

## Heating and Cooling Coils

- Designed for use with matching **Delhi 200 or 9200** Series Duct Blower and Filter Section
  - Lead free construction - Safe for use with potable water systems
  - Attractive Delhi green baked enamel Cabinet Finish
  - Convenient for both New or Renovation Installations
    - Aluminum Fin on Copper Tube Construction
    - Suitable for Remote Installation in Duct
    - All coils are Factory Leak Tested

### HOT WATER HEATING COILS

- 2 Row Coil
- Horizontal or Vertical Installation



**Series HC Heating Coil**

### CHILLED WATER COOLING COILS

- 4 Row Coil
- Sloped Drain Pan for Positive Condensate Removal



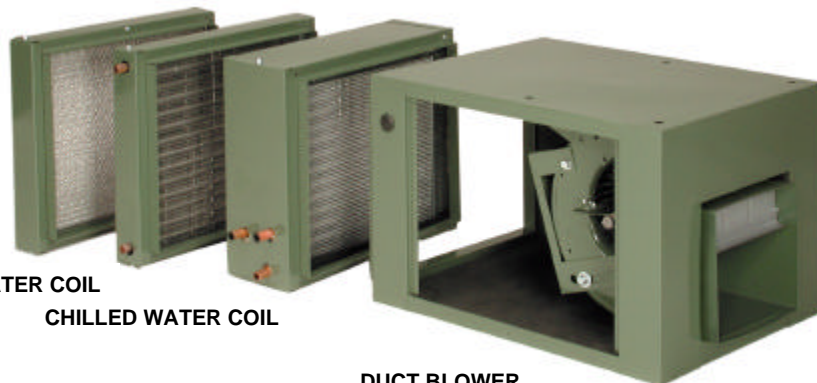
**Series CW Cooling Coil**

**FILTER SECTION**

**HOT WATER COIL**

**CHILLED WATER COIL**

**DUCT BLOWER**  
(side panel removed for illustrative purposes)



# Heating Coil Capacities

Based on 70 deg. F Air in Temp.

## Model HC-07

Based on 2 U.S. gpm - Pressure drop - 3.3 ft wg

<b>CFM</b>	300	375	450	525	600	675	750
<b>SP - in. wg</b>	0.03	0.05	0.07	0.09	0.11	0.14	0.16
<b>Water Temp. DEG F</b>	<b>Heating Capacity - MBH</b>						
140	16.3	18.9	21.1	22.3	24.0	25.5	26.8
160	21.0	24.5	27.1	29.2	30.8	32.9	34.4
180	25.6	29.6	33.1	35.7	37.7	40.2	42.1

## Model HC-09

Based on 4 U.S. gpm - Pressure drop - 2.5 ft wg

<b>CFM</b>	400	500	600	700	800	900	1000
<b>SP - in. wg</b>	0.04	0.05	0.07	0.10	0.12	0.15	0.18
<b>Water Temp. DEG F</b>	<b>Heating Capacity - MBH</b>						
140	21.9	25.5	28.6	31.0	33.1	35.2	36.9
160	28.2	32.7	36.8	39.9	42.5	45.2	47.5
180	34.4	40.0	44.9	48.8	51.0	55.3	58.0

## Model HC-10

Based on 5 U.S. gpm - Pressure drop - 2.8 ft wg

<b>CFM</b>	500	600	700	800	900	1000	1100
<b>SP - in. wg</b>	0.04	0.05	0.07	0.09	0.11	0.13	0.15
<b>Water Temp. DEG F</b>	<b>Heating Capacity - MBH</b>						
140	27.1	30.7	33.9	36.5	38.8	40.8	42.8
160	34.9	39.4	43.6	46.9	49.8	52.4	55.1
180	42.6	48.2	53.3	57.3	60.9	64.0	67.3

## Model HC-12

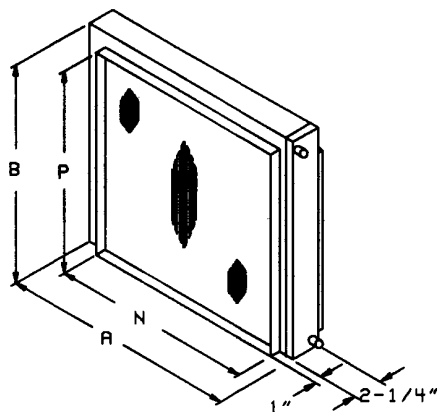
Based on 6 U.S. gpm - Pressure drop - 2.8 ft wg

<b>CFM</b>	700	850	1000	1150	1300	1450	1600
<b>SP - in. wg</b>	0.04	0.05	0.07	0.09	0.11	0.13	0.15
<b>Water Temp. DEG F</b>	<b>Heating Capacity - MBH</b>						
140	39.3	44.9	49.8	53.6	57.0	60.2	62.9
160	50.5	57.7	64.0	68.9	73.3	77.5	80.9
180	61.8	70.6	78.2	84.2	89.6	94.7	98.9

## Model HC-15

Based on 8 U.S. gpm - Pressure drop - 3.1 ft wg

<b>CFM</b>	1500	1600	1700	1800	1900	2000	2100
<b>SP - in. wg</b>	0.07	0.07	0.08	0.09	0.10	0.11	0.12
<b>Water Temp. DEG F</b>	<b>Heating Capacity - MBH</b>						
140	71.4	73.9	76.4	78.7	80.8	82.9	84.7
160	91.8	95.0	98.2	101.2	103.9	106.5	108.9
180	112.2	116.2	120.0	123.6	127.0	130.2	133.1



Dimensions - in.

<b>Model</b>	<b>"A"</b>	<b>"B"</b>	<b>"N"</b>	<b>"P"</b>
HC-07	17-3/4	15-3/8	16	13-1/2
HC-09	21	18	19-1/8	16-1/8
HC-10	22-1/4	20	20-3/8	18-1/8
HC-12	27	23	25-1/8	21-1/8
HC-15	32-1/2	26-3/4	30-5/8	25-1/8

OD - in.

<b>Model</b>	<b>Inlet</b>	<b>Outlet</b>	<b>wt - lbs</b>
HC-07	5/8	5/8	10
HC-09	5/8	5/8	14
HC-10	5/8	5/8	17
HC-12	3/4	3/4	23
HC-15	3/4	3/4	32

# Cooling Coil Capacities

Based on 80 deg. F DB / 67 deg. F WB Air in Temp.

## Model CW-07

Based on 4 U.S. gpm - Pressure drop - 3.0 Ft w.g.

CFM	300	375	450	525	600	675	750
SP - in. wg	0.09	0.13	0.17	0.22	0.28	0.34	0.41
Water Temp. DEG F	Total Cooling Capacity (Sensible) - MBH						
42	14.2 (9.4)	16.2 (11.0)	17.9 (12.4)	19.5 (13.8)	20.8 (15.1)	21.9 (16.3)	22.8 (17.4)
45	12.6 (8.7)	14.4 (10.2)	15.8 (11.6)	17.3 (13.0)	18.5 (14.2)	19.4 (15.3)	20.3 (16.4)
48	11.0 (8.0)	12.6 (9.5)	13.8 (10.8)	15.1 (12.1)	16.1 (13.3)	17.0 (14.4)	17.7 (15.5)

## Model CW-09

Based on 5 U.S. gpm - Pressure drop - 2.6 Ft w.g.

CFM	400	500	600	700	800	900	1000
SP - in. wg	0.09	0.13	0.17	0.22	0.28	0.34	0.41
Water Temp. DEG F	Total Cooling Capacity (Sensible) - MBH						
42	18.9 (12.5)	21.6 (14.6)	18.6 (14.4)	26.0 (18.5)	27.7 (20.2)	29.2 (21.7)	30.4 (23.2)
45	16.8 (11.6)	19.2 (13.6)	21.2 (15.5)	23.1 (17.3)	24.6 (18.4)	25.9 (20.5)	27.0 (21.9)
48	14.7 (10.7)	16.8 (12.6)	18.5 (14.4)	20.2 (16.2)	21.5 (17.7)	22.6 (19.2)	23.6 (20.6)

## Model CW-10

Based on 6 U.S. gpm - Pressure drop - 2.8 Ft w.g.

CFM	500	600	700	800	900	1000	1100
SP - in. wg	0.09	0.12	0.16	0.20	0.25	0.30	0.35
Water Temp. DEG F	Total Cooling Capacity (Sensible) - MBH						
42	23.5 (15.5)	26.2 (17.6)	28.5 (19.6)	30.8 (21.6)	32.6 (23.3)	34.2 (25.0)	35.7 (26.5)
45	20.9 (14.4)	23.2 (16.4)	25.3 (18.3)	27.4 (20.2)	29.0 (21.9)	30.4 (23.5)	31.7 (25.0)
48	18.2 (13.3)	20.3 (15.2)	22.1 (19.0)	23.9 (18.8)	25.3 (20.5)	26.5 (22.0)	26.7 (23.5)

## Model CW-12

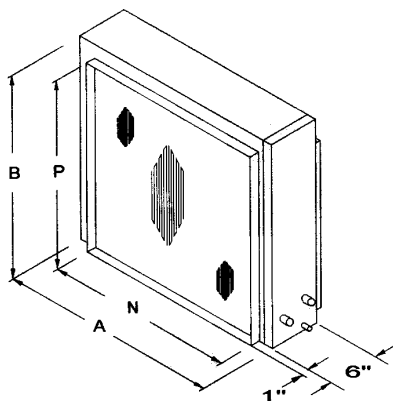
Based on 7 U.S. gpm - Pressure drop - 3.6 Ft w.g.

CFM	700	850	1000	1150	1300	1450	1600
SP - in. wg	0.08	0.12	0.15	0.19	0.24	0.29	0.34
Water Temp. DEG F	Total Cooling Capacity (Sensible) - MBH						
42	32.8 (21.7)	37.0 (25.0)	40.7 (28.0)	43.4 (30.7)	45.8 (33.2)	47.9 (35.6)	49.7 (37.8)
45	29.1 (20.1)	32.9 (33.3)	36.1 (26.2)	38.6 (28.8)	40.7 (31.2)	42.5 (33.5)	44.0 (35.6)
48	25.4 (18.6)	28.7 (21.6)	31.6 (24.4)	33.7 (36.8)	33.6 (29.2)	37.1 (31.4)	38.5 (33.5)

## Model CW-15

Based on 8 U.S. gpm - Pressure drop - 5.0 Ft w.g.

CFM	1500	1600	1700	1800	1900	2000	2100
SP - in. wg	0.14	0.15	0.17	0.19	0.21	0.22	0.24
Water Temp. DEG F	Total Cooling Capacity (Sensible) - MBH						
42	59.0 (41.3)	60.6 (43.0)	62.0 (44.6)	63.2 (46.2)	64.4 (47.7)	65.5 (49.2)	66.5 (50.6)
45	52.4 (38.6)	53.8 (40.2)	55.0 (41.8)	56.1 (43.4)	57.2 (44.9)	58.2 (46.3)	59.0 (47.7)
48	45.8 (36.0)	47.0 (37.6)	48.1 (39.1)	49.1 (40.6)	50.0 (42.1)	50.8 (43.5)	51.6 (45.0)



Dimensions - in.

Model	"A"	"B"	"N"	"P"
CW-07	17-3/4	15-3/8	16	13-1/2
CW-09	21	18	19-1/8	16-1/8
CW-10	22-1/2	20	20-3/8	18-1/8
CW-12	27	23	25-1/8	21-1/8
CW-15	33-1/2	28	30-5/8	25-1/8

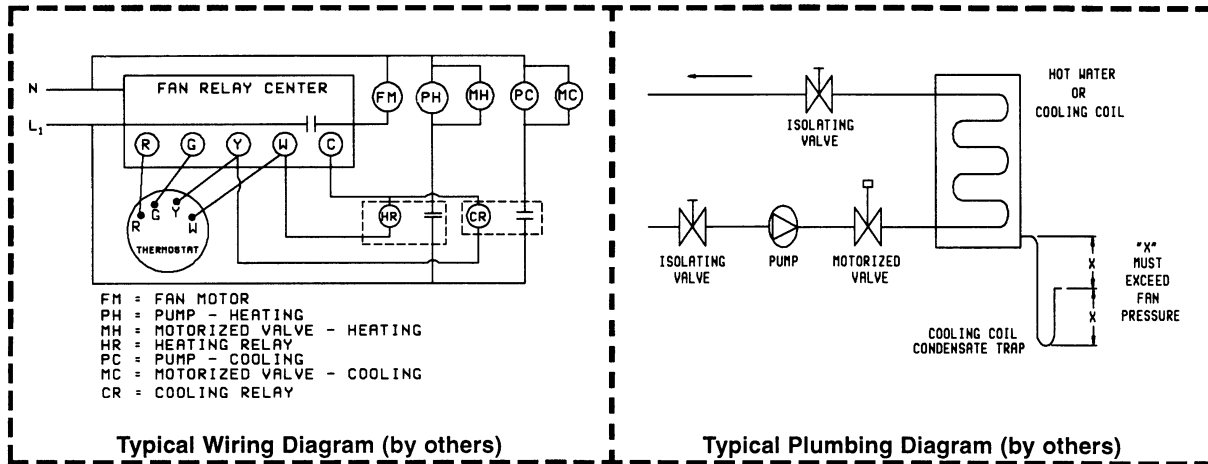
OD - in.

Model	Inlet	Outlet	Drain	wt - lbs
CW-07	5/8	5/8	5/8	22
CW-09	7/8	7/8	5/8	29
CW-10	7/8	7/8	5/8	36
CW-12	7/8	7/8	5/8	42
CW-15	7/8	7/8	5/8	61

## Heating Coil Capacity Air Temperature Correction Factor

Air Temp Deg. F.	Water Temp. deg. F			Air Temp. Rise = $\frac{Mbh \times 1000}{cfm \times 1.08}$
	140	160	180	
80	0.86	0.89	0.91	Water Temp. Drop = $\frac{Mbh \times 1000}{gpm \times 500}$
70	1.00	1.00	1.00	
60	1.14	1.11	1.09	
50	1.29	1.22	1.18	

## Useful Formula



## Typical Selection Example

### Requirement

An application requires 40 Mbh heating and 26 Mbh of cooling.  
Hot water temperature is 160 deg. F. Chilled water is 45 deg. F.

### Selection

An HC-09 will provide 42.5 Mbh @ 160 deg F water temp with an air flow of 800 CFM. The matching Cooling Coil, CW-09, needs 900 CFM to deliver the 26 Mbh cooling load which will determine the design CFM. The system SP, excluding the coils and filter section, has been calculated as 0.4 in. wg based on the 900 CFM.

#### sp Estimate

Component	sp - in. wg
System	0.40
CW-09 Cooling Coil	0.34
HC-09 Heating Coil	0.15
F209A Filter	0.04
<b>Total sp</b>	<b>0.93</b>

#### Blower Selection

Select Model 209 or 9209 duct blower to match HC-09 & CW-09 dimensions

#### Motor Selection

From Duct Blower CAT. #SS-31, page 7, models 209 & 9209 performance data, at 900 CFM & 1" SP requires .28 BHP @ 1125 RPM  
Select a 1/3 BHP motor

**For Duct Blower details request Delhi Catalogue #SS-31  
"Forward Curved Inline Duct Blowers"**

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CAT. #SS-38-4 MAY 2002

Printed in Canada