



Pool & Spa Heaters

PROUDLY MADE IN THE U.S.A. SINCE 1955

EXPORT PRODUCT CATALOG

12kw - 72kw HEATERS

These medium capacity pool and spa heaters feature a built-in flow switch to prevent operation when there is no water flow and allow operation at flow rates between 75LPM and 300LPM.



STANDARD FEATURES:

- > Stainless steel tank
- > Incoloy heating elements
- > Close differential thermostat
- > Manual reset high temp limit
- > Flow switch
- > Element & flow "on" lights
- > Piping connections:
CE/CPH – 1-1/2" NPT
PHS – 2" NPT

DIMENSIONS

CE: 483mm L x 260mm W x 279mm H {19" L x 10" W x 11" H} (20.4Kg) {45 lbs.}
CPH: 616mm L x 311mm W x 324mm H {24" L x 12" W x 13" H} (30.8Kg) {68 lbs.}
PHS: 718mm L x 387mm W x 387mm H {28" L x 15" W x 15" H} (45.4Kg) {100 lbs.}

220v THREE PHASE

KW	MODEL NUMBER	AMPS
12	32212CE-E	31
15	32215CE-E	39
18	32218CE-E	47
24	32224CPH-E	63
30	32230CPH-E	79
36	32236PHS-E	94
45	32245PHS-E	118
54	32254PHS-E	142
57	32257PHS-E	150
60	32260PHS-E	157
72	32272PHS-E	189

380v THREE PHASE

KW	MODEL NUMBER	AMPS
12	33812CE-E	18
15	33815CE-E	23
18	33818CE-E	27
24	33824CPH-E	36
30	33830CPH-E	46
36	33836PHS-E	55
45	33845PHS-E	68
54	33854PHS-E	82
57	33857PHS-E	87
60	33860PHS-E	91
72	33872PHS-E	109

415v THREE PHASE

KW	MODEL NUMBER	AMPS
12	34112CE-E	17
15	34115CE-E	21
18	34118CE-E	25
24	34124CPH-E	33
30	34130CPH-E	42
36	34136PHS-E	50
45	34145PHS-E	63
54	34154PHS-E	75
57	34157PHS-E	79
60	34160PHS-E	83
72	34172PHS-E	100

5.5kw - 11kw HEATERS

The built-in pressure switch prevents operation when there is no water flow and allows operation at flow rates between 60LPM and 300LPM. The stainless steel tank is designed to optimize heat transfer by directing the water flow over the incoloy elements efficiently.



STANDARD FEATURES:

- > Stainless steel tank
- > Incoloy heating elements
- > Close differential thermostat
- > Manual reset high temp limit
- > Pressure switch
- > Element & flow "on" lights
- > Piping connections:
1-1/2 x 2" union connections for PVC pipe

DIMENSIONS

451mm L x 108mm W x 356mm H
 {17-1/2" L x 4" W x 14" H}

MODEL NUMBER	KW	VOLTAGE	PHASE	AMPS	BTU'S P/H	SHIPPING WT.
12406ST	5.5	240	1	23	18,766	7.71Kg {17 lbs.}
12411ST	11.0	240	1	46	37,530	8.16Kg {18 lbs.}



90kw - 300kw HEATERS

Designed for high capacity commercial pool installations, Coates heaters incorporate design features that increase service life, dependability and provide ease of servicing. Corrosion resistant all stainless steel tank surfaces and low watt density incoloy elements mounted on four-bolt stainless steel flanges provide long, trouble-free service life.

All electrical components are easily accessible under the conveniently hinged cover. Terminal blocks are provided for simplified power supply wiring.



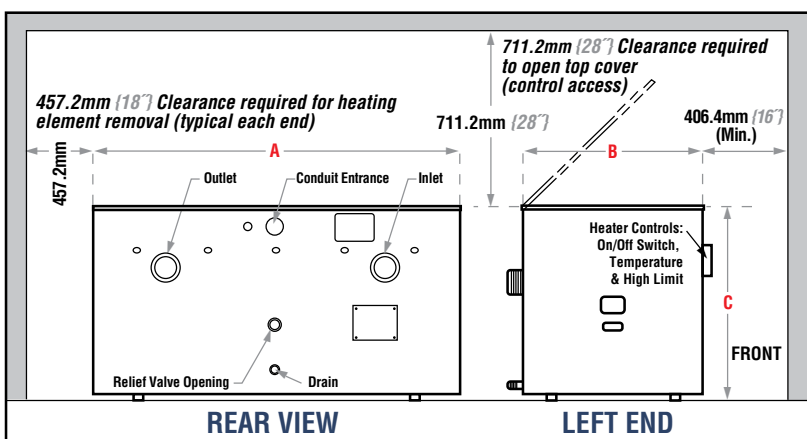
PHS-20
THREE PHASE

STANDARD FEATURES:

- > Stainless steel tank
- > 50psi design pressure
- > Incoloy heating elements
- > Close differential thermostat
- > Manual reset high temp limit
- > 120V control circuit
- > Lighted "on/off" switch
- > Element and flow "on" lights
- > Pressure relief valve*
- > Flow switch*

* Installation required

MODEL NUMBER	KW	FLOW RATE		THREE PHASE AMPERAGE							
		MIN. GPM	MAX. GPM	208V	220V	240V	346V	380V	415V	480V	600V
PHS-8	90	60	175	250	235	216	150	137	125	108	86
	105	75	175	241	275	252	175	160	146	126	101
	120	75	175	232	314	288	200	182	167	144	115
	144	75	175	400	378	346	240	218	200	174	140
PHS-20	180	100	175	Consult Factory For Availability				274	250	217	173
	210	100	175					319	292	253	202
	240	125	175					365	334	289	230
	270	125	175					410	375	325	260
	300	125	175					456	417	361	288



PIPING SIZES: (PHS-8 & PHS-20)

- Inlet/Outlet 3"
- Drain 1/2"
- Relief Valve..... 3/4"

DESIGN PRESSURE:

PHS-20 & PHS-8 50 PSI

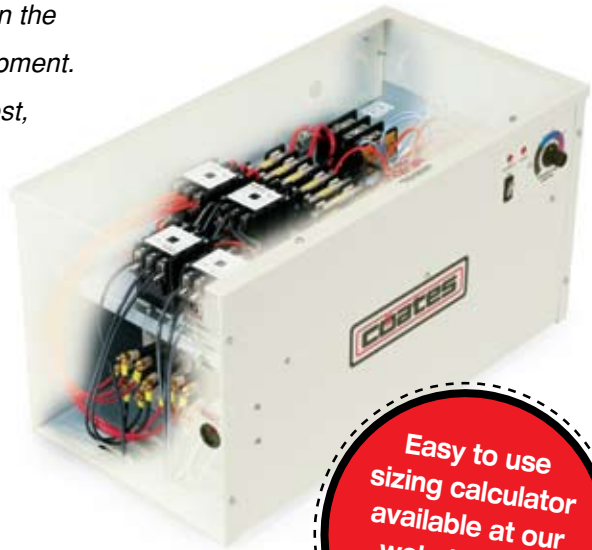
DIMENSIONS

MODEL #	A	B	C	SHIP WT.
PHS-8	1,270mm {50"}	457mm {18"}	559mm {22"}	136Kg {300 lbs.}
PHS-20	1,372mm {54"}	660mm {26"}	711mm {28"}	200Kg {450 lbs.}



QUALITY AND RELIABILITY: A COATES COMMITMENT SINCE 1955

Since we built our first pool heater in 1955, Coates has been the name to trust for quality and reliability in water heating equipment. 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 1.5kw 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.



Easy to use
sizing calculator
available at our
website. Visit
www.CoatesHeater.com

sizing SIZING GUIDES

There are two ways to size a pool/spa. Either by the heat loss, which is used for maintaining the temperature, or the temperature rise, which is used when heat up time is a factor.

TEMPERATURE RISE METHOD:

For use when a rapid change in temperature is important.
(common for spas)

V = Volume of pool/spa in gallons
= Length x Width x Depth x 7.5

kw = Kilowatt rating of heater

ΔT = Temperature rise in °F/hour

Do you want to know the
kilowatt required to achieve
a desired temperature rise?

$$kw = \frac{V \times 8.3 \times \Delta T^*}{3413}$$

Do you want to know the
temperature rise a kilowatt
rating will achieve?

$$\Delta T = \frac{KW \times 411^*}{V}$$

* Assumes spa is covered when not in use.
Formula does not account for heat loss — actual heat
up times may vary.

HEAT LOSS METHOD:

For use when maintaining water temperature.
(common for pools)

A = Surface area of pool/spa (ft²)
= Length x Width

T_{diff} = Difference between average air temp and desired
water temp (°F).

kw = Kilowatt rating of heater

$$kw = \frac{A \times T_{diff} \times 10^{**}}{3413}$$

** Assumes a heat loss of 10 BTU/hour per ft² per °F.
Assumes a 3-1/2 mph maximum wind and partial
sun exposure. 1kw= 3,413 BTU/hour



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