected premium components.

# Added value for the same money

In addition to providing greater transparency and easier ordering, the option packages are cheaper than ordering individual options.

- **DE/EU road approval kit** includes all the necessary equipment for licensing the machine in the EU
- **Lighting kit** covers additional lighting to the scope of standard equipment
- **Technology kit** enables the automatic agitator function and the 3 optimized settings of the concrete pump for hose pumping applications or other uses
- Operating kit 1 EBC (Basis) reduces the vibrations for smoother boom movement
- Operating kit 2 EBC PLUS offers a wide range of comfort function for boom control

- Cleaning kit includes various components which make cleaning the machine easier
- Camera kit 1 to 3 includes various camera systems, from the reversing camera to the 360° camera
- **Driver kit 1** includes e.g. additional diesel tank for increasing the reach
- Further individual options are also available

17

# Build on Putzmeister – in service, parts, training

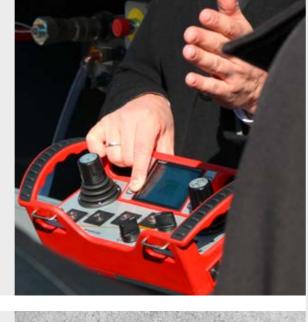
# **Everything that sets service apart**

Swift assistance, meaningful advice and a reliable supply of genuine Putzmeister accessories and parts – in over 120 countries worldwide. This is what we at Putzmeister understand as first-class service.

### Ideally placed to support you

We provide continuous training for our service technicians, provide a close-knit information network and the latest equipment and consistently strive to meet our customers' needs.

Thanks to state-of-the-art technology, our employees have all the relevant technical information about your machine at their fingertips, should the need arise. Allowing us to provide you with the best possible support for emergencies, repairs or preventive maintenance.



### Genuine parts for maximum availability

It goes without saying that we use only genuine Putzmeister parts in our workshops. This is the only way to guarantee consistent quality, checked for interoperability. And you can be absolutely sure that your machine meets the tough requirements with maximum performance and availability.



### **Excellent in quality customer proximity**

In case of need, you have two options: Either the service team visits you or you take your machine to one of our service workshops. The latest tools, software analysis solutions and genuine parts ensure that your machine is operable again immediately.

All Putzmeister workshops and the workshops of our international Putzmeister partners meet our high quality standard. Especially when it comes to manufacturer's inspections and acceptance procedures in accordance with specifications.

# Induction at handover – everything correct from the outset

So you and your machinist can adapt perfectly to all special features and innovations.

### Custome<mark>r training –</mark> benefit from expert knowledge

Practice-based learning offers a host of benefits: Your employees master the machine with all its special features, use the machine to optimum effect, reduce operating costs and avoid operating errors.

# Our services for cost-effective activities

The Putzmeister service support points offer you these services — all provided by our experienced service employees:

# 100 hours of customer service – avoid potential sources of error

Our customer service team provides you with a status report on your concrete pump as per the Putzmeister service plan.

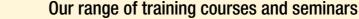
### Mandatory machine inspection – calculable costs instead of incalculable failures

Visual inspection and functional check of components for 100 % safety.

The hydraulic system with cylinders, electrical system and core pump are also inspected.

# 500 hours of customer service – protect your investment, retain your value

Our technical customer service team is the number one choice for checking the safety and wear of your machine. You receive a status report for this too.



### For concrete pump machinists

- Training and development seminars
   Concrete pumps
- Training and development seminars PUMI with piston and rotor pumps
- Regional / company seminars (in your region or on your premises)

### For concrete pumps mechanics

 Training and development seminars Concrete pumps

# For concrete pump machinists and mechanics

- Practical days in Aichtal
- Training: Handover and induction, on-the-job training

### For workshop managers and foremen

- Overview of current developments in Putzmeister concrete pumps
- Qualification at the customer workshops for requisite maintenance work

Further information can be found at: www.pm-akademie.de





# Subject to technical modifications and errors 🂿 by Putzmeister Concrete Pumps GmbH 2019 All rights reserved Printed in Germany (1901sc) CT 4670-4 EN

# The M46 and M47 at a glance

- A gross weight of less than 32 t incl. sufficient reserves for payload and functional fluids
- Smooth 5-arm placing boom thanks to intelligent laying of the delivery line and the harmonious continuity of the steel structure
- Efficient working thanks to consistent sophisticated ergonomics and Ergonic<sup>®</sup> 2.0, the innovative control hardware and software
- Maximum safety thanks to comprehensive consideration of applicable standards and directives
- Service-friendly thanks to optimized accessibility and consistent screw concept
- Minimal service costs thanks to maintenance-free components, standardised wear parts (e.g. only four standard elbow types) and smaller quantities of functional fluids
- The I frame follows the distortions of the chassis: less distortion and longer service life
- Flexible, space-saving TRDI support system, in particular, significantly reduced extent of supports when using OSS and ESC



Truck-mounted concrete pump M46



Truck-mounted concrete pump M47

Hinweis: The diagrams in the brochure do not necessarily correspond to the full scope of standard equipment for the machines. Further brochures: Ergonic® CT 4691



### **Putzmeister Concrete Pumps GmbH**

Max-Eyth-Straße  $10 \cdot 72631$  Aichtal/Germany P.O. Box  $2152 \cdot 72629$  Aichtal/Germany Tel.  $+49 (7127) 599-0 \cdot Fax +49 (7127) 599-520$  pmw@putzmeister.com  $\cdot$  www.putzmeister.com

