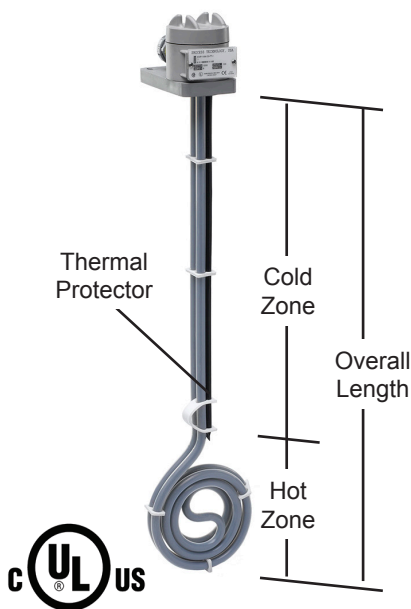




| HXF SERIES, LOW PROFILE<br>FLUOROPOLYMER (PTFE) HEATERS |       |          |                |          |                |                |                    |
|---|-------|----------|----------------|----------|----------------|----------------|--------------------|
| WATTS   | VOLTS | HOT ZONE | OVERALL LENGTH | DIA.     | MAX. COLD ZONE | MODEL NUMBER   | SHIP WGT. Lbs./kg) |
|   |       | In./(mm) | In./(mm)       | In./(mm) | In./(mm)       |                |                    |
| 500   | 120   | 6        | 14             | 5        | 36             | HXF.5105-14-** | 6                  |
|   | 240   | (152)    | (356)          | (127)    | (914)          | HXF.5205-14-** | (2.7)              |
| 1000  | 120   | 7        | 14             | 6        | 36             | HXF1106-14-**  | 7                  |
|   | 240   | (178)    | (356)          | (152)    | (914)          | HXF1206-14-**  | (3.2)              |
| 2000  | 120   | 9        | 17             | 8        | 35             | HXF2108-17-**  | 8                  |
|   | 240   | (229)    | (432)          | (203)    | (889)          | HXF2208-17-**  | (3.6)              |
|   | 480   |          |                |          |                | HXF2408-17-**  |                    |
| 3000  | 240   | 10       | 23             | 9        | 35             | HXF3209-23-**  | 13                 |
|   | 480   | (254)    | (584)          | (229)    | (889)          | HXF3409-23-**  | (5.9)              |
| 4000  | 240   | 12       | 29             | 11       | 35             | HXF4211-29-**  | 15                 |
|   | 480   | (305)    | (737)          | (279)    | (889)          | HXF4411-29-**  | (6.8)              |
| 5000  | 240   | 13       | 35             | 12       | 31             | HXF5212-35-**  | 18                 |
|   | 480   | (330)    | (889)          | (305)    | (787)          | HXF5412-35-**  | (8.2)              |
| 6000  | 240   | 14       | 40             | 13       | 25             | HXF6213-40-**  | 22                 |
|   | 480   | (356)    | (1016)         | (330)    | (635)          | HXF6413-40-**  | (10)               |

**SINGLE PHASE ONLY.** Guards recommended. This configuration is not recommended for electroless chemistry, phosphoric acid, or applications prone to sludge buildup.



## HXF Series Heater Features and Benefits

### SUPERIOR CHEMICAL RESISTANCE:

- ♦ Inert to most aqueous acid, alkaline, anodizing and pickling solutions up to 212°F (100°C).

### RUGGED CONSTRUCTION:

- ♦ Heavy wall fluoropolymer (PTFE) covered stainless steel element reduces permeation and reduces the need for gas purge systems. Guaranteed 100% pinhole free.

### OUTSTANDING PERFORMANCE:

- ♦ Low watt density design (10 watts/square inch (1.5w/cm<sup>2</sup>) uses minimal space and ensure long service life.

### CORROSION RESISTANT HEAD:

- ♦ Vapor resistant, flame retardant polypropylene terminal enclosure with 3 ft (.9m) flexible PVC liquid tight conduit.

### SAFETY FEATURES:

- ♦ Grounded internal metal element.
- ♦ Thermal protector built in. Replaceable P1 protector standard for solutions up to 180°F(82°C).
- ♦ Non-floating construction.

**CERTIFICATIONS:** cULus listed and CE compliant (except 600 volts).

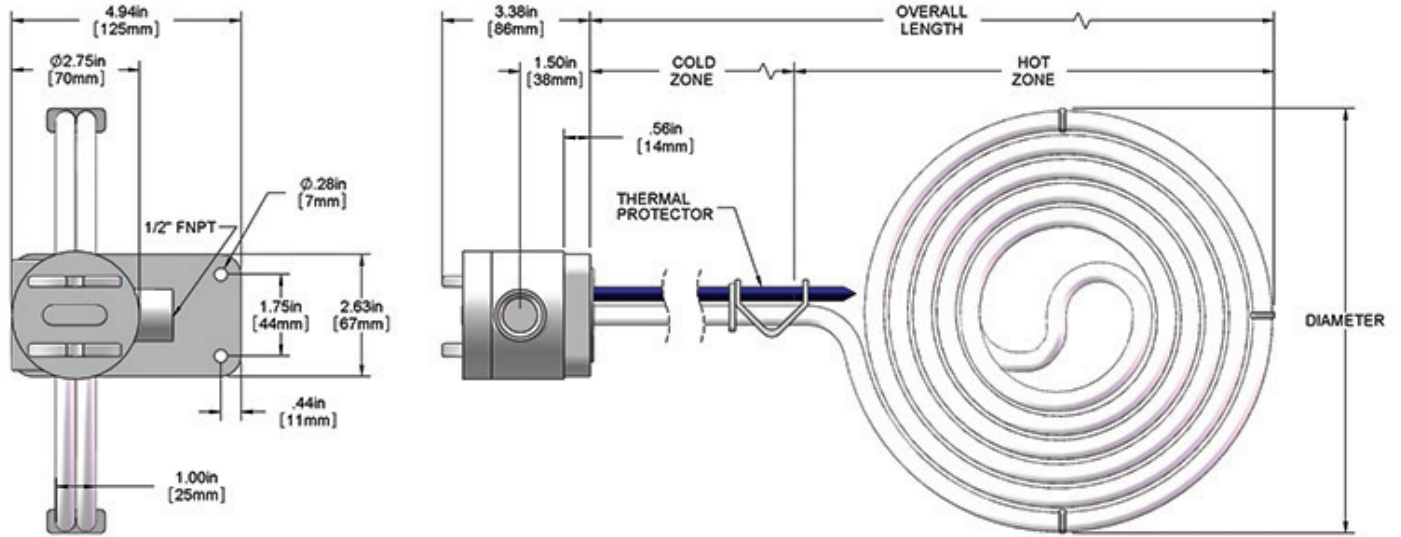
**SIZES:** 500 watts to 6,000 watts.

**VOLTAGES:** 120 to 600 volts. (600 volts on 4500 watts or lower only)

### OPTIONS AVAILABLE (consult factory):

- ♦ Resettable thermal protectors:
  - P2: For solutions up to 180°F(82°C)
  - P8: Type-J thermocouple for solutions up to 210°F(99°C).
  - P3: Type-J thermocouple for solutions up to 250°F(121°C).
- ♦ Polypropylene guards: Recommended for applications up to 180°F(82°C) (sold separately).
- ♦ Fluoropolymer (PTFE) guards: Recommended for chromic acid and solutions over 180°F(82°C) (sold separately).
- ♦ Special configurations and lengths.
- ♦ Longer wire and conduit lengths.
- ♦ Flexible continuous fluoropolymer leads (P3 protector only).
- ♦ Lower watt densities for highly viscous solutions and technical acids.
- ♦ Temperature and level controls sized to match the heater. (sold separately)

## DIMENSIONS



## LOW PROFILE FLUOROPOLYMER (PTFE) HEATER ORDERING INFORMATION

| Series                                  | Wattage                                  | Voltage                    | Diameter (in.)                                   | Overall Length (in.) | Type of Protector  | Wire and Conduit Length      |  |           |                           |     |                            |                             |  |  |  |     |                           |     |                           |     |                           |   |
|---|--|----------------------------|--|----------------------|--|------------------------------|--|-----------|---------------------------|-----|----------------------------|-----------------------------|--|--|--|-----|---------------------------|-----|---------------------------|-----|---------------------------|---|
| HXF = PTFE<br>HSF = 304 Stainless Steel | .5 = 500                                 | 1 = 120                    | 05 = .5kW  | -14 = .5kW           | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;"><b>Replaceable Protector</b></td> </tr> <tr> <td style="width: 30px;">-P1 (std)</td> <td>for solutions up to 190°F</td> </tr> <tr> <td>-P4</td> <td>for 190° - 220°F solutions</td> </tr> <tr> <td colspan="2" style="text-align: center;"><b>Resettable Protector</b></td> </tr> <tr> <td colspan="2" style="text-align: center;">(additional control components required)</td> </tr> <tr> <td>-P2</td> <td>for solutions up to 190°F</td> </tr> <tr> <td>-P8</td> <td>for solutions up to 210°F</td> </tr> <tr> <td>-P3</td> <td>for solutions up to 250°F</td> </tr> </table> | <b>Replaceable Protector</b> |  | -P1 (std) | for solutions up to 190°F | -P4 | for 190° - 220°F solutions | <b>Resettable Protector</b> |  | (additional control components required) |  | -P2 | for solutions up to 190°F | -P8 | for solutions up to 210°F | -P3 | for solutions up to 250°F | 36" length standard (no designator)<br>specify variations from standard<br>Ex: -X84 = 84" |
|   | <b>Replaceable Protector</b>             |                            |  |                      |  |                              |  |           |                           |     |                            |                             |  |  |  |     |                           |     |                           |     |                           |   |
|   | -P1 (std)                                | for solutions up to 190°F  |  |                      |  |                              |  |           |                           |     |                            |                             |  |  |  |     |                           |     |                           |     |                           |   |
|   | -P4                                      | for 190° - 220°F solutions |  |                      |  |                              |  |           |                           |     |                            |                             |  |  |  |     |                           |     |                           |     |                           |   |
|   | <b>Resettable Protector</b>              |                            |  |                      |  |                              |  |           |                           |     |                            |                             |  |  |  |     |                           |     |                           |     |                           |   |
|   | (additional control components required) |                            |  |                      |  |                              |  |           |                           |     |                            |                             |  |  |  |     |                           |     |                           |     |                           |   |
|   | -P2                                      | for solutions up to 190°F  |  |                      |  |                              |  |           |                           |     |                            |                             |  |  |  |     |                           |     |                           |     |                           |   |
|   | -P8                                      | for solutions up to 210°F  |  |                      |  |                              |  |           |                           |     |                            |                             |  |  |  |     |                           |     |                           |     |                           |   |
|   | -P3                                      | for solutions up to 250°F  |  |                      |  |                              |  |           |                           |     |                            |                             |  |  |  |     |                           |     |                           |     |                           |   |
|   | 1 = 1000                                 | 2 = 240                    | 06 = 1kW   | -14 = 1kW            |  |                              |  |           |                           |     |                            |                             |  |  |  |     |                           |     |                           |     |                           |   |
|   | 2 = 2000                                 | 3 = 380                    | 08 = 2kW   | -17 = 2kW            |  |                              |  |           |                           |     |                            |                             |  |  |  |     |                           |     |                           |     |                           |   |
|   | 3 = 3000                                 | 4 = 480                    | 09 = 3kW   | -23 = 3kW            |  |                              |  |           |                           |     |                            |                             |  |  |  |     |                           |     |                           |     |                           |   |
|   | 4 = 4000                                 | 5 = 415                    | 11 = 4kW   | -29 = 4kW            |  |                              |  |           |                           |     |                            |                             |  |  |  |     |                           |     |                           |     |                           |   |
| 5 = 5000                                | 6 = 600                                  | 12 = 5kW                   | -35 = 5kW  |                      |  |                              |  |           |                           |     |                            |                             |  |  |  |     |                           |     |                           |     |                           |   |
| 6 = 6000                                | 7 = 400                                  | 13 = 6kW                   | -40 = 6kW  |                      |  |                              |  |           |                           |     |                            |                             |  |  |  |     |                           |     |                           |     |                           |   |
|   | 8 = 208                                  |                            | specify custom lengths, not to exceed tank depth |                      |  |                              |  |           |                           |     |                            |                             |  |  |  |     |                           |     |                           |     |                           |   |
|   | 9 = 220                                  |                            |  |                      |  |                              |  |           |                           |     |                            |                             |  |  |  |     |                           |     |                           |     |                           |   |
|   | 0 = 200                                  |                            |  |                      |  |                              |  |           |                           |     |                            |                             |  |  |  |     |                           |     |                           |     |                           |   |

### ORDERING EXAMPLE:

HXF5412-35-P1

Low profile fluoropolymer heater, 5000 watts, 480 volt, single phase, 12" diameter hot zone, 35" overall length, P1 thermal protector.

