

# 51Z Truck-Mounted Boom Pump

Technical specifications



# Built to last for the most demanding jobs

## Meet the newest member of the Putzmeister fleet

The 51Z-5 combines proven components with the latest developments to reduce operating costs, increase operator safety, and offer flexibility to meet your customers' jobsite needs.

### Robust

- Heavy-duty design for the most demanding jobs
- Most durable core pump and wear parts
- Simplified operation and service

### Economical

- Up to 25% reduced fuel consumption with Ergonic Output Control (EOC) 3.0
- Intuitive control with new remote designed for operators, by operators
- TCO (total cost of ownership) is not just about price — it's about parts quality, durability, service cycles, efficiency in all drive systems, and exceptional support

### Versatile

- Multi-story buildings, huge foundation work, or piling application
- Optional piling tip section makes this heavy duty machine ideal for piling work with up to 15,040 lbs (700 kg) boom tip load
- 5 arms with compact RZ-folding results in low unfolding height and best slip characteristics
- User-friendly Putzmeister boom kinematics that eliminates dead space
- Narrow support width for a 50Z class machine including One Side Support option

## Other benefits at a glance

### Boom

- 5-section roll-Z-folding (RZ) boom design
- Integrated safety platform
- More flexibility in the boom eliminates dead space
- Low unfolding height
- Fast control response characteristics
- Lubrication for first boom cylinder and slewing bearing
- Standard 90° and 45° elbows, with lengthened collars for a longer service life

### Pedestal

- Four standard frame lengths available for local weight requirements
- Low weight offers high payload capacity
- Plenty of storage space on the deck
- One-sided support (OSS) outrigger system

### Pump

- Engineered for all common concrete types
- Service-friendly control system with exclusive free flow hydraulics
- Wear-resistant design of S-Valve
- Optimized hopper with optimized shape
- Hopper agitator safety shutdown via Radio Frequency Identification (RFID)
- Automatic agitator direction of rotation corresponds to pumping direction
- Optimized pumping with EPS and EOC
- Optimized switchover procedure with SN control system and Push-Over avoids wear-intensive pressure peaks



# Features & options

**Safety** The 51Z features handrails, safety switches, and quality-assured components according to the global Putzmeister standards that exceed local compliance.

**Efficiency** Fewer hydraulic valves, less oil, lower service times, and long-lasting, genuine wear parts make the unit incredibly efficient.

**User-Friendly Operation** Control elements and the remote control are designed by operators, for operators. You're in the driver's seat with simple operation or customizable options for your needs.

**Flexibility** Our equipment meets your applications — flexible support system with One Side Support, or versatile attachments and accessories. Consult our application experts to learn more.

**Service** The 51Z has harmonized service cycles for all wear parts, with easy access to training and support — on site or remotely.

**Value** Unmatched resale value, high efficiency with less fuel consumption, long lasting parts, reliable service, exceptional jobsite performance, intuitive control, and safe operation makes the 51Z an unmatched value for owners, operators, and workshop managers.

## Practical equipment and accessories

- Standard DN 125 throughout pipeline with no special pipe bends
- Automatic catching of end hose when folding in the boom
- Large, easily accessible storage areas
- Powerful flushing water pump with 160 l/min and 25 bar
- High pressure water pump (100 bar) available as an option
- All operating information on graphic display



The PRO-VANTAGE® Warranty Plan extends the coverage on all Putzmeister BSF boom pumps for a total of 36 months or 6,600 hours at no extra charge. Domestic only.

## Standard features

### Concrete Pump Unit

- Free flow hydraulics
- Multi-piece piston cups
- S-Valve - 2318 hard-faced (9" to 7")
- RS 909 clean out hopper w/ solid polyurethane fold down back splash
- Hardox remixer paddles
- Hopper vibrator
- Hopper agitator safety shutdown via Radio Frequency Identification (RFID)
- Hard-chromed material cylinders
- Proximity switches w/ indicator
- Hydraulic outriggers - front & rear
- Snap-locks for outriggers & bubble level indicators
- 406 psi (28 bar) high pressure water pump
- 185 gal (700L) composite water tank
- Auto-lube grease system - boom / hopper
- Centralized lube locations
- Gauge Port Central (GPC)
- Loading decks for pipe & accessories
- Modular bolt-on flatpack
- Large side-mounted aluminum toolboxes
- Swing out step (left side)
- Operator Supervision Warning System (OSWS)
- 5" delivery line on boom & deck pipe
- Proline 3000 Putzmeister Pipe Technology (PPT) w/ 10 ft (3m) delivery hose w/ coupling
- Electric oil cooler
- Wash out kit & hose
- Light kit package at boom, pedestal, & hopper
- One-Sided Support (OSS) Outriggers
- 4 outrigger pads w/ 2 side compartments
- Wireless & cable remote

### Unit Control System

- Ergonic 3.0 w/ Ergonic Output Control (EOC)
- Standard world pattern
- Radio remote w/ Ergonic Graphic Display Remote Control (EGD-RC) w/ full proportionality & 20m cable back-up option
- Ergonic Graphic Display in control cabinet
- Cable remote w/ full proportionality
- Remote on/off of concrete pump & remote engine off

### Miscellaneous

- Ship-away kit w/ basic maintenance tools
- Operational & safety manuals
- High quality paint finish





## The tremie arm — piling high with versatility



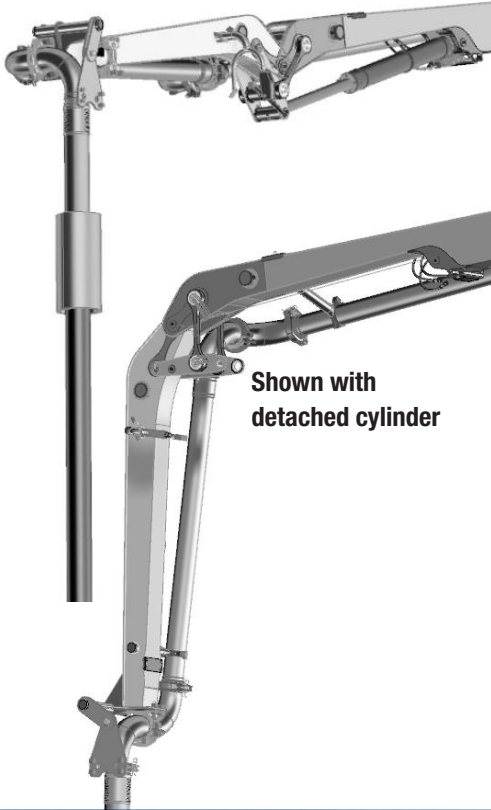
### All your needs met with the optional tremie arm

The 51Z-5 can be equipped with the tremie boom arm instead of the last boom section to increase boom tip load — up to 800 kg — for piling application.

No need for a crane to support the boom: the powerful and robust 51Z supports itself as long as the boom tip load does not exceed the approved load on the tremie section, keeping your jobsite efficient and clutter-free.



Shown with  
attached cylinder



Shown with  
detached cylinder

## Bolt connections for simple setup

The tremie arm setup is quick and easy. Simply remove the E boom segment by removing the bolts and disconnecting the couplings and cables, and reconnect the tremie arm with the bolt-on connection. The E cylinder can also be removed for maximum tip load.

Tremie Arm Specifications	Attached E cylinder		Detached E cylinder	
	Imperial	Metric	Imperial	Metric
<b>BSF 51Z-Meter</b>				
<b>Weight</b>	563 lbs	255 kg	232 lbs	105 kg
<b>Length</b>	7' 6"	2.2 m	7' 6"	2.2 m
<b>Vertical reach</b>	138' 9"	42.3 m	131' 6"	40.1 m
<b>Horizontal reach</b>	121' 8"	37.1 m	114' 6"	34.9 m
<b>Maximum tip load</b>	1,543 lbs	700 kg	1,874 lbs	850 kg
<b>Maximum length of the end hose*</b>	52' 5"	16 m**	68' 10"	21 m***

\*Only the tip load is approved. Not the length of the end hose. The given length of the end hoses are only valid for the defined combinations of hoses. Depending on the weight of the hoses including additional parts the end hose length will be different.

\*\* (1) 519090 hose SK125+5 5Z X 1000, (2) 057612001 hose SK125=5 5Z X 5000ND, (1) 239129008 end hose SK125=5 5Z X 5000

\*\*\* (1) 519090 hose SK125+5 5Z X 1000, (3) 057612001 hose SK125=5 5Z X 5000ND, (1) 239129008 end hose SK125=5 5Z X 5000





# TRDI and One-Side Support – a small footprint with a big impact

## TRDI Support

With TRDI support developed by Putzmeister, you can save time and space without compromising on safety. Telescoping outriggers can be placed between obstacles and in the smallest of spaces — a huge advantage when working under restrictive setup conditions.

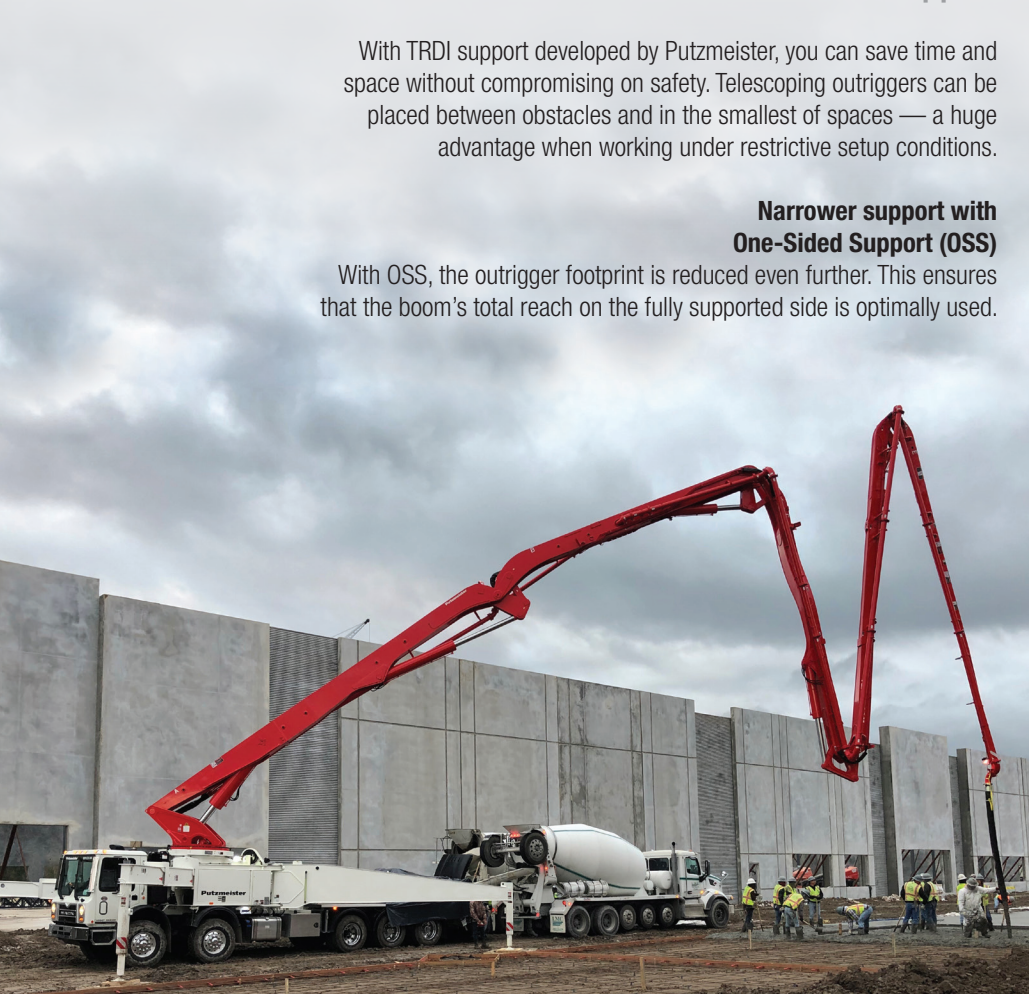
## Narrower support with One-Sided Support (OSS)

With OSS, the outrigger footprint is reduced even further. This ensures that the boom's total reach on the fully supported side is optimally used.

## 3 core pumps for all your concrete needs

Including the new .17 iLS core pump (intelligent Low Stroke) for more power and maximum service life.

**.16 H**  
**.17 iLS**  
**.19 iLS**  
**51Z**



## Other Available Options

High pressure washer (2000 psi / 138 bar)

Hopper step (right hand side) hinged

Oil tank heater

Outrigger saddle tank / fuel selector valve

Partial Flow Filter / Dehydrator

Squeeze valve air line installation

Squeeze valve installation w/ PM EQV part

Wash-out hose reel kit

Water tank heater



# iLS pump – highlights

## The Putzmeister iLS pump generation is setting standards across the board

The heart of every truck-mounted concrete pump is the pump itself. The iLS pump generation delivers significantly improved data across the board and is the logical advancement of the tried and proven HLS generation.

### Special features

- Fuel savings of up to 25%
- 3% increased efficiency with leak prevention
- 10% better suction resulting from the elimination of constrictions in the concrete flow
- Optimized drive unit
- Optimized conveying unit – ideal for the heaviest concretes
- Reduced wear for long service life
- Optimized accessibility for maintenance and service
- Automatic stroke correction without pump interruption
- Field-tested and robust
- Reduced noise

#### Hopper

The hopper has a user-friendly and low-maintenance ergonomic design. It is RFID protected, the grill is welded, and the hopper cover can be locked in 4 positions.

#### Lubrication system

The grease cycles have been adapted to better protect all concrete bearings from wear.

#### Concrete cylinder

Eliminating the constriction before the S transfer tube has resulted in calmer pump behavior and improved efficiency. On longer sections, the reduction from 250 mm to 180 mm occurs only in the S transfer tube.

#### Drive cylinder

Hydraulic circuits further relieved through automatic stroke compensation and the elimination of pressure peaks in the end bearings.

#### Seals

Designed for maximum reliability for outstanding system performance.

#### S transfer tube swivel bearing

The hopper wall thickness and bearing surface have been doubled for maximum reliability.

#### S transfer tube

The hardened valve operates smoothly and guarantees extreme durability.

**LONGER SERVICE LIFE**  
**LOW MAINTENANCE**  
**OPTIMIZED EFFICIENCY**  
**OPTIMIZED ACCESSIBILITY**  
**EASY CLEANING**  
**BEST PERFORMANCE!**



# Ergonic® 3 – highlights

## The new Ergonic® 3 – clear, fast, and safe

- **Continuous operating concept** for all Putzmeister products with the same functions and displays – whether on the radio remote control or the Ergonic Graphic Display (EGD).
- **Intuitive work and quick reactions** thanks to a clear menu structure and intuitively arranged functions.
- **Full overview** of machine status on the radio remote control and EGD (incl. valves, sensors, and LEDs on fuses).
- **Detailed fault management:** Faults are easy to detect and rectify – even without a Putzmeister technician.
- **Multi-level emergency operation** keeps the machine running even in the toughest conditions.

**AS EASY TO OPERATE  
AND MORE INTUITIVE  
THAN EVER BEFORE**

**ERGONIC® 3**



### Pumping made smart

If our concrete pumps are the heart of Putzmeister machines, then the Ergonic system is the brain.

As a switching center, the microprocessor-supported control systems regulate the functions of concrete pumps and placing booms.

### Always by your side – Ergonic® 3 inside

#### **EPS** Ergonic Pump System

Takes control of the concrete pump for optimized pumping.

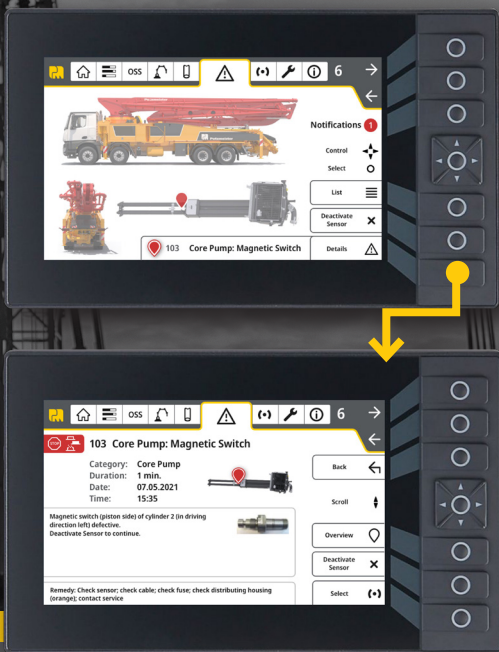
#### **EOC** Ergonic Output Control

Regulates the optimum motor speed for smooth operation with fuel efficiency and low wear.



## Ready for the future

- **A future-oriented solution** with interfaces for future expansions and easy software updates.
- **Service-friendly concept** with services that can be accessed and implemented efficiently.
- **Clearly guided fault management** on the radio remote control and display.



## The best of two worlds

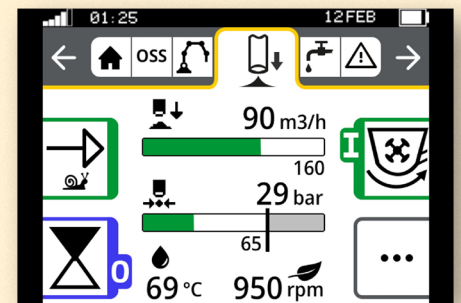
Ergonic<sup>®</sup> 3 is the logical evolution of Ergonic<sup>®</sup> 1 and Ergonic<sup>®</sup> 2.

Proven features are maintained, others developed further, and new and future-oriented functions are integrated.

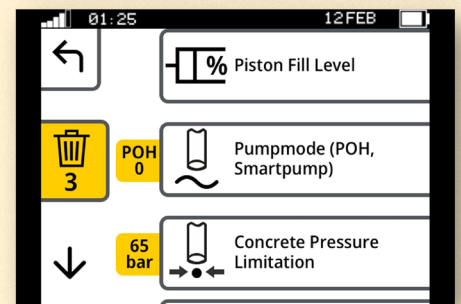
- Experienced Putzmeister customers quickly become familiar with operation, making the switch incredibly easy.
- New customers will need little training or instructions since operation is so intuitive.
- Once learned, a wide variety of machine models can be operated.

## Keeping an overview in every situation

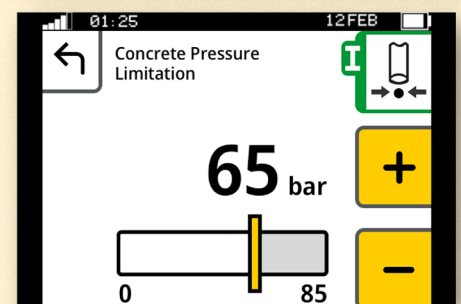
- The static menu bar guides users through the available functions.
- Neatly and intuitively arranged functions.
- Simple menu structure with a maximum of two submenu levels.
- Main menu with all standard functions and additional details in submenus.



Main menu



Submenu level 1



Submenu level 2

## SIMPLE OPERATION

Easy and intuitive, for all machine operators.

## RELIABLE OPERATION

With a comprehensive fault management.

## DETAILED FAULT MANAGEMENT

Comprehensive fault messages with suggested solutions.



# You can rely on Putzmeister – service, parts, and training

## Everything that sets service apart

Putzmeister provides first class service with swift assistance, meaningful advice, and a reliable supply of genuine Putzmeister parts and accessories in over 120 countries.

### Ideally placed to support you

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

Our employees have all the relevant technical information about your machine at their fingertips, allowing us to provide you with the best possible support for emergencies, repairs, or preventive maintenance.



## Our services for cost-effective work

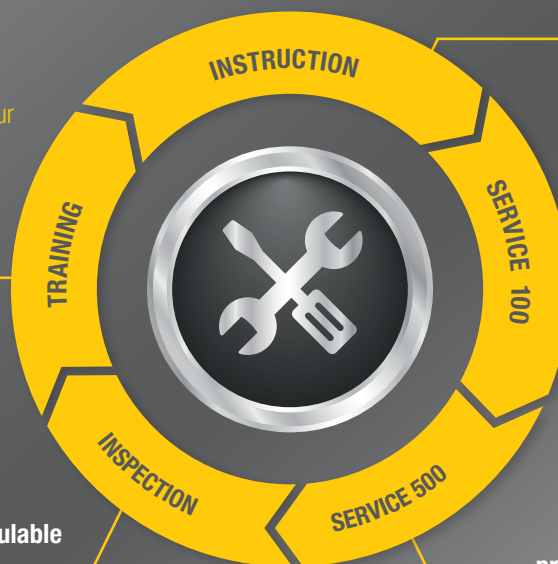
The Putzmeister service support points offer you these services - all provided by our experienced service staff:

### Customer training – benefit from expert knowledge

Practice-oriented learning offers many benefits: Master the machine and all of its special features, use the machine to optimum effect, reduce operating costs, and avoid operating errors.

### 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.



### Introduction at handover – everything correct from the get-go

You and your team can adapt perfectly to all features and innovations.

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

Receive a status report on your concrete pump per the Putzmeister service plan.

### 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.



## Putzmeister Academy - Service Schools

We want to make sure you get the most from your Putzmeister equipment. To maximize the use and profitability of your investment, take advantage of the regular training seminars at our Wisconsin headquarters.



Service Schools cover maintenance, operation, and inspection of boom pumps, Telebelts, and Thom-Katts. They include hands-on training, problem-solving exercises, hands-on presentations, and safety training.

## Genuine parts for maximum availability

We use only genuine Putzmeister parts in our workshops to guarantee consistent quality. You can be sure that your machine meets the tough requirements with maximum performance and availability.

- Immediate availability worldwide through our extensive dealer network
- Longest possible service life and maximum reliability
- Minimal maintenance and repair work thanks to high-quality materials and tested quality
- Quick and easy replacement with precise fitting and no variations in quality
- Safety for your customers, your personnel, and your investment

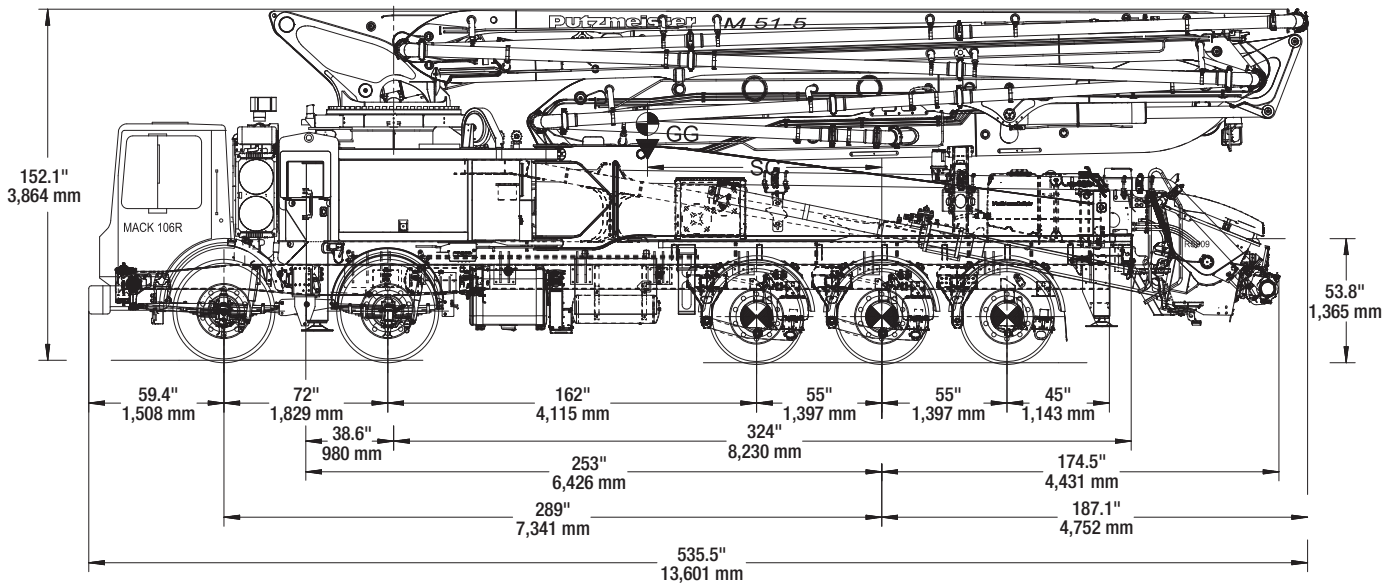
## Product and training information — whenever, wherever

We consistently provide the most up-to-date product and training information through our YouTube channel. From the comfort of your own home to on the jobsite, you have access to hundreds of videos that showcase the latest and greatest Putzmeister products, how-to videos, demonstrations, and much more.





# 51Z-Meter Truck-Mounted Specifications

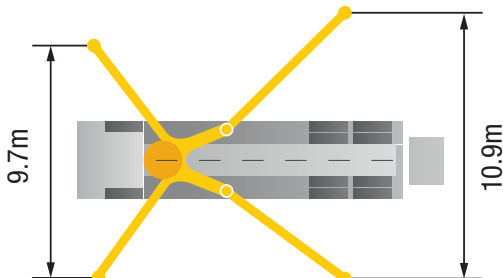


Machine Dimensions	Imperial	Metric
Length	44' 7"	13.60 m
Width	8' 2"	2.50 m
Height	12' 8"	3.86 m
Outrigger spread L - R — front hydraulically extended out & down	31' 10"	9.70 m
Outrigger spread L - R — rear hydraulically swing out & extend down	35' 9"	10.90 m
Wheelbase	330"	8,382 mm

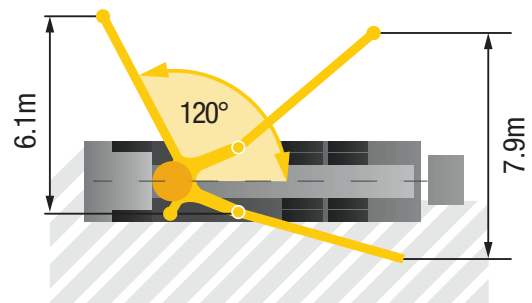
Weight	Imperial	Metric
Front axle weight	37,164 lbs	16,857 kg
Rear axle weight	54,196 lbs	24,583 kg
Approximate total weight	91,360 lbs	41,441 kg

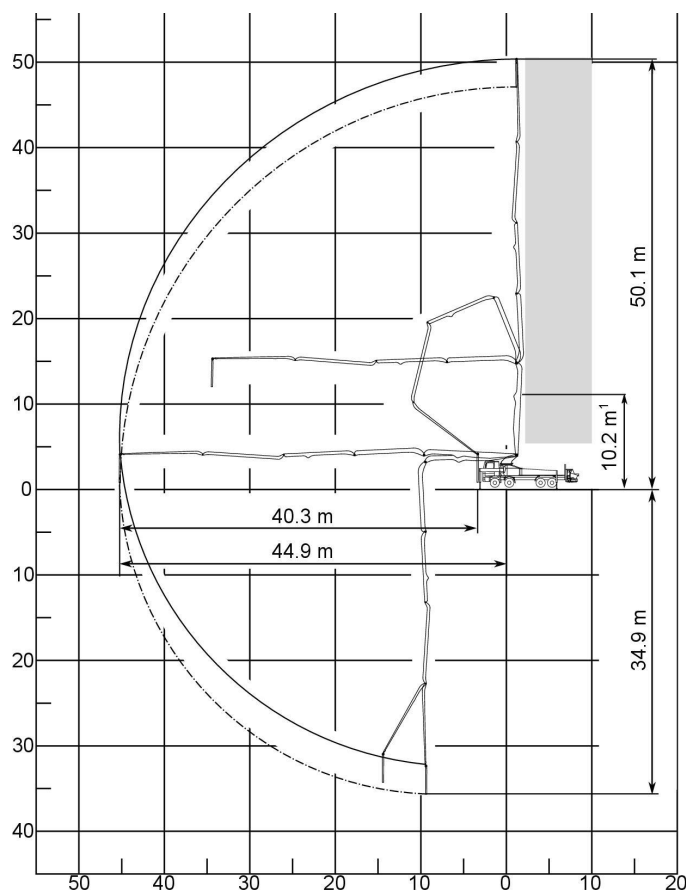
Based on Model MACK MRU 613 with .16H pump cell. Dimensions will vary with different truck makes, models, and specifications. Weights are approximate and include pump, boom, truck, driver and full fuel tank. Varies with options selected.

## Standard



## OSS





Boom   Multi-Z Design	Imperial	Metric
<b>Height &amp; Reach</b>		
Vertical reach	164' 4"	50.10 m
Horizontal reach	147' 4"	44.90 m
Reach from front of truck*	132' 3"	40.30 m
Reach depth	114' 6"	34.90 m
Unfolding height	33' 6"	10.20 m

#### 5-Section Boom

1st section articulation	90°	
2nd section articulation	180°	
3rd section articulation	180°	
4th section articulation	225°	
5th section articulation	205°	
1st section length	31' 10"	10.70 m
2nd section length	26' 7"	7.90 m
3rd section length	26' 11"	8.00 m
4th section length	27' 3"	9.50 m
5th section length	32' 10"	10.00 m

General Specifications	Imperial	Metric
Pipeline Size (ID) metric ends	5"	125 mm
Rotation	365°	
End hose — length	10' 0"	3.00 m
End hose — diameter	5"	125 mm

Pump	51Z.16 H		51Z.17 iLS		51Z.19 iLS	
	Imperial	Metric	Imperial	Metric	Imperial	Metric
Output — rod side	209 yd <sup>3</sup> /hr	160 m <sup>3</sup> /hr	—	—	—	—
— piston side	141 yd <sup>3</sup> /hr	108 m <sup>3</sup> /hr	222 yd <sup>3</sup> /hr	170 m <sup>3</sup> /hr	254 yd <sup>3</sup> /hr	194 m <sup>3</sup> /hr
Pressure — rod side	1,233 psi	85 bar	—	—	—	—
— piston side	1,885 psi •	130 bar •	1,233 psi	85 bar	1,233 psi	85 bar
Material cylinder diameter	9"	230 mm	10"	250 mm	10"	250 mm
Stroke length	83"	2,100 mm	83"	2,100 mm	83"	2,100 mm
Maximum strokes per minute						
— rod side		31		—		—
— piston side		21		28		31
Volume control		0-Full		0-Full		0-Full
Vibrator		Standard		Standard		Standard
Hard-chromed material cylinders		Standard		Standard		Standard
Hydraulic system		Free Flow		Free Flow		Free Flow
Hydraulic system pressure	5,075 psi	350 bar	5,075 psi	350 bar	5,075 psi	350 bar
Differential cylinder diameter	5.5"	140 mm	4.5"	115 mm	4.5"	115 mm
Rod diameter	3.1"	80 mm	3.1"	80 mm	3.1"	80 mm
Maximum size aggregate	2.5"	63 mm	2.5"	63 mm	2.5"	63 mm
Water tank — pedestal	185 gal	700 L	185 gal	700 L	185 gal	700 L

Maximum theoretical values listed. \* Applies to units mounted on PMA stock truck — MACK MRU 613 • Standard delivery line system rated at max line pressure of 1,233 psi (85 bar)



# Here for you every step of the way

## Our Putzmeister Promise

We build machines that increase your production and give you a competitive edge – and these machines are continuously developed. Innovative technologies and durable quality need to adapt to your ever-changing daily challenges. Our products stand for optimum output with low fuel consumption, wear, and costs.

Our customers will always have a thinking, intelligent partner in all their undertakings; a partner that will deliver to their exact requirements regardless of the complexity of the task or the remoteness of the scale. With knowledge and understanding backed by experience, we approach every task with renewed enthusiasm – be it a small scale construction or a mass assignment, tight deadlines, or unique concreting and manufacturing needs.

## Your Putzmeister Team



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