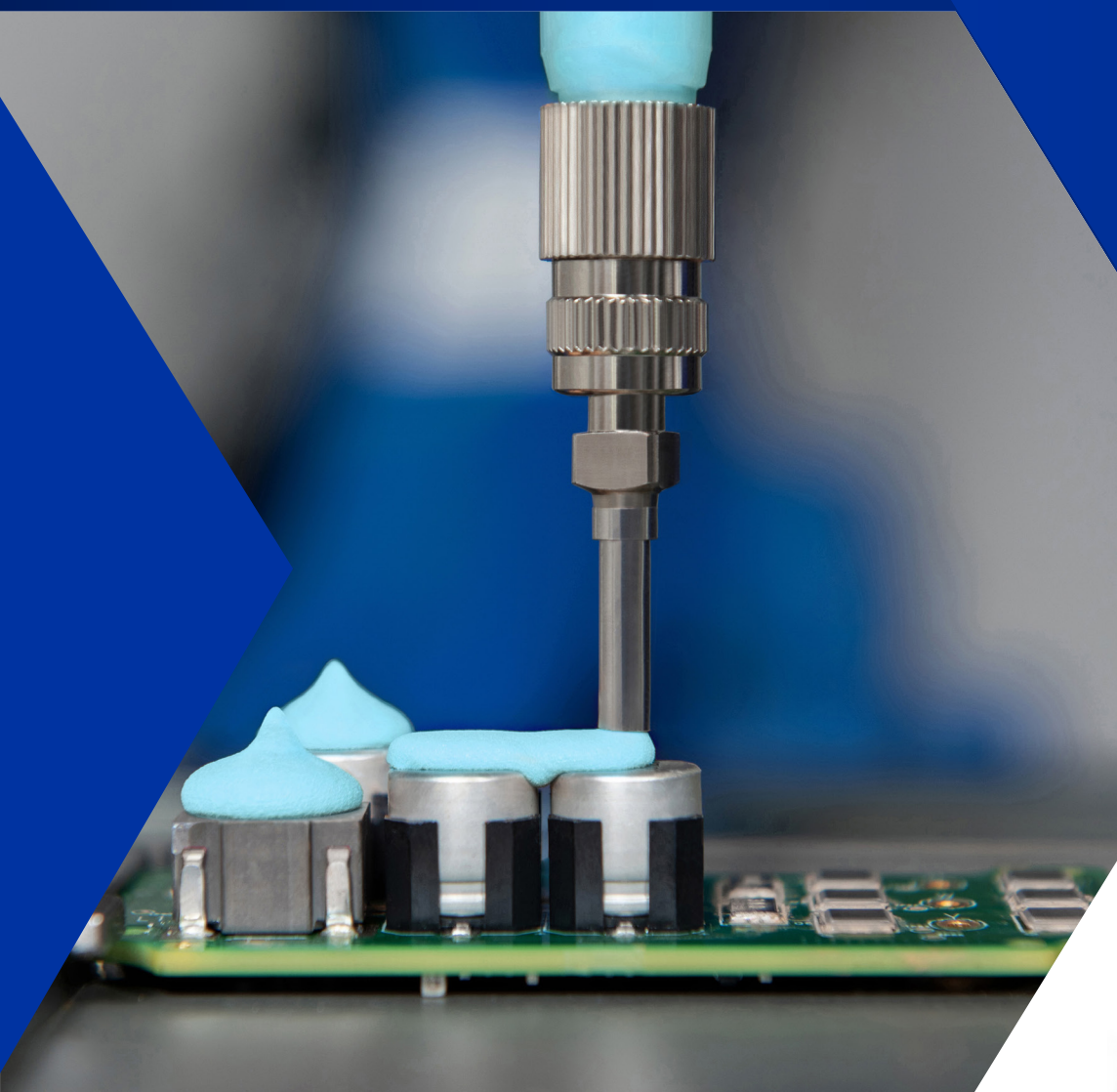


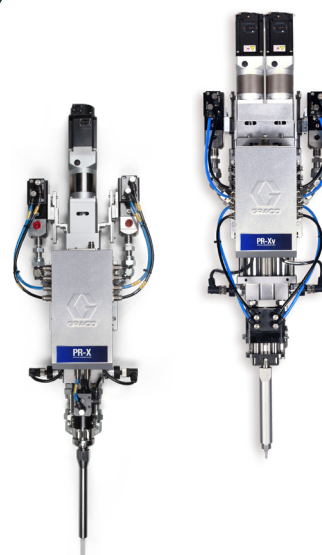


Posi-Ratio® Meter, Mix and Dispense Systems

For Two Component Sealants and Adhesives



PROVEN QUALITY. LEADING TECHNOLOGY.



Posi-Ratio

Meter, Mix and Dispense Systems

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.



Single servo motor
Fixed ratio
MD2 valve
0.03 to 50 cc
shot size range
Optional high wear
resistance model

PR-X
Fixed ratio solution



Dual servo motors
Variable ratio
Mini TC valve
0.01 to 30 cc shot
size range
Base purge
Optional high wear
resistance model

PR-Xv30
Variable ratio solution



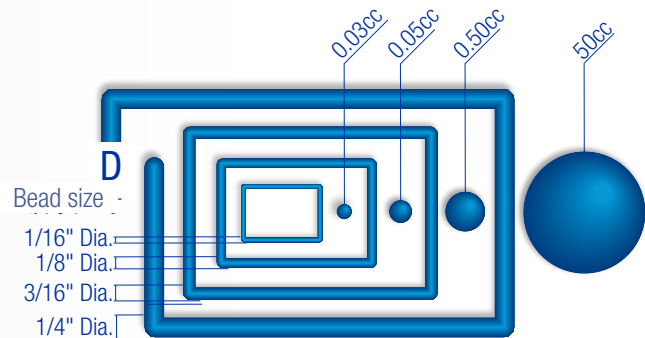
Dual servo motors
Variable ratio
TC valve
0.03 to 100 cc
shot size range
Base purge
Optional high wear
resistance model

PR-Xv
Variable ratio solution

IMPROVE PRECISION AND PRODUCTIVITY

Extreme Repeatability of Each Bead, Dot and Pattern

- Servo drive design allows for accurate and highly repeatable dispensing processes.
- On-demand flow control synchronizes dispense rates 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.

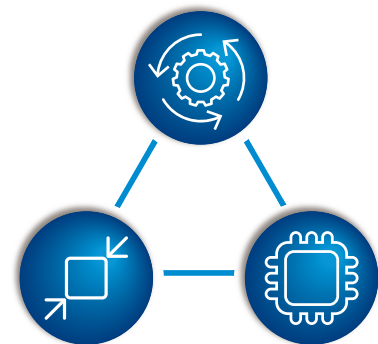


First-in-first-out (FIFO) fluid path

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

Applications:

- Thermal Management
- Bonding
- Sealing
- Potting
- Gasketing

Industries:

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

Materials:

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

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 construction works well to dispense most materials.



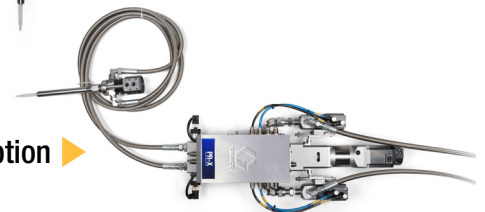
High wear, patented Elite construction withstands highly abrasive materials for extended service life.

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.



▶ Directly mounted dispense valve



Remotely mounted option ▶

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

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

Pressure Transducer

Continuously monitors fluid pressure

Dual Servo Motors

Allow for variable ratio dispensing capabilities

Dual Metering Tubes*

Dispense material with different viscosities and abrasiveness

Twin Control (TC) Valve*

Individually regulates on and off of A and B outlets

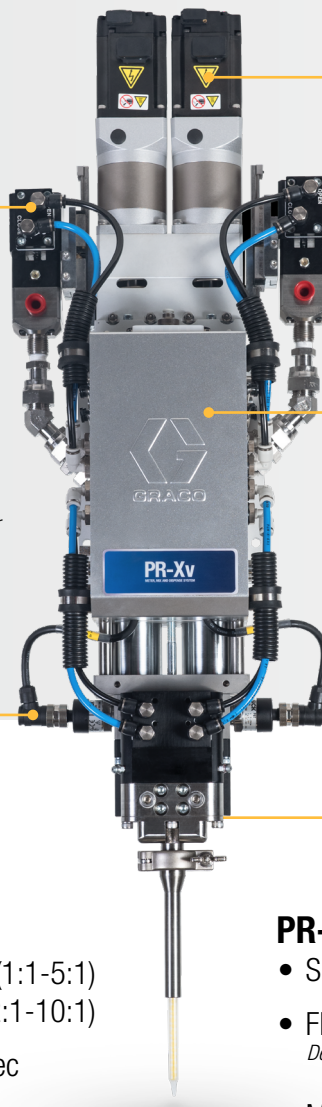
Technical Information

PR-Xv

- 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

PR-Xv30

- Shot size range: 0.01 - 30 cc
- Flow rate: 0.01 - 3.6 cc/sec
Depending on material viscosity
- Maximum working pressure: 1,200 PSI



System and Configurations

Standard and High Wear Models



Standard construction works well to dispense most materials.



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



Integrated Controller

Programmable Logic Controller

- 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:
 - PLC Controller: Profinet (PLC), EtherNet/IP;
 - PCB Controller: Profinet, EtherNet/IP, DeviceNet, Profibus



Micro TC Valve
(For PR-Xv30)
Low viscosity material dispense



Mini TC valve
(For PR-Xv30)
High viscosity material dispense



TC Valve
(For PR-Xv)

Applicators

- 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	PR-Xv30
Maximum Working Fluid Pressure	1200 psi (8.4 MPa, 84 bar)		
Maximum Air Pressure	100 psi (0.7Mpa, 7bar)		
Power Supply	220VAC-240VAC, 50Hz/60Hz, 10A		
Air Inlet	1/4 npt (f) (including 6mm quick disconnect device)		Ø 8mm
Fluid Inlet	1/4 npt (f)		
Fluid Outlet	7/8 - 9 bell outlet	Outlet with clamp	
Fluid Viscosity Range	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	511 x 103 x 165mm
Weight (net weight)	35 lbs (16 Kg)	56.8 lbs (26 Kg)	25.4 lbs (11.5kg)
Wetted Parts	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)	0.01 - 30 cc
Shot Repeatability	+/- 1%		
Ratio Range	1:1 - 2.4:1	1:1-5:1 / 2:1-10:1	1:1-5:1
Flow Rate	0.01-10 cc/s (depending on material viscosity)		0.01-3.6 cc/s (depending on material viscosity)

Ordering Information

PR-X System

Part No.	Description
25R128	PR-X, Pump Feed, MD2 Valve, Direct Mount with Standard Tube, 1:1
25R129	PR-X, Pump Feed, MD2 Valve, Direct Mount with High Wear Tube, 1:1
2001180	PR-X, Pump Feed, MD2 Valve, Direct Mount with Standard Tube, 2:1
2001181	PR-X, Pump Feed, MD2 Valve, Direct Mount with High Wear Tube, 2:1

PR-Xv System

Part No.	Description
2005711	PR-Xv30 system, Mini TC valve Direct Mount with Standard Tube, I/O, 1:1 to 5:1
2005712	PR-Xv30 system, Mini TC valve Direct Mount with High Wear Tube, I/O, 1:1 to 5:1
2007240	PR-Xv30 system, Mini TC valve Direct Mount with Standard Tube, PROFINET, 1:1 to 5:1
2007241	PR-Xv30 system, Mini TC valve Direct Mount with High Wear Tube, PROFINET, 1:1 to 5:1
2007242	PR-Xv30 system, Mini TC valve Direct Mount with Standard Tube, ETHERNET IP, 1:1 to 5:1
2007243	PR-Xv30 system, Mini TC valve Direct Mount with High Wear Tube, ETHERNET IP, 1:1 to 5:1
25S181	PR-Xv, TC Valve Direct Mount with Standard Tube, 1:1 to 5:1
25S182	PR-Xv, TC Valve Direct Mount with High Wear Tube, 1:1 to 5:1
25S197	PR-Xv, TC Valve Direct Mont wth Standard Tube, 2:1 to 10:1
25S198	PR-Xv, 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
18C277	PR-X, Profinet SD Card Kit, 4MB

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



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, namely 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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