

## -BRUEST

## CATALYTIC HEATERS

## ■ TECHNOLOGY OVERVIEW

Bruest Catalytic Freez-Fiter Fuel Gas Heaters were designed to heat low to medium volume of gas with either one or two catalytic heaters to heat a serpentine process gas coil. The Freez-Fiter family of heaters is offered with high pressure regulators to reduce the inlet gas pressure to the fuel gas train, an integral filter to remove contaminants, and temperature controllers to adjust the temperature of the process gas. Bruest's Freez-Fiter family of fuel gas heaters are great alternatives to larger fuel gas systems.

## - SPECIFICATIONS

The Freez-Fiter family of heaters operates on the same principle as all of Bruest's Catalytic Heaters. An electric source is required to warm up the catalytic pad. Once the pads are warmed up, which should take between 15 to 20 minutes, the electric supply can be removed and the gas supply takes over. After the gas is introduced, the catalytic reaction will supply the necessary heat to continue the process.

| Model | S1800 | S4000 | S6000 | S8000 | S12000 | S16000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BTUH | 2,500 | 5,000 | 12,000 | 24,000 | 36,000 | 48,000 |
| Heater Size | R8 | R12 | 6X24 | 12X24 | 12X36 | $12 \times 48$ |
| Qty of Heater | 1 | 1 | 2 | 2 | 2 | 2 |
| Coil Size | 3/8" Tubing | 3/8" Tubing | $1 / 2^{\prime \prime}$ Tubing | 1/2" Tubing | 3/4" Tubing | 3/4" Tubing |
| \# of Coils | 1 or 2 | 1 or 2 | 1 | 1 | 1 | 1 |
| MAOP (PSIG) | 3000 | 3000 | 3000, 4300, 5200 | 3000, 4300, 5200 | 3000, 4300, 5200 | 3000, 4300, 5200 |
| Starting Voltage | 12DC/120AC | 12DC/120AC | $\begin{gathered} \text { 12DC, 120, } \\ 240 \mathrm{AC} \end{gathered}$ | 12DC, 120, 240AC | 12DC, 120, 240AC | AC Only, 120, 240 |
| Low Pressure Regulator (up to 50 PSIG Inlet) | STANDARD | STANDARD | STANDARD | STANDARD | STANDARD | STANDARD |
| Filter | STANDARD Inline | STANDARD Inline | STANDARD | STANDARD | STANDARD | STANDARD |
| Fuel Input Gauge | STANDARD | STANDARD | STANDARD | STANDARD | STANDARD | STANDARD |
| Temperature Controller | OPTIONAL | OPTIONAL | STANDARD | STANDARD | STANDARD | STANDARD |
| High Pressure Regulator | OPTIONAL | OPTIONAL | STANDARD | STANDARD | STANDARD | STANDARD |
| Power Cable Options (Feet) | 16, 20, 25 | 16, 20, 25 | 16, 20, 25 | 16, 20, 25 | 16, 20, 25 | 16, 20, 25 |
| Heater Panel Classification Available | General, Class <br> 1, Div 1 or Div 2, $\qquad$ | General, Class 1, Div 1 or Div 2, Gr. D | Class I, Div 1, Gr. D | Class I, Div 1, Gr. D | Class I, Div 1, Gr. D | Class I, Div 1, Gr. D |

## Models S1800 and S4000



| Model Number | A |  | B |  | C |  | D |  | E |  | Heat Value | Est. Weight |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | IN | MM | IN | MM | IN | MM | IN | MM | IN | MM | BTU | Lbs |
| S1800 | 12.8 | 323.9 | 4.9 | 125.5 | 12.8 | 323.9 | 11.7 | 296.4 | 14.0 | 355.6 | 2500 | 22 |
| S4000 | 16.6 | 421.6 | 4.1 | 104.1 | 16.6 | 421.6 | 15.5 | 393.7 | 18.2 | 462.3 | 5000 | 35 |

Models S6000, S8000, S12000, and S16000


| Model Number | A |  | B |  | C |  | D |  | E |  | Heat Value | Est. Weight |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | IN | MM | IN | MM | IN | MM | IN | MM | IN | MM | BTU | Lbs |
| S6000 | 38.1 | 972.0 | 16.1 | 410.0 | 19.7 | 500.0 | 10.5 | 268.0 | 27.1 | 689 | 12000 | 50 |
| S8000 | 38.1 | 972.0 | 20.8 | 527.0 | 20.4 | 519.0 | 11.3 | 286.0 | 27.1 | 689 | 24000 | 60 |
| S12000 | 49.1 | 1247.0 | 21.6 | 548.0 | 23.8 | 604.0 | 13.0 | 330.0 | 39.1 | 994 | 36000 | 75 |
| S16000 | 61.3 | 1557.0 | 21.6 | 548.0 | 23.8 | 604.0 | 13.0 | 330.0 | 51.1 | 1299 | 48000 | 110 |

## FEATURES

Stainless steel construction

DC startup power option

Light weight, compact design

## Direct heating of process coil

Temperature control based on gas temperature

Larger (S6000 and higher) models with dual temperature controllers

## BENEFITS

Suitable for outdoor installation with little to zero maintenance required
Allows heaters to be started without costly AC power installation, can be run off car batteries

Portable and easy to install. Can be relocated where heat is required with minimal tools

No costly heat exchange medium to fill, no risk of spills
Accurate temperature control ensuring consistent gas heating

Increased turn down ratio to cover wide spectrum of flow rate ranges

## APPLICATIONS

- Fuel Gas Heating
- Pilot Gas Heating
- CNG Decompression System (see Bruest LD Series Let Down Stations for more information)
- LPG Vaporization
- Glycol Heating


## ■ HOW TO BUILD A SYSTEM

Use this chart to identify the capacity and features required for your application. For assistance, please call the Bruest Engineering Team at 800-835-0557.


## Example Models

FF0613-101000
Freez-Fiter S6000 rated at 24,000 BTU with 12VDC startup voltage
Class I Division 1 Group D heater panels
3000 PSIG operating pressure , $1 / 2^{\prime \prime}$ process gas tubing
Dual Mertik temperature controller
Fisher 1301 high pressure regulator
Belgas low pressure regulators
16 foot explosion proof pigtail power cable

## FF1633-410000

Freez-Fiter S16000 rated at 48,000 BTU, 240VAC startup voltage Class I Division 1 Group D heater panels
2750 PSIG operating pressure, $3 / 4^{\prime \prime}$ process gas tubing
Dual Mertik temperature controller
Fisher 1301 and 912 regulators
No power cable
Natural gas fuel supply

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