Frontier

Inline Solvent/Chemical Heater

PRODUCT DATA SHEET

Optimum solution for heating solvents and IPA!

- Safely heat chemicals and solvents through indirect heat
- High-wattage, high-flow heater for demanding high purity applications
- Lighter, smaller and faster than cast solvent heaters
- Clean electropolished 316 stainless steel
- Standard resistive or optional self-limiting (PTC) heat source

- Up to 180C
- 3, 6, 9, 12, 18, 24, 36 kW
- 120 to 600 volts, single or three phase
- Up to 689 kPa
- UL823, UL499, CE, CSA22.2. Rated for Class I, Division 2 hazardous locations certified.

PROCESS TECHNOLOGY

ISO 9001:2015 WITH DESIGN CERTIFIED

FRONTIER DATA SHEET

Features & Values

- Indirect heat for safely heating chemicals and solvents in harsh environments.
- High-wattage, high-flow inline heater suitable for the most demanding applications.
- Replace cast solvent heaters used in the past with a compact, lighter and cleaner Frontier.
- Offers outstanding performance over a wide range of flow and temperature requirements. Flexible configurations for a wide variety of flow rates.
- Indirect heating provides an evenly heated surface and reduces surface temperatures and hot spots.
- Available with either resistance heat or PTC (self-limiting) technology as a heat source for enhanced safety.

Specifications

Wattages	3 kW to 36 kW
Voltages	120 volts to 600 volts, single or three phase.
Temperature Range	Up to 180º C.
Pressure Range	Up to 689 kPa.
Fluid Connections	12mm, 19mm, or 25mm. Custom connections available.
Safety Features	▫ Grounded construction ▫ Bimetallic TCO ▫ Insulated housing
Certifications	UL823, UL499, CE, CSA22.2. Rated for Class I, Division 2 hazardous locations certified.

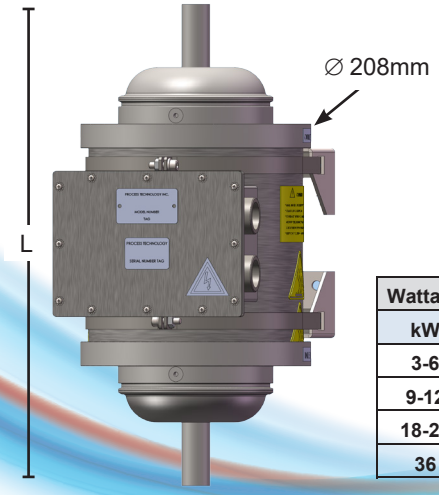
Model Number Breakdown

F R S 3 - 2 1 - SN75 - 1 R 1 1 L 2 - ##

Series	Element Type	Wetted Material	Wattage	Voltage	Phase	Plumbing Connections (316SS)
F = Frontier	R = Resistive style P = PTC style (coming)	S = 316SS (EP)	3 = 3000 6 = 6000 9 = 9000 12 = 12000 18 = 18000 24 = 24000 36 = 36000	1 = 208V 2 = 240V 3 = 380V 4 = 400V 5 = 415V 6 = 480V 7 = 440V 8 = 575V 9 = 220V 10 = 200V 11 = skip 12 = 120V 13 = skip 14 = 600V 15 = 230V	1 = single phase 3 = three phase	–SN50– = 1/2" Non Threaded Tube Stubs –SN75– = 3/4" Non Threaded Tube Stubs –SN100– = 1" Non Threaded Tube Stubs –V50– = 1/2" Swagelok VCR connections –V75– = 3/4" Swagelok VCR connections –SF50– = 1/2" Sanitary Flange –SF75– = 3/4" Sanitary Flange –SF100– = 1" Sanitary Flange

# of Sensors	Overtemp Sensor Type	# of TCO	TCO type	Flow Configuration	Overall Length	Options
1 3	K = K-type TC E = E-type TC H = 100-Ohm RTD (2-wire) R = 1000-Ohm RTD (2-wire)	1 3	1 = 232°C TCO. For applications up to 125°C 2 = 288°C TCO. For applications between 125-200°C. *3 = Non -Hermetically sealed 270°C TCO *4 = Non -Hermetically sealed 232°C TCO (for applications up to 125°C) *5 = Non -Hermetically sealed 288°C TCO (for applications up to 200°C) * Are not UL 823	L = Low flow range: (6*-30) lpm M = Medium flow range: (20-80) lpm H = High flow range: (60+) lpm	1 = 12.63" Overall Length 2 = 18.13" Overall Length 3 = 29.13" Overall Length 4 = 40.13" Overall Length	Blank = No Options X__# = With Wire (specify length in inches and conduit position (ex. X180A) NE = Non-electropolished ## = TBD as needed #### = Custom Clean req.

Dimensions



Wattage	L - Length	
kW	Inch	mm
3-6	12.63	321
9-12	18.13	461
18-24	29.13	740
36	40.13	1019

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