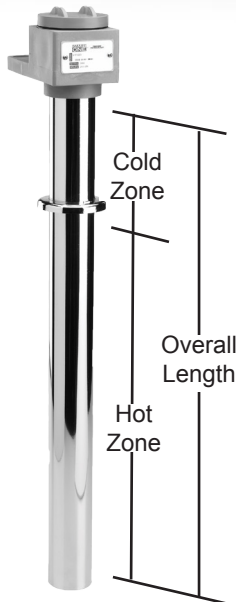




# SMART ONE



S1 SERIES, METAL OVER-THE-SIDE HEATERS							
WATTS	VOLTS	HOT ZONE In./(mm)	OVERALL LENGTH In./(mm)	304 STAINLESS	316 STAINLESS	TITANIUM	SHIP WEIGHT Lbs./(kg)
				MODEL NUMBER	MODEL NUMBER	MODEL NUMBER	
1000	100-120	7	11	S1F1111	S1S1111	S1T1111	7
	200-240	(178)	(279)	S1F1211	S1S1211	S1T1211	(3.2)
2000	100-120	13	17	S1F2117	S1S2117	S1T2117	10
	200-240	(330)	(432)	S1F2217	S1S2217	S1T2217	(4.5)
3000	200-240	18 (457)	23 (584)	S1F3223	S1S3223	S1T3223	11 (5)
4000	200-240	24 (610)	29 (737)	S1F4229	S1S4229	S1T4229	13 (5.9)
5000	200-240	30 (762)	35 (889)	S1F5235	S1S5235	S1T5235	15 (6.8)
6000	200-240	35 (889)	41 (1041)	S1F6241	S1S6241	S1T6241	17 (7.7)
1600	380-480	13 (330)	17 (432)	S1F1.6417	S1S1.6417	S1T1.6417	10 (4.5)
2400	380-480	18 (457)	23 (584)	S1F2.4423	S1S2.4423	S1T2.4423	11 (5)
3200	380-480	24 (610)	29 (737)	S1F3.2429	S1S3.2429	S1T3.2429	13 (5.9)
4000	380-480	30 (762)	35 (889)	S1F4435	S1S4435	S1T4435	15 (6.8)
4800	380-480	35 (889)	41 (1041)	S1F4.8441	S1S4.8441	S1T4.8441	17 (7.7)
5600	380-480	41 (1041)	47 (1194)	S1F5.6447	S1S5.6447	S1T5.6447	23 (10.4)

Single phase standard, add -3 for three phase.

## S1 Series, Metal Over the Side Heater Features and Benefits:

### LONG LIFE ELEMENT:

- ◆ Patented PTC heater element lasts longer than conventional heaters.
- ◆ Will not burn out due to scale or sludge buildup or if run in air.

### SAFE DESIGN:

- ◆ Heater self limits its maximum operating temperature to 482°F (250°C). This is lower than the ignition point of most plastics.
- ◆ Will not melt tanks when a 1/2" (12mm) minimum distance is maintained.
- ◆ Overtemperature protection devices are not required.
- ◆ Safety is built-in, not added on.
- ◆ Metal-grounded (earth ground), non-floating construction.

### OUTSTANDING PERFORMANCE:

- ◆ Watt densities up to 26 watts per square inch (4 w/cm<sup>2</sup>) ensure long service life.
- ◆ Auto-stabilizing solid state element prevents hot spots and ensures uniform heating.
- ◆ Heater derates itself in highly viscous and high temperature solutions. Consult factory for sizing assistance.

### CORROSION RESISTANT HEAD:

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

### CHEMICALLY RESISTANT:

For use in most aqueous alkaline, electroplating and rinse solutions. Check solution recommendation chart with your chemical supplier for proper sheath material selection.

- ◆ 304 stainless steel.
- ◆ 316 stainless steel.
- ◆ Titanium.

**CERTIFICATIONS:** cULus listed and CE compliant.

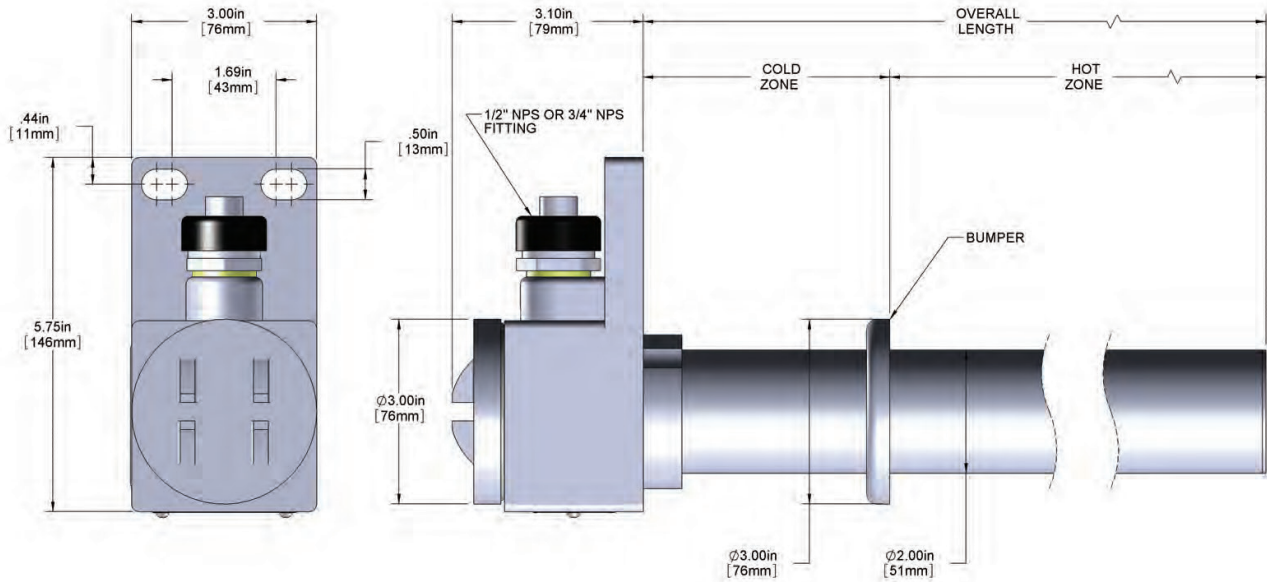
**SIZES:** 1,000 watts to 6,000 watts.

**VOLTAGES:** 120 volt, 200-240 volt, and 380-480 volt. Single or three phase power.

### OPTIONS AVAILABLE (consult factory):

- ◆ Special configurations and lengths.
- ◆ Longer wire and conduit lengths.
- ◆ All metal welded junction box.
- ◆ Temperature and level controls sized to match the heater (sold separately).

## DIMENSIONS



### SINGLE TUBE S1, OVER THE SIDE HEATER ORDERING INFORMATION

Series	Wattage	Voltage	Overall Length	Phase Options	Wire and Conduit Length
S1F = 304 stainless steel S1S = 316 stainless steel S1T = titanium	<b>120-240V:</b> 1 = 1000 2 = 2000 3 = 3000 4 = 4000 6 = 6000 <b>380-480V:</b> 1.6 = 1600 2.4 = 2400 3.2 = 3200 4 = 4000 4.8 = 4800 5.6 = 5600	1 = 120 2 = 200-240 4 = 380-480	<b>120-240V:</b> 11 = 1kW 17 = 2kW 23 = 3kW 29 = 4kW 35 = 5kW 41 = 6kW <b>380-480V:</b> 17 = 1.6kW 23 = 2.4kW 29 = 3.2kW 35 = 4kW 41 = 4.8kW 47 = 5.6kW (custom lengths available)	no designator = single phase -3 = three phase	no designator = 36" (1m) length standard specify variations from standard Ex: -X240 = 240" (6m)

#### **ORDERING EXAMPLE:**

S1T1111

Titanium, 1,000 watts, 120 volt, 11" overall length, single phase.

