



# Reactor® IP

In-Plant Polyurethane Foam Processing Systems



PROVEN QUALITY. LEADING TECHNOLOGY.

# Reactor IP Series

Entry-level unit designed for rigid and flexible in-plant foam applications

## Depend on the Reactor IP for outstanding performance, accuracy and repeatability

Take total control of your in-plant foam applications with the new Reactor IP proportioner from Graco. The Reactor IP is engineered for accuracy in pouring – with advanced controls and technologies for unparalleled performance.

- Lets you program up to 25 different shot settings and five shot sequences
- Accurately measures volume of the material poured, providing repeatable shot sizes, part after part
- Available in two models, the Reactor IP offers flow rates of 25 or 50 lb/min (11.3 and 22.6 kg/min)
- Easy clean-up – no gun purging, no solvent flush
- Easy start-up and shutdown

### Remote Mountable Controls

- For total control over temperature and pressure
- Allows you to control material temperature in three heating zones (ISO, resin, hose) for improved yield

### User-Defined Controls

- Pressure imbalance control prevents off-ratio conditions – offers imbalance detection between 100 to 999 psi (7 to 69 bar) in 100 psi (7 bar) increments
- Programmable standby mode shuts the motor and hydraulic pump down after a period of inactivity – reducing system wear and protecting the unit from overheating

### Hybrid Heater Design

Heats material quickly and maintains temperature set points – even when pouring at maximum flow rates

### Electrical Control Box

Provides an easy connection between the local control module, pour gun and Reactor IP

### New Local Control Module

Allows up to 25 different pre-programmed volume settings and five shot sequences

### Digital User Interface

Separate temperature and motor controls allow you to quickly set, maintain and monitor machine performance

- Temperature settings
- Cycle counter
- Pressure readout
- ISO rod park feature lengthens pump seal life by preventing ISO reaction

### Circulation Valves

Designed to reduce isocyanate crystallization

### Horizontal Pumpline

Robust pump design provides extended seal life. Different ratios can be achieved by combining different rod pump sizes. Ratio range is from 4.6:1 to 1:4.6. 81 pump combinations are available.

### New Linear Transducer

Provides accurate volume repeatability from part to part

### Optional Data Recorder

Records and compares material temperatures and pressures for critical applications



# Advanced controls

## Local control module for precise dispensing

### Local Control Module

- Accurately controls the amount of material you want to dispense
- Lets you program up to 25 different shot sizes and five sequences
- Precision dispensing means no wasted material
- Results in consistent parts production



### Arrow Keys

For easy screen navigation and numerical entry

### Soft Keys

For setup and programming

### Dispense Button

For remote dispensing capabilities

### Mode Button

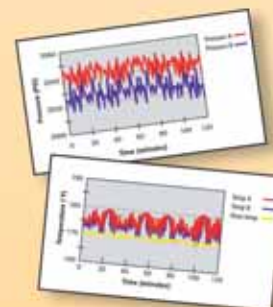
Choose between three modes: shot size, sequence or manual mode

### Optional Data Recorder

- Records actual temperatures and pressures
- Tracks material usage for accurate job tracking and record keeping
- Records diagnostic codes to simplify troubleshooting
- User can output data in spreadsheet format to quickly graph application temperatures and pressures
- Provides data to validate job accuracy



Reactor Data Reporting Kit



## Typical Applications

- Insulation for coolers and containers
- Pre-formed foam block for housing
- Picture frames
- Cabinets
- Solar panels
- Insulation for doors and windows
- Refrigerator panels
- Shutters
- Wall and floor panels
- Heater tanks
- Surf boards
- Pipe insulation

# Reactor System Components

How to select system components for your Reactor IP

Use this selection tool in conjunction with the part numbers listed on pages 5-7.

## 1 Select a Reactor IP

Choose from the Reactor IPH-40, or the Reactor IPH-25 (both hydraulic motors).

### KEY FEATURES:

- Quick knock down fluid sections
- Optional data reporting capabilities
- Foam models rated at 2000 psi (138 bar, 13.8 MPa)
- Optional pump sizes available for different ratios

## 2 Select heated hose

Pressure rating of 2000 psi (138 bar, 13.8 MPa). Choose 1/4 in (6.4 mm), 1/2 in (12.7 mm) or 3/8 in (9.5 mm) IDS.

## 3 Select heated whip hose

Pressure rating of 2000 psi (138 bar, 13.8 MPa). Choose 1/4 in (6.4 mm), 1/2 in (12.7 mm) or 3/8 in (9.5 mm) IDS.

## 4 Select a pour gun

### AR-C Gun:

- Good for mid- to high-flow rate applications
- 0.25 in (6.4 mm) diameter rod
- Optional AR-D conversion kit available – 0.375 in (9.5 mm) diameter rod

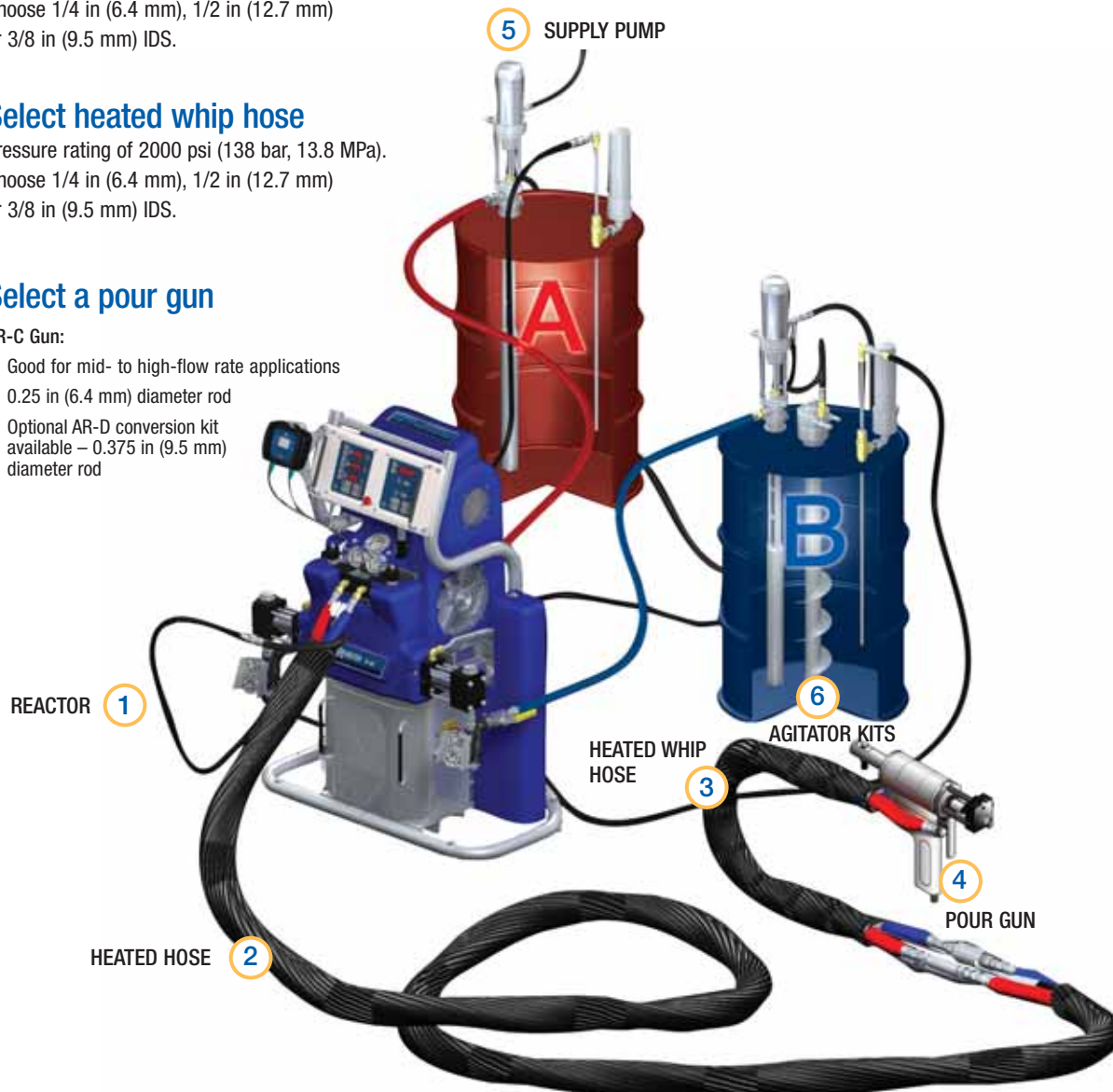
## Select supply processing equipment

### 5 SUPPLY PUMP

Choose from diaphragm or piston pumps for standard materials in drum-mount or wall-mount. Select a 2:1 piston pump for materials with higher viscosities.

### 6 AGITATOR KITS

Choose a kit to agitate your resin for a consistent coating. Graco's patented Twistork® agitators are very low shear to minimize material frothing.



# Technical Specifications

## Ordering Information



REACTOR IP FOR IN-PLANT FOAM APPLICATIONS		
	Hydraulic (H-Series)	
Model	REACTOR IPH-25	REACTOR IPH-40
Max Working Pressure	2000 psi (140 bar, 14 MPa)	2000 psi (140 bar, 14 MPa)
Max Hose Length	310 ft (94 m)	410 ft (125 m)
Output	25 lb/min (11.3 kg/min)	50 lb/min (22.6 kg/min)
Heater Wattage	8000 watts	12,000 or 15,300 watts
Max Ambient Temperature	120°F (49°C)	120°F (49°C)
Max Fluid Temperature	190°F (88°C)	190°F (88°C)
Weight	8 kW: 535 lb (243 kg)	600 lb (272 kg)
Dimensions (H x W x D)	55 x 40 x 22 in (140 x 101 x 56 cm)	55 x 40 x 22 in (140 x 101 x 56 cm)
<b>1</b> Ordering Information	<p><u>With 8.0 kW heater:</u> 69A-230V, 1-ph <b>255824</b> (Package* w/ AR Gun) <b>255814</b> (Bare)</p> <p>46A-230V, 3-ph <b>255825</b> (Package* w/ AR Gun) <b>255815</b> (Bare)</p> <p>35A-400V, 3-ph <b>255826</b> (Package* w/ AR Gun) <b>255816</b> (Bare)</p>	<p><u>With 12.0 kW heater:</u> 100A-230V, 1-ph <b>255821</b> (Package* w/ AR Gun) <b>255811</b> (Bare)</p> <p><u>With 15.3 kW heater:</u> 71A-230V, 3-ph <b>255822</b> (Package* w/ AR Gun) <b>255812</b> (Bare)</p> <p>41A-400V, 3-ph <b>255823</b> (Package* w/ AR Gun) <b>255813</b> (Bare)</p>
Operation manual	<b>312062/312878</b>	<b>312062/312878</b>
Repair manual	<b>312063</b>	<b>312063</b>

\* Package includes 25 ft (7.6 m) heated hose, 10 ft (3 m) heated whip hose and AR Gun.

# Ordering Information

To get genuine Graco accessories, see your nearest Graco Distributor, or call Graco at 1-877-844-7226

## Reactor IP Accessories

- 247827 Heater control module
- 247828 A, B, hose heater power module
- 247838 Modular heater control to retrofit electric/hydraulic units
- 255149 Circulation valve – ISO only
- 255150 Circulation valve – resin only
- 255148 Circulation valve kit – includes ISO and resin circulation valves, Fusion® grease and grease gun
- 24A024 Conversion kit, local control module for Reactor H-40 and H-25  
*Includes local control module, linear transducer, electrical control box, brackets, data cable, power cable, gun cable and miscellaneous hardware*
- 24A025 Conversion kit, local control module for Reactor H-20/35  
*Includes local control module, linear transducer, electrical control box, brackets, and miscellaneous hardware*
- 15T859 Data cable, 10 ft (3 m)  
*Connects local control module to the Reactor IP's electrical control box*
- 15T961 Data cable extension, 25 ft (7.5 m)  
*Can be combined with 15T859. Connects local control module to the Reactor IP's electrical control box*
- 121002 Power cable, 5 ft (1.5 m)  
*Connects local control module to the Reactor IP's electrical control box*
- 15T960 Power cable, 35 ft (10 m)  
*Connects local control module to the Reactor IP's electrical control box*
- 15T602 Gun cable, 10 ft (3 m)  
*Connects the gun to the Reactor IP's electrical control box*
- 15T852 Gun cable extension, 25 ft (7.5 m)  
*Can be combined with 15T602. Connects the gun to the Reactor IP's electrical control box*
- 255817 Local control module

### Pumps

Reactor IPH-40 has #140 as standard pumps. Reactor IPH-25 has #120 as standard pumps. Order a different pump size for different flow rates or different ratios. Pumps must be purchased and installed separately.

- 247371 Proportioner pump kit, size 30
- 247372 Proportioner pump kit, size 40
- 247373 Proportioner pump kit, size 48
- 247374 Proportioner pump kit, size 60
- 247375 Proportioner pump kit, size 80
- 247577 Proportioner pump kit, size 88
- 247376 Proportioner pump kit, size 96
- 247377 Proportioner pump kit, size 120
- 247576 Proportioner pump kit, size 140

## 2 Heated Hoses



### Hoses, 2000 psi (138 bar, 13.8 MPa)

- 246051 3/8 in x 10 ft (9.5 mm x 3 m)
- 246049 3/8 in x 25 ft (9.5 mm x 7.6 m), with scuffguard™
- 246046 3/8 in x 50 ft (9.5 mm x 15 m), with scuffguard
- 246075 3/8 in x 50 ft (9.5 mm x 15 m), no thermocouple wire
- 246678 3/8 in x 50 ft (9.5 mm x 15 m), with scuffguard
- 246047 1/2 in x 50 ft (12.7 mm x 15 m)
- 246076 1/2 in x 50 ft (12.7 mm x 15 m), no thermocouple wire

### Hose Accessories

- 246077 10 ft (3 m) braided polyester mesh scuffguard
- 246078 50 ft (15 m) braided polyester mesh scuffguard
- 246456 50 ft (15 m) polyethylene scuffguard
- 246805 25 ft (7.6 m) braided polyester mesh scuffguard
- 248921 Heated hose controller, 2700 watt. Allows Reactor heated hose extended past 300 ft (91 m). Requires 200-230 volts at 15 amps
- 15B296 FTS cable 50 ft (15 m)
- 261821 Heated hose jumper *(required when not using heated whip)*
- 15C626 Fluid temperature sensor (FTS) cable 25 ft (7.6 m)
- 261669 Fluid temperature sensor
- 15F028 Band heater, 1000 watt, for 55 gal (208 l) drum, 230 volt
- 261821 Power-lock™ splice kit
- 15M312 Power-lock splice kit (20-pk)  
*(enough for 10 hoses)*

## 3 Heated Whip Hoses



- 246050 1/4 in x 10 ft (6.3 mm x 3 m)

### Ratio Possibilities

	30	40	48	60	80	88	96	120	140
30	1.000	1.333	1.600	2.000	2.667	2.933	3.200	4.000	4.667
40	0.750	1.000	1.200	1.500	2.000	2.200	2.400	3.000	3.500
48	0.625	0.833	1.000	1.250	1.667	1.833	2.000	2.500	2.917
60	0.500	0.667	0.800	1.000	1.333	1.467	1.600	2.000	2.333
80	0.375	0.500	0.600	0.750	1.000	1.100	1.200	1.500	1.750
88	0.341	0.455	0.545	0.682	0.909	1.000	1.091	1.364	1.591
96	0.313	0.417	0.500	0.625	0.833	0.917	1.000	1.250	1.458
120	0.250	0.333	0.400	0.500	0.667	0.733	0.800	1.000	1.167
140	0.214	0.286	0.343	0.429	0.571	0.629	0.686	0.857	1.000

Ratios are approximate.

## 4 Pour Guns

### AR Pour Guns

- 255828 AR-C (250) pour gun  
*Includes gun, toolkit, impingers, tip and coupling block*
- 255827 AR-C (250) pour gun  
*Does not include coupling block, tip or impingers*
- 24A023 Conversion kit  
*Converts AR-C (250) to AR-D (375)*
- 312888 AR pour gun manual

### AR Pour Gun Accessories

- 253728 AR Gun toolkit
- 299973 Tip, AR-C
- 299972 Tip, AR-D
- 285771 Coupling block, AR-C and AR-D

### AR Gun Impinger Options

- 299974 Front impinger C size, 23-B-1 style, orifice area factor 900
- 299975 Front impinger C size, 33-B-1 style, orifice area factor 1200
- 299976 Front impinger C size, 33-C-1 style, orifice area factor 1800
- 299977 Front impinger C size, 34-C-1 style, orifice area factor 2400
- 299980 Front impinger C size, 46-B-1 style, orifice area factor 3000
- 299978 Front impinger C size, 36-C-1 style, orifice area factor 3600
- 299982 Front impinger C size, 48-C-1 style, orifice area factor 6000
- 299983 Front impinger C size, 58-C-1 style, orifice area factor 7200
- 299990 Rear impinger C size, 23-B-1 style, orifice area factor 900
- 299991 Rear impinger C size, 33-C-1 style, orifice area factor 1800
- 299992 Rear impinger C size, 34-C-1 style, orifice area factor 2400
- 299995 Rear impinger C size, 46-B-1 style, orifice area factor 3000
- 299993 Rear impinger C size, 36-C-1 style, orifice area factor 3600
- 299996 Rear impinger C size, 46-C-1 style, orifice area factor 4500
- 299997 Rear impinger C size, 48-C-1 style, orifice area factor 6000
- 299999 Rear impinger C size, 58-C-1 style, orifice area factor 7200
- 299979 Front impinger D size, 33-C-1 style, orifice area factor 1800
- 299984 Front impinger D size, 59-D-1 style, orifice area factor 10800
- 299985 Front impinger D size, 66-D-1 style, orifice area factor 8400
- 261790 Front impinger D size, 79-D-1 style, orifice area factor 14400
- 299987 Front impinger D size, 90-D-1 style, orifice area factor 18000
- 299988 Front impinger D size, 94-D-1 style, orifice area factor 25200
- 299994 Rear impinger D size, 36-C-1 style, orifice area factor 3600
- 299998 Rear impinger D size, 48-C-1 style, orifice area factor 6000
- 261789 Rear impinger D size, 58-C-1 style, orifice area factor 7200
- 285750 Rear impinger D size, 66-D-1 style, orifice area factor 8400
- 285751 Rear impinger D size, 78-D-1 style, orifice area factor 12800
- 285752 Rear impinger D size, 90-D-1 style, orifice area factor 18000

## 5 Supply Pumps

### Complete Supply Pump Systems

- Includes all air and fluid fittings, and hoses for two pumps.
- 246369 Complete Husky 515 (246481) supply pump system
- 246375 Complete Husky 716 (246482) supply pump system

## 5 Supply Pumps - continued

### Complete Supply Pump Systems - continued

- 246376 Complete Husky 1040 (246676) supply pump system
- 247955 Complete T1 (247956) supply pump system
- 246081 Complete T2 (246898) supply pump system

### Supply Pumps with Drum Riser Tube

- 246366 Husky™ 515 diaphragm pump, acetal bolted design, 100 psi (7 bar, 0.7 MPa) max air inlet, 7.5 gpm @ 60 cpm, 3 cfm per gpm
- 246367 Husky 716 diaphragm pump, aluminum clamped design, 100 psi (7 bar, 0.7 MPa) max air inlet, 7.5 gpm @ 60 cpm, 3 cfm per gpm
- 246368 Husky 1040 diaphragm pump for trailer mounts - aluminum, bolted, wall mount, 120 psi (8 bar, 0.8 MPa) max air inlet, 7.5 gpm @ 60cpm, 1 cfm per gpm
- 295616 T2 2:1 ratio piston pump for higher viscosity materials - 405 psi (28 bar, 2.8 MPa) max fluid psi, 5.0 gpm @ 100 cpm
- 248825 5:1 Monark drum pump, for high viscosity materials, 900 psi (62 bar, 6.2 MPa) max fluid psi, 10 ft (3 m) hose, 3/4 npt (m), air regulator, manual 310863

### Double Supply Pumps with Fluid Plumbing

- 246481 Husky 515 (246366), 10 ft x 3/4 in (3 m x 19 mm) supply hose
- 246482 Husky 716 (246367), 10 ft x 3/4 in (3 m x 19 mm) supply hose
- 246676 Husky 1040 (246368), 10 ft x 3/4 in (3 m x 19 mm) supply hose, 6 ft x 3/4 in (1.8 m x 19 mm) suction hose
- 246898 T2 2:1 ratio piston pump (295616), 10 ft x 3/4 in (3 m x 19 mm) supply hose

### Supply Pump Accessories

- 246419 55 gal (208 l) feed pump tube with inlet ball check
- 246477 3/4 in (19 mm) bung return tube with air dryer port
- 246483 Air distribution kit, 120 psi (8 bar, 0.8 MPa) for two feed pumps and a Fusion gun
- 246640 Desiccant dryer kit
- 246978 Reactor manifold circulation kit with return tubes, return fluid lines and dryers
- 15C381 Desiccant replacement

### Manuals

- 309815 Supply pump
- 309827 Air supply kit
- 309852 Circulation and return tube

## 6 Agitators

### Agitator

- 224854 Twistork CS, air-operated, 1-1/2 HP, 37.3 in (0.9 m) length
- 235534 Twistork SST, air-operated, 1-1/2 HP, 37.3 in (0.9 m) length
- 236629 Twistork SST, air-operated with built-in return tube, 3/4 HP, 47.5 in (1.2 m) in length
- 248824 Twistork CS, air-operated (224854), 1-1/2 HP, 37.3 in (0.9 m) with air connection, hose



## ABOUT GRACO

### PROVEN QUALITY. LEADING TECHNOLOGY.

Founded in 1926, Graco is a world leader in fluid handling systems and components. Graco products move, measure, control, dispense and apply a wide range of fluids and viscous materials used in vehicle lubrication, commercial and industrial settings.

The company's success is based on its unwavering commitment to technical excellence, world-class manufacturing and unparalleled customer service. Working closely with qualified distributors, Graco offers systems, products and technology that set the quality standard in a wide range of fluid handling solutions. Graco provides equipment for spray finishing, protective coating, paint circulation, lubrication, and dispensing sealants and adhesives, along with power application equipment for the contractor industry. Graco's ongoing investment in fluid management and control will continue to provide innovative solutions to a diverse global market.

## GRACO LOCATIONS

### MAILING ADDRESS

P.O. Box 1441  
Minneapolis, MN 55440-1441  
Tel: 612.623.6000  
Fax: 612.623.6777

### AMERICAS

#### MINNESOTA

Worldwide Headquarters  
Graco Inc.  
88 -11th Avenue N.E.  
Minneapolis, MN 55413

### EUROPE

#### BELGIUM

European Headquarters  
Graco N.V.  
Industrieterrein-Oude Bunders  
Slakweidestraat 31  
3630 Maasmechelen,  
Belgium  
Tel: 32.89.770.700  
Fax: 32.89.770.777

### ASIA PACIFIC

#### AUSTRALIA

Graco Australia Pty Ltd  
P.O. Box 558  
Level 2 / 541 Blackburn Rd.  
Mount Waverley VIC 3149  
Australia  
Tel: 61.3.9550.0848  
Fax: 61.3.9550.0816

#### CHINA

Graco Fluid Equipment  
(Shanghai) Co. Ltd.  
Room 118 1st Floor  
No.2 Xin Yuan Building  
No.509 Cao Bao Road  
Shanghai, P.R. China 200233  
Tel: 86.21.649.50088  
Fax: 86.21.649.50077

### INDIA

Graco (HK) Ltd. India Liaison Office  
Room 103, Level 4, Augusta Point  
Golf Course Road  
Gurgaon, Haryana, India 122001  
Tel: +91.124.435.4208

### JAPAN

Graco K.K.  
1-27-12 Hayabuchi  
Tsuzuki-ku  
Yokohama City, Japan 2240025  
Tel: 81.45.593.7300  
Fax: 81.45.593.7301

### KOREA

Graco Korea Inc.  
Choheung Bank Building  
4th Floor #1599  
Gwanyang-Dong, Dongan-Ku,  
Anyang-Si, Gyunggi-Do,  
Korea 431-060  
Tel: 82(Korea).31.476.9400  
Fax: 82(Korea).31.476.9801

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North America  
Industrial Customer Service  
800-328-0211  
FAX 877-340-6427