



HFR Metering System

Hydraulic Fixed Ratio Metering System



High-performance precision metering

The rules have changed

The versatility of the Graco HFR Metering System™ promises to re-define the marketplace. That's because this hydraulic, fixed ratio metering system processes multiple materials – from rigid and flexible polyurethanes to elastomers and epoxies. And its modular design, combined with Graco technologies and precision dispensing capabilities give you a system that is advanced and reliable, yet affordable.

Accurate, on-ratio dispense means less waste, more profits

With the Graco HFR Metering System, you accurately hit a specific ratio and volume – first time, every time. As the machine dispenses material, it automatically fine-tunes and adjusts to achieve a consistent material flow or pressure. With a $\pm 1\%$ ratio accuracy, you reduce scrap and rework with accurate, on-ratio dispensing.

More technology for less capital investment

The Graco HFR Metering System is a high-quality meter, mix and dispense system that offers more technology and functionality – at a lower price than traditional custom RIM systems. A low initial investment allows you to participate in the marketplace where it may not have been possible before.

You benefit from a lower total cost of ownership

The system's horizontal pumps can be rebuilt at your facility, eliminating costly rebuilds and the need for backup pumps. Less downtime, reduced maintenance costs, and lower parts inventory mean more profits for your company.

Materials

Handles multiple materials including:

- Polyurethane foams
- Polyurethane elastomers
- Epoxies
- Silicones
- Polyureas
- Soft filled materials

Applications

- Polyurethane processing
- Coating

Low viscosity application such as:

- Batch processing
- Potting
- Encapsulating
- Vacuum infusion



Graco HFR Metering System

Fully configurable – simply select what you need for your material and application

Modular design gives you exactly what you need

A modular design gives you the freedom and flexibility to configure the components that are essential for your specific application requirements – no more, no less. Standard configured equipment can be delivered to your door much faster than a custom solution. Plus it's easier to use and service than custom equipment because you use standard parts. And with Graco's established global distribution network, service is there when you need it.

Advanced Display Module

- Provides easy setup, monitoring and system diagnostics
- USB drive for data reporting
- Stores 100 shot sizes and five sequences of 20 positions each

IsoGuard Select™ System

- Prevents isocyanate crystallization – less maintenance, more uptime

Motor Control Module

- In constant communication with the Advanced Display Module, the Motor Control Module makes real-time adjustments to deliver a highly precise dispense

Power Distribution Box

- Modular assembly replaces complex wiring

Graco Z-Series Horizontal Pumps

- Provide precision control to eliminate pressure spikes
- Positive displacement pumps are easy to service with easy-to-replace cartridge packings, seals and pumps seats

Compact Design

- Small footprint saves valuable space in your plant
- 48W x 34D x 59H in (122 x 150 x 86 cm)

Fully Configurable

- Select what you need for your material and application – no more, no less
- Shorter lead time than custom solutions
- Standard wear parts are quickly available

▶ Visit www.graco.com/hfr for more information ◀

Easy set-up, material monitoring capabilities and advanced dispensing technology

Intuitive, easy to use controls

The Graco HFR Metering System features intuitive user interfaces based on the Graco Control Architecture™, a modular system of processing and control components. Products using Graco Control Architecture provide similar interface functionality across your plant and simplify training. Maintenance and service is easier too, thanks to built-in troubleshooting tools and simple, modular part replacement.

The Advanced Display Module is easy to understand and operate. Because it's easy to use, you spend less time on training and reduce operator error as well. The Advanced Display Module provides:

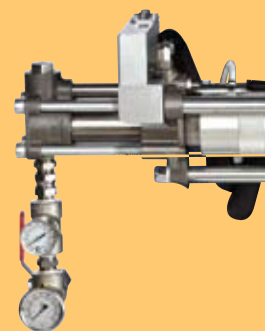
- Programmable shot sizes and sequencing – up to 100 different shot sizes and five sequences of 20 positions each
- Easy configuration of integrated temperature controls
- Immediate access to error/event history
- Material usage and pump cycle counter
- Simple interface for machine calibration

Integrated USB interface for easy data downloads

- Lets you download process data and error/event logs onto a flash drive for further analysis
- Allows you to archive valuable setup parameters

Improved process performance

Material dispensing reaches a new level of precision due to proprietary algorithms and adaptive technology. The Graco Metering System uses advanced controls to monitor the system and control the dispensing and material conditioning processes. The system is capable of producing either a constant pressure material output or a constant flow rate material output.



Everything you need to make an informed decision

Technical Specifications

Dimensions	48W x 59H x 34D in (122 x 150 x 86 cm)
Mix ratio range	Fixed ratio, 1:1 to 16:1, shot to continuous flow
Ratio tolerance range	Up to $\pm 1\%$
Fluid filtration	20 mesh standard
Flow rates	
Minimum	0.12 gpm (7.5 cc/s)
Maximum	5.0 gpm (316 cc/s)
Fluid inlets without feed kits	3/4 npt
Max. mixed fluid working pressure	3000 psi (207 bar, 20.7 MPa)
Min. pump inlet fluid pressure	50 psig (0.3 bar, 0.03 MPa)
Max. ambient temperature	120°F (49°C)
Weight	
Base machine	634 lb (287.6 kg)
Fully configured	868 lb (393.7 kg)
Fluid viscosity range	up to 30,000 cps
Wetted parts	
Pumps (A and B)	Stainless steel, PTFE, UHMWPE, tungsten carbide
Manifold	Aluminum or stainless steel
Applicator	Varies based on applicator chosen; see applicator manual
Primary heaters	Aluminum, carbon steel

