

3P, 3F, 3S, and 3T SERIES, TRIPLE METAL HEATERS									
WATTS	VOLTS	HOT ZONE	OVERALL LENGTH	STEEL		304 SS	316 SS	TITANIUM	SHIP WGT.
		In./.(mm)	In./.(mm)					Lbs./.(kg)	
3000	240	6	11	3P3211-*.**	3F3211-*.**	3S3211-*.**	3T3211-*.**	21	
	480	(152)	(279)	3P3411-*.**	3F3411-*.**	3S3411-*.**	3T3411-*.**	(9.5)	
6000	240	10	17	3P6217-*.**	3F6217-*.**	3S6217-*.**	3T6217-*.**	30	
	480	(254)	(432)	3P6417-*.**	3F6417-*.**	3S6417-*.**	3T6417-*.**	(13.6)	
9000	240	16	23	3P9223-*.**	3F9223-*.**	3S9223-*.**	3T9223-*.**	33	
	480	(406)	(584)	3P9423-*.**	3F9423-*.**	3S9423-*.**	3T9423-*.**	(15)	
12000	240	20	29	3P12229-*.**	3F12229-*.**	3S12229-*.**	3T12229-*.**	39	
	480	(508)	(737)	3P12429-*.**	3F12429-*.**	3S12429-*.**	3T12429-*.**	(17.7)	
15000	240	25	35	3P15235-*.**	3F15235-*.**	3S15235-*.**	3T15235-*.**	45	
	480	(635)	(889)	3P15435-*.**	3F15435-*.**	3S15435-*.**	3T15435-*.**	(20.4)	
18000	240	30	40	3P18240-*.**	3F18240-*.**	3S18240-*.**	3T18240-*.**	51	
	480	(762)	(1016)	3P18440-*.**	3F18440-*.**	3S18440-*.**	3T18440-*.**	(23.1)	
24000	240	37	47	3P24247-*.**	3F24247-*.**	3S24247-*.**	3T24247-*.**	63	
	480	(940)	(1194)	3P24447-*.**	3F24447-*.**	3S24447-*.**	3T24447-*.**	(28.6)	
27000	240	44	54	3P27254-*.**	3F27254-*.**	3S27254-*.**	3T27254-*.**	69	
	480	(1118)	(1372)	3P27454-*.**	3F27454-*.**	3S27454-*.**	3T27454-*.**	(31.3)	
30000	240	49	59	3P30259-*.**	3F30259-*.**	3S30259-*.**	3T30259-*.**	75	
	480	(1245)	(1499)	3P30459-*.**	3F30459-*.**	3S30459-*.**	3T30459-*.**	(34)	
36000	240	58	68	3P36268-*.**	3F36268-*.**	3S36268-*.**	3T36268-*.**	84	
	480	(1473)	(1727)	3P36468-*.**	3F36468-*.**	3S36468-*.**	3T36468-*.**	(38.1)	

Standard units consist of single head with single conduit. Add "-1" for single phase or "-3" for three phase.



## 3P, 3F, 3S, and 3T Series Heater Features and Benefits

### SUPERIOR CHEMICAL RESISTANCE:

- ◆ For use in most aqueous alkaline solutions, and 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/cm<sup>2</sup>) 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 protectors 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:** 3,000 watts to 36,000 watts.

### VOLTAGES:

- ◆ 200 to 600 volts.

### OPTIONS AVAILABLE (consult factory):

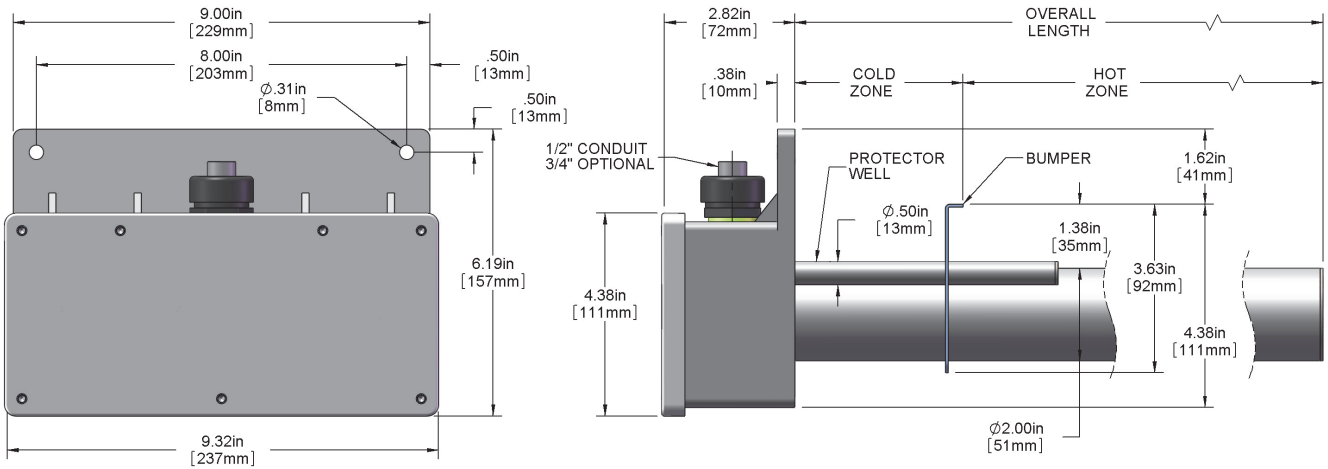
- ◆ Replaceable thermal protectors:
  - P4: for solutions up to 230°F(110°C)
  - P5: for solutions up to 300°F(149°C)

Resettable thermal protectors:

- P2: for solutions up to 180°F(82°C)
- P6: for solutions up to 230°F(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.
- ◆ Temperature and level controls sized to match the heater (sold separately).
- ◆ All metal welded junction box.

## DIMENSIONS



## TRIPLE TUBE METAL OVER THE SIDE HEATER ORDERING INFORMATION

Series	Wattage	Voltage	Length (in.)	Options	Type of Protector	Wire and Conduit Length																		
	3 = 3000 6 = 6000 9 = 9000 12 = 12000 15 = 15000 18 = 18000 24 = 24000 27 = 27000 30 = 30000 36 = 36000	1 = 120 2 = 240 3 = 380 4 = 480 5 = 415 6 = 600 7 = 400 8 = 208 9 = 220 0 = 200	11 = 3kW 17 = 6kW 23 = 9kW 29 = 12kW 35 = 15kW 40 = 18kW 47 = 24kW 54 = 27kW 59 = 30kW 68 = 36kW specify custom lengths, not to exceed tank depth			no designator = 36" length standard specify variations from standard Ex: -X84 = 84"																		
	3P = steel 3F = 304 stainless steel 3S = 316 Stainless Steel 3T = 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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	-X = any special configuration not called out in the part number (specify in clear text) -3 = three phase power with single head and conduit -1 = single phase power with single head and conduit																							

### ORDERING EXAMPLE:

3S12429-3-P6-X72

Triple tube, 316 SS, 12,000 watts, 480 volt, 29" long, 3 phase, P6 protector, 72" wire and conduit.

