



**Putzmeister**



# 31Z-Meter

Truck-Mounted Concrete Boom Pump



# Solid quality with excellent boom maneuverability

## Flexible right down to the ground – the new 31Z

Its flexible 5-section boom ensures maximum maneuverability in all directions, making the 31Z the perfect machine for restoration and smaller job sites. Additionally, it has a particularly robust design and comprehensive standard equipment, including The Ergonic® 2.0 Control System. This means that our smaller truck-mounted concrete pump is now capable of completing tasks that were previously only possible using larger machines. This comes with its own advantages: more convenient operation, increased cost-effectiveness and efficiency in day-to-day use, and flexibility when working with the machine.

### Minimal maintenance costs

The 31Z is engineered to save time and money. Its robust components stand up to wear. Necessary maintenance is simple, quick, and kept to a minimum.

### Easy to operate

The boom control's fast response characteristics, smooth pump operation, sophisticated routing of the delivery lines, and robust steel structure ensure precise concrete placement.

## Genuine Parts. Expert Service. Putzmeister keeps you running.

Not all parts and accessories are created equal. Putzmeister offers longer-lasting, better-performing parts and accessories you need to stand up to increased wear conditions. This means greater savings and less downtime.

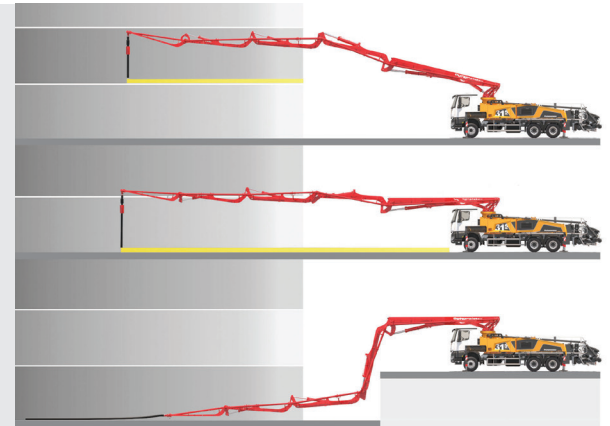
With a busy schedule and your reputation on the line, nothing is more critical than ongoing on-site support. Coast-to-coast and around the world, you can count on Putzmeister's expert service to keep your project and jobsite moving. Our trained technicians are available 24/7 to deliver the help you need, when you need it.



# Boom, control, and support

## The boom — extremely flexible for use indoors

The boom of the 31Z is incredibly agile. This benefit comes in particularly handy when working in low buildings and under bridges. Optimum maneuverability swinging with a folded arm assembly and its low unfolding height make working inside buildings no problem at all. The optimised kinematics ensure that the working area is maximised and there is no “dead space”. This makes the 31-5 unbeatable for many jobs, particularly for renovation work.



## Maximum usability, minimum maintenance costs

### Engineered to save time and money

- Robust components with high wear resistance
- Many maintenance-free and standard components
- Quick and easy maintenance access
- Bolt-on parts such as the pipe bracket

### Optimum capacity utilisation thanks to maximum availability

Robust components with high wear resistance, many maintenance-free and standard components, simple and quick access, as well as screwed-on parts such as the pipe bracket help you save considerable amounts of both time and money.

## Ergonic® 2.0: the brains behind the brawn

Putzmeister machines with Ergonic overcome the difficulties of day-to-day work on the job site to deliver increased efficiency, greater flexibility, and reduced costs.

- **EPS — Ergonic® Pump System**
- **EOC — Ergonic® Output Control**
- **Ergonic® FFS**
- **EGD-RC — Ergonic® Graphic Display (Radio) Remote Control**
- **EBC — Ergonic® Boom Control**

**ergonic®**  
inside

## Stands steady in every location

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.



# 31Z-Meter — features at a glance

## Benefits

- Smooth 5-section boom with Z-Fold design, and maximum maneuverability
- Versatile use on job sites, ideal for operating under low ceiling heights, congested sites, or under bridge work
- Efficient operation thanks to intuitive and innovative ergonomic design
- Increased stability due to reinforced base structure, compact pedestal, and boom line installation
- Maintenance- and service-friendly with optimized accessibility and consistent bolt concept
- Lower service costs thanks to standardized, maintenance-free components and smaller quantities of operational fluids

## Boom

- 101' 8" (31.0 m) vertical reach with 5-section Z-Fold boom design
- No dead space, more flexibility
- Slewable while boom is folded
- Low unfolding height
- Fast response characteristics of boom control
- Improved safety, reduced boom vibration
- EBC for vibration damping, one-handed control
- Lubrication for first boom cylinder and the slewing bearing
- Standard 90° and 45° elbows, with lengthened collars for a longer service life

## Pedestal

- Plenty of storage space on the deck
- A robust, calm, and stable base structure
- Optimized full-deployment outrigger footprint
- Significantly reduced footprint with the use of one-sided support (OSS) outrigger system
- Saves money thanks to maintenance-free components, comprehensive bolt concept, and standard components

## Pump

- Pump geometry is optimally coordinated to all common concrete types
- Service-friendly control system with exclusive free flow hydraulics
- Wear-resistant design of S-Valve for long service life
- Optimized hopper with optimized shape
- Hopper agitator safety shutdown via Radio Frequency Identification (RFID)
- Automatic agitator direction of rotation corresponds to pumping direction
- Smooth, optimized pumping with EPS and EOC, protects the pump and vehicle
- Optimized switchover procedure with SN control system and Push-Over avoids wear-intensive pressure peaks
- More convenient operation with Ergonic® 2.0, the latest concept for control hardware and software from Putzmeister
- Minimal operating costs thanks to maintenance-free common components and increased accessibility
- Easy replacement of components due to bolt-on concept



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.

# High-performing pump and pedestal

## Free flow hydraulics in a closed loop system

### Free flow hydraulics in a closed loop system

The pumps at the heart of Putzmeister's free flow pumping system are bi-directional variable displacement piston pumps. Depending on stroke, oil flows in a closed loop from either port A or port B on the pump to the hydraulic cylinders.

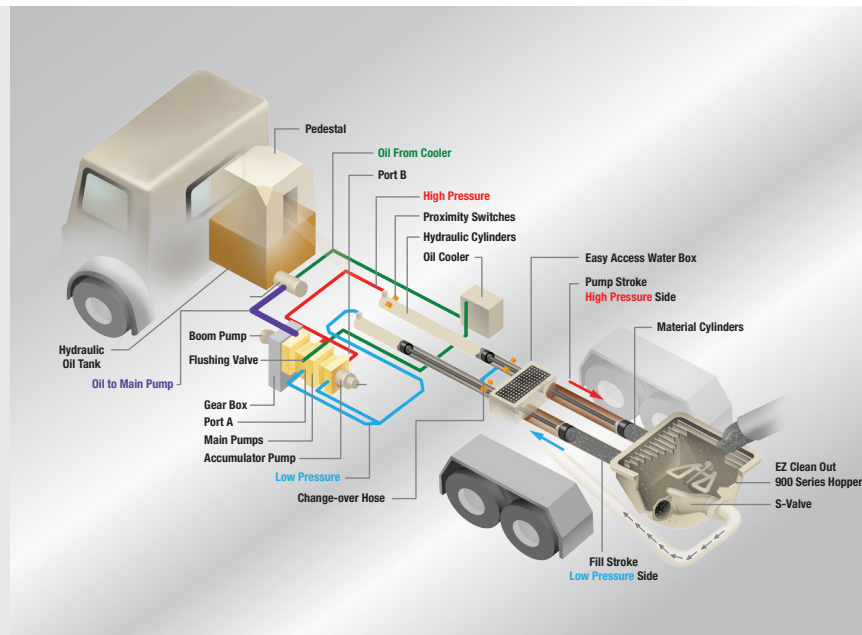
Depending on the specific pump cell size, up to 20% of the oil leaves the simple closed loop system during each stroke through a flushing valve on the main pump and cycles to a cooler before it returns to the hydraulic oil tank.

Unlike an open loop system, the oil flows freely without passing through any unnecessary valves that can generate heat. Thus, the closed loop requires far less oil to run the system, as a larger reservoir is not necessary to cool all of the oil. In addition, return oil can be cycled directly through the main kidney filter instead of going back to the tank, keeping it in the filtered state preferred by the hydraulic components for long life and dependable operation.

Speed and timing are also critical to superior performance. Quicker and more responsive than a hydraulic signal, the electrical system on a Putzmeister pump minimizes the time it takes to change direction at stroke end. An electrical signal precisely synchronizes the drive cylinders with the accumulator system that controls the S-Valve in the hopper. Reserved energy stored in a nitrogen bladder is sent as a supercharged blast of oil at precisely the right moment to facilitate a smooth and fast shift of the S-Valve from one position to another.

### Key advantages of Putzmeister's free flow hydraulics

- Changes in material pressure in the delivery line are reduced to ensure smooth pumping and a consistent concrete flow.
- The intelligent design minimizes wear-inducing pressure peaks, increases service life, and makes our pumps extremely powerful.
- Rapid change-over of the stroke means higher outputs, a smoother flow of concrete, and less boom bounce.
- There is greater pump output due to the efficient use of all available energy.



## The pedestal — robust, stable, reliable

The 31Z fulfills the most stringent weight regulations while offering plenty of additional payload for functional fluids and accessories. Sufficient storage is available due to the outrigger design and wide deck with anti-slip surface.

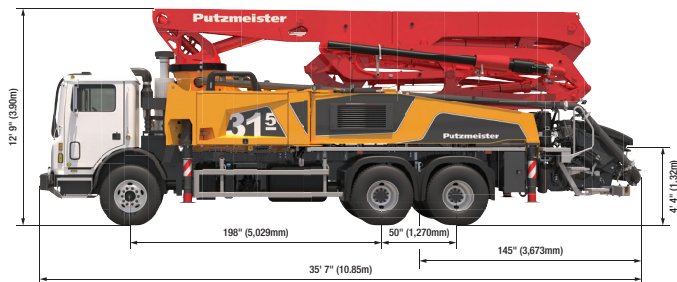
Additional details make the base structure particularly robust: the overlap length of the front telescopic support legs, the closed rear swinging outriggers, and the compact boom pedestal, which is made of a single piece of material.

The pedestal is particularly impressive when it comes to force distribution. The forces acting on it are completely distributed over the outriggers, protecting the chassis. The I-frame and connection concept also ensures a longer service life than that of rigid frames.

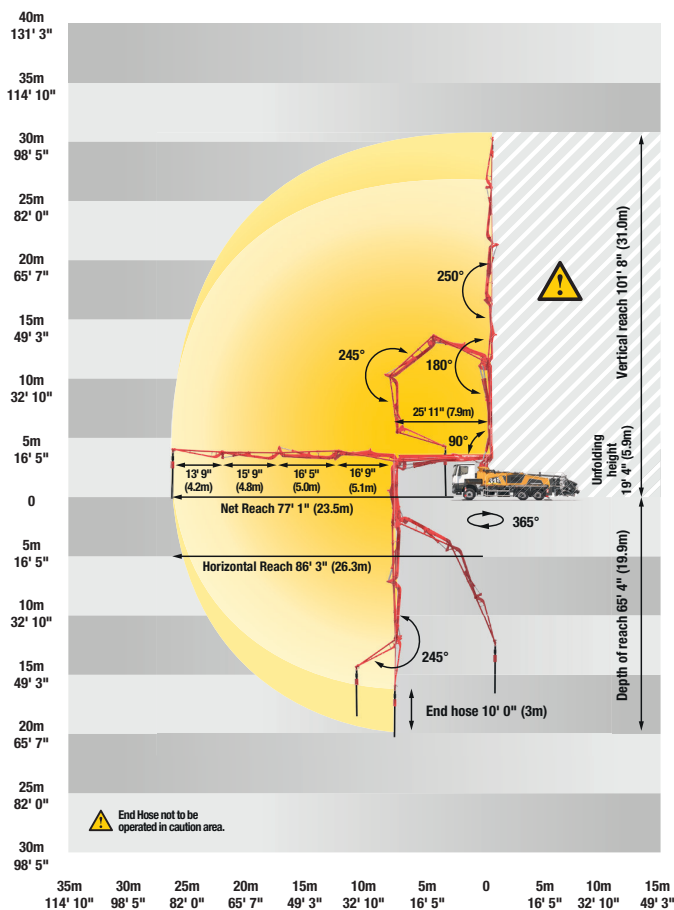
## The concrete pump — enough power to fit your needs

Like all Putzmeister truck-mounted concrete pumps, the 31Z-Meter is available with different pump kits, each with a delivery pressure of 1,233 psi (85 bar). The cost-effective 12H and 16H feature two chromium-plated delivery cylinders and smooth operation. The 16H offers a high delivery rate, while the 12H has fewer strokes with less wear over time.

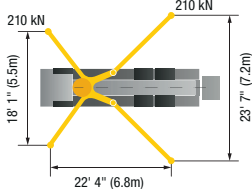




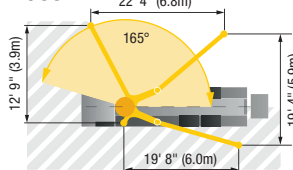
## 31Z-Meter Range Diagram



### Standard



### OSS



## 31Z-Meter Truck-Mounted Specifications

Length	35' 6"	(10.84 m)
Width	8' 2"	(2.50 m)
Height	12' 9"	(3.80 m)
Wheelbase	223"	(5,664 mm)
Front axle weight	19,631 lbs	(8,905 kg)
Rear axle weight	37,086 lbs	(16,822 kg)
Approx total weight	56,717 lbs	(25,727 kg)

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

### Boom Specifications | Z-Fold Design

<b>Height &amp; Reach</b>		
Vertical reach	101' 8"	(31.0 m)
Horizontal reach	86' 3"	(26.3 m)
Reach from front of truck*	77' 1"	(23.5 m)
Reach depth	65' 4"	(19.9 m)
Unfolding height	19' 8"	(6.0 m)

### 5-Section Boom

1st section articulation	90°	
2nd section articulation	180°	
3rd section articulation	250°	
4th section articulation	245°	
5th section articulation	245°	
1st section length	25' 11"	(7.9 m)
2nd section length	16' 9"	(5.1 m)
3rd section length	16' 5"	(5.0 m)
4th section length	15' 9"	(4.8 m)
5th section length	13' 9"	(4.2 m)

### General Specifications

Pipeline Size (ID) metric ends	5"	(125 mm)
Rotation	365°	
End hose — length	10' 0"	(3.00 m)
End hose — diameter	5"	(125 mm)
Outrigger spread L-R — front	18' 1"	(5.5 m)
hydraulically extended out & down		
Outrigger spread L-R — rear	23' 7"	(7.2 m)
hydraulically swing out & extend down		

### Pump Specifications

	31Z.12H	31Z.16H
Output — rod side	144 yd <sup>3</sup> /hr (110 m <sup>3</sup> /hr)	209 yd <sup>3</sup> /hr (160 m <sup>3</sup> /hr)
— piston side	97 yd <sup>3</sup> /hr (74 m <sup>3</sup> /hr)	141 yd <sup>3</sup> /hr (108 m <sup>3</sup> /hr)
Pressure — rod side	1,233 psi (85 bar)	1,233 psi (85 bar)
— piston side	1,885 psi (130 bar)•	1,885 psi (130 bar)•
Material cylinder diameter	9" (230 mm)	9" (230 mm)
Stroke length	83" (2,100 mm)	83" (2,100 mm)
Maximum strokes per minute		
— rod side	21	31
— piston side	14	21
Volume control	0-Full	0-Full
Vibrator	Standard	Standard
Hard-chromed material cylinders	Standard	Standard
Hydraulic system	Free Flow	Free Flow
Hydraulic system pressure	5,075 psi (350 bar)	5,075 psi (350 bar)
Differential cylinder diameter	5.5" (140 mm)	5.5" (140 mm)
Rod diameter	3.1" (80 mm)	3.1" (80 mm)
Maximum size aggregate	2.5" (63 mm)	2.5" (63 mm)
Water tank — pedestal	137 gal (520 L)	137 gal (520 L)

Maximum theoretical values listed.

\* Applies to units mounted on PMA stock truck — MACK TerraPro 613

• Standard delivery line system rated at max line pressure of 1,233 psi (85 bar)



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