FRP Systems
Proportioners and Guns for Gel Coat and Chop Applications
Industry-leading solutions for FRP

Raising the bar for high-performance FRP equipment

Engineered with industry-proven Graco components, Graco FRP (Fiber-Reinforced Plastic) Systems and RS™ (resin spray) applicator guns provide you with a system that is technologically advanced, durable and easy to use.

Lower cost of ownership

• Easy maintenance — fewer wear parts than competitive models
• More uptime for production — longer periods between scheduled maintenance

Quality parts — all day, every day

Your reputation rides on the quality of your end products. With Graco FRP equipment, you’re assured of a consistent catalyst ratio for a consistent cure — resulting in higher quality, finished products.

A smart future investment: MACT-compliant technology

Graco FRP equipment features MACT (Maximum Achievable Control Technologies)-compliant RS spray guns. As regulations change to require new technologies, Graco promises to be a smart investment for the future of your business.

Here’s why. Graco FRP equipment supports MACT requirements with two application tip designs — one for air assisted airless and a second one for impingement spray processes. With Graco, you can switch from air assisted airless to impingement by simply changing the spray tip.
Optional inline heaters provide consistent temperature and viscosity control at the point of application (see page 11)

Featuring:
- More consistent spray pattern
- Resin usage monitor
- Linkage and tool-free catalyst adjustment

Balanced Graco NXT® Air Motor
- Provides same output pressure on upstroke and downstroke, resulting in more consistent spray pattern
- Shortened stroke on pump for better spray pattern

Control Panel
- Easy user interface with all gauges in one location

Stable, Lightweight Cart
- Easy to maneuver
- Strong, durable casters

New Linkage and Catalyst Pump
- Truly engineered linkage for superior ratio control
- Allows for infinite adjustment of catalyst percentage — no tools required
- Ensures proper catalyst percentage and optimum results
- Variance of 1% or less

Gravity Fed Catalyst System
- Keeps the catalyst pump primed for consistent delivery

Optional DataTrak™ Control
- Monitors resin usage — Helps ensure product quality by tracking resin usage per piece, shift or day
- Tracks cycles for preventive maintenance schedule
- Displays real time flow rate — eliminates material waste due to worn spray tips
Easy to use, lightweight guns

Graco RS Chop Gun with Cutter

Magnetic Cutter Drum
- Quick and easy blade changes
- Magnet in cutter head holds blades in place

Swivel Feature
(Where the fluid line connects to the gun)
- Allows smooth movement
- Operator can easily pivot in different directions without kinking the hose

Ergonomic Handle
- Less operator fatigue

Graco RS Gel Coat Gun

Solvent-Safe
- Easy shutdown — simply place front end in solvent at end of shift

Quick-Disconnect Front End
- Modular design means it’s very easy to get to the specific part you need to replace
- No need to disassemble the entire gun
- Increases productivity, reduces cleanup time

Constant Control
- Adjust glass cutting tension output on the production floor in seconds
- No tools needed to make many adjustments

Lightweight, High-Output Cutter
- Allows you to get the glass output you need with fewer strands of roving
- Fewer strands of roving means less chance of tangling, easier handling and more uptime
- External anvil adjustment lets you quickly and easily adjust anvil tension

Optional Quick-Change Blade Cartridges
- Change blades in a matter of seconds
- Replace the whole cartridge at once, not individual blades
- Greatly reduces the chance of nicks and cuts
- Only available from Graco!
Today’s FRP market uses two different technologies. Mechanical Air Atomized (Air Assisted Airless) and Mechanical Non-Air Atomized (Impingement). Using the Graco RS Guns allows you to switch from one technology to the other by simply changing the spray tip. This can be done quickly and cost effectively. Competitive models require time-consuming spray gun head changes and or complete replacement of the spray gun which results in lost time and higher cost conversion.

Exclusive Graco Feature
**Air Assist Containment® (AAC) – control and contain your spray pattern**

When you buy a drum of resin or gelcoat, you pay for every drop of material. Graco will help you put as many of those drops as possible on the mold.

Our exclusive Air-Assist Containment (AAC) wraps the spray pattern in a containment shield of air. This prevents atomized droplets from escaping the spray pattern creating a better working environment. Droplets that escape and end up on the floor, wall or employee’s clothing are a waste of money.

AAC creates a spray pattern where the droplets travel to the mold at very low pressure. The low speed or “particle velocity” creates very little turbulence or disturbance in the material when it is applied to the mold. Competitive spray guns with higher “particle velocity”, create a great deal of turbulence during the application process. Turbulence, or over-atomization, creates air entrapment which can result in porosity issues.

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**Graco Spray Technology**

**Graco Air Assist Containment: AFTER introduction of catalyst**

- Resin
- Catalyst
- Atomized droplets are kept or “contained” in the spray pattern

**Traditional Air Assist Containment: BEFORE introduction of catalyst**

- Resin
- Catalyst
- Some atomized droplets escape the spray pattern

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**YES**

- Low Pressure catalyst is delivered into the spray pattern
- Graco’s catalyst delivery process assures a complete mix with the gelcoat
- The patented AAC is introduced to the spray pattern after the catalyst assuring a complete mix, reducing over spray and providing the highest transfer efficiency.

**NO**

- Everyone Else
- Some atomized droplets escape the spray pattern
### Systems

<table>
<thead>
<tr>
<th>No Cart/Hose Length*</th>
<th>Cart/Hose Length *</th>
<th>Cart, Mast and Boom/Hose Length *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part #</td>
<td>ft (m)</td>
<td>Part #</td>
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<tr>
<td><strong>Internal Mix</strong></td>
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<tr>
<td>Gel</td>
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<tr>
<td>16R065</td>
<td>25 (7.6)</td>
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<td>16R066</td>
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<td>16R071</td>
<td>50 (15.2)</td>
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<td>16R074</td>
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<td>16R050</td>
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<tr>
<td><strong>Chop</strong></td>
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<tr>
<td>Gel</td>
<td></td>
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<td>16R138</td>
<td>35 (10.7)</td>
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<td>16R141</td>
<td>50 (15.2)</td>
<td>16R117</td>
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<td><strong>External Mix</strong></td>
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<tr>
<td>Gel</td>
<td></td>
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<td>16R030</td>
<td>25 (7.6)</td>
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<td>16R033</td>
<td>35 (10.7)</td>
<td>16R009</td>
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<td>16R036</td>
<td>50 (15.2)</td>
<td>16R012</td>
</tr>
<tr>
<td>16R039</td>
<td>(None)</td>
<td>16R015</td>
</tr>
<tr>
<td><strong>Chop</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16R100</td>
<td>25 (7.6)</td>
<td>16R088</td>
</tr>
<tr>
<td>16R103</td>
<td>35 (10.7)</td>
<td>16R079</td>
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<td>16R106</td>
<td>50 (15.2)</td>
<td>16R082</td>
</tr>
<tr>
<td>16R109</td>
<td>(None)</td>
<td>16R085</td>
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</table>

### Solvent Flush Kits

- **16M560**: Diaphragm Pump Solvent Flush Kit - 2.5 gal (9.5 l)
- **16M561**: Diaphragm Pump Solvent Flush Kit - 5 gal (19 l)
- **16M993**: Pressure Pot Solvent Flush Kit - 2 gal (7.6 l)
- **16M894**: Pressure Pot Solvent Flush Kit - 5 gall (19 l)
- **16M874**: CE Pressure Pot Solvent Flush Kit - 2 gal (7.6 l)

### Optional Kits

- **16M881**: DataTrak Upgrade Kit
- **24M501**: 5 gal (19 l) Catalyst Tank Kit
- **16M896**: 55 gal (208 l) Drum Cart for Cart, Mast and Boom
- **16M897**: 55 gal (208 l) Drum Cart for Pole Cart
- **16M961**: Roving Box Kit
- **16W18**: Wall Mount Bracket Kit
- **16W761**: Boom Kit

### Hose Kits

- **16M718**: Internal Gel Hose Extension 25 ft (7.6 m)
- **16M587**: Internal Gel Hose Bundle 25 ft (7.6 m)
- **16M590**: Internal Gel Hose Bundle 35 ft (10.7 m)
- **16M584**: Internal Gel Hose Bundle 50 ft (15.2 m)
- **16M719**: External Gel Hose Extension 25 ft (7.6 m)
- **16M588**: External Gel Hose Bundle 25 ft (7.6 m)
- **16M591**: External Gel Hose Bundle 35 ft (10.7 m)
- **16M585**: External Gel Hose Bundle 50 ft (15.2 m)
- **16M712**: Chop Hose Extension 25 ft (7.6 m)
- **16M586**: Chop Hose Bundle 25 ft (7.6 m)
- **16M589**: Chop Hose Bundle 35 ft (10.7 m)
- **16M583**: Chop Hose Bundle 50 ft (15.2 m)

### Replacement Outlet Filters

- **224458**: 30 mesh, 2-pack
- **238436**: 30 mesh, 25-pack
- **224459**: 60 mesh, 2-pack
- **238438**: 60 mesh, 25-pack
- **224466**: 100 mesh (standard option), 2-pack
- **238440**: 100 mesh (standard option), 25-pack
- **224469**: 200 mesh, 2-pack
- **238442**: 200 mesh, 25-pack

### Pump Kits and Parts

- **W170CS**: 17:1 Pump Assembly 75 cc SST
- **W130FC**: 13:1 Pump Assembly 100 cc CS
- **W09DFC**: 9:1 Pump Assembly 150 cc CS
- **M07LNL**: 4.5 in FRP NXT Air Motor
- **16N235**: 4.5 in FRP NXT Air Motor - Seal Kit
- **LW150A**: 150 cc FRP Lower
- **17E098**: 150 cc FRP Lower - Seal Kit
- **17E099**: 150 cc FRP Lower - Connection Kit
- **LW100C**: 100 cc FRP Lower
- **16N232**: 100 cc FRP Lower - Seal Kit
- **16N243**: 100 cc FRP Lower - Connection Kit
- **LW07SS**: 75 cc FRP Lower
- **16N231**: 75 cc FRP Lower - Seal Kit
- **16N242**: 75 cc FRP Lower - Connection Kit
- **16N740**: Internal Mix Catalyst Pump Assembly
- **16N741**: External Mix Catalyst Pump Assembly
- **16R019**: Catalyst Pump Rebuild Kit

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### Notes:

- **13:1 Ratio**: Max Air Consumption** - 35 SCFM Max Fluid Output** - 1.5gpm (5.7 lpm)
- **17:1 Ratio**: Max Air Consumption** - 35 SCFM Max Fluid Output** - 2.2gpm (8.4 lpm)
- **9:1 Ratio High Output System**: Max Air Consumption** - 35 SCFM Max Fluid Output** - 2.2gpm (8.4 lpm)
- **13:1 Ratio with High Flow Gun 24P435**: Max Air Consumption** - 35 SCFM Max Fluid Output** - 1.5gpm (5.7 lpm)

* Systems without hoses do not come with guns  ** Fluid and air flow rate for 70 cpm
### HOW TO READ A COMPOSITE SPRAY TIP NUMBER

**Airless Composites Spray Tips** - For example: CSTS21

1. The first three letters (CST) = Composite Spray Tip.
2. The 4th digit indicates pattern width code. Double this number to get the pattern width at 12 inches. In this case, 5 equals a 10-inch spray pattern width at a 12-inch spraying distance.
3. The last two digits indicate orifice size. In this case, 21 is equivalent to a .021” diameter orifice.

**Impingement Composite Spray Tips** - For example: CSTS75

1. The first three letters (CST) = Composite Spray Tip.
2. The 4th digit indicates S for stainless steel or T for tool steel.
3. The 5th digit indicates spray pattern width code. Double the number to get pattern width at 18 inches. In this case, 7 equals a 14-inch pattern width at an 18-inch spraying distance.

### Airless Composite Spray Tips (CSTXXX)

<table>
<thead>
<tr>
<th>Fan Width</th>
<th>ORIFICE SIZE - INCHES</th>
<th>ORIFICE SIZE - MM</th>
</tr>
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<tbody>
<tr>
<td>4</td>
<td>0.015 0.017 0.019 0.021</td>
<td>0.10 0.17 0.19 0.21</td>
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<tr>
<td>6</td>
<td>0.023 0.027 0.031 0.035</td>
<td>0.23 0.27 0.31 0.35</td>
</tr>
<tr>
<td>8</td>
<td>0.037 0.041 0.045 0.051</td>
<td>0.37 0.41 0.45 0.51</td>
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<tr>
<td>10</td>
<td>0.055 0.061 0.067 0.071</td>
<td>0.55 0.61 0.67 0.71</td>
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### Impingement Composite Spray Tips (CSTXXX)

<table>
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<tr>
<th>Fan Width</th>
<th>ORIFICE SIZE - INCHES</th>
<th>ORIFICE SIZE - MM</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>0.018 0.021 0.036 0.042</td>
<td>S31 S32 S33 S34</td>
</tr>
<tr>
<td>8</td>
<td>0.044 0.049 0.055 0.061</td>
<td>S44 S49 S55 S61</td>
</tr>
<tr>
<td>10</td>
<td>0.067 0.072 0.078 0.084</td>
<td>S67 S72 S78 S84</td>
</tr>
<tr>
<td>12</td>
<td>0.087 0.092 0.098 0.104</td>
<td>S87 S92 S98 S104</td>
</tr>
<tr>
<td>14</td>
<td>0.106 0.111 0.117 0.123</td>
<td>S106 S111 S117 S123</td>
</tr>
<tr>
<td>16</td>
<td>0.122 0.127 0.133 0.139</td>
<td>S122 S127 S133 S139</td>
</tr>
<tr>
<td>18</td>
<td>0.140 0.145 0.151 0.157</td>
<td>S140 S145 S151 S157</td>
</tr>
</tbody>
</table>
FRP Accessories

Heavy Duty Drum Agitator

- Heavy duty gearbox mixes high viscosity materials
- Leak-free and oil-less gearbox prevents material contamination
- Stainless steel agitator and cover for corrosion resistance
- Twin paddles thoroughly mix finishing materials
- Siphon option allows material transfer through agitator shaft
- Access port for easy sampling and inspection of material during operation

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Drive</th>
<th>HP</th>
<th>Length in (cm)</th>
<th>Material</th>
<th>Manual</th>
</tr>
</thead>
<tbody>
<tr>
<td>231414</td>
<td>Heavy-duty back-geared agitator with elevator, drum cover and siphon kit</td>
<td>Air</td>
<td>1/2</td>
<td>32 (81.25)</td>
<td>SST</td>
<td>308609</td>
</tr>
<tr>
<td>231413</td>
<td>Same as 231414, except without siphon capability</td>
<td>Air</td>
<td>1/2</td>
<td>32 (81.25)</td>
<td>SST</td>
<td>308609</td>
</tr>
<tr>
<td>238157</td>
<td>Heavy-duty back-geared agitator</td>
<td>Air</td>
<td>1/2</td>
<td>32 (81.25)</td>
<td>SST</td>
<td>308609</td>
</tr>
<tr>
<td>240209</td>
<td>Same as 238157 with siphon kit</td>
<td>Air</td>
<td>1/2</td>
<td>32 (81.25)</td>
<td>SST</td>
<td>308609</td>
</tr>
<tr>
<td>238250</td>
<td>Siphon tube kit; fits 238157 agitator</td>
<td></td>
<td></td>
<td>43 (109)</td>
<td>SST</td>
<td>308609</td>
</tr>
</tbody>
</table>

In-line Air Filter and Coalescers

- Reusable filter removes particles down to 5 microns
- Coalescer removes contaminants down to 0.01 microns
- Auto-drain eliminates manual emptying of filters
- Built-in filters change indicator signals replacement to ensure optimal efficiency

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Air Inlet in</th>
<th>Air Outlet in</th>
<th>Air Flow Capacity</th>
<th>Maximum Inlet Pressure</th>
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</thead>
<tbody>
<tr>
<td>234405</td>
<td>Air filter/coalescer assembly (both with auto drain)</td>
<td>1/2 npt (f)</td>
<td>1/2 npt (f)</td>
<td>70 CFM</td>
<td>175 psi (1.2 MPa, 12 bar)</td>
</tr>
<tr>
<td>234406</td>
<td>Stage 1 - Air filter with auto drain removes contaminants to 5 microns</td>
<td>1/2 npt (f)</td>
<td>1/2 npt (f)</td>
<td>108 CFM</td>
<td>175 psi (1.2 MPa, 12 bar)</td>
</tr>
<tr>
<td>234407</td>
<td>Stage 2 - Coalescer with auto drain removes particles to 0.01 microns</td>
<td>1/2 npt (f)</td>
<td>1/2 npt (f)</td>
<td>70 CFM</td>
<td>175 psi (1.2 MPa, 12 bar)</td>
</tr>
<tr>
<td>234408</td>
<td>Air filter with auto drain removes contaminants to 5 microns</td>
<td>3/4 npt (f)</td>
<td>3/4 npt (f)</td>
<td>300 CFM</td>
<td>175 psi (1.2 MPa, 12 bar)</td>
</tr>
<tr>
<td>234409</td>
<td>Coalescer with auto drain removes particles to 0.01 microns</td>
<td>3/4 npt (f)</td>
<td>3/4 npt (f)</td>
<td>115 CFM</td>
<td>175 psi (1.2 MPa, 12 bar)</td>
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</table>

Instruction Manual: 309919
Pail Cover Agitator

- Lift handles for easy moving and color changes
- Locking bolts to secure cover and reduce spills
- Ideal for wall mount pumps or spray packages

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Size</th>
<th>Description</th>
<th>Drive</th>
<th>HP</th>
<th>Length (in/cm)</th>
<th>Material</th>
<th>Manual</th>
<th>Notes</th>
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<tbody>
<tr>
<td>222695</td>
<td>5 gal (18 l) Round prop</td>
<td>Air 1/4</td>
<td>13.25 (33.6)</td>
<td>SST</td>
<td>224571 Agitator and hose</td>
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<td></td>
<td></td>
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<tr>
<td>204536</td>
<td>5 gal (18 l) Round prop (3 blade)</td>
<td>Air 1/4</td>
<td>13.25 (33.6)</td>
<td>SST</td>
<td>224571 Agitator and metal tube</td>
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<tr>
<td>226086</td>
<td>5 gal (18 l) Pail cover, round prop</td>
<td>Air 1/4</td>
<td>13.25 (33.6)</td>
<td>CS</td>
<td>224571 Agitator and CS pail cover</td>
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<td>243340</td>
<td>5 gal (18 l) SST pail cover with SST agitator</td>
<td>Air 1/4</td>
<td>13.25 (33.6)</td>
<td>SST</td>
<td>224571 Agitator and SST pail cover</td>
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<tr>
<td>245081</td>
<td>5 gal (18 l) SST pail agitator kit for Triton pkgs</td>
<td>Air 1/2</td>
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<td>245895</td>
<td>5 gal (18 l) CS pail cover with SST agitator</td>
<td>Air 1/4</td>
<td>13.25 (33.6)</td>
<td>CS</td>
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<td>224572</td>
<td>10 gal (37 l) Single round prop (3 blade)</td>
<td>Air 1/4</td>
<td>17.25 (43.8)</td>
<td>SST</td>
<td>306565</td>
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</table>

Fluid Heater Kit

- Variable heating levels for consistent viscosity control
- Approved for hazardous locations
- 7250 psi (500 bar) maximum working pressure
- Stainless steel construction is compatible with polyester resins and coats

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>HP</th>
<th>Length (in/cm)</th>
<th>Manual</th>
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<tbody>
<tr>
<td>16N014</td>
<td>Viscon Heater Kit - 120V</td>
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<td>307968</td>
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<td>16N015</td>
<td>Viscon Heater Kit - 240V</td>
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<tr>
<td>16N018</td>
<td>Viscon HP Heater Kit – 120V</td>
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<td>306565</td>
<td></td>
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<tr>
<td>16N019</td>
<td>Viscon HP Heater Kit – 240V</td>
<td>1/4</td>
<td>306565</td>
<td></td>
</tr>
<tr>
<td>16N016</td>
<td>Viscon HP Hazardous Location Heater Kit – 120V</td>
<td>1/4</td>
<td>306565</td>
<td></td>
</tr>
<tr>
<td>16N017</td>
<td>Viscon HP Hazardous Location Heater Kit – 240V</td>
<td>1/4</td>
<td>306565</td>
<td></td>
</tr>
<tr>
<td>16N119</td>
<td>Heater Mount Kit</td>
<td>1/4</td>
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</table>
Since 1998, EnDiSys has provided customer-driven solutions to fluid delivery challenges in an ever-changing market. As products become increasingly high tech, and adhesives replace fasteners, EnDiSys consistently invests in research and development to maintain their position as an industry leader for spray and pumping equipment, and other fluid delivery systems. Whether their products are used for coating chewing gum tablets in Bangkok, Thailand, evacuating 250-gallon bins of caramel at a Pennsylvania food processing plant, or striping roads on Minnesota highways, EnDiSys is meeting the demand for quality fluid delivery systems.

PROVEN QUALITY. LEADING TECHNOLOGY. OUTSTANDING SERVICE.

Call today for product information or to request a demonstration. 763.428.5075 or visit us at www.EnDiSys.com.

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