

SF₆ Cylinder Heater

Ordinary Areas—120 Vac

Application . . .

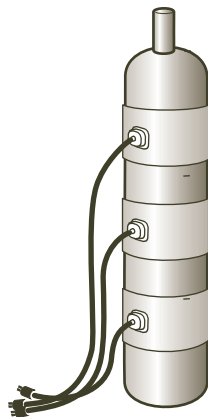
The SF₆ Cylinder Heater provides a clean, simple and quick method for applying heat to cylinders containing SF₆. A 130°F (54°C) cut-out thermostat is designed into each heater to prevent overheating. Heater efficiency is improved through the use of a custom designed cylinder blanket.

SF₆ is stored in 9.25" diameter cylinders in liquid form under pressure. Utilities (Transmission and Distribution Divisions) use SF₆ circuit breakers for their high voltage (69,000-400,000 volts) transmission lines. The SF₆ provides an inert blanketing media that prevents arcing when the breakers open and close. Periodically, maintenance crews need to hook up the storage cylinders to the circuit breakers to add SF₆ to the breaker and increase the system's operating pressure. When the valve is opened and gas flow begins, the cylinder temperature drops rapidly and slows down the flow of SF₆ into the circuit breaker. Heat must be added to the cylinder to make up the heat losses caused by vaporizing from a liquid to a gas.

Applying heat safely not only converts this time-consuming activity into an efficient and convenient operation but, also ensures maximum removal of SF₆ from the cylinder and eliminates the return of partially filled cylinders.

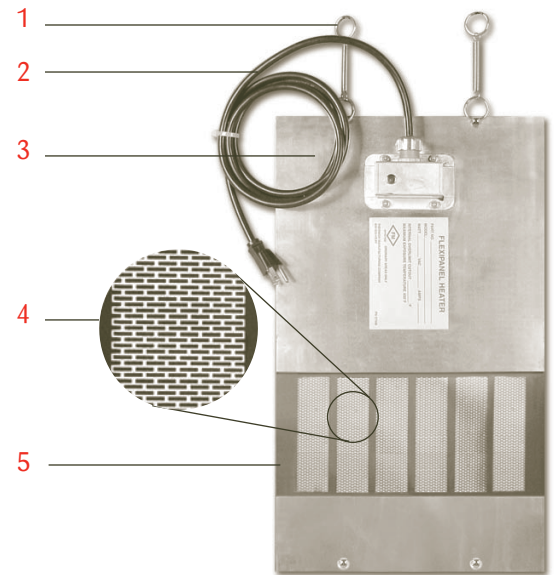
Ratings/Specifications . . .

Heater Model No. RT-521-SF6
 Size 12" x 24" (305 mm x 610 mm)
 Power Output 500 watts @ 120 Vac, 4.2 amps
 Watt Density 1.8 w/in² (2790 w/m²)
 Attachment Method..... quick release spring system
 Ground Plane..... hardened 10mil aluminum sheet



Typical Installation

Product Specifications



Construction . . .

- 1 Quick Release Spring System
- 2 6' Cordset with 120 Vac Plug
- 3 Protective Metal Jacket
- 4 Parallel Circuit High Temperature Alloy Heating Element
- 5 Heat-Laminated, High Temperature Silicone Rubber Insulation

Product Features . . .

- Operates at less than 2.0 w/in² (3100 w/m²) allowing for even heat distribution and maintenance of a stable temperature over the entire surface.
- Integral 130°F (54°C) thermal cut-out thermostat provides protection from burnout. The heating panels operate safely below the 135°F (57°C) maximum allowed on most cylinders.
- Proprietary heating element is stamped from a high-temperature alloy, INCONEL 600. Multiple electrical paths (minimum of six) eliminate series wire burnouts.
- INCONEL heating element is laminated in silicone rubber and encased in a metal jacket providing a tough, watertight seal.
- Spring mounting for quick installation and removal.



THERMON . . . The Heat Tracing Specialists®

ISO 9001
REGISTERED

100 Thermon Dr. • PO Box 609 • San Marcos, TX 78667-0609
 Phone: 512-396-5801 • Facsimile: 512-396-3627 • 1-800-820-HEAT
 www.thermon.com In Canada call 1-800-563-8461

SF Cylinder Heater

Ordinary Areas—120 Vac

Product Specifications

SF Cylinder Heater Performance . . .

Three 500 watt RT FlexiPanel heaters attached and operating:

1. at 70°F (21°C), the heating system will maintain the cylinder at or above 70°F (21°C) with flow rates of up to 150 lbs/hr.
2. at 0°F (-18°C) the heating system with an SF insulation blanket will maintain a 70°F (21°C) cylinder at or above 70°F (21°C) with flow rates of up to 100 lbs/hr.
3. at -20°F (-29°C) the heating system with an SF insulation blanket will maintain a 40°F (4°C) cylinder at or above 40°F (4°C) with flow rates of up to 100 lbs/hr.
4. at 0°F (-18°C) without a heating system, loading 115 lbs of SF₆ into a circuit breaker system can take up to 8 hours..

Lead Wires and Terminations . . .

Each RT-521 5F6 FlexiPanel heater is equipped with a 6' (1.83 m) long SJT cord with a standard three-prong male adapter.

Circuit Breaker Sizing and Type . . .

Multiple panels can be energized from the same circuit breaker based on operating voltage and current draw. Breaker sizing should be based on the National Electrical Code, Canadian Electrical Code or any other applicable code.

The National Electrical Code and Canadian Electrical Code require ground-fault protection of equipment for each branch circuit supplying electric heating equipment. Check local codes for ground-fault protection requirements.

Certifications/Approvals¹ . . .



FM Approvals
Ordinary Locations



Canadian Standards Association
Ordinary Locations

Note . . .

1. Contact Thermon for design assistance for applications other than 120Vac, for hazardous (classified) area applications.

Accessories . . .



SF Cylinder Blanket is manufactured from silicone coated glass cloth with 1-1/2" fiberglass insulation. The cylinder blanket conserves heat and maximizes heat transfer into the cylinder.



Control Thermostats: Thermon offers a complete line of mechanical thermostats and electronic control and monitoring modules designed and approved specifically for electric heat tracing applications. For complete details, refer to the Controls and Monitoring section of the Electric Heat Tracing catalog or contact Thermon.

