

# FL Series Flanged Heater

Durable, efficient chemical heater with a variety of options for use in most aqueous alkaline solutions, plating and phosphate tanks.







### FEATURES

- Vapor resistant, flame retardant polypropylene terminal.
- Heavy wall metal sheaths available in 316 stainless steel, carbon steel, incoloy and titanium. 316 Stainless Steel standard with metal explosion resistant M2 terminal enclosure.
- Vapor-resistant, painted metal enclosures.
- Grounded construction and built-in P1 thermal protector for solutions up to 180°F (82°C).
- Temperature and level controls sized to match the heater.
- Lower watt densities for highly viscous solutions and long service life (up to 40 watts per square inch - 6.2w/cm<sup>2</sup>).
- 3" and 5" fluoropolymer flanged heaters.

### OPTIONS

- Resettable thermal protectors.
- Custom configurations and lengths.
- Custom wire and conduit lengths.

 Temperature: Up to 180°F	 240 to 600 volts
 Watts: 3000 to 72,000	 CE certified (except steel and 600 volts)

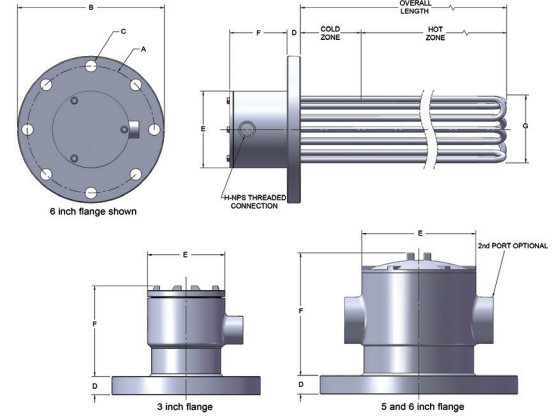
# FL Series Flanged Heater

## SPECIFICATIONS

Wattages	3000 Watts to 72,000 Watts
Voltages	240 volts to 600 volts
Temperature Range	Up to 180°F (82°C)
Options	Special configurations & lengths  Resettable thermal protectors Metric flanges
Safety Features	Grounded construction Thermal protector built in. Replaceable PI protector standard for solutions up to 180°F (82°C).

## DIMENSIONS

NOTE: Gasket and bolts not provided. Intended for horizontal installation only.



## 3", 5" AND 6" FLANGE SIZES

3" 150 LBS. SS FLANGE 3 STAINLESS STEEL ELEMENTS					5" 150 LBS. SS FLANGE 6 STAINLESS STEEL ELEMENTS					6" 150 LBS. SS FLANGE 12 STAINLESS STEEL ELEMENTS				
WATTS	VOLTS	OVERALL LENGTH in/(mm)	MODEL NUMBER	SHIP WGT. lbs/(kg)	WATTS	VOLTS	OVERALL LENGTH in/(mm)	MODEL NUMBER	SHIP WGT. lbs/(kg)	WATTS	VOLTS	OVERALL LENGTH in/(mm)	MODEL NUMBER	SHIP WGT. lbs/(kg)
3000	240	9	3FLS3209-M2-**	14	6000	240	9	5FLS6209-M2-**	25	12000	240	9	6FLS12209-M2-**	48
480		(229)	3FLS3409-M2-**	(6.4)	480		(229)	5FLS6409-M2-**	(11.3)	480		(229)	6FLS12409-M2-**	(21.8)
4500	240	13	3FLS4.5213-M2-**	15	9000	240	13	5FLS9213-M2-**	28	18000	240	13	6FLS18213-M2-**	54
480		(330)	3FLS4.5413-M2-**	(6.8)	480		(330)	5FLS9413-M2-**	(12.7)	480		(330)	6FLS18413-M2-**	(24.5)
6000	240	19	3FLS6219-M2-**	16	12000	240	19	5FLS12219-M2-**	30	24000	240	19	6FLS24219-M2-**	60
480		(483)	3FLS6419-M2-**	(7.3)	480		(483)	5FLS12419-M2-**	(13.6)	480		(483)	6FLS24419-M2-**	(27.2)
9000	240	26	3FLS9226-M2-**	17	18000	240	26	5FLS18226-M2-**	33	36000	240	26	6FLS36226-M2-**	67
480		(660)	3FLS9426-M2-**	(7.7)	480		(660)	5FLS18426-M2-**	(15)	480		(660)	6FLS36426-M2-**	(30.4)
12000	240	33	3FLS12233-M2-**	18	24000	240	33	5FLS24233-M2-**	37	48000	240	33	6FLS48233-M2-**	76
480		(838)	3FLS12433-M2-**	(8.2)	480		(838)	5FLS24433-M2-**	(16.8)	480		(838)	6FLS48433-M2-**	(34.5)
15000	240	41	3FLS15241-M2-**	20	30000	240	41	5FLS30241-M2-**	40	60000	240	41	6FLS60241-M2-**	84
480		(1041)	3FLS15441-M2-**	(9.1)	480		(1041)	5FLS30441-M2-**	(18.1)	480		(1041)	6FLS60441-M2-**	(38.1)
18000	240	49	3FLS18249-M2-**	21	36000	240	49	5FLS36249-M2-**	43	72000	240	49	6FLS72249-M2-**	111
480		(1245)	3FLS18449-M2-**	(9.5)	480		(1245)	5FLS36559-M2-**	(19.5)	480		(1245)	6FLS72449-M2-**	(50.3)

FLANGE SIZE	DIM A	DIM B	DIM C	DIM D	DIM E +/-	DIM F +/-	DIM G +/-	DIM H
3" 150 lb.	6.00"	7.50"	0.75" (4)	0.94"	3.88"	4.55"	2.48"	0.75"
5" 150 lb.	8.50"	10.00"	0.88" (8)	0.94"	5.80"	6.30"	4.70"	1.50"
6" 150 lb.	9.50"	11.00"	0.88" (8)	1.00"	6.63"	5.63"	5.70"	1.00"

## MODEL NUMBER BREAKDOWN

3	FLS	3	4	09	-	M2	-	P4	-
Flange Size	Series	Wattage	Voltage	Horizontal Length (in.)	Heater Head	Type of Protector	Wire & Conduit Length		
3 = 3"	FLS = 316 Stainless Steel	3000 - 72000	2 = 240	Consult model chart for length	M2 = Metal head	<b>Replaceable Fuse</b> P1 (std) = solutions up to 180°F P4 = solutions up to 230°F P5 = solutions up to 300°F	36" length standard (no designator) Specify variations from standard Ex: -X84 = 84"		
5 = 5"	FLT = Titanium		3 = 380			<b>Resettable Fuse</b> P2 = solutions up to 180°F P6 = solutions up to 220°F P7 = solutions up to 300°F			
6 = 6"			4 = 480						
			5 = 415						
			6 = 600						
			7 = 400						