



PrecisionSwirl™

Electric Orbital Applicator for Sealants and Adhesives



Exclusive Graco® PrecisionSwirl technology provides consistent results

- Applies a uniform, circular loop pattern with clean edges and no mess
- Dispenses open or closed, wide or narrow pattern beads for a variety of applications
- Reduces downtime – virtually no tip plugging with PrecisionSwirl's large tip sizes
- Simplifies robotics programming for directional changes
- An orbiting nozzle allows you to apply material on vertical and horizontal surfaces
- Eliminates manual touch-up, masking and rework

Distributed by



**Sealant Equipment
& Engineering, Inc.**

Manufacturers of Precision Dispense Systems & Valves

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Advanced Graco Distributor and Design Center for Adhesive and Sealant Equipment

Graco Reliability. Industry-Proven Accuracy.



PrecisionSwirl applicator technology delivers material consistently

PrecisionSwirl accurately applies a continuous swirled bead of material exactly where you want it, even in confined spaces. Because it dispenses the exact amount needed, you waste less material and save money. PrecisionSwirl technology reduces warranty cost and minimizes associated rework, repair, or scrap.

Get the full coverage and control you need with PrecisionSwirl.

Key Applications



- PVC Seam Sealing
- Hem Flange Adhesive Bonding
- Structural Adhesive Bonding
- After Hem Sealing
- Liquid Mask Sealing
- Liquid Applied Sound Deadening
- Window Glazing

Key Industries



- Automotive
 - Paint Shops
 - Body Shops
 - Stamping Plants
- Automotive Tiered Suppliers
- Appliance
- Door and Window
- Transportation
 - Truck
 - Bus
 - RV
 - Farm Equipment

Key Fluids Handled

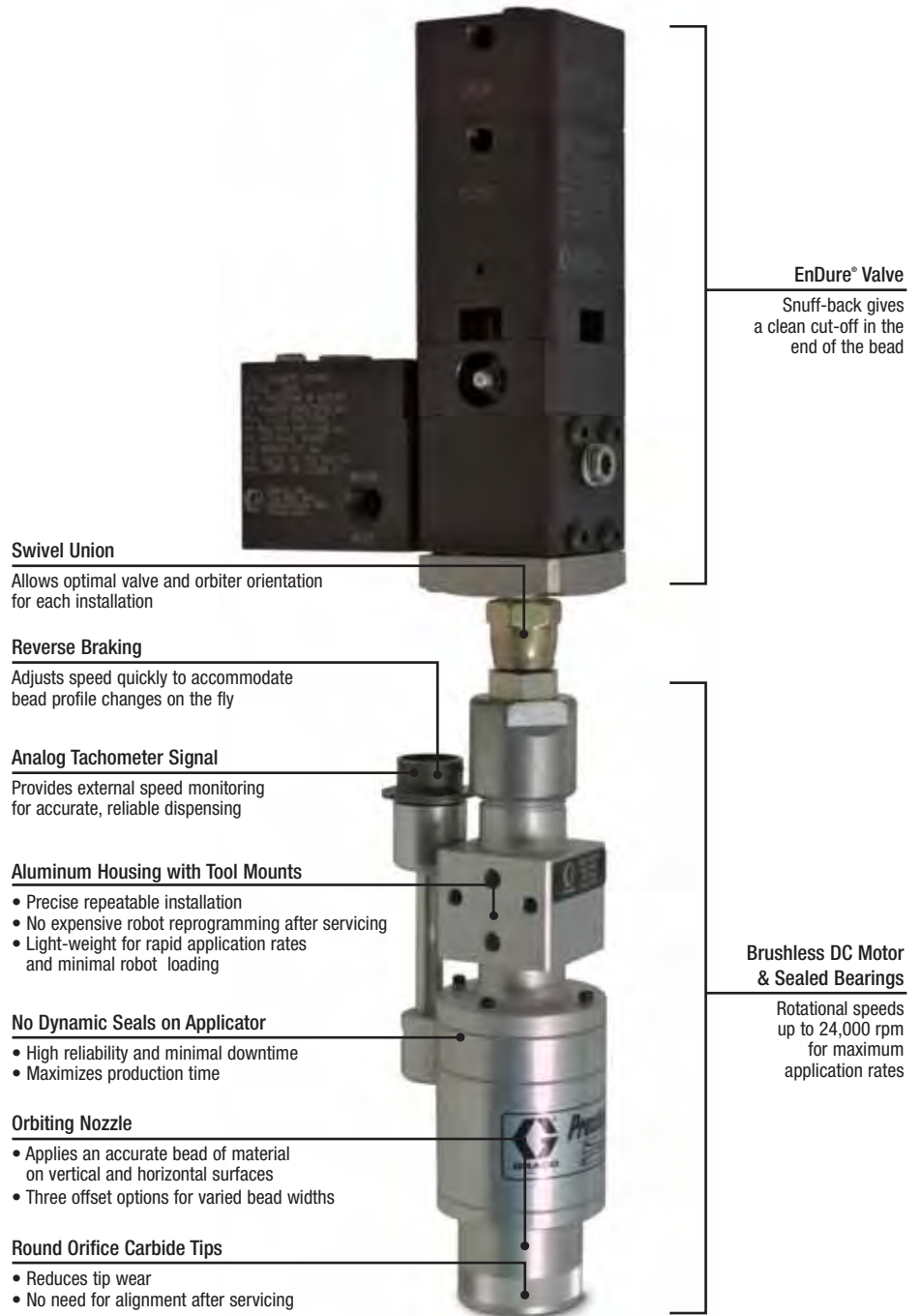


- PVC Plastisol
- Expandable Sealers
- Heat Cure Epoxy
- Waterborne and Epoxy
- Sound Deadeners
- Liquid Masking

Get Control and Better Accuracy

Swirl applicator

PrecisionSwirl lets you adjust rotational speed, standoff distance and flow rate for greater control. Working at pressures up to 3500 psi (240 bar), the applicator dispenses a wide, flat bead onto the seam, creating a more resilient seal or adhesive bond – even in irregularly shaped parts.



Smooth Neat Consistent Beads



Open Bead

Closed Continuous Bead

Intuitive Advanced Controls for Ease of Use

Flexible configurations

PrecisionSwirl can be configured using a stand-alone module or integrated into the PrecisionFlo™ XL as an automated system.



PrecisionFlo XL with integrated PrecisionSwirl

- Complete dispensing solution in one package
- Simplifies use and application commissioning
- No separate electrical backup required – minimizes installation costs
- Lets you monitor swirl application on a large graphic display



Stand-alone control

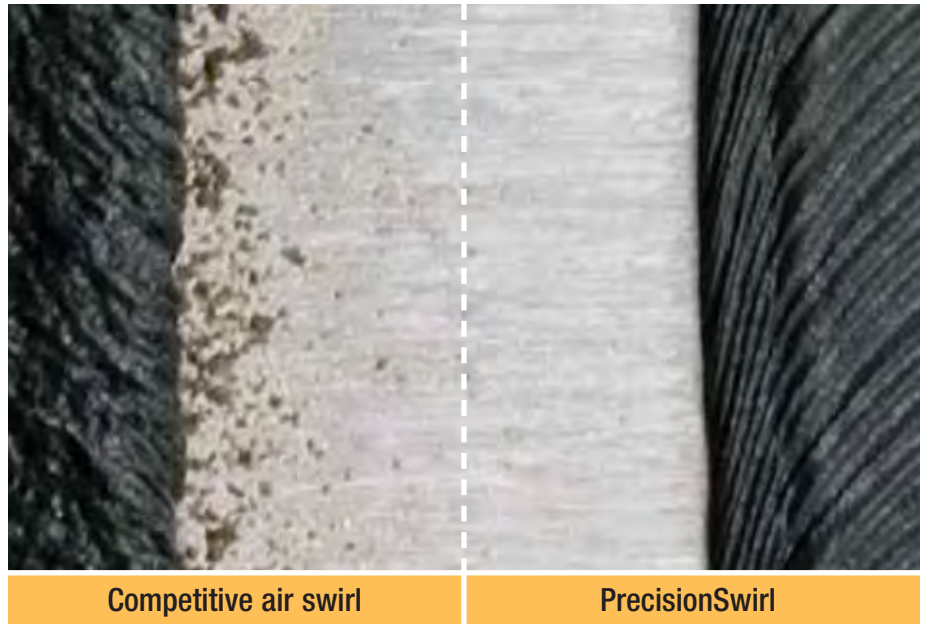
- Used with Graco PrecisionFlo LT
- Digital speed control provides consistent application bead profiles
- System matched to Graco PrecisionSwirl application for trouble-free operation
- Simple user interface and connectivity provide easy system start-up

Compare and Save with PrecisionSwirl

Compare PrecisionSwirl to flat stream and competitive air swirl alternatives

With hundreds of global installations and over five years in the industry, PrecisionSwirl is simply the best choice for increased productivity and improved efficiency.

- Consistent and reliable in high production environments
- Exceptional pattern control, uniform bead profile and consistent coverage
- Cost savings compared to flat stream and air swirl technologies



Technical Comparison

	PrecisionSwirl	Air swirl	Flat stream
Quality	<ul style="list-style-type: none"> • Consistent swirl edges for predictable material usage • No air turbulence; consistent bead profile • Wide variety of pattern widths, material thickness and patterns • Consistent pattern control • Electrically operated 	<ul style="list-style-type: none"> • Variable swirl edges • Air turbulence causes inconsistent edges and pattern bead profile • Small selection of pattern widths 	<ul style="list-style-type: none"> • Customized nozzle design for each application & designed bead profile • Inconsistent pattern control
Productivity	<ul style="list-style-type: none"> • Tip to part stand-off distance: 75 mm - 200 mm • Larger filter mesh/ lower maintenance • Minimal tip wear • Virtually no tip plugging; applicator passages stay clean • Operates in all directions; better operation on irregular shaped parts 	<ul style="list-style-type: none"> • Tip to part stand-off distance: 75 mm - 200 mm. <i>May also require 65° angle. Robot programming is complex</i> • Applicator passages may accumulate material and require maintenance • Difficult to use in confined areas 	<ul style="list-style-type: none"> • Orientation dependent requires complex robot programming • Smaller filter mesh/ higher maintenance • Frequent tip wear • Tip plugging • Directional pattern only
R.O.I. Return on Investment	<ul style="list-style-type: none"> • 12-24 month life • No additional compressed air required • Long life tungsten carbide tips 	<ul style="list-style-type: none"> • Increased compressed air consumption and associated cost • Nozzles are typically carbon or stainless steel 	<ul style="list-style-type: none"> • High annual replacement & maintenance cost

Technical Specifications

Control Panel

Input power	85-264 VAC, 50/60 Hz, 1 phase
Output power	PWM control of the motor
Automatic control analog input (speed adjustment)	0-10 Vdc or 0-5 Vdc
Auto control relay contact rating	3 amps at 30 VDC
Weight	23.5 lbs (10.7 kg)

Swirl Orbital Applicator

Input power	Proprietary PWM control of the motor
Minimum motor speed	6,600 rpm
Maximum motor speed	24,000 rpm
Maximum operating pressure	3500 psi (24.1 MPa, 241 bar)
Fluid inlet	3/4-16-in 37° JIC female swivel
Wetted parts	Stainless steel, nickel alloy, brazing alloy, epoxy, EPDM rubber
Noise level	Sound pressure level – 67 dBA
Weight	1.6 lbs (0.7 kg)

Temperature Conditioned Dispense Valve

Maximum fluid working pressure	3500 psi (24 MPa, 241 bar)
Maximum working dry air pressure	150 psi (1 MPa, 10 bar)
Material inlet (to conditioning manifold)	1/2 npt
Air inlet	1/8 npt(m)
Conditioning fluid inlet/outlet	(2 ports) 1/4 npt (4 ports) 1/8 npt
Wetted parts	Stainless steel, aluminum, UHMWPE, Fluoroelastomer, black oxide coated CS, Hytrel elastomer
Maximum temperature rating	140°F (60°C)
Weight (approximate)	4.4 lbs (2 kg)
Instruction manuals	
PrecisionSwirl Orbital Dispenser	309403
PrecisionFlo XL Control	309374
PrecisionSwirl Stand-Alone Control	310554



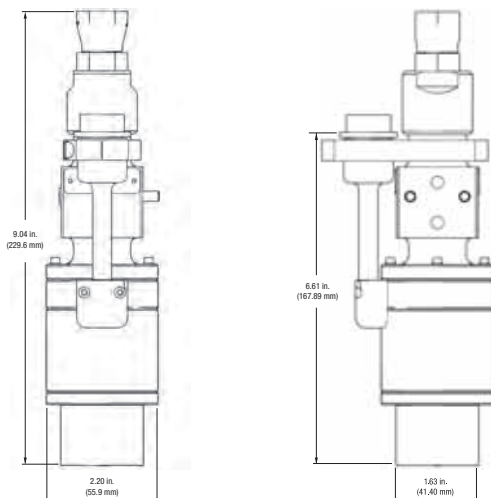
Standard Version



Compact Version

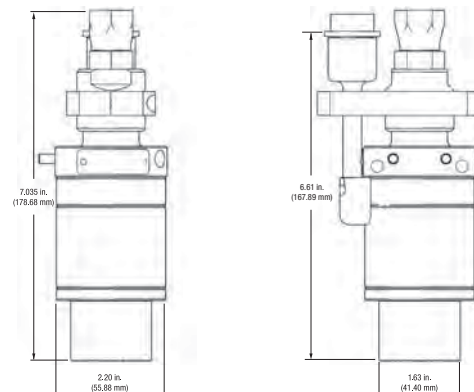
Standard Version

PrecisionSwirl Orbital Dispenser Dimensions;
Part Numbers 243402 and 243403



Compact Version

PrecisionSwirl Orbital Dispenser Dimensions;
Part Numbers 289261 and 289262



Ordering Information

Preconfigured Systems

241658 PrecisionSwirl Module Kit (standard version, wide pattern)
PrecisionSwirl orbiter (243403), motor cable (617870), extension motor cable (233123), control panel (918616) and robot interface cable assembly (617829).

234029 PrecisionSwirl Module Kit (standard version, narrow pattern)
PrecisionSwirl orbiter (243402), motor cable (617870), extension motor cable (233123), control panel (918616) and robot interface cable assembly (617829).

289911 PrecisionSwirl Module Kit (compact version, medium pattern)
PrecisionSwirl orbiter (289261), motor cable (617870), extension motor cable (233123), control panel (918616) and robot interface cable assembly (617829).

289912 PrecisionSwirl Module Kit (compact version, narrow pattern)
PrecisionSwirl orbiter (289262), motor cable (617870), extension motor cable (233123), control panel (918616) and robot interface cable assembly (617829).

Repair Kits

241479 Swirl Motor Assembly
Order bearing and coupler separately.

241569 Tool Kit
Includes various tools required for servicing the Swirl applicator and tube bearing.

241466 Tube Bearing Wide Pattern Coupler Assembly
Tool kit (241569) required for replacement. (Dispenser part #243403)

243256 Tube Bearing Narrow Pattern Coupler Assembly
Tool kit (241569) required for replacement. (Dispenser part #243402 & 289262)

289531 Tube Bearing Medium Pattern Coupler Assembly
Tool kit (241569) required for replacement. (Dispenser part #289261)

246292 Standard Version Tube Support Bearing Repair Kit
.028" offset coupler. (Dispenser part #243403)
Includes 241466, o-ring, seal, and tube assembly.

246293 Standard Version Tube Support Bearing Repair Kit
.012" offset coupler. (Dispenser part #243402)
Includes 243256, o-ring, seal, and tube assembly.

289311 Compact Version Tube Support Bearing Repair Kit
.018" offset coupler. (Dispenser part #289261)
Includes 289531, o-ring, seal, and tube assembly.

289312 Compact Version Tube Support Bearing Repair Kit
.012" offset coupler. (Dispenser part #289262)
Includes 243256, o-ring, seal, and tube assembly.

15B619 Bellows Seal
Qty: 1 – Fluoroelastomer

246290 Bellows Seal Kit
Qty: 12 – Fluoroelastomer

BUILD YOUR SYSTEM

START
ORDER

FINISH
ORDER

SWIRL DISPENSERS

••• STANDARD VERSION •••

243402 PrecisionSwirl Orbital Dispenser
0.012 (0.3 mm) coupler offset for smaller bead widths.
Typical for hem flange, after hem, etc.

••• OR •••

243403 PrecisionSwirl Orbital Dispenser
0.028 (0.7 mm) coupler offset for larger bead widths.
Typical for seam sealing applications.

••• COMPACT VERSION •••

289262 PrecisionSwirl Orbital Dispenser
0.012 (0.3 mm) coupler offset for smaller bead widths.
Typical for hem flange, after hem, etc.

••• OR •••

289261 PrecisionSwirl Orbital Dispenser
0.018 (0.5 mm) coupler offset for larger bead widths.
Typical for seam sealing applications.

DISPENSE VALVES

243482 1K Ultra-Lite
Dispense Valve with 45 degree connection

••• OR •••

243666 1K Ultra-Lite
Dispense Valve straight connection

••• OR •••

For EnDure straight connection, order:
244910 - EnDure Valve
197504 - Straight Flange Adapter, Endure

For EnDure 45 degree connection, order:
244910 - EnDure Valve
197842 - 45 degree Nosepiece
198323 - Alternative Orbiter Nut
198324 - Nosepiece to Orbiter Fitting

SWIRL DISPENSE TIPS

918610 - 0.012"	918609 - 0.033"
918601 - 0.015"	918611 - 0.035"
918602 - 0.017"	918612 - 0.039"
918603 - 0.019"	918613 - 0.043"
918604 - 0.021"	918614 - 0.047"
918605 - 0.023"	241813 - 0.051"
918606 - 0.025"	241814 - 0.055"
918607 - 0.027"	241816 - 0.070"
918608 - 0.030"	

SMALL DISPENSER ACCESSORIES

196039 Small Profile Retainer
Replaces standard nozzle guard.
Allows easier access in confined spaces.

196160 Teach Adapter
Replaces nozzle guard during robot path teaching.

MOTOR EXTENSION CABLES

233125 6 ft (1.8 m) Extension Cable

••• OR •••

233124 9 ft (2.7 m) Extension Cable

••• OR •••

233123 15 ft (4.6 m) Extension Cable

Connects PrecisionSwirl orbital applicator to motor cable.

ROBOT INTERFACE CABLE

617829 Robot Interface Cable Assembly
40 ft (12.2 m)

Connects PrecisionSwirl control panel to robot control panel.
Accepts a 0-10 volt signal to adjust RPM.

CONTROLLER

918616 PrecisionSwirl Control Assembly

Must order appropriate cables separately
to connect to dispenser.

MOTOR CABLES

617870 Motor Cable
55 ft (16.8 m)

Can be used alone or in conjunction with Cable Extension.
Connects PrecisionSwirl control panel to extension cable
or directly to PrecisionSwirl applicator.

••• OR •••

198730 Motor Cable
110 ft (33.6 m)

Can be used alone or in conjunction with Cable Extension.
Connects PrecisionSwirl control panel to extension cable
or directly to PrecisionSwirl applicator.



ABOUT GRACO

PROVEN QUALITY. LEADING TECHNOLOGY.

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.

GRACO LOCATIONS

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