

# 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

# 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

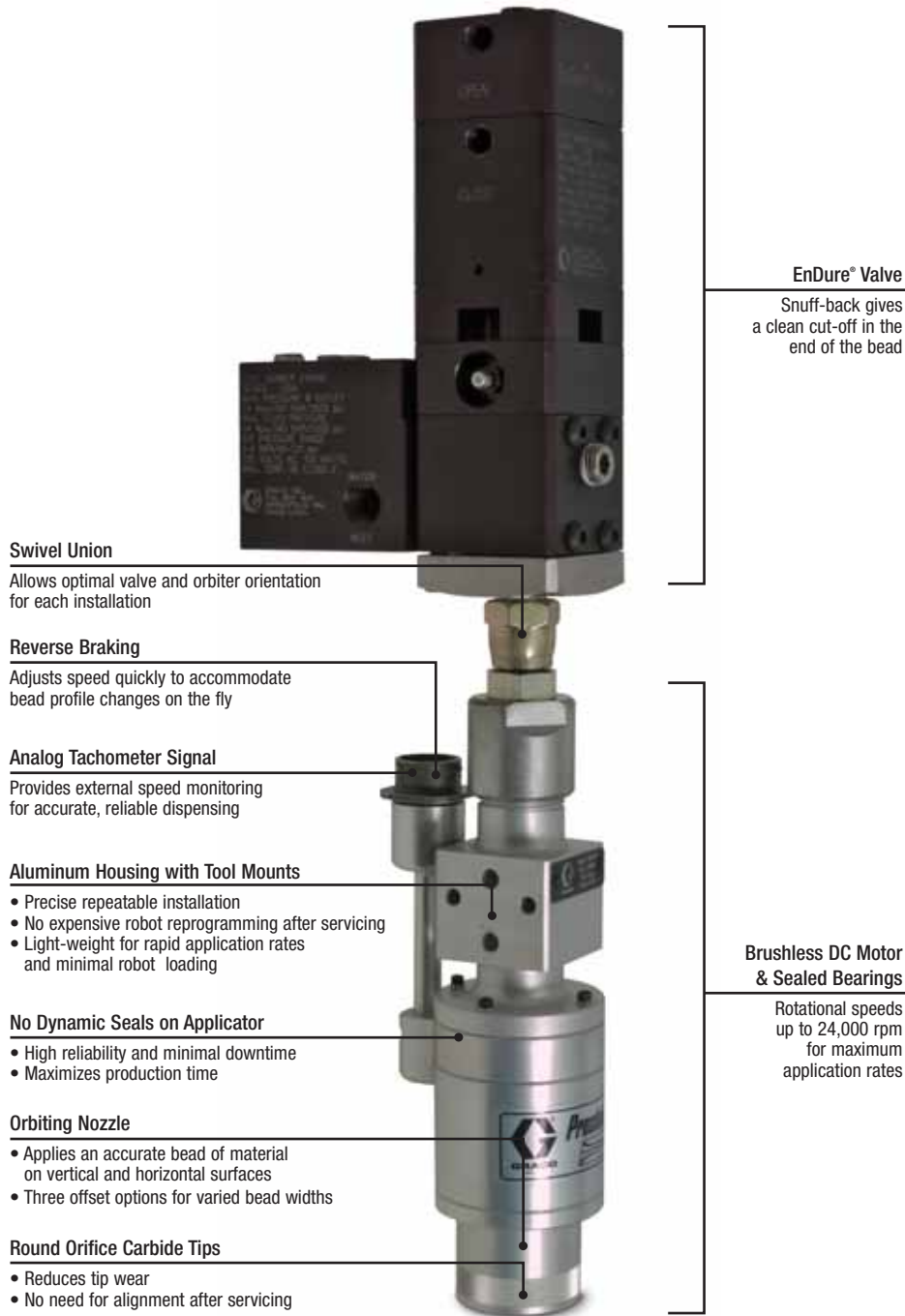


- PVC Plastisol
- Expandable Sealers
- Heat Cure Epoxy
- Waterborne and Epoxy
- Sound Deadeners
- Liquid Masking

# 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

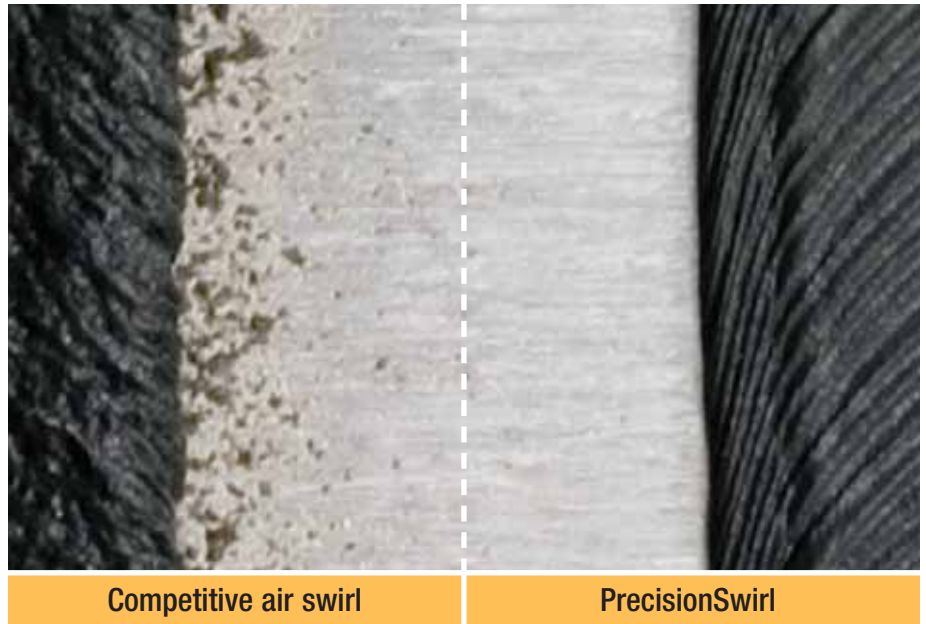
- Used with Graco PrecisionFlo LT
- Digital speed control provides consistent application bead profiles
- System matched to Graco PrecisionSwirl application for trouble-free operation
- Simple user interface and connectivity provide easy system start-up

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

# 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



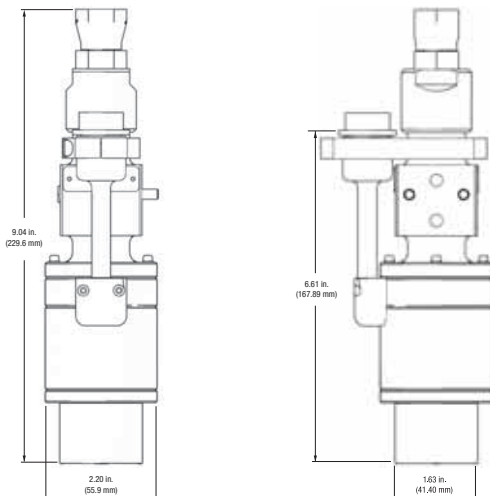
Standard Version



Compact Version

## Standard Version

PrecisionSwirl Orbital Dispenser Dimensions;  
 Part Numbers 243402 and 243403



## Compact Version

PrecisionSwirl Orbital Dispenser Dimensions;  
 Part Numbers 289261 and 289262

