

# VRM and VPM Metering Systems

Variable Ratio Metering Systems for Resin and Paste Applications



## High-volume dispensing equipment for maximized productivity

- High flow rates provide faster cycle times to improve your productivity
- Accurate, on-ratio dispense means less waste, more profits
- Variable ratio allows flexibility for different materials or temperature variations
- Intuitive, easy-to-use controls cut training time and reduce operator error
- Well-suited for rotor blade production in the wind energy market

# Expand your capacity with high-volume metering systems

## Graco VRM Metering System for resin applications

The Graco VRM Metering System is a hydraulic variable ratio metering system that uses positive displacement pumps to dispense resin materials.

### High flow rates

- Meet demands for increased production requirements
- Delivers accurate continuous material flow and shot dispensing as well
- Up to 66 lb (30 kg) per minute

### Accurate, on-ratio mixing

- Results in higher yield, less material waste and more process confidence
- Ratio accuracies better than  $\pm 2$  percent

### Variable ratio

- Allows you to change ratios on the fly
- Easy to program the exact output of A and B materials
- Ratio range: 1:1 to 5:1

### Applications

- Resin infusion

### Materials

- Resin



### Intuitive, easy to use user interface

Both the Graco VRM and VPM Metering Systems feature intuitive user controls based on the Graco Control Architecture.

### Less training time

Products using Graco Control Architecture provide similar functionality across your plant – which results in less training time for your operators. In other words, if you learn one system, you are already familiar with the other.

## Graco VPM Metering System for high-viscosity applications

The Graco VPM Metering System is a hydraulic variable ratio metering system that uses positive displacement pumps to dispense tooling pastes, adhesives and other high-viscosity materials.

### High flow rates

- Speeds production with high-volume dispensing
- Delivers accurate continuous material flow and shot dispensing as well
- Up to 55 lb (25 kg) per minute

### Ratio assurance

- Accurate, on-ratio mixing results in better yield, less material waste, less scrap
- Ratio accuracies better than  $\pm 2$  percent

### Variable ratio

- Allows you to change ratios on the fly
- Easy to program the exact output of A and B materials
- Ratio range: 1:1 to 5:1

### Applications

- Bonding
- Molding

### Materials

- Adhesives
- Tooling paste



### USB interface

The user controls offer a USB interface for easy data downloads. It lets you download process data, plus job and error logs onto a flash drive for further analysis, and also lets you archive valuable setup parameters.

### Features

- 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
- USB interface

# Technical Specifications & Ordering Information

Everything you need to make an informed decision

## Technical Specifications

Models	VRM-30	VPM-25	VPM-12
Max flow rate*	Up to 66 lb/min (30 kg/min) @ 70°F (21°C)	Up to 55 lb/min (25 kg/min) @ 70°F (21°C)	Up to 26 lb/min (12 kg/min) @ 70°F (21°C)
Output per cycle* (A+B)	0.27 gal (1.01 L)	0.2 gal (0.76 L)	0.2 gal (0.76 L)
Mixing ratio	Variable ratio 1:1 to 5:1	Variable ratio 1:1 to 5:1	Variable ratio 1:1 to 5:1
Max fluid working pressure	2000 psi (138 bar, 14 MPa)	3000 psi (207 bar, 21 MPa)	3000 psi (207 bar, 21 MPa)
Fluid viscosity range	10 to 10,000 cps	Thixotropic paste	Thixotropic paste
Power supply	System: 24kW; 60A-230V, 3-ph or 55A-400V, 3-ph	System: 24kW; 60A-230V, 3-ph or 55A-400V, 3-ph	System: 24kW; 60A-230V, 3-ph or 55A-400V, 3-ph
Max air inlet pressure	100 psi (6.9 bar, 0.69 MPa)	100 psi (6.9 bar, 0.69 MPa)	100 psi (6.9 bar, 0.69 MPa)
Dimensions	115L x 79H x 63W in (2921 x 2007 x 1600 cm)	190L x 110H x 90W in (4826 x 2794 x 2286 cm)	190L x 110H x 90W in (4826 x 2794 x 2286 cm)
Weight	1390 lb (630 kg)	3816 lb (1731 kg)	3816 lb (1731 kg)
Ratio accuracy	Shot accuracy better than $\pm 2\%$	Shot accuracy better than $\pm 2\%$	Shot accuracy better than $\pm 2\%$
Shot sizes	Minimum 0.53 gal (2.02 L)	Minimum 0.39 gal (1.5 L)	Minimum 0.39 gal (1.5 L)
Materials	For typical resin infusion materials: 1000-1500 cP resin bases @ 70°F (21°C) 10-50 cP hardeners @ 70°F (21°C)	For typical bonding and tooling pastes: 100,000 cP thixotropic base @ 70°F (21°C) 75,000 cP thixotropic hardener @ 70°F (21°C)	For typical bonding and tooling pastes: 100,000 cP thixotropic base @ 70°F (21°C) 75,000 cP thixotropic hardener @ 70°F (21°C)
Part numbers	24F872 - 230V 3-ph 50/60Hz 60A 24F391 - 400V 3-ph 50/60Hz 55A 24F873 - 400V 3-ph 50/60Hz 55A CE	24F874 - 230V 3-ph 50/60Hz 60A 24F226 - 400V 3-ph 50/60Hz 55A 24F875 - 400V 3-ph 50/60Hz 55A CE	24J510 - 230V 3-ph 50/60Hz 60A 24J509 - 400V 3-ph 50/60Hz 55A 24J511 - 400V 3-ph 50/60Hz 55A CE
Operation and repair manual	313873	313875	313875

\* Values are dependent on mixing ratio, viscosity, temperature and installed pump size. Values shown are for largest available pump size.

## Accessories

### Heated Platen Kits

24E267 - High volume heater kit, manual 3A1937  
24E268 - Low volume heater kit, manual 3A1937

### Accessories for VRM

24F589 - VRM Feed Kit, manual 3A1159  
114372 - Static Mixer

### Accessories for VPM

124130 - Static Mixer, 1 1/2 in x 6  
123588 - Static Mixer, 1 in x 12

## Contact us today!

To receive product information or talk with a Graco representative,  
call 800-746-1334 or visit us online at [www.graco.com](http://www.graco.com).

