

# CA Model

## Water Source Heat Pump

$\frac{3}{4}$  to  $1\frac{1}{2}$  ton

The water-to-air CA console provides high performing heating and cooling in a compact size when space and access is at a premium.

<b>CA</b> MODEL	UP TO	UP TO
	<b>16.0</b> EER GLHP	<b>4.6</b> COP WSHP



Made in  
the U.S.A.



Commercial Sales Brochure  
[fhp-mfg.com](http://fhp-mfg.com)



**BOSCH**  
Invented for life

# High Performance Console **CA Model**

The FHP console, water-to-air, water source heat pump is designed to provide heating and cooling in areas where space and access are limited. Utilize as a decentralized room terminal unit that is field connected to a closed-circuit piping loop within a structure. Typically these units are installed in perimeter zones and are ideal for installations where ducted systems are impractical. Office buildings, hotel/motels, schools and assisted living complexes are some of the popular applications these units are used.

## Quiet Comfort

- ▶ **Double Isolated Compressor** - Noise reduction is a critical consideration of the unit's design which is why all CA Models utilize thermal and acoustical double isolated compressor with closed cell foam insulation below the compressor base to support sound attenuation

## Service Friendly

- ▶ **Blower Inlet Ring** - Helps facilitate motor removal without having to remove the fan housing from the chassis
- ▶ **Sloped Top Cabinet** - Cover provides rigid steel discharge air grille and bottom return air filter rack for easy removal of washable mesh air filter
- ▶ **Schrader Charging Valves** - Facilitates **service** diagnosis by allowing the connection of refrigerant hoses quickly and securely

## Robust and Durable Construction

- ▶ **Cabinet** - Heavy-gauge powder coat paint galvanized steel cabinet to help prevent against corrosion
- ▶ **Stainless Steel Drain Pan** - Resists cracking and corrosion which provides long-lasting reliability for condensate collection
- ▶ **Cupro-nickel Coaxial Heat Exchanger** (option) - Protects against corrosion when water conditions are of low quality

## Safety

- ▶ **Condensate Overflow Sensor\*** - Protection that continuously monitors the drain pan for high condensate water level, and if this exceeds normal operating levels, the compressor operation is interrupted to protect against drain pan overflow
- ▶ **Unit Protection Module\*** - Monitors the unit operation and safety controls that protect the unit
- ▶ **Dual Refrigerant Freeze Sensors\*** - Monitors if refrigerant temperatures reach freeze limitations and disables unit to protect it

## Quality Design & Efficiency

- ▶ **Extended Range** - Accommodates a wider range in temperature swings commonly found in geothermal projects
- ▶ **63" Cabinet** - Width dimension gives added sizes for multiple configurations
- ▶ **Energy Management Switch** (option) - Allows you to connect to an energy management system that can turn the unit off and on

# Options Designed for any Application

## Epoxy Coated Evaporator Coil

All CA evaporator coils are baked enamel coated with a corrosion resistant material. This epoxy coating protects against most airborne chemicals that can lead to accelerated corrosion and premature failure of the coil. All coatings are factory applied for total coil coverage and must pass the equivalent of a 1000-hour salt spray test.

## Controls

There are two main choices when designating controllability for the CA console. There is either a factory installed unit mounted controller (UMC) or a field supplied remote mounted controller (RMC). In deciding which to choose for the project, one factor to consider is if the project entails a building automation system with DDC, if this is the case, the remote mounted controller is mandatory. For further explanation, contact the local sales representative to receive a better understanding of the console controllability choices.

\*With remote mounted controller

# Technical Specifications

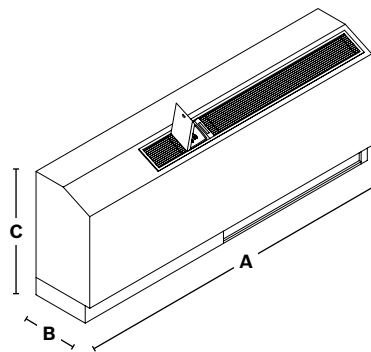
## Standard Length Unit Dimensions

Model	A	B	C
	Width	Depth	Height
CA009	48.00	12.00	23.88
CA012	48.00	12.00	23.88
CA015	48.00	12.00	23.88
CA018	48.00	12.00	23.88

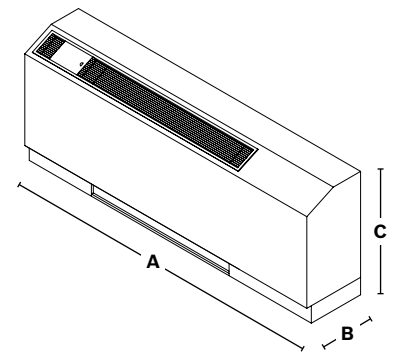
## Extended Length Unit Dimensions

Model	A	B	C
	Width	Depth	Height
CA009	63.00	12.00	23.88
CA012	63.00	12.00	23.88
CA015	63.00	12.00	23.88
CA018	63.00	12.00	23.88

Left Hand  
Water Connections



Right Hand  
Water Connections



- NOTES: 1. All dimensions in inches unless otherwise noted. All dimensions within  $\pm 0.125"$ . Specifications subject to change without notice.  
 2. Fresh Air Opening (In Sub-base Rear).  
 3. Caution! When installing unit in cold climates, an outside air damper must be provided to prevent possible condenser freeze-up.

## AHRI/ANSI 13256-1 Performance Data

Model	GPM	Water Loop Heat Pump				Ground Water Loop Heat Pump				Ground Loop Heat Pump			
		Cooling 86 °F		Heating 68 °F		Cooling 86 °F		Heating 68 °F		Cooling 77 °F		Heating 32 °F	
		Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
CA009	2.0	8200	12.9	9400	4.6	10200	22.3	7400	3.8	9000	16.0	5400	3.3
CA012	2.5	10500	12.0	12400	4.3	13000	19.4	10900	3.8	11500	14.2	8400	3.3
CA015	4.0	14400	13.3	15000	4.3	16400	19.8	11800	3.6	14700	14.5	9800	3.3
CA018	5.0	16400	12.3	17500	4.2	18300	17.6	14600	3.4	17000	14.0	12000	3.1

Ratings based upon AHRI/ANSI 13256-1 with 3/8" washable mesh filter.

### DDC Controls\*

The optional factory mounted DDC Controller is preprogrammed and installed on the unit with the Unit Protection Module (UPM) to be job site ready. The unit will operate in a 100% stand-alone control mode or connect to a Building Automation System (BAS) using open protocols BACnet™, Modbus, N2 or LonWorks® (with an optional Lon card). Stand-alone DDC modules must use remote intelligent sensors and are to be programmed by the FHP BACview® controller only. Zone temperatures, leaving air temperatures and water temperatures can be monitored from the central control computer and unit fault indication displayed.

### DDC Room and Zone Sensors

To complement the controller, Bosch Thermotechnology Corp. offers a line of intelligent FHP space sensors, which provide precision measurement and communication capabilities in an attractive low profile enclosure.

\*With remote mounted controller

### Additional Standard Features

- ▶ 40VA transformer
- ▶ TXV
- ▶ Remote reset at thermostat
- ▶ Fault LED indication
- ▶ 4 Way reversing valve
- ▶ LH/RH water piping connections

### Additional Options

- ▶ 75VA transformer
- ▶ 1/2" FPT fittings
- ▶ Multiple water piping connections
- ▶ Extended cabinet length - 63" L
- ▶ Blower monitor relay (with RMC)
- ▶ Compressor monitor relay
- ▶ Pump/valve relay
- ▶ Wire to 208V (voltage -1 only)
- ▶ Non-fused disconnect switch
- ▶ Fresh air damper (Available with sub-base)

# Electrical Data

## PSC Blower Motor

Model	Voltage Code	Voltage/Phase/Hz	Voltage Min/Max	Compressor			Total Unit w/ PSC Motor			Compressor Service		
				Quantity	RLA	LRA	FLA	Min Circuit Amps	Max Fuse/HACR	Cold Winding Resistance ( $\Omega$ )		Run Capacitor ( $\mu\text{F}/\text{V}$ )
										Single Phase: S-C	Single Phase: R-C	
CA009	0	115/1/60	104/126	1	7.0	45.6	2.1	10.9	15	3.48	0.71	35/240
	1	208-230/1/60	197/253	1	3.4	22.2	0.7	5.0	15	7.35	2.95	15/370
	2	265-277/1/60	239/291	1	2.9	18.8	0.7	4.3	15	10.74	4.27	10/440
CA012	0	115/1/60	104/126	1	9.6	58.4	2.1	14.1	20	3.15	0.58	35/370
	1	208-230/1/60	197/253	1	4.6	27.9	0.7	6.5	15	5.90	2.30	20/370
	2	265-277/1/60	239/291	1	3.8	22.2	0.7	5.5	15	8.70	3.47	15/440
CA015	0	115/1/60	104/126	1	12.7	63.0	2.2	18.1	30	N/A	N/A	40/370
	1	208-230/1/60	197/253	1	5.6	29.0	0.8	7.8	15	5.45	2.31	25/440
	2	265-277/1/60	239/291	1	4.6	20.0	0.9	6.6	15	7.39	3.58	15/440
CA018	1	208-230/1/60	197/253	1	7.4	33.0	0.8	10.1	15	3.05*	2.41*	35/370
	2	265-277/1/60	239/291	1	6.0	28.0	0.9	8.4	15	2.57*	3.26*	35/440

NOTE: \* These values are reported at 167°F (75°C), not room temperature.

1. Resistance value tolerance +/- 7%. All resistance values must be measured with compressor at room temperature.



### Bosch Thermotechnology Corp.

555 NW 65th Court  
 Fort Lauderdale, FL 33309  
 Phone: 866-642-3198  
 Fax: 954-776-5529  
[fhp-mfg.com](http://fhp-mfg.com)



Printed on Elemental Chlorine Free, FSC-certified, minimum 10% PCW paper with vegetable-based inks.

Scan the QR code to the right to access product information.

Copyright © 2014 Bosch Thermotechnology Corp.  
 All rights reserved. Subject to change without notice.

76P995053 12-14

