



POOL & SPA HEATERS



IN-LINE ELECTRIC SPA HEATERS

Compact and efficient, Coates in-line spa heaters feature heavy duty cast bronze tanks and replaceable incoloy elements. There's a capacity and shape suitable for all in-line applications.

STANDARD FEATURES:

- ▲ Replaceable incoloy element
- ▲ Cast bronze tank
- ▲ Close differential thermostat
- ▲ Control box with powder coat finish
- ▲ Manual reset hi-limit
- ▲ Element "on" light
- ▲ 1-1/2 inch male NPT connections
- ▲ U.L. Listed*

MODEL NUMBER	KW	VOLTAGE	PHASE	AMPS	BTUs PER HOUR	SHIPPING WEIGHT
1.5IL	1.44	120	1	12	4,915	11 lbs.
6ILC	1.44	120	1	12	4,915	10 lbs.
(Convertible)	5.75	240	1	24	19,625	10 lbs.
6IL	5.75	240	1	24	19,625	12 lbs.
6IL with Base	5.75	240	1	24	19,625	15 lbs.

CONTROL BOX DIMENSIONS (inches):

1.5IL..... 11-5/8L x 5-1/8W x 3H
 6ILC 6L x 3-3/4W x 3H
 6IL..... 11-5/8L x 5-1/8W x 3H
 6IL w/ Base 11-5/8L x 5-1/8W x 6-7/8H
 Overall Length: 15 inches (all models)

 *Model 1.5IL and Model 6IL U.L. Listed per Standard 1261.

 Model 16ILC is a recognized component.



6ILC
 Convertible for 240V or 120V operation. A contactor (not provided) is required when operated at 240V.



6IL with Base



6IL
 For 240V only. Pressure switch is built-in.

COMPACT ELECTRIC SPA HEATERS

With Exclusive Built-In Flow Switch

The built-in flow switch prevents operation when there is no water flow and allows operation at flow rates between 15GPM and 80GPM. The stainless steel tank is designed to optimize heat transfer by directing the water flow over the incoloy elements efficiently.

STANDARD FEATURES:

- ▲ Incoloy heating element
- ▲ Close differential thermostat
- ▲ Manual reset hi-limit
- ▲ Flow switch
- ▲ Heavy duty contactor
- ▲ Element & flow switch "on" lights
- ▲ 1-1/2 x 2 inch union connections for PVC pipe.

MODEL NUMBER	KW	VOLTAGE	PHASE	AMPS	BTUs PER HOUR	SHIPPING WEIGHT
12406ST	5.5	240	1	23	18,766	17 lbs.
12411ST	11.0	240	1	46	37,530	18 lbs.

DIMENSIONS (inches): 17-1/2L x 4W x 14-1/2H



ST
 For 240V use only. Flow switch is built-in.

 INDOOR/OUTDOOR INSTALLATION

Quality and Reliability: A Coates Commitment For Over 50 Years

Since the 1940's Coates has been the name to trust for quality and reliability in water heating equipment. We built our first swimming pool heater over 40 years ago. Today, the Coates Heater Company manufactures the largest, most complete selection of electric heaters for pools and spas.

All Coates models, from our largest capacity 300KW commercial pool heater to the smallest 1.44KW in-line spa heater, blend the latest technology, the finest materials and innovative engineering to provide the kind of quality and reliability you've come to expect from Coates.

SIZING GUIDES

Spa Heater

SPA WATER VOLUME – when the rate of recovery and the spa heat-up time are important, or when the spa is used infrequently, determine the proper heater size with the following calculations:

▲ Capacity of spa in gallons = Length x width x average depth x 7.5 (gal./cu. ft.)
OR Surface area x average depth x 7.5 (gal./cu. ft.)

▲ Desired temperature rise per hour: °F

▲ KW required =
$$\frac{\text{Gallon capacity} \times 8.3 \text{ (lbs./gal.)} \times \text{temperature rise in } ^\circ\text{F/hr}}{3413}$$

**HEATING CAPACITY
IN GALLONS
PER HOUR
(GPH)**

HEATER KW	WATER TEMPERATURE RISE IN °F/HOUR				
	5 °	10 °	15 °	20 °	25 °
1.44	118gph	59 gph	39 gph	—	—
5.75	472 gph	236 gph	157 gph	118 gph	95 gph
11.0	902 gph	451 gph	301 gph	226 gph	189 gph

Pool Heater

POOL SURFACE AREA – when the pool is in frequent use, a heater to make up pool heat losses may be all that is needed. Use the following calculations to properly size the heater:

▲ Surface area of the pool (sq. ft.) = Length x width

▲ Desired pool temperature: °F

▲ Average outdoor air temperature (during months pool is use):
Available from Weather Bureau.

▲ Temperature differential = The difference between air and pool temperatures during the coldest month the pool is to be use. (Desire pool temp. – Avg. air temp.)

▲ KW required =
$$\frac{\text{Pool surface area (sq. ft.)} \times \text{temperature differential (} ^\circ\text{F)} \times 12^*}{3413}$$

* Assumes a heat loss of 12 BTU/hour per square foot per °F of temperature difference between pool and air.
1 KW = 3,413 BTU/hour.

COMPACT ELECTRIC POOL/SPA HEATERS

With Exclusive Built-In Flow Switch

These pool and spa heaters feature a flow switch to prevent operation when there is no water flow. An all stainless steel tank for long life and corrosion resistance is also standard. Available in single phase and three phase configurations.

STANDARD FEATURES:

- ▲ Incoloy heating elements
- ▲ Close differential thermostat
- ▲ Manual reset hi-limit
- ▲ Flow switch
- ▲ Stainless steel tank
- ▲ Heavy duty contactor
- ▲ Element & flow switch "on" lights
- ▲ Element fusing on units rated over 48 amps
- ▲ 1-1/2 inch male NPT connections



CE



INDOOR/OUTDOOR
INSTALLATION

240V-SINGLE PHASE			208V-THREE PHASE			240V-THREE PHASE		480V-THREE PHASE	
KW	MODEL NUMBER	AMPS	KW	MODEL NUMBER	AMPS	MODEL NUMBER	AMPS	MODEL NUMBER	AMPS
12	12412CE	51	12	32012CE	34	32412CE	30	34812CE	15
15	12415CE	64	15	32015CE	42	32415CE	37	34815CE	19
18	12418CE	77	18	32018CE	50	32418CE	45	34818CE	22

DIMENSIONS (inches): 18-1/4L x 10-1/8W x 11-1/8H Shipping Weight 47 lbs.

POOL/COMMERCIAL SPA HEATERS

With Exclusive Built-In Flow Switch

These medium capacity pool and spa heaters feature a built-in flow switch to prevent operation when there is no water flow and allows operation at flow rates between 20GPM and 80GPM. An all stainless steel tank for long life and corrosion resistance is also standard.

STANDARD FEATURES:

- ▲ Incoloy heating elements
- ▲ Close differential thermostat
- ▲ Manual reset hi-limit
- ▲ Flow switch
- ▲ Element & flow switch "on" lights
- ▲ Element sequencing of single phase heaters
- ▲ Internal protective fusing (units over 48 amps)

NOTE – All CPH/PHS models are also available in the following voltages: 220V, 346V, 380V, 415V & 600V.



PHS/CPH

PHS: 2 inch connections.
CPH: 1-1/2 inch connections.



INDOOR/OUTDOOR
INSTALLATION

240V-SINGLE PHASE			208V-THREE PHASE			240V-THREE PHASE		480V-THREE PHASE	
KW	MODEL NUMBER	AMPS	KW	MODEL NUMBER	AMPS	MODEL NUMBER	AMPS	MODEL NUMBER	AMPS
24	12424CPH	102	24	32024CPH	67	32424CPH	59	34824CPH	29
30	12430CPH	128	30	32030CPH	84	32430CPH	74	34830CPH	37
36	12436PHS	153	36	32036PHS	101	32436PHS	89	34836PHS	44
45	12445PHS	191	45	32045PHS	126	32445PHS	111	34845PHS	55
54	12454PHS-4	225	54	32054PHS-4	150	32454PHS-4	130	34854PHS-4	65
57	12457PHS-4	238	57	32057PHS-4	158	32457PHS-4	137	34857PHS-4	69

DIMENSIONS: CPH – 24L x 12W x 13H Shipping Weight 68 lbs.
(inches) PHS – 28L x 16W x 15H Shipping Weight 100 lbs

COMPACT ELECTRIC POOL/SPA HEATERS

With Exclusive Built-In Flow Switch

These pool and spa heaters feature a flow switch to prevent operation when there is no water flow. An all stainless steel tank for long life and corrosion resistance is also standard. Available in single phase and three phase configurations.

STANDARD FEATURES:

- ▲ Incoloy heating elements
- ▲ Close differential thermostat

- ▲ Manual reset hi-limit
- ▲ Flow switch
- ▲ Stainless steel tank
- ▲ Heavy duty contactor
- ▲ Element & flow switch "on" lights
- ▲ Element fusing on units rated over 48 amps
- ▲ 1-1/2 inch male NPT connections



CE



INDOOR/OUTDOOR
INSTALLATION

240V-SINGLE PHASE

KW	MODEL NUMBER	AMPS
12	12412CE	51
15	12415CE	64
18	12418CE	77

208V-THREE PHASE

KW	MODEL NUMBER	AMPS
12	32012CE	34
15	32015CE	42
18	32018CE	50

240V-THREE PHASE

MODEL NUMBER	AMPS
32412CE	30
32415CE	37
32418CE	45

480V-THREE PHASE

MODEL NUMBER	AMPS
34812CE	15
34815CE	19
34818CE	22

DIMENSIONS (inches): 18-1/4L x 10-1/8W x 11-1/8H Shipping Weight 47 lbs.

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PHS/CPH

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CPH: 1-1/2 inch connections.



INDOOR/OUTDOOR
INSTALLATION

240V-SINGLE PHASE

KW	MODEL NUMBER	AMPS
24	12424CPH	102
30	12430CPH	128

208V-THREE PHASE

KW	MODEL NUMBER	AMPS
24	32024CPH	67
30	32030CPH	84

240V-THREE PHASE

MODEL NUMBER	AMPS
32424CPH	59
32430CPH	74

480V-THREE PHASE

MODEL NUMBER	AMPS
34824CPH	29
34830CPH	37

KW	MODEL NUMBER	AMPS
36	12436PHS	153
45	12445PHS	191
54	12454PHS-4	225
57	12457PHS-4	238

KW	MODEL NUMBER	AMPS	MODEL NUMBER	AMPS	MODEL NUMBER	AMPS
36	32036PHS	101	32436PHS	89	34836PHS	44
45	32045PHS	126	32445PHS	111	34845PHS	55
54	32054PHS-4	150	32454PHS-4	130	34854PHS-4	65
57	32057PHS-4	158	32457PHS-4	137	34857PHS-4	69

DIMENSIONS: CPH – 24L x 12W x 13H Shipping Weight 68 lbs.
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