



SMART ONE



S1L SERIES, METAL BOTTOM HEATERS							
WATTS	VOLTS	HORI- ZONTAL LENGTH	VER- TICAL LENGTH	304 STAINLESS MODEL NUMBER	316 STAINLESS MODEL NUMBER	TITANIUM MODEL NUMBER	SHIP WEIGHT
		In./(mm)	In./(mm)				Lbs./kg
1000	120	13 (330)	15 (381)	S1LF1113-R**	S1LS1113-R**	S1LT1113-R**	10 (4.5)
2000	120	17 (432)	19 (483)	S1LF2117-R**	S1LS2117-R**	S1LT2117-R**	11 (5)
	200-240			S1LF2217-R**	S1LS2217-R**	S1LT2217-R**	
3000	200-240	23 (584)	25 (635)	S1LF3223-R**	S1LS3223-R**	S1LT3223-R**	12 (5.4)
4000	200-240	29 (737)	25 (635)	S1LF4229-R**	S1LS4229-R**	S1LT4229-R**	13 (5.9)
5000	200-240	35 (889)	37 (940)	S1LF5235-R**	S1LS5235-R**	S1LT5235-R**	14 (6.4)
6000	200-240	41 (1041)	50 (1270)	S1LF6241-R**	S1LS6241-R**	S1LT6241-R**	15 (6.8)
1600	380-480	17 (432)	19 (483)	S1LF1.6417-R**	S1LS1.6417-R**	S1LT1.6417-R**	11 (5)
2400	380-480	23 (584)	25 (635)	S1LF2.4423-R**	S1LS2.4423-R**	S1LT2.4423-R**	12 (5.4)
3200	380-480	29 (737)	25 (635)	S1LF3.2429-R**	S1LS3.2429-R**	S1LT3.2429-R**	13 (5.9)
4000	380-480	35 (889)	37 (940)	S1LF4.4435-R**	S1LS4.4435-R**	S1LT4.4435-R**	14 (6.4)
4800	380-480	41 (1041)	50 (1270)	S1LF4.8441-R**	S1LS4.8441-R**	S1LT4.8441-R**	15 (6.8)
5600	380-480	47 (1194)	50 (1270)	S1LF5.6447-R**	S1LS5.6447-R**	S1LT5.6447-R**	18 (8.2)

Single phase standard, add -3 for three phase.

S1L Series, Metal L Shaped 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 518°F (270°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/cm²) 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.

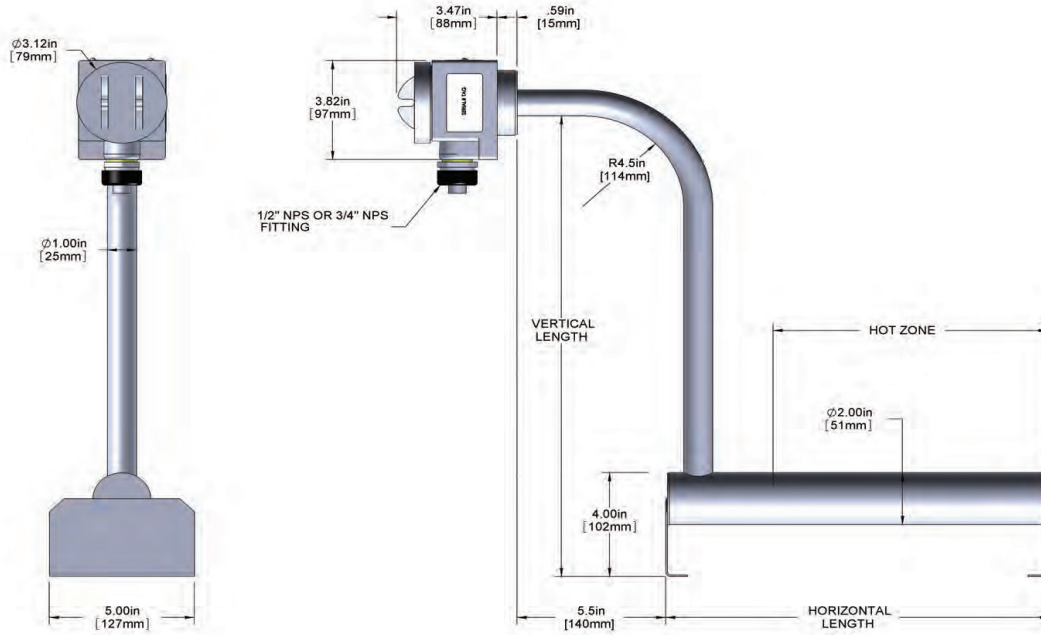
SIZES: 1,000 watts to 6,000 watts.

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 S1L, L SHAPED HEATER ORDERING INFORMATION

Series	Wattage	Voltage	Horizontal Length	Vertical Length	Phase Options	Riser Options	Wire and Conduit Length
S1LF = 304 stainless steel S1LS = 316 stainless steel S1LT = titanium	120-240V: 1 = 1000 2 = 2000 3 = 3000 4 = 4000 6 = 6000 380-480V: 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	120-240V: 13 = 1kW 17 = 2kW 23 = 3kW 29 = 4kW 35 = 5kW 41 = 6kW 380-480V: 17 = 1.6kW 23 = 2.4kW 29 = 3.2kW 35 = 4kW 41 = 4.8kW 47 = 5.6kW	120-240V: -R15 = 1kW -R19 = 2kW -R25 = 3kW -R25 = 4kW -R37 = 5kW -R50 = 6kW 380-480V: -R19 = 1.6kW -R25 = 2.4kW -R25 = 3.2kW -R37 = 4kW -R50 = 4.8kW -R50 = 5.6kW (custom lengths available)	no designator = single phase -3 = three phase no designator = 90° horizontal bend (standard) -S = straight riser no designator = 36" (1m) length standard specify variations from standard Ex: -X240 = 240" (6m)		

ORDERING EXAMPLE:

S1LS3223-R15

316 stainless steel, 3,000 watts, 240 volt, 33" horizontal length, 15" riser, three phase.

