



# PR70™

Meter, Mix and Dispense Systems



PROVEN QUALITY. LEADING TECHNOLOGY.

# PR70. Performance You Can Trust



## Reliable Meter, Mix and Dispense Systems

Graco PR70™ Meter, Mix and Dispense Systems offer superior accuracy for a broad range of applications including bonding and sealing, potting, gasketing, encapsulation and syringe filling.

## Handles most Two-Component Materials

- Stainless steel design reduces the chance of a material incompatibility
- Positive displacement pumps deliver ratio accuracy to  $\pm 1\%$
- Linear transducer monitors piston velocity to provide ratio assurance, and reduce scrap and re-work
- Shot size ranges from 2 to 70 cc's
- Ratio range from 1:1 to 24:1 with variable drive

## Rugged, Reliable and Durable

- Long-lasting wear parts mean lower cost of ownership
- Cast pump bodies for improved seal alignment
- Chromex™ shafts and Severe Duty™ cylinders combined with stainless steel fittings provide long pump life with no corrosion
- Shaft seals designed for extended life and easy replacement
- Preventive maintenance counter to plan system rebuilds around your production schedule
- Linear thrust bearings eliminate side loading to maximize seal life and performance

## Ease of Operation and less Downtime

- Standard electronic controls allow for digital shot entry in grams (PR70 and PR70v™ only)
- Built-in, easy to set up purge timer keeps system up and production running (PR70 and PR70v only)
- Graco Control Architecture modules, with built-in diagnostics allow for quick troubleshooting
- Modular design eliminates point-to-point wiring – a quick board change-out gets your system up and running

## Key Industries

- Product assembly
- Automotive components
- Automotive electronics
- Consumer electronics
- Medical
- Sporting goods
- Appliance



### *PR70v with Accumulators*

- PR70v offers flexibility with variable ratio dispensing

# Technology You Can Count On

## Graco Reliability. Industry-proven Accuracy. Intuitive Design.

The PR70 fixed ratio system accurately meters, mixes and dispenses two-component medium to low-viscosity materials for potting, gasketing, sealing, encapsulation and syringe filling. For variable ratio dispensing, the PR70v handles ratios from 1:1 to 24:1 and offers even more control with an optional Advanced Display Module.

### Multiple Feed Systems

A variety of feed package options are available:

- Polyethylene tanks
- Stainless steel tanks
- Off-board tanks for high-volume applications and reduced material refills
- Accumulators for high-viscosity materials

### MD2 Valve

- High-pressure accuracy with multiple seat styles and adjustable snuffback for clean, precise dispensing

### Compact Benchtop Unit

- Stable, strong machine base for secure installation
- Small footprint saves valuable space

### Intuitive User Interface

- Digital shot size entry, machine monitoring and feedback for total control

### Fluid Control Module

- Offers a simplified wiring system and board-level diagnostics
- Modular approach is easier to operate, easier to maintain

### Proven Ratio Accuracy

- Multiple tube sizes to pinpoint specific target ratios and deliver ratio accuracy to  $\pm 1\%$

### Long-Life Design

- Optimized pump support, seal design, and Chromex rods provide twice the life of other systems



# PR70e. Reliable Dispensing at an Affordable Price

## Easy to Use, entry-level System.

If you are looking for a basic meter, mix and dispense system, the PR70e is the ideal model for you. It offers reliable and accurate performance, yet at a lower initial investment than the PR70 or PR70v.

### Multiple Feed Systems

A variety of feed package options are available:

- Polyethylene tanks
- Stainless steel tanks
- Off-board tanks for high-volume applications and reduced material refills

### MD2 Valve

- High-pressure accuracy with multiple seat styles and adjustable snuffback for clean, precise dispensing

### Compact Benchtop Unit

- Stable, strong machine base for secure installation
- Small footprint saves valuable space

### Local Control Module (LCM)

- Digital shot size entry

### Proven Ratio Accuracy

- Multiple tube sizes to pinpoint specific target ratios and deliver ratio accuracy to  $\pm 1\%$

### Long-Life Design

- Optimized pump support, seal design, and Chromex rods provide twice the life of existing systems

# Superior Tracking and Monitoring Capabilities

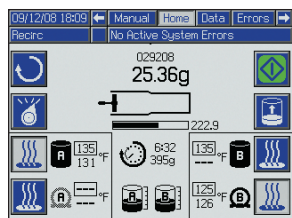
## Graco Control Architecture

PR70 and PR70v Dispense Systems feature intuitive user interfaces based on the Graco Control Architecture, a modular system of processing and control components. Products using the 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.

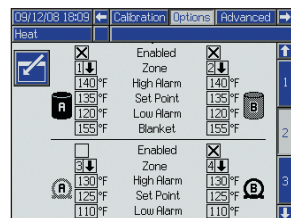
### Advanced Display Module

When you upgrade to the Advanced Display Module, you gain extra capabilities that allow you to accomplish more in your production area. The Advanced Display Module enables expanded features including:

- Recirculation capability
- Programmable shot sizes and sequencing – up to 50 different shot sizes and seven sequences
- Integrated heater control
- Large, bright colour screen makes the system easier to see and use
- Key pad entry makes it easy to program and reduces operator training time



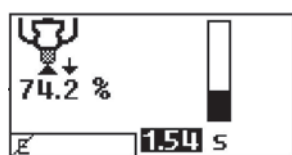
Recirc Mode option prevents materials from setting overnight



Set-up screen gives users easy access heat options

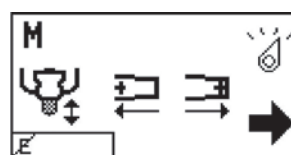
### Local Control Module (PR70e only)

- Simple system electronic controls with diagnostics
- LCD graphical interface saves time by enabling accurate shot size programming
- Automatic alarms notify you when pumps need attention



Operation Screen

Shot size is displayed as a percentage of stroke length, duration of shot and progress bar.



Maintenance Mode Screen

Allows trouble shooting and easy maintenance through manual operation of system



# PR70 System Comparisons

		PR70e with LCM	PR70 with DM	PR70 with ADM	PR70v with ADM
System	Configured system?	No	Yes	Yes	Yes
Ratios	Fixed Ratio	1:1 to 12:1	1:1 to 12:1	1:1 to 12:1	NA
	Variable Ratio	NA	NA	NA	1:1 to 24:1
Shots	Number of shots	1	5	50	50
	Shots Based on Percentage of stroke	Yes	No	No	No
	Weight Based Shots	No	Yes	Yes	Yes
	Multi-stroke shots (over 100%)	No	Yes	Yes	Yes
	Shot Sequencing	No	Optional	Yes	Yes
Monitoring	Pressure Monitoring	No	Optional	Optional	Optional
	Ratio Monitoring	No	Optional	Optional	Optional
Data Controls	Local Control Module (LCM)	Yes	No	No	No
	Display Module (DM)	No	Yes	No	No
	Advanced Display Module (ADM)	No	Optional	Yes	Yes
	Gel Timer	No	Yes	Yes	Yes
	Run with Automation (PLC)	No	Yes	Yes	Yes
	USB Download	No	Optional	Yes	Yes

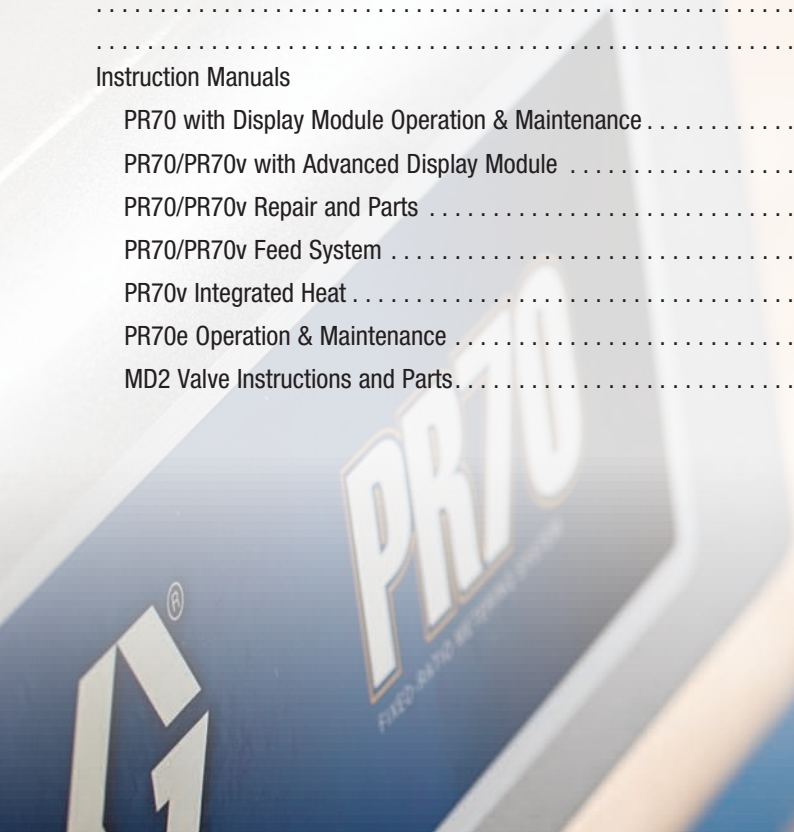
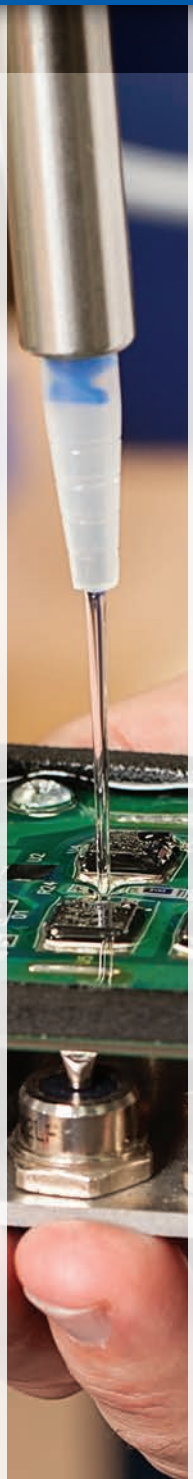
## Available Accessories and Configurations

Valves	1:1 MD2 Valve	Optional	Optional	Optional	Optional
	10:1 MD2 Valve	Optional	Optional	Optional	Optional
Hoses	76 cm (2.5 ft) Hoses	Accessory	Optional	Optional	Optional
	3 m (10 ft) Hoses	Accessory	Optional	Optional	Optional
	4.6 m (15 ft) Hoses	Accessory	Optional	Optional	Optional
Tanks, Accumulators, Heated Equipment, Accessories	Plastic Tanks	Accessory	Optional	Optional	Optional
	On-Board Stainless Steel Tanks	Accessory	Optional	Optional	Optional
	1-1/2 NPT Flange Kit for bulk feed	Accessory	Optional	Optional	Optional
	Off-Board Stainless Steel Tanks	Accessory	Optional	Optional	Optional
	Heated Tanks	No	Optional	Optional	Optional
	Agitation	Accessory	Optional	Optional	Optional
	Tank Level Sensors Low	No	Optional	Optional	Optional
	Tank Level Sensors High	No	No	Optional	Optional
	Accumulators	No	No	Optional	Optional
	Auto Refill	No	No	Optional	Optional
	Mixers & Shrouds	Accessory	Optional	Optional	Optional
	Valve Mounting	Accessory	Optional	Optional	Optional
	Incoming Air Shut-off & Filter	Accessory	Standard	Standard	Standard
	Heated Hoses	No	No	Optional	Optional
Recirculation	No	No	Optional	Optional	

Optional items can be selected from the configurator and are factory installed. Accessories are ordered when you order the machine, but you assemble it onto the machine at your location.

# Technical Specifications

Metering Pump Effective Area . . . . .	80 – 960 mm <sup>2</sup> (0.124 – 1.49 in <sup>2</sup> ) per side
Small Air Cylinder Effective Area . . . . .	4560 mm <sup>2</sup> (7.07 in <sup>2</sup> )
Large Air Cylinder Effective Area . . . . .	10260 mm <sup>2</sup> (15.9 in <sup>2</sup> )
Maximum Stroke Length . . . . .	38.1 mm (1.50 in)
Minimum Stroke Length . . . . .	5.8 mm (0.23 in)
Volume per Cycle . . . . .	2 – 70 cc (0.12 – 4.3 in <sup>3</sup> )
Pump Cycles per 1L (.26 gal) – varies by piston size . . . . .	14.3 – 500
Ratios (fixed) . . . . .	1:1 to 12:1 depending on cylinders selected
Ratios (variable) . . . . .	1:1 to 24:1 depending on cylinders selected
Maximum Fluid Working Pressure . . . . .	207 bar (20.7 MPa / 3000 psi)
Maximum Air Input Pressure . . . . .	7 bar (0.7 MPa / 100 psi)
Maximum Cycle Rate . . . . .	30 cpm
Maximum Operating Temperature . . . . .	70° C (160° F) nylon pistons 50° C (120° F) UHMWPE pistons or PE tanks
Air Inlet Size . . . . .	1/4 NPT(f)
Pump Fluid Outlet Size . . . . .	-03, -04, -06, -08 or -12 JIC fittings for 4.8 mm (3/16 in), 6.4 mm (1/4 in), 9.5 mm (3/8 in), 12.7 mm (1/2 in), 19.1 mm (3/4 in) hoses
Wetted Parts . . . . .	303/304, 17-4 PH, hard chrome, Chromex™, carbide, chemical resistant O-rings, PTFE, nylon, UHMWPE
Weight – PR70 . . . . .	55 kg (120 lb) typical with two 7.5 l tanks 150 kg (330 lb) typical with two 60 l tanks
Weight – PR70v . . . . .	73 kg (160 lb) typical with two 7.5 l tanks 168 kg (370 lb) typical with two 60 l tanks
Weight – PR70e . . . . .	46 kg (100 lb) typical without tanks
Compressed Air . . . . .	< 10 scfm typical (varies with cycle time)
Electrical Power . . . . .	100-240V 50/60Hz 1 phase for machine – 80 watts 208–240V 50/60Hz 1 phase for heat – 10 kW max 120 or 240V 50/60Hz 1 phase for on-board agitators
<b>Instruction Manuals</b>	
PR70 with Display Module Operation & Maintenance . . . . .	312393
PR70/PR70v with Advanced Display Module . . . . .	312759
PR70/PR70v Repair and Parts . . . . .	312760
PR70/PR70v Feed System . . . . .	312394
PR70v Integrated Heat . . . . .	312761
PR70e Operation & Maintenance . . . . .	334135
MD2 Valve Instructions and Parts . . . . .	312185





## ABOUT GRACO

Founded in 1926, Graco is a world leader in fluid handling systems and components. Graco products move, measure, control, dispense and apply a wide range of fluids and viscous materials used in vehicle lubrication, commercial and industrial settings.

The company's success is based on its unwavering commitment to technical excellence, world-class manufacturing and unparalleled customer service. Working closely with qualified distributors, Graco offers systems, products and technology that set the quality standard in a wide range of fluid handling solutions. Graco provides equipment for spray finishing, protective coating, paint circulation, lubrication, and dispensing sealants and adhesives, along with power application equipment for the contractor industry. Graco's ongoing investment in fluid management and control will continue to provide innovative solutions to a diverse global market.

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All written and visual data contained in this document are based on the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

Graco is certified ISO 9001.



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