



31Z-Meter

Truck-Mounted Concrete Boom Pump

31Z-Meter



- 100' 1" (30.51m) vertical reach
- Up to 210 yd³/hr (160m³/hr) maximum output
- Versatile 5-section Z-Fold boom
- 5" twin-wall delivery line
- Rack and pinion slewing system

Putzmeister BOOM PUMP ADVANTAGE



Better Boom Design

Lighter and more resilient, Putzmeister's "smart design" boom incorporates welding seams below the edge of maximum stress. The boom is engineered to offer the flexibility to adapt to different loads, features more straight pipe for a less stressful concrete flow and longer wear on parts. The Z-Fold configuration handles space restrictive areas and can pump even if the boom is not fully extended.



Rack and Pinion Slewing

The 31Z-Meter boom features a simple mechanical rack and pinion design for improved weight distribution and easy serviceability. Putting the pump closer to the cab, rack and pinion slewing offers greater reach than rotation bearings on lighter weight models. Specially designed teeth in the system offer smooth rotation and prevent backlash in the swing gears.



RS 907A Hopper

Putzmeister's EZ Clean Out RS 907A hopper is engineered for performance and easy maintenance. Offering 19.4 cu. ft. (550L) capacity, the hopper features hard-faced mixer paddles and vibrator. The unique design of the splash guard protects the unit from splattering during pumping and folds down and latches to cover the hopper during transit.

31Z-Meter

Truck-Mounted Concrete Boom Pump Standard F

Boom

- 100' 1" (30.51m) vertical reach
- Low unfolding height
- Versatile 5-section Z-Fold boom
- Manual lubrication
- Integrated work lights

Delivery Line

- Equipped with 5" (125mm) twin-wall delivery line on all boom sections providing efficient concrete delivery
- Induction-hardened deck pipe with Esser turret elbow
- Easy lift-out brackets for simple delivery line replacement
- Standardized elbows and straight pipe sections
- Common component availability and easy replacement

Clean Out

- Fast and easy clean out
- 406 psi (28 bar) hydraulically-driven water pump
- Wash out kit and hose
- Integrated 185 gallon (700L) water tank

Boom Operation and Control

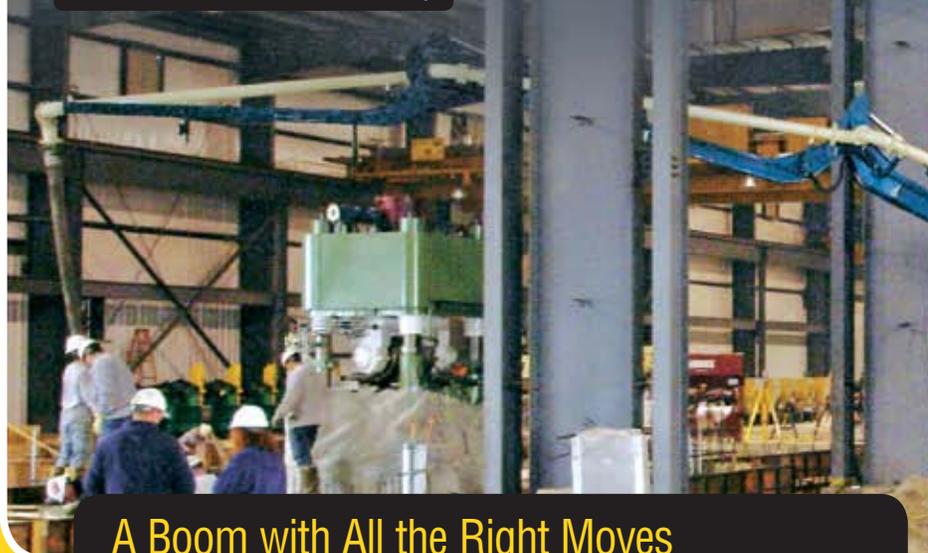
- Fully proportional HBC radio remote
- Smooth and precise boom positioning at greater distances
- Fully proportional cable remote with 130' (40m) cable
- Gauge Port Central (GPC)
- Modular Boom Controls (MBC)
- 24V electrical system

Concrete Pump

- Choose from high pressure or high volume with the same setup
- Free flow hydraulic system for smooth, controllable pumping
- Multi-piece piston cup design
- Automatic lubrication of the concrete pistons for long service life
- Hard-chromed material cylinders
- Redundant proximity sensor system with function indicators
- Fully adjustable volume control for very slow pumping with full concrete pressure and boom speed
- Modular pump control box

Putzmeister
PRO-VANTAGE[®]
WARRANTY PLAN

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.



A Boom with All the Right Moves

One of Putzmeister's best kept secrets, the highly flexible 31Z-Meter offers a unique five-section Z-Fold boom design that easily handles unusual site configurations as well as more typical applications. In the hands of a skilled operator, the boom can be strategically positioned

Features

EZ Clean Out RS 907A Hopper

- Large 19.4 cu ft (550L) capacity
- Hard-faced remixer paddles
- Vibrator
- Hinged splash guard covers hopper during transit
- Low hopper height allows easy discharge from a mixer truck
- Automatic lubrication
- Integrated work lights

Outriggers

- Quick setup on restrictive job sites
- Fully hydraulic outriggers with integral cylinders
- Unique "X" brace outrigger system
- Front outriggers extend diagonally out and down
- Rear outriggers swing out and extend down
- Four outrigger pads in two side compartments
- Bubble level indicators

S-Valve

- Ideal for high pressure applications and harsh mixes
- Hard-faced S-Valve
- Gradual 9" to 7" (230 to 180mm) reduction
- Thick-walled valve construction
- Lasting wear over years of use



Pedestal

- Rack and pinion slewing system for better weight distribution, smoother boom rotation and the potential for greater net reach
- Fully integrated pedestal design absorbs all forces
- Access opening simplifies changing of turret pipe
- Easy access large single-suction filter with indicator gauge
- Condensation trap in the tank for water collection
- Two spacious decks for convenient pipe and hose storage
- Manual lubrication
- Side-mounted aluminum toolboxes
- Integrated work lights
- Breakaway rear steps



to maximize the reach of each boom section to obtain precise concrete placement. The model's low 18 ft. 9 in. unfolding height and boom flexibility enable the operator to maintain a single location throughout a job while preventing the need for extra delivery line.

Putzmeister BOOM PUMP ADVANTAGE



Modular Flatpack

Fully removable, Putzmeister's modular bolt-on flatpack and hydraulic system combine versatility and servicing convenience. This simple design allows for cost-effective, minimally labor intensive pump cell replacement for upgrades, repairs or as part of a maintenance program.



Convenience and Control

The Frequency Hopping system on the standard HBC proportional radio remote ensures minimal interference with other frequency transmitters. Radiomatic Power Boost further enhances reception quality with a 50-100% increase in signal power. A fully proportional cable remote is also standard. Unlike other remote control systems, the radio and cable remote systems are completely independent, offering redundancies to ensure complete proportional operation with either the radio or cable remote in the event of a problem.



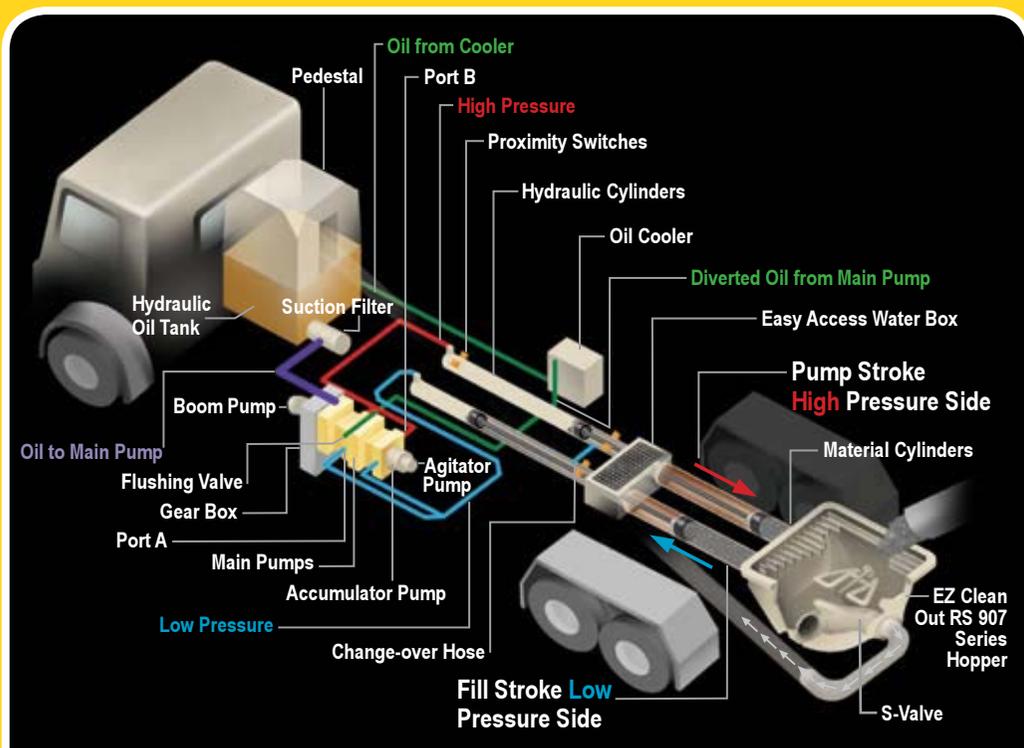
Fuel Economy

Switch gears and save with Putzmeister's patented Econo-Gear.™ The exclusive design allows the Mack chassis engine to run at a lower rpm, achieving less stress on wear parts, lower noise levels and reduced fuel consumption. Econo-Gear makes a significant impact on job site safety and profitability with an estimated 10-15% savings.

Putzmeister

FREE FLOW HYDRAULICS

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Putzmeister 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 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. Removing and cooling this minimal amount of oil is possible because, unlike an open loop system, the oil flows freely without passing through any unnecessary valves that can generate heat.

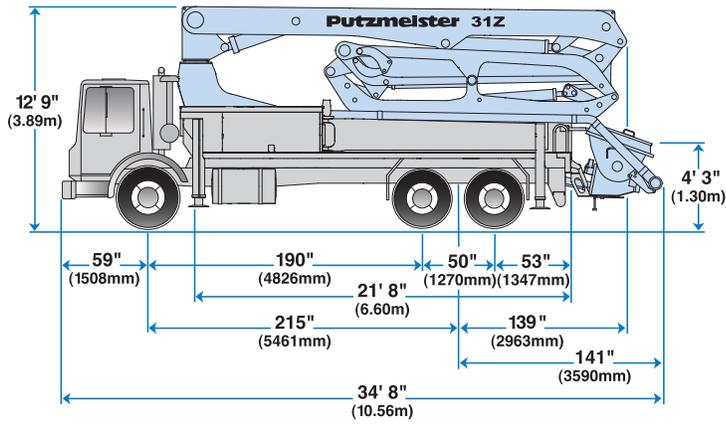
The closed loop also requires far less oil to run the system, as a larger reservoir is not necessary to cool all of the oil.

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.

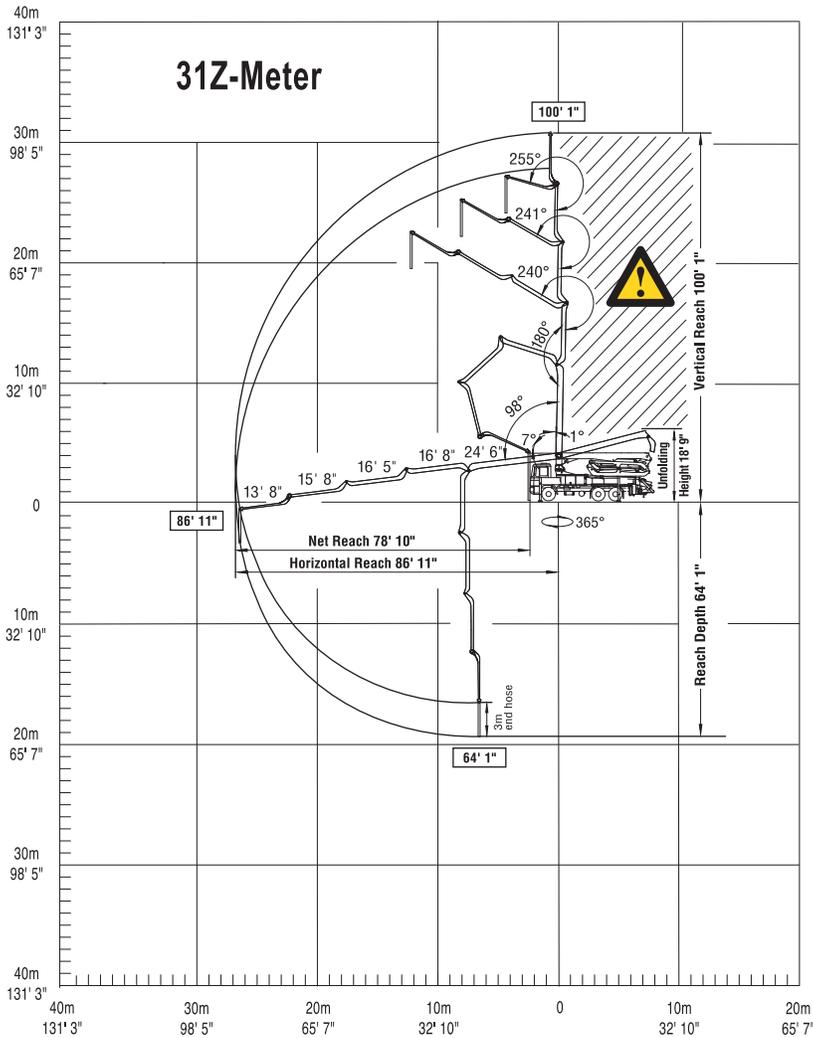
An electrical signal precisely synchronizes the drive cylinders with the accumulator system that controls the S-Valve in the hopper. Reserved energy stored in a nitrogen bladder is sent as a supercharged blast of oil at precisely the right moment to facilitate a smooth and fast shift of the S-Valve from 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 eliminates wear-inducing pressure peaks, increases service life and makes our pumps extremely powerful.
- There is greater pump output due to the efficient use of all available energy.
- Rapid changeover of the stroke means higher outputs, a smoother flow of concrete and less boom bounce.



Range Diagram



31Z-Meter Truck-Mounted Specifications

Based on Model MACK MRU 688S with .16H pump cell

| | | |
|----------------------|------------|------------|
| Length | 34' 8" | (10.56m) |
| Width | 8' 2" | (2.50m) |
| Height | 12' 9" | (3.89m) |
| Wheelbase | 215" | (5,461mm) |
| Front axle weight | 19,196 lbs | (8,707kg) |
| Rear axle weight | 36,407 lbs | (16,514kg) |
| Approx. total weight | 55,603 lbs | (25,221kg) |

Weights are approximate and include pump, boom, truck, full hydraulic oil, driver and some fuel. Varies with options selected.

Dimensions will vary with different truck makes, models and specifications.

Boom Specifications • Z-Fold Design

Height & Reach

| | | |
|------------------|---------|----------|
| Horizontal reach | 86' 11" | (26.49m) |
| Reach depth | 64' 1" | (19.53m) |

4-Section Boom

| | | |
|---|--------|---------|
| 2nd section articulation | 180° | |
| 4th section articulation | 241° | |
| 1st section length | 24' 6" | (7.47m) |
| 3rd section length | 16' 5" | (5.00m) |
| 5th section length | 13' 8" | (4.17m) |
| Pipeline size (ID) metric ends | 5" | (125mm) |
| End hose — length | 10' | (3m) |
| Outrigger spread L - R — front extend diagonally out and down | 20' 7" | (6.27m) |

Pump Specifications

31Z.12L

31Z.16H

| | | |
|--------------------------------|--------------------|--------------------|
| Pressure — rod side | 1015 psi (70 bar) | 1233 psi (85 bar) |
| piston side | 1624 psi (112 bar) | 1885 psi (130 bar) |
| Stroke length | 83" (2100mm) | 83" (2100mm) |
| Volume control | 0-Full | 0-Full |
| Hard-chromed material cylinder | Standard | Standard |
| Hydraulic system pressure | 5075 psi (350 bar) | 5075 psi (350 bar) |
| Rod diameter | 3.1" (80mm) | 3.1" (80mm) |
| Water tank | 185 gal (700L) | 185 gal (700L) |

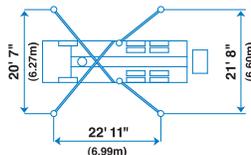
Maximum theoretical values listed.

* Applies to units mounted on PMA stock truck — MACK MRU 688S

• Standard delivery line system rated at max line pressure of 1233 psi (85 bar)

End hose not to be operated in caution area.

Photos and drawings are for illustrative purposes only. For available options, please refer to price list.



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