

# SPI

MODEL

# FF18/18

## AIR DRIVEN PROPORTIONER

1. HIGH OUTPUT  
PREHEATER

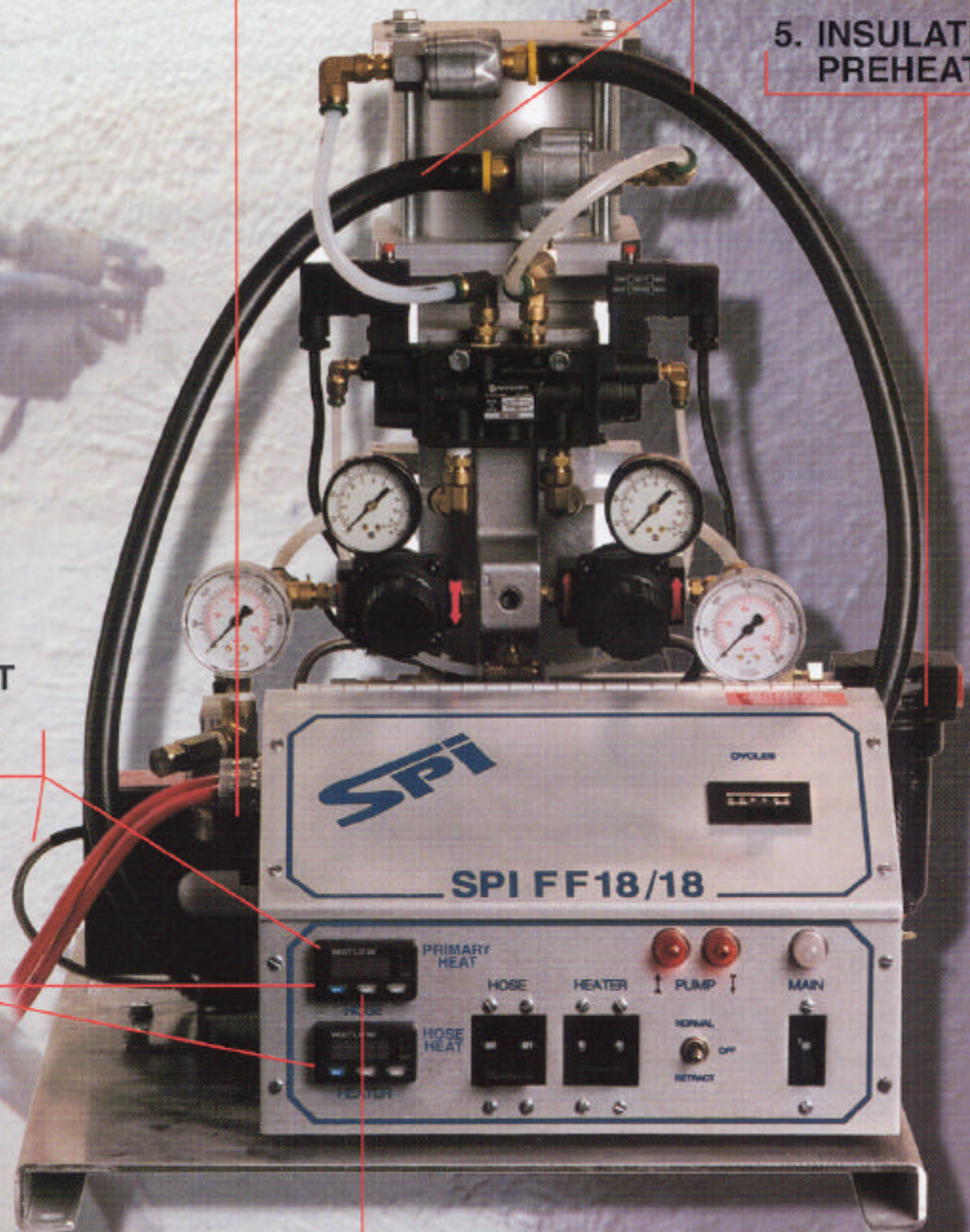
4. UNIQUE EXHAUST  
MUFFLERS

5. INSULATED  
PREHEATER

2. ELECTRONIC  
PRIMARY HEAT  
SENSOR &  
CONTROLLER

3. L.E.D. DIGITAL  
INDICATORS

6. AUTOMATIC HOSE HEAT  
WITH REMOTE SENSOR



# **MODEL FF18/18** **AIR DRIVEN PROPORTIONER**

The fastest growing segment of the protective coatings, industry is heated, plural component elastomers.

The SPI FF18/18 is the ideal machine for applying the evolving V.O.C. compliant coatings such as polyurea, polyurethane, and hybrids.

•Reliable

•Lightweight

•Inexpensive

A compact design and air operation make the SPI FF18/18 mobile and easy to use when spraying or pouring plural components. Including, but not limited to, systems such as urethane foam, polyurea and polyurethane elastomers, hybrids, casting resins, and control joint fillers.

Uses of the SPI FF18/18 Include:

Roofing • Corrosion Protection • Secondary Containment • Insulation • Bedliner Systems Applications

Specialty Products, Inc., in conjunction with Gusmer Corporation, developed the SPI FF18/18 to meet the requirements for accurate processing parameters such as heat and pressure of V.O.C. compliant coatings. Its metering pumps are based on the proven reliability of Gusmer Corporation FF and FF1600 models.

The SPI FF18/18 is designed for Outputs Up to 1.8 gal/min (6.8 Liters/Min). The over pressure safety shut-off switches are set at 2200 psi (152 Bar).

## **IMPORTANT FEATURES**

### 1. Newly-designed Primary Heater

This innovative, solid block aluminum alloy primary heater has several features and enhancements not previously available.

- A simplified "thermal mass" design exhibits excellent heat transfer for faster response and maximum temperature gain.
- 6000 watt heat capacity which reduces viscosity and increases laminar flow throughput to the gun tip for a superior mix and a more even spray pattern.
- Pressure rated to 35M psi (241 Bar) with a 4x safety factor.
- Elimination of plate warpage and subsequent leak potential through O-ring free design.
- Rapid disassembly after removing only 12 bolts.
- Low maintenance.

### 2. Primary Heater Controls

A preheater can only be as good as its controls. The accuracy inherent with an SPI FF18/18 controller system is critical for application of the evolving coatings, such as polyurea elastomers. Features include:

- Thermocouple probe with digital indicating temperature controller to accurately read and adjust temperature once every second.
- Calibration to + 4° F (Unlike other bimetal thermostat controlled heaters which may vary as much as 30° F).
- Better yield and productivity with newer water and HCFC blown urethane foams.

### 3. L.E.D. Digital Indicator Controllers

- Used for both the primary and hose heat.
- Interchangeable for quick and easy troubleshooting.
- Easily operated with 3 set buttons and a red heat indicator light that is illuminated until a preset temperature is reached.
- Visible from a distance because of the 1/2" L.E.D. (Light Emitting Diode) digital display.

### 4. Exhaust Mufflers

- Dampened sound and air velocity from dump valves.
- Cooled air directed through a heat sink, reducing temperature of controllers solid state relays.
- Non-icing exhaust mufflers that eliminate power loss experienced with other air driven proportioners.
- Increased efficiency and longevity of the relay system.

### 5. Thermal Insulation Jacket

- Reduces heat loss on the preheater.
- Helps keep adjacent electronic components cooler.
- Prevents liquids from baking onto heater surfaces.
- Has a convenient cover for easy removal in the event of spills or splatters.

### 6. Automatic Hose Heat

- Provides completely automatic temperature control of the hose heater.
- Measures temperature through a remote temperature sensing unit (MU) strategically located inside the heated hose.
- Produces more consistent spray pattern because hose heat will not fluctuate with ambient temperature changes.



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WARNING: The equipment described herein must only be operated or serviced by properly trained individuals, thoroughly familiar with the operating instructions and limitations of equipment

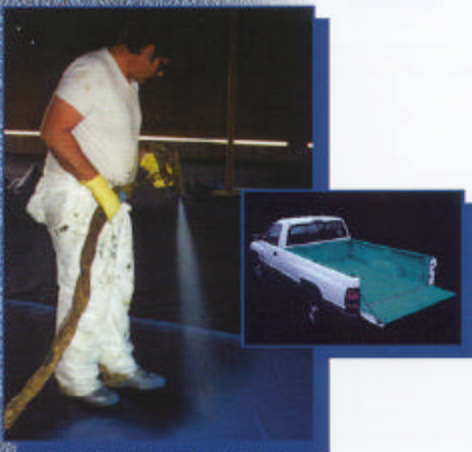
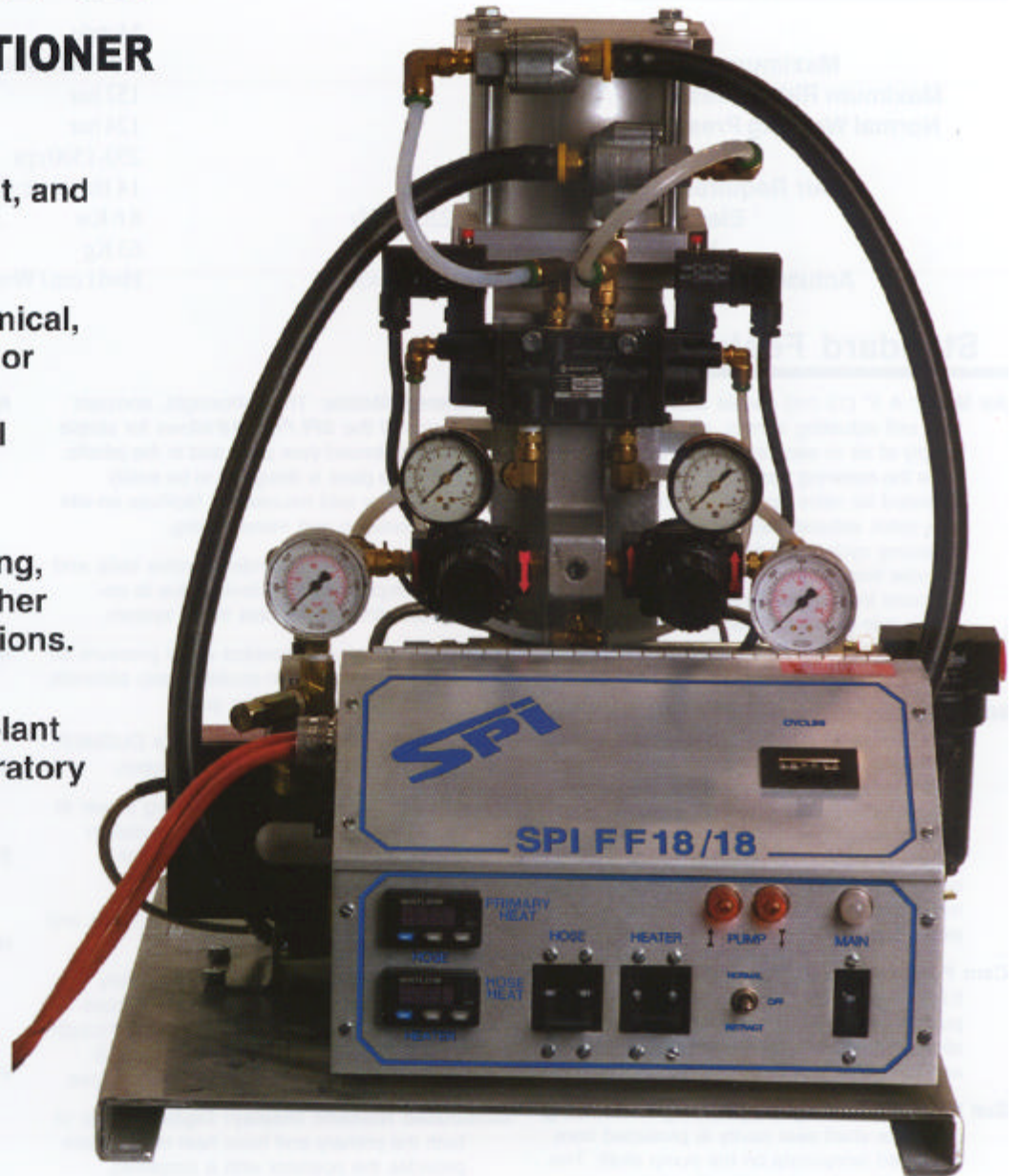
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NOTE: All standard and service specifications identified on the Specialty Products, Inc. technical sales flier are based on U.S. standards.

# FF18/18

## AIR DRIVEN PROPORTIONER

- Compact, lightweight, and mobile design.
- Designed for economical, low output spraying or pouring of plural component chemical systems.
- Ideal for use in roofing, construction, and other related field applications.
- Very popular for in-plant operations and laboratory use.



*Industrial/Commercial*



*Construction*



*Fillers & Sealants*



Specialty Products, Inc.

# SPI FF18/18

## Technical Data

	<u>U.S.</u>	<u>Metric</u>
<b>Maximum Output:</b>	1.8 gal/rnin	6.8 liters/min
<b>Maximum Rated Pressure:</b>	2200 psi	152 bar
<b>Normal Working Pressure:</b>	1800 psi	124 bar
<b>Viscosity:</b>	250-1500 cps	250-1500 cps
<b>Air Requirement:</b>	40 CFM @ 100 psi	14 liters/sec @ 7 bar
<b>Electrical:</b>	45 amps @ 1 x 220; 60 Hz	8.6Kw
<b>Weight:</b>	140 lbs	63 Kg
<b>Actual Dimensions:</b>	H=24 in / W=26 in / D=30 in	H=61 cm / W=46 cm / D=61 cm

## Standard Features

**Air Motor:** A 5" (13 cm) double acting cylinder, with self actuating control, alternates the supply of air to each end of the cylinder to drive the metering pumps. A solenoid operated air valve operates in conjunction with quick exhaust valves to accelerate the reversing cycle. Rated operating pressure is variable from 50 to 120 psi (8 Bar). Air pressure to hydraulic pressure ratio is 16:1. An electric stroke counter enables operator to keep accurate records of materials used, and to compute chemical yield.

**Metering Pumps:** The *SPI FF18/18* is equipped with fixed ratio, positive displacement, double acting piston pumps. Hard chrome plated piston rods and cylinder walls to provide the most reliable pumping system available. An internal piston packing set has a self-adjusting take-up. Over-pressure safety switches on each pump deactivate the air motor should safe pressure limits be exceeded.

**Cam Follower Guide Connecting Yoke:** Eliminates asymmetrical forces and increases pump packing life by assuring proper alignment and balance between air cylinder and pumps.

**Self Flushing Packing:** By providing a lubricating rinse, the shaft seat cavity is protected from hardened isocyanate on the pump shaft. This will significantly extend the life of the pump seals and reduce maintenance downtime.

**Pump Retract.** Automatically positions the pump shaft completely within the cylinder during shutdown to provide longer pump packing life.

**Externally Accessible Valve Balls:** Innovative pump design incorporates readily serviceable valve balls and removable ball seats without pump disassembly.

**Completely Mobile:** The lightweight, compact design of the *SPI FF18/18* allows for simple mobility around your plant and to the jobsite. The base plate is designed to be easily forklifted or skid mounted to facilitate on-site transportation and maneuvering.

**In-Line Filter Screens:** Protects valve balls and gun components from fouling due to unwanted dirt and particles in the system.

**Dual Air Regulation:** Provides equal pressure on both the up and down stroke to help eliminate pattern fluctuations at the gun.

**Heated Hose:** Proven safe and reliable GUSMER LOW VOLTAGE Hose Heating System.

**Hose Power Pack:** Provides operating power to the hose heating system. Isolation design separates the low voltage system for operator protection.

**Primary Heater:** Controls material viscosities and process temperatures.

**Automatic Hose Heat:** Provides completely automatic temperature control of the hose heater. The temperature is measured through a remote temperature sensing unit (TSU) strategically located inside the heated hose.

**Illuminated Numeric Display:** Digital readout of both the primary and hose heat temperature provides the operator with a simplified, convenient method of viewing operating parameters on the jobsite.

**Auxiliary Proportioning Pump:** Auxiliary pump assemblies are available and can be field retrofitted to meter one or two additional chemical components such as resin, blowing agent, catalysts, flame retardants and coloring.

**4" (10 cm) Air Motor:** Maximum Pressure 1,000 psi output 1.2 gal/min (4.5 liters/min) 12 CFM @ 100 psi.

**Mix Heads/Spray Guns:** A wide variety of standard and specialty application mixing heads are available for Spray, Pour, or injection to meet your production requirements.

**Gusmer TX-50 Processor:** Provides 100 separate programmable channels for automatic shot selection.

**Encoder:** Used with the Gusmer TX-50 processor to automatically dispense a metered amount of material.

**Hoses.** Available in 50 foot (15.2 m) lengths up to 310 feet (94.5 m)

3/8" x 50' (.95 cm x 15.2 m)  
1/4" x 10' (.64 cm x 3.1 m)

**Varied Ratio Operation:** The *SPI FF18/18* will process a wide range of system ratios from 1:4 to 4:1. The fixed ratio adjustment is made by substituting smaller or larger metering pumps of various sizes. All pump sizes are interchangeable and can be ordered through Specialty Products, Inc. to fit custom applications.

## Optional Features

**Material Supply:** To insure complete filling of Model *SPI FF18/18* metering pumps, both components should be pressure fed using Gusmer 2:1 transfer pumps or pressurized supply tanks. Material should be protected from atmospheric moisture via Gusmer air dryer and regulator.

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