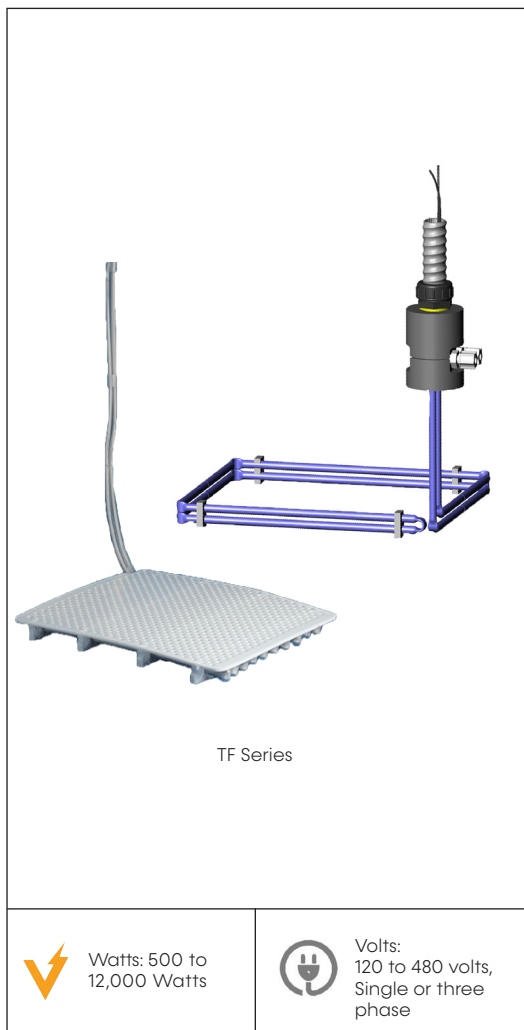




BOTTOM HEATER

Designed for the most demanding chemical applications and to provide years of trouble-free performance. High efficiency in a compact design, and an excellent alternative for replacing strip heaters on quartz tanks. TFB for bottom heater applications, and TFW for inside tank wall requirements. All wetted parts are fluoropolymer and compatible with virtually any chemistry for unlimited process options (Not to be used with flammable solutions). Low watt density design promotes process temperature uniformity. Single or three phase. Consult Customer Service for higher temperatures. 500-12000 watts, 120-480 volts.



FEATURES

Years of trouble-free performance in the most demanding chemical applications, such as semiconductor, FPD, MEMS, & biomedical industries.

PTFE heater element with 38mm (.015 in.) thick fluoropolymer sheath for safety & long service life.

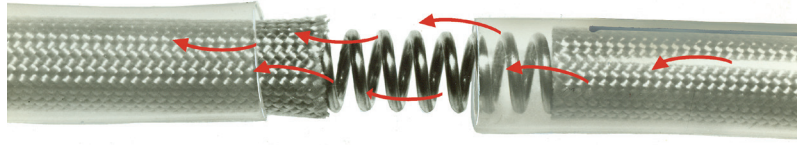
Patented "purged" element design ensures maximum element life by removing chemical permeation.

100% fluoropolymer wetted surfaces for virtually any non-flammable process solutions including HF & KOH.

Lower watt density design promotes process temperature uniformity.

TF Fluoropolymer Heater

PURGED HEATER ELEMENT CONSTRUCTION



1. Fluoropolymer Sleeve Heating Element

Resistance element sleeved in braided material for even coil separation. The entire element is given an outer sleeving of pretested & pre-extruded fluoropolymer tubing. THIS IS NOT A COATED PRODUCT.

2. N2 Purge System

Monitors heater integrity & prevents condensation or diffusion of corrosive gases by purging nitrogen or clean dry air through the tubing.

3. Over-Temperature Thermocouple

Protects the integrity of the heater. If an operator should leave the heater on while draining or aspirating a tank, when used in conjunction with a temperature control device, it will automatically shut off the heater when it is exposed to air.

SPECIFICATIONS

Wattages 500 Watts to 12,000 Watts

Voltages 120 volts to 480 volts,
Single or three phase

Options Available (Consult Factory)

Custom heater configurations
built to customer specifications.

76mm(.030 in.) thick sheath available for applications or for use with certain chemistries, such as nitride etch or HF.

PID temperature control module

Element gas purge flow regulator panel

Special configuration & lengths

Longer wire & conduit lengths

Bolt down feature

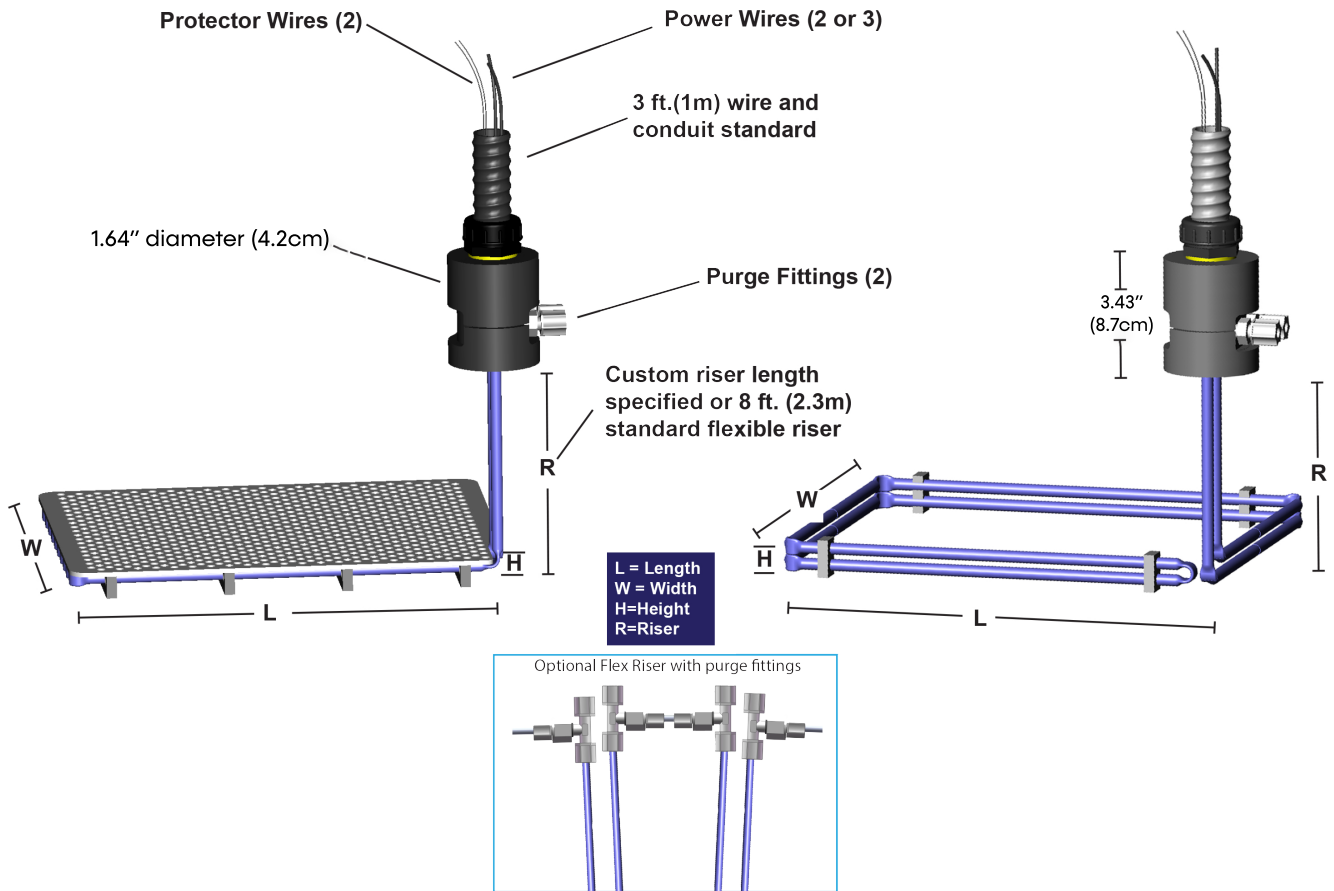
Lower Watt densities for highly viscous solutions & technical acids

Customized process & over-temperature control sensors

DIMENSIONS

TFB SERIES

TFW SERIES



ORDERING INFORMATION

TFB Bottom Heater consist of:
PTFE ensleeved heating element
PTFE guard
8 foot heater leads
Nitrogen purge connections
Overtemperature thermocouples
Optional "TCO" thermal cut off heater fuse

1	TFB	-	1000	-	XXX
Number of Layers	Model		Wattage		Plan Number
1	TFB	-	250-12,000	-	XXX (assigned)
2	TFW				
3					
4					