

3P,3F,3S and 3T Series

PRODUCT DATA SHEET

Metal Heater

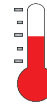
Durable, efficient chemical heater

For use in most aqueous alkaline solutions

Low watt density design saves space & ensures long life

Vapor resistant, flame retardant polypropylene terminal enclosure

Grounded construction and built in thermal protector



Up to 82°C (180°F)



3,000 watts to 36,000 watts



200 to 600 Volts
600V on 4,500W or lower only



Steel, 304 stainless steel, 316 stainless steel and titanium.



cULus (except steel and 600 volts)



3P, 3F, 3S, and 3T SERIES, TRIPLE METAL HEATERS

WATTS	VOLTS	HOT ZONE In./(mm)	OVERALL LENGTH In./(mm)	STEEL	304 SS	316 SS	TITANIUM	SHIP WGT. 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)

Three phase standard

PROCESS TECHNOLOGY

ISO 9001:2015
WITH DESIGN CERTIFIED

Features & Values

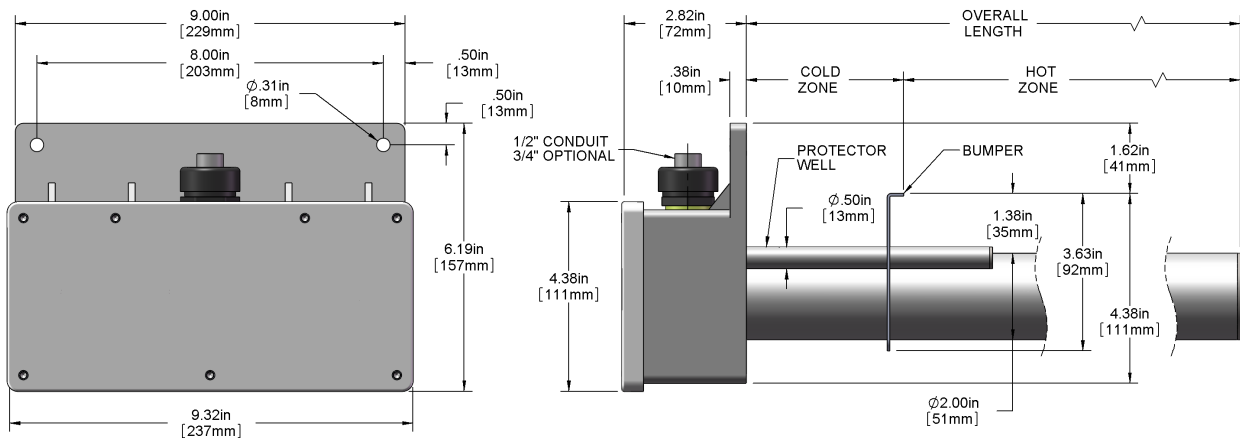
- For use in most aqueous alkaline solutions, plating and phosphate tanks. Check solution recommendation chart with your chemical supplier for proper sheath material selection
- Heavy wall metal sheaths available in: steel, 304 stainless steel, 316 stainless steel, titanium
- Watt densities up to 35 watts per square inch (5.4 w/cm²) ensure long service life
- Vapor-resistant, flame retardant polypropylene terminal enclosure with 3 ft (.9m) flexible PVC liquid tight conduit.
- Temperature and level controls sized to match the heater
- Lower watt densities for highly viscous solutions

NOTE: Intended for vertical installation only.

Specifications

Wattages	3,000 to 36,000 Watts
Voltages	200 to 600 Volts (600V on 4,500W or lower only)
Temperature Range	Up to 180°C (82°F)
Options	<ul style="list-style-type: none"> ▫ Special configurations & lengths ▫ Longer wire and conduit lengths ▫ All metal welded junction box
Safety Features	<ul style="list-style-type: none"> ▫ Grounded construction ▫ Thermal protector built in. Replaceable PI protector standard for solutions up to 180°F (82°C). ▫ See chart below for protector options
Certifications	cULus compliant (except 600V)

Dimensions



Model Number Breakdown

Series	Wattage	Voltage	Overall Length	Phase	Type of Protector	Wire & Conduit Length
3P = Steel	3 = 3000	1 = 120	11 = 3kW	-3 = 3 phase (std)	Replaceable Fuse	36" length standard (no designator)
3F = 304 stainless steel	6 = 6000	2 = 240	17 = 6kW	-1 = single phase	P1 (std) = solutions up to 180°F	Specify variations from standard Ex: -X84 = 84"
3S = 316 stainless steel	9 = 9000	3 = 380	23 = 9kW		P4 = solutions up to 230°F	
3T = Titanium	12 = 12000	4 = 480	29 = 12kW		P5 = solutions up to 300°F	
	15 = 15000	5 = 415	35 = 15kW		Resettable Fuse	
	18 = 18000	6 = 600	40 = 18kW		P2 = solutions up to 180°F	
	24 = 24000	7 = 400	47 = 24kW		P6 = solutions up to 230°F	
	27 = 27000	8 = 208	54 = 27kW		P7 = solutions up to 300°F	
	30 = 30000	9 = 220	59 = 30kW			
	36 = 36000	0 = 200	60 = 68kW			

