

Pro-Flo[®] System

Proportional flow dispensing system provides maximum accuracy and performance with minimal complexity.



The Nordson Pro-Flo System is specially designed for robotic application of automotive adhesive and sealant materials. The Pro-Flo dispensing module quickly compensates for changes in robot velocity by proportionally adjusting the material flow at the nozzle to provide precise, uniform material deposition.

The Pro-Flo system is ideal for use in new and existing sealer deck, hem flange and other applications where closely controlled adhesive or sealant deposition is required for optimum product function or appearance.

The compact, lightweight Pro-Flo dispensing module mounts on a variety of commercial robots. It is adaptable for extrusion and spray application of materials for maximum operation versatility.

The Pro-Flo dispensing module features a quick-response, adjustable orifice providing instantaneous flow adjustment based upon a signal supplied by the robot controller. Response time equals or exceeds the speed of most currently available robots, assuring consistent material deposition. The dispensing module applies a wide variety of adhesive/sealant materials with viscosities of up to several million centipoise.



Pro-Flo System Features and Benefits

The Nordson Pro-Flo system adds productivity to your operation and quality to your products:

- **Proportional flow capability** provides continuous, consistent bead size, assured sealing/bonding of substrates and eliminates "squeeze out" for improved appearance and reduced cleanup.
- **Dispenses a wide range of materials** for increased application flexibility.
- **Compact, lightweight dispensing module** provides easy installation and service.
- **Compact, modular controller** requires minimal floor space.
- **Quick-release fittings and connectors** provide fast, easy installation and service.
- **Component interchange capability** enables fast component replacement and off-line maintenance with minimal downtime.

Precise Control of Material Viscosity

Material viscosities can decrease when the ambient temperature of the plant increases during the work shift, causing excess material flow. The Pro-Flo system compensates for these temperature-induced viscosity changes by monitoring the amount of material applied per part and adjusting the flow on subsequent parts to stay within preset (self-taught) target values. The system also learns the shear characteristics of materials and provides consistent material flow regardless of robot speed.



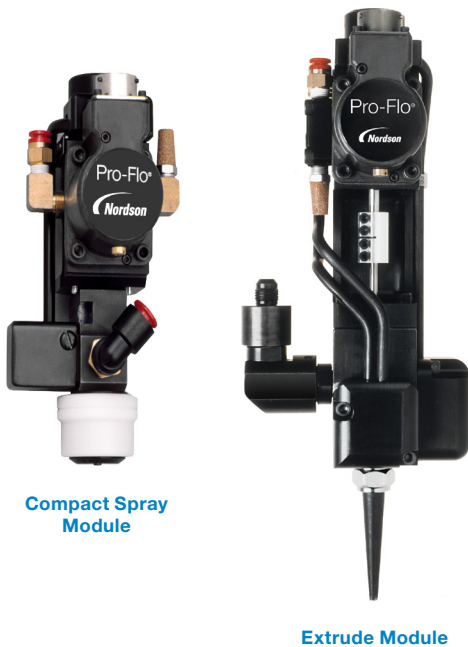
Flow-Through-Felt Dispensing System

Pro-Flo Dispensing Modules

The Pro-Flo extrusion and air-spray dispensing modules provide precise, proportional control of ambient-temperature materials. These dispensing modules are designed for bonding and sealing applications using plastisol, epoxy and other body sealer materials.

The heated extrusion dispensing module delivers exceptional performance for warm sealer applications. The heated extrusion dispensing module provides proportional flow with application temperatures up to 350° F.

The Hi-Flo dispensing module is designed to apply viscous materials up to five million centipoise. Large passages ensure smooth flow of weldable/expandable body sealers used in body shop applications.



Compact Spray Module

Extrude Module

Specifications

Pro-Flo Extrude Module		
Dimensions:	Height Width Depth	9.34 in. (23.7 cm) 1.75 in. (4.4 cm) 4.00 in. (10.2 cm)
Weight*		2 lbs. 12 oz. (1.25 kg)
Air Pressure: Operating Maximum Air Flow Ambient Air Temp Filter (included)		70-120 psi (482-827 Kpa) 0.8 scfm (.023m ³ .min.) 40-160° F (4-71° C) 30 micron
Fluid Pressure Rating, Static		3,000 psi (20,684 Kpa)
Maximum Operating Temperature of Material		120° F (48° C)
Material Viscosity Range		10,000 to 5,000,000 cps**
Flow Range		0-350 lbs/hr (0-158 kg/hr)
Accuracy Set Point and		Repeatability +/- 5%

Pro-Flo Compact Spray Dispense Module		
Dimensions:	Height Width Depth	6.25 in. (15.9 cm) 1.75 in. (4.4 cm) 4.00 in. (10.2 cm)
Weight*		2 lbs. 13 oz. (1.28 kg)
Air Pressure: Operating Maximum Air Flow Ambient Air Temp Filter (included)		70-120 psi (482-827 Kpa) 0.8 scfm (.023m ³ .min.) 40-160° F (4-71° C) 30 micron
Fluid Pressure Rating, Static		3,000 psi (20,684 Kpa)
Maximum Operating Temperature of Material		120° F (48° C)
Material Viscosity Range		10,000 to 3,000,000 cps**
Flow Range		0-350 lbs/hr (0-158 kg/hr)
Accuracy Set Point and		Repeatability +/- 5%

* Dimensions and weight are less mounting hardware, cables, etc.

** NOTE: Flow is dependent upon viscosity, trim size and shear rate of the material used. The Pro-Flo dispensing module is capable of handling viscosity of up to several million centipoise.

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