

P, F, S, and T SERIES, METAL HEATERS									
WATTS	VOLTS	HOT ZONE	OVERALL LENGTH	STEEL	304 SS	316 SS	TITANIUM	SHIP WGT. Lbs./kg)	
		In./mm)	In./mm)						
1000	120	6	11	P1111-**	F1111-**	S1111-**	T1111-**	8	
	240	(152)	(279)	P1211-**	F1211-**	S1211-**	T1211-**	(3.6)	
2000	240	10	17	P2217-**	F2217-**	S2217-**	T2217-**	10	
	480	(254)	(432)	P2417-**	F2417-**	S2417-**	T2417-**	(4.5)	
3000	240	16	23	P3223-**	F3223-**	S3223-**	T3223-**	12	
	480	(406)	(584)	P3423-**	F3423-**	S3423-**	T3423-**	(5.4)	
4000	240	20	29	P4229-**	F4229-**	S4229-**	T4229-**	13	
	480	(508)	(737)	P4429-**	F4429-**	S4429-**	T4429-**	(5.9)	
5000	240	25	35	P5235-**	F5235-**	S5235-**	T5235-**	16	
	480	(635)	(889)	P5435-**	F5435-**	S5435-**	T5435-**	(7.3)	
6000	240	30	40	P6240-**	F6240-**	S6240-**	T6240-**	18	
	480	(762)	(1016)	P6440-**	F6440-**	S6440-**	T6440-**	(8.2)	
8000	240	37	47	P8247-**	F8247-**	S8247-**	T8247-**	23	
	480	(940)	(1194)	P8447-**	F8447-**	S8447-**	T8447-**	(10.4)	
9000	240	44	54	P9254-**	F9254-**	S9254-**	T9254-**	24	
	480	(1118)	(1372)	P9454-**	F9454-**	S9454-**	T9454-**	(10.9)	
10000	240	49	59	P10259-**	F10259-**	S10259-**	T10259-**	25	
	480	(1245)	(1499)	P10459-**	F10459-**	S10459-**	T10459-**	(11.3)	
12000	240	58	68	P12268-**	F12268-**	S12268-**	T12268-**	29	
	480	(1473)	(1727)	P12468-**	F12468-**	S12468-**	T12468-**	(13.2)	

Three phases available as option. Add "-3" before thermal protector designator.

P, F, S, and T Series, Heater Features and Benefits

SUPERIOR CHEMICAL RESISTANCE:

- ◆ For use in most aqueous alkaline solutions, plating and phosphate tanks. Check solution recommendation chart with your chemical supplier for proper sheath material selection.

RUGGED CONSTRUCTION:

- ◆ Heavy wall metal sheaths available in: steel, 304 stainless steel, 316 stainless steel, titanium.

OUTSTANDING PERFORMANCE:

- ◆ Watt densities up to 35 watts per square inch (5.4 w/cm²) 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 construction.
- ◆ Thermal protector built in. Replaceable PI protector standard for solutions up to 180°F (82°C).
- ◆ Non-floating construction.

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

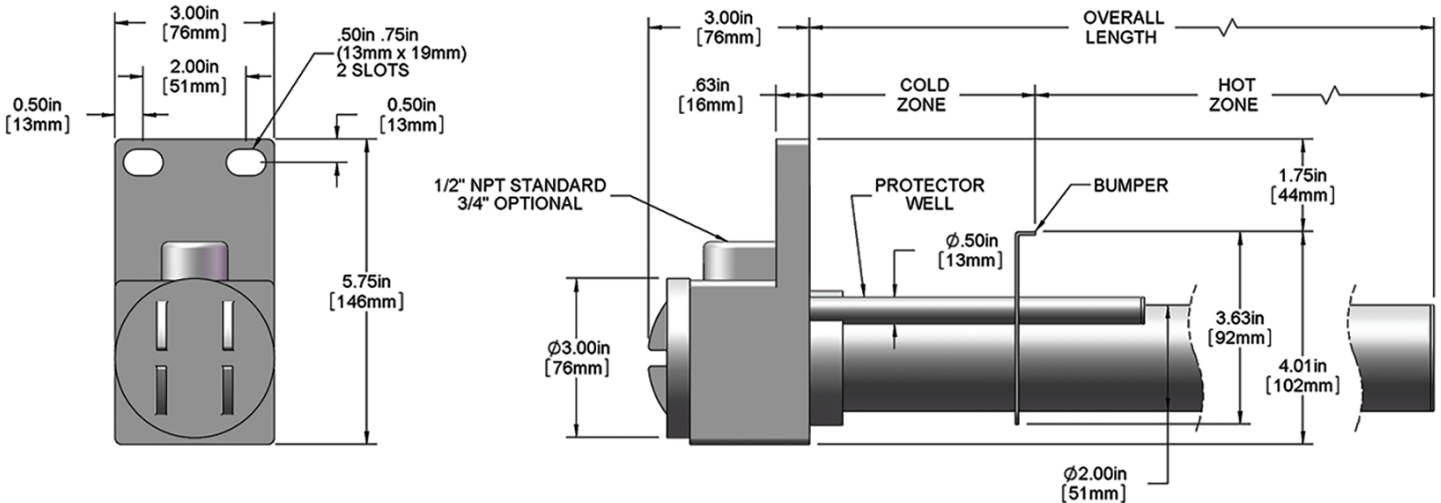
SIZES: 1,000 watts to 12,000 watts.

VOLTAGES: 120 to 600 volts.

OPTIONS AVAILABLE (consult factory):

- ◆ Replaceable thermal protector:
 - P4: for solutions up to 230°F(110°C)
 - P5: for solutions up to 300°F(149°C)
- ◆ Resettable thermal protector:
 - P2: for solutions up to 180°F(82°C)
 - P6: for solutions up to 230F(110°C)
 - P7: for solutions up to 300°F(149°C)
- ◆ Special configurations and lengths.
- ◆ Longer wire and conduit lengths.
- ◆ Lower watt densities for highly viscous solutions.
- ◆ All metal welded junction box.
- ◆ Temperature and level controls sized to match the heater (sold separately).

DIMENSIONS



SINGLE TUBE METAL OVER THE SIDE HEATER ORDERING INFORMATION

Series	Wattage	Voltage	Length (in.)	Options	Type of Protector	Wire and Conduit Length																		
	1 = 1000 2 = 2000 3 = 3000 4 = 4000 5 = 5000 6 = 6000 8 = 8000 9 = 9000 10 = 10000 12 = 12000	1 = 120 2 = 240 3 = 380 4 = 480 5 = 415 6 = 600 7 = 400 8 = 208 9 = 220 0 = 200	11 = 1kW 17 = 2kW 23 = 3kW 29 = 4kW 35 = 5kW 40 = 6kW 47 = 8kW 54 = 9kW 59 = 10kW 68 = 12kW specify custom lengths, not to exceed tank depth			no designator = 36" length standard specify variations from standard Ex: -X84 = 84"																		
	P = steel F = 304 stainless steel S = 316 stainless steel T = titanium				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Replaceable Protector</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">P1 (std)</td> <td>for solutions up to 180°F</td> </tr> <tr> <td style="text-align: center;">P4</td> <td>for solutions up to 230°F</td> </tr> <tr> <td style="text-align: center;">P5</td> <td>for solutions up to 300°F</td> </tr> <tr> <th colspan="2" style="text-align: center;">Resettable Protector</th> </tr> <tr> <td colspan="2" style="text-align: center;">(additional control components required)</td> </tr> <tr> <td style="text-align: center;">P2</td> <td>for solutions up to 180°F</td> </tr> <tr> <td style="text-align: center;">P6</td> <td>for solutions up to 230°F</td> </tr> <tr> <td style="text-align: center;">P7</td> <td>for solutions up to 300°F</td> </tr> </tbody> </table>	Replaceable Protector		P1 (std)	for solutions up to 180°F	P4	for solutions up to 230°F	P5	for solutions up to 300°F	Resettable Protector		(additional control components required)		P2	for solutions up to 180°F	P6	for solutions up to 230°F	P7	for solutions up to 300°F	
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	-3 = three phase power																							

ORDERING EXAMPLE:

T12468-P4-X84

Titanium, 12,000 watts, 480 volt, 68" overall length, P4 protector, 84" wire and conduit.

