Rhythm™ Nozzles

Construction

Improve bond strength and product quality in hot melt adhesive laminating applications

Rhythm construction nozzles deliver superior control of hot melt adhesive fiber size, density, and pattern width for numerous disposable hygiene and product assembly laminating applications.

Non-crossing patterns offer uniform bonding and soft product features. The softness attribute is especially vital in baby diaper and pant, and adult incontinence briefs, for example.

Rhythm spray nozzles utilize process air jets to oscillate a series of adhesive fibers. Application temperature and process air can be adjusted to produce a wide range of patterns:

- Low-density, large-fiber patterns for maximum bond strength
- Open patterns for enhanced absorbency and breathability
- Dense, fine-fiber patterns for heat sensitive substrates

Large adhesive orifices resist clogging and dispensing further away from the substrate reduces external contamination to maximize production uptime. The durable, all-steel nozzles are available in partial and full-width versions to tailor coverage to specific application requirements. Nozzles are non-handed, meaning they can be conveniently oriented for either left or right partial coverage; thus, reducing inventory requirements.

Rhythm nozzles are compatible with the Nordson’s popular Universal™ nozzle mounting system that enables quick-exchange. The quick-exchange feature allows Nordson nozzles to be easily and economically updated to support product and production performance optimization.

**Features**

- Side-to-side oscillating (sinusoidal) patterns
- High strength bonding
- Non-crossing dispense pattern
- Shim-based, steel construction

**Benefits**

- Produce high bond strength at low add-on rates in continuous and intermittent operations
- Control adhesive fiber size, density and pattern width for better bond performance
- Reduce heat distortion on thinner materials
- Provide leak-free operation with serviceable, surface mounted elastomeric seal
### Rhythm Nozzles Construction

#### Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Rhythm Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum add-on weight</strong></td>
<td>14 GSM @ 300 m/min</td>
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<tr>
<td></td>
<td>7 GSM @ 600 m/min</td>
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<tr>
<td><strong>Production speed capability</strong></td>
<td>50 to 600 m/min</td>
</tr>
<tr>
<td></td>
<td>(16.5 to 1,969 ft/min)</td>
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<tr>
<td><strong>Adhesive fiber size</strong></td>
<td>50 to 100 microns</td>
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<tr>
<td><strong>Adhesive viscosity (recommended)</strong></td>
<td>1,000 to 6,000 cps</td>
</tr>
<tr>
<td><strong>Operating temperature</strong></td>
<td>70° to 205° C (160° to 400° F)</td>
</tr>
<tr>
<td><strong>Air consumption</strong></td>
<td>0.50 to 1 scfm per nozzle</td>
</tr>
<tr>
<td><strong>Air pressure (typical)</strong></td>
<td>0.2 to 0.5 bar</td>
</tr>
<tr>
<td></td>
<td>(3 to 7 psi)</td>
</tr>
<tr>
<td><strong>Working hydraulic pressure</strong></td>
<td>13.8 to 55.2 bar</td>
</tr>
<tr>
<td></td>
<td>(200 to 800 psi)</td>
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<tr>
<td><strong>Maximum hydraulic pressure</strong></td>
<td>89.6 bar (1300 psi)</td>
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</tbody>
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