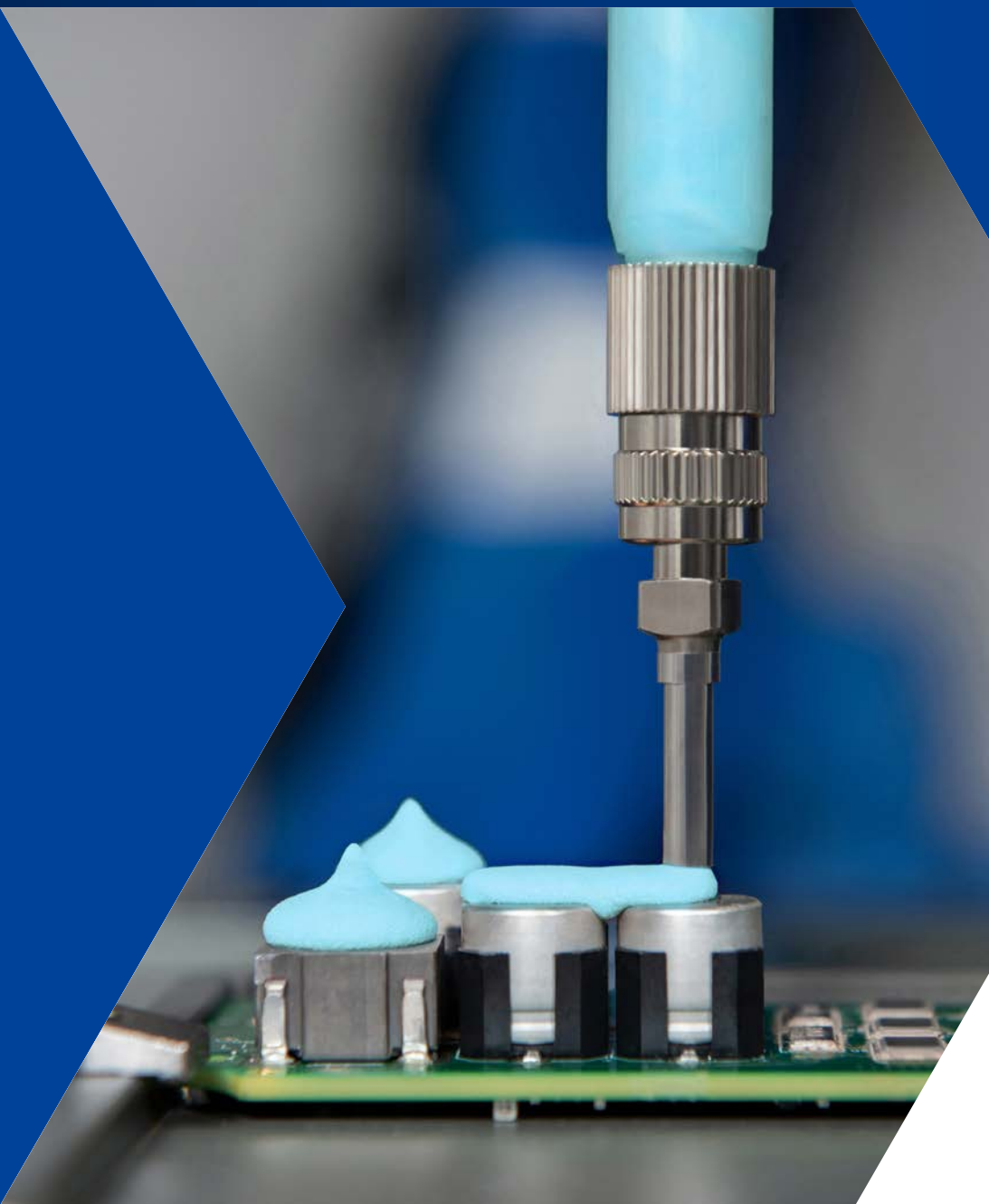




# POSI-RATIO® METER, MIX AND DISPENSE SYSTEMS

For Two Component Sealants and Adhesives



PROVEN QUALITY. LEADING TECHNOLOGY.



# POSI-RATIO

## Meter, Mix and Dispense Systems

# IMPROVE PRECISION AND PRODUCTIVITY

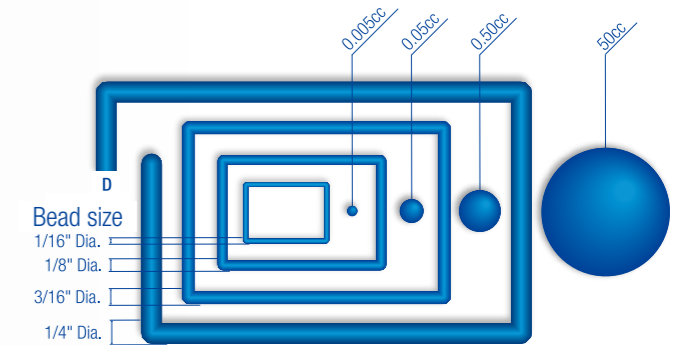
### Posi-Ratio (PR) solutions for extremely (-X) viscous and abrasive two component sealants and adhesives

Fixed and variable ratio options sustain the control and repeatability needed to ensure beads, dots and other patterns meet specifications every time.

- Servo drive regulates motor speed, delivering ratio accuracy and repeatability of up to 1 percent.
- Patented first-in-first-out (FIFO) fluid path keeps materials from blocking and curing inside the pump.
- Durable construction and fluid path geometry resist wear from abrasive materials, extending service life.
- High wear models withstand thermal interface material (TIM), other fillers, and different viscosities.

### Extreme Repeatability of Each Bead, Dot and Pattern

- Servo drive design allows for accurate and highly repeatable dispensing processes.
- On-demand flow control synchronizes dispenses with automation speeds.



### Engineered for Advanced Fluid Handling and Durability

- Patented first-in-first-out (FIFO) fluid path prevents material from settling or curing inside the metering tube. This keeps dispense on-ratio and lessens the need for maintenance.
- Durable construction and fluid path geometry resist wear from abrasive materials and extend service life.

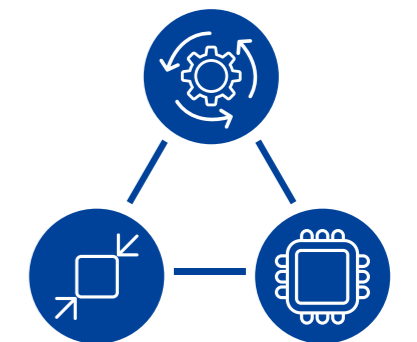


First-in-first-out (FIFO) fluid path

### Compact Design and Easy Integration Lead to High Production Rates

- Small size and low mass allow for installation flexibility for stand-alone benchtop and automated applications.
- Simple communication protocols provide seamless integration with robots, automated work cells, and data tracking systems.
- Flexible system configurations level up production by improving material transfer and dispense.

High production rates



Compact

Easy to integrate

### Materials:

- Thermal Interface Materials (TIM)
- Epoxy
- Silicon
- Acrylics
- Polyurethane



PR-X  
Fixed ratio solution

- Single servo motor
- Fixed ratio
- MD2 valve
- 0.03 to 50 cc shot size range



PR-Xv  
Variable ratio solution

- Dual servo motors
- Variable ratio
- TC valve
- 0.03 to 100 cc shot size range
- Base purge

### Applications:

- Thermal Management
- Bonding
- Sealing
- Potting
- Gasketing

### Industries:

- EV Batteries
- Electronics
- 5G Telecommunication
- Automotive
- General Industry

# PR-X

## Fixed Ratio Solution

Fixed Posi-Ratio® (PR) meter, mix and dispense retains extreme (-X) control at high flow rates with +/-1% shot repeatability.

### Inlet Valve\*

Precisely controls material as it enters the metering system



### Servo Motor

Powers precise and repeatable dispense

### Metering Tube\*

Comes in different sizes that can be changed to deliver ratios of up to 2.4:1. Has no dead spots, thanks to first-in-first-out (FIFO) fluid path.

### MD2 Valve\*

Precisely mixes and dispenses two component materials

*\*High wear option is available for extended service life when handling fillers and other highly abrasive materials.*

## Technical Information

- Shot size range: 0.03 - 50 cc
- Flow rate: 0.01 - 10 cc/sec  
Depending on material viscosity
- Maximum working pressure: 1,200 PSI

# SYSTEM AND CONFIGURATIONS

## Standard and High Wear Models



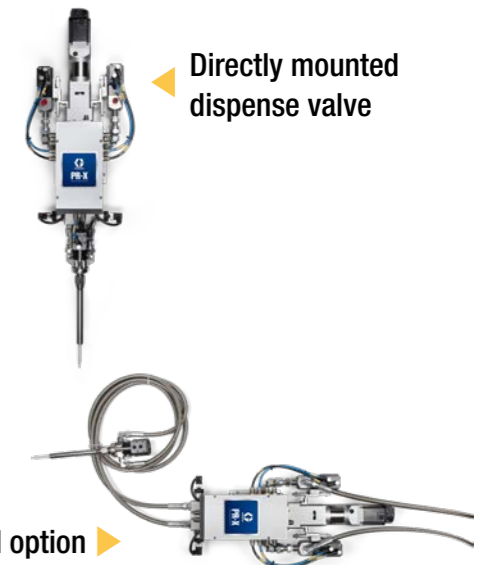
Standard stainless steel construction works well to dispense most materials.



High wear, ceramic construction withstands highly abrasive materials for extended service life.

## Remote Options

- Graco's proven MD2 mixing dispense valve for two component materials can be mounted either directly or remotely to best fit your application requirements.
- Direct mount requires little or no extra floor space to make the PR-X part of current factory automation equipment. This option is ideal for highly filled and high viscosity materials.
- The optional remote mount kit allows for more workspace flexibility and lessens automation payload requirements.



## Programmable Logic Controller

PLC integrates easily with automated systems and includes:

- 16 programmable flow rates
- Motor torque monitoring and alarm function
- Fluid pressure monitoring, overpressure alarm and A/B component ratio pressure deviation alarm with fluid pressure transducers
- Supply system low liquid level check valve
- Pre-charge and automatic pressure relief function
- Data record: 50 recent alarms
- Communication module type: IO and Profinet

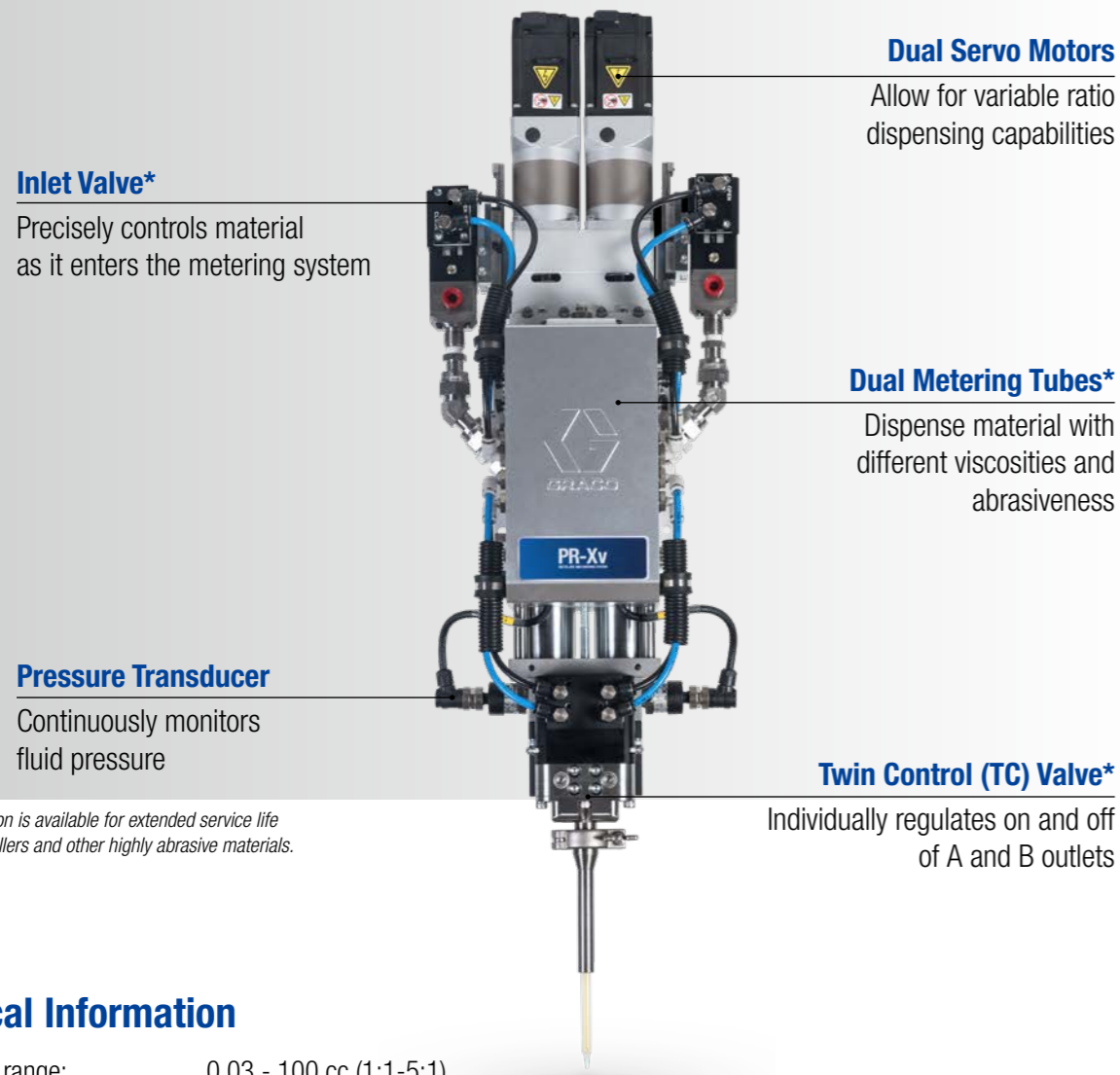


Integrated PLC Controller

# PR-XV

## Variable Ratio Solution

- Posi-Ratio® (PR) system offers the extreme variability (-Xv) needed for precise meter, mix and dispense of two component adhesives and sealants.
- Variable ratio capability adapts to variety of applications.
- Flexible shot size range meets the demands of micro to high flow dispense with +/- 1 percent shot repeatability.
- Base purge function minimizes mixer consumption and material waste.



**Inlet Valve\***  
Precisely controls material as it enters the metering system

**Dual Servo Motors**  
Allow for variable ratio dispensing capabilities

**Dual Metering Tubes\***  
Dispense material with different viscosities and abrasiveness

**Pressure Transducer**  
Continuously monitors fluid pressure

**Twin Control (TC) Valve\***  
Individually regulates on and off of A and B outlets

*\* High wear option is available for extended service life when handling fillers and other highly abrasive materials.*

### Technical Information

- Shot size range: 0.03 - 100 cc (1:1-5:1)  
0.03 - 75 cc (2:1-10:1)
- Flow rate: 0.01 - 10 cc/sec  
Depending on material viscosity
- Maximum working pressure: 1,200 PSI

# SYSTEM AND CONFIGURATIONS

## Standard and High Wear Models



Standard stainless steel construction works well to dispense most materials.



High wear, ceramic construction withstands highly abrasive materials for extended service life.



Integrated PLC Controller

## Programmable Logic Controller

PLC integrates easily with automated systems and includes:

- 16 programmable flow rates
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- Communication module type: IO and Profinet



TC Valve

## Applicator

### Twin Control (TC) Valve

- Independent control of A/B fluid path maximizes dispense accuracy and efficiency with minimal maintenance.
- Modular design adapts to different installation needs.
- No unique tools are required for maintenance or repair.
- Base purge conserves the amount of material used.
- High wear option withstands tough materials, extending equipment life.

# TECHNICAL SPECIFICATIONS



MODEL	PR-X	PR-Xv
Maximum Working Fluid Pressure	1200 psi (8.4 MPa, 84 bar)	1200 psi (8.4 MPa, 84 bar)
Maximum Air Pressure	100 psi (0.7Mpa, 7bar)	100 psi (0.7Mpa, 7bar)
Power Supply	220VAC-240VAC, 50Hz/60Hz, 10A	220VAC-240VAC, 50Hz/60Hz, 10A
Air Inlet	1/4 npt (f) (including 6mm quick disconnect device)	1/4 npt (f) (including 6mm quick disconnect device)
Fluid Inlet	1/4 npt (f)	1/4 npt (f)
Fluid Outlet	7/8 - 9 bell outlet	Outlet with clamp
Fluid Viscosity Range	20 to 1,000,000 cps	20 to 1,000,000 cps
Dimensions (L x W x H without mixing nozzle)	760 x 260 x 156.5 mm	759 x 279 x 156.5 mm
Weight (net weight)	35 lbs (16 Kg)	56.8 lbs (26 Kg)
Wetted Parts	303 Stainless Steel, 17-4 Ph Stainless Steel, C2 Carbide, Hard Chrome, Ethylene Propylene, Parker Polymite, PTFE	303 Stainless Steel, 17-4 Ph Stainless Steel, C2 Carbide, Hard Chrome, Ethylene Propylene, Parker Polymite, PTFE
Shot Size Range	0.03 - 50 cc	0.03 - 100 cc (1:1-5:1 ) 0.03 - 75 cc (2:1-10:1)
Shot Repeatability	+/- 1%	+/- 1%
Ratio Range	1:1 - 2.4:1	1:1-5:1 / 2:1-10:1
Flow Rate	0.01-10 cc/s (depending on material viscosity)	0.01-10 cc/s (depending on material viscosity)

# ORDERING INFORMATION

## PR-X System

PART NO.	DESCRIPTION
133646	PR-X, Pump Feed, MD2 Valve, Direct Mount with Standard Tube, 1:1
133647	PR-X, Pump Feed, MD2 Valve, Direct Mount with High Wear Tube, 1:1
*	PR-X, Pump Feed, MD2 Valve, Direct Mount with Standard Tube, 2:1
*	PR-X, Pump Feed, MD2 Valve, Direct Mount with High Wear Tube, 2:1

\* Contact Graco for more information

## PR-Xv System

PART NO.	DESCRIPTION
25S181	PR-Xv, Pump Feed, TC Valve Direct Mount with Standard Tube, 1:1 to 5:1
25S182	PR-Xv, Pump Feed, TC Valve, Direct Mount with High Wear Tube, 1:1 to 5:1
25S197	PR-Xv, Pump Feed, TC Valve, Direct Mont wth Standard Tube, 2:1 to 10:1
25S198	PR-Xv, Pump Feed, TC Valve, Direct Mount with High Wear Tube, 2:1 to 10:1

## PR-X Accessories

PART NO.	DESCRIPTION
2001244	PR-X, Hose, JIC fitting, 3/16X36
2001245	PR-X, Hose, JIC Fitting, 3/16X48
2001246	PR-X, Hose, JIC Fitting, 3/16X72
2001247	PR-X, Hose, JIC Fitting, 1/4X36
2001248	PR-X, Hose, JIC Fitting, 1/4X48
2001249	PR-X, Hose, JIC Fitting, 1/4X60
2001250	PR-X, Hose, JIC Fitting, 1/4X72
2001251	PR-X, Hose, JIC Fitting, 3/8X36
2001252	PR-X, Hose, JIC Fitting, 3/8X48
2001253	PR-X, Hose, JIC Fitting, 3/8X60
2001254	PR-X, Hose, JIC Fitting, 3/8X72
2001255	PR-X, Hose, JIC Fitting, 1/2X36
2001256	PR-X, Hose, JIC Fitting, 1/2X48
2001257	PR-X, Hose, JIC Fitting, 1/2X60
2001258	PR-X, Hose, JIC Fitting, 1/2X72
2001277	PR-X, Hose, ORFS Fitting, 3/8X72

## PR-Xv Accessories

PART NO.	DESCRIPTION
2000860	PR-Xv, Hose, JIC Fitting, 3/32X60
2000861	PR-Xv, Hose, JIC Fitting, 1/8X6
2000862	PR-Xv, Hose, JIC Fitting, 3/16X36
2000863	PR-Xv, Hose, JIC Fitting, 3/16X48
2000865	PR-Xv, Hose, JIC Fitting, 3/16X72
2000866	PR-Xv, Hose, JIC Fitting, 1/4X36
2000867	PR-Xv, Hose, JIC Fitting, 1/4X48
2000868	PR-Xv, Hose, JIC Fitting, 1/4X60
2000869	PR-Xv, Hose, JIC Fitting, 1/4X72
2000870	PR-Xv, Hose, JIC Fitting, 3/8X36
2000871	PR-Xv, Hose, JIC Fitting, 3/8X48
2000872	PR-Xv, Hose, JIC Fitting, 3/8X60
2000873	PR-Xv, Hose, JIC Fitting, 3/8X72
2000874	PR-Xv, Hose, JIC Fitting, 1/2X36
2000875	PR-Xv, Hose, JIC Fitting, 1/2X48
2000876	PR-Xv, Hose, JIC Fitting, 1/2X60
2000877	PR-Xv, Hose, JIC Fitting, 1/2X72
2000414	PR-Xv, Hose, ORFS Fitting, 3/8X72
2000359	PR-Xv, Profinet SD Card Kit



## OUR BRAND PROMISE TO YOU

Since 1926, **innovation**, **quality** and **A+ Service** have been at the centre of Graco.

### Experience Innovation

Our focus on innovation results in products and equipment that lead the industry with technologically-advanced features, pioneering design, high performance and unparalleled reliability. In short, innovation is how you get better products!

### Building Quality

You're investing in high-quality products built to last for years of reliable service. Moreover, we partner with our customers to better understand how you're deploying our products in the field, then use your experiences to improve performance and durability.



### A+ service, every time

You'll see A+ Service in action when you contact any of our support services options no matter where you are in the world. We'll listen to your situation and work methodically to resolve it as quickly as we can. We are guided by a mindset of integrity and a customer service view centred on collaboration and relationships, not transactions.



We're here to answer questions and help address your needs:

[www.graco.com/contact](http://www.graco.com/contact)

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