

# Allegro™ Elastic Attachment Nozzles

Advanced nozzle technology delivers precise adhesive fiber deposition for high-speed elastic attachment.

Allegro elastic attachment nozzles:

- Use novel air-assisted contact coating technology
- Facilitate increased production speeds
- Support close centers
- Offer improved durability with easier maintenance and inspection
- Stabilize elastic strand position with integral guides
- Optimize adhesive placement
- Improve creep resistance
- Reduce adhesive variance
- Offer durability through all-steel construction for extended service life

Nordson® Allegro nozzles consistently apply a hot melt adhesive coating on the elastic strands used for elasticized features on baby diapers, training pants, and adult incontinence products.

The patent-pending Allegro nozzle supports high-speed production lines, up to 650 meters per minute, while maintaining elastic centers as close as two millimeters. Production efficiency is enhanced with a robust design for nozzle durability and simplified cleaning and inspection.

The Allegro nozzle uses an integral-strand guide to stabilize the elastic strand just prior to adhesive application and process air just after adhesive application to maintain performance at demanding production speeds. The process entails contact adhesive application to the top of



the elastic strand and, while still molten, manipulation of the adhesive by the process air flow to form the adhesive around the entire strand for consistent, repeatable coating with exceptionally low variability. The process air also assists in cleanliness of cutoff of adhesive flow and in nozzle maintenance.

Allegro nozzles in most common configurations are maintained in inventory for rapid delivery and may be made to order for other specific elastic configuration requirements. The nozzles are made of all-steel construction and use a proprietary coating to enhance durability and wear resistance.

Allegro nozzles are compatible with UM22 and UM25 modules for mid-speed intermittent adhesive applications; Speed-Coat® modules for the most demanding high-speed intermittent lines; UM50 modules for continuous operation; high-speed, electric E-400U modules and UM3 modules for metering applications. Common Universal™ parts minimize inventory and simplify service. Special nozzle lengths up to 175 mm are available to support many-strand applications.



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## Specifications<sup>1</sup>

Module Compatibility	All Universal™ modules
Materials of Construction	All-steel construction with proprietary coating
Nozzle Orifice Sizes	0.51 mm (0.020 in.)
Nozzle to Substrate Distance	Contact
Adhesive Flow	2.5 to 25 grams per minute per orifice
Add-on Weight	25 to 100 milligrams/strand/meter
Production Speed Capability	100 to 650 m/min (330 to 2,132 ft/min)
Adhesive Viscosity	4,500 to 8,000 centipoise
Operating Temperature	70° to 205° C (160° to 400° F)
Air Consumption	0.08 scfm per strand
Air Pressure <sup>2</sup>	0.3 to 0.7 bar (4.4 to 10.3 psi)
Working Hydraulic Pressure	6.8 to 40.1 bar (100 to 600 psi)
Maximum Hydraulic Pressure	89.6 bar (1300 psi)

<sup>1</sup> Values are typical and may vary based on specific adhesive and application.

<sup>2</sup> Process air (pressure regulation supplied by customer).



*Patented integral strand guide.*



*Nozzles detach easily without removing modules.*

For more information, speak with your Nordson representative or contact your Nordson regional office.

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