HH SERIES

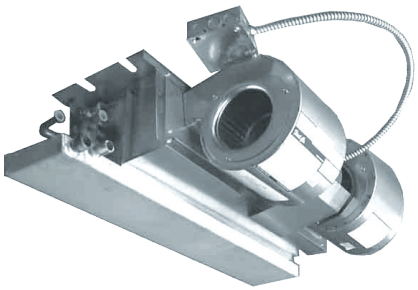
HH/X • PHH/X • RHH/X • CHH/X
Ceiling Fan Coils

PSC Motor or ECM

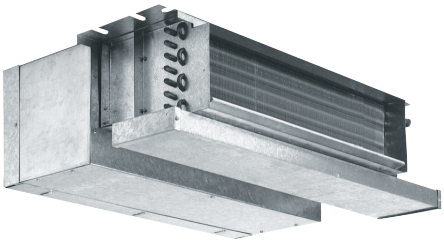
Chilled Water / Hot Water

2-Pipe with Electric Heat

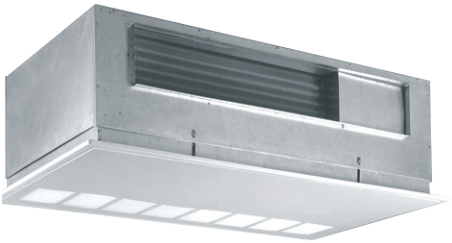
300 – 1200 CFM



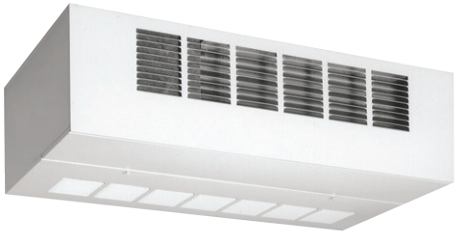
Ceiling Concealed – HH(X)



Ceiling Concealed with Plenum – PHH(X)



Ceiling Recessed – RHH(X)



Ceiling Exposed – CHH(X)

ECO FRIENDLY

INTERTEK ETL LISTED C US

AHRI CERTIFIED®
www.ahridirectory.org
Room Fan-Coils
AHRI Standard 440

TABLE OF CONTENTS

First Co.'s customer is ultimately responsible for confirming which fan coil models are compatible with selected outdoor unit(s) and which expansion valves (if any) are required. To determine certified indoor/outdoor combinations, go to www.firstco.com or contact the factory.

In keeping with its policy of continuous progress and product improvement, First Co. reserves the right to make changes without notice.

NOMENCLATURE

HH • PHH • CHH • RHH

6 R HH S 3 4 RH

NOMINAL CFM (100'S)
3 - 300
4 - 400
5 - 500
6 - 600
8 - 800
10 - 1000
12 - 1200

UNIT CONFIGURATION
NONE Basic Unit
P Return Air Plenum
R Recessed, Telescoping Panel
C Ceiling Exposed

HORIZONTAL SERIES WITH ELECTRIC HEAT

STATIC PRESSURE
S = Low Static Model (for ductless applications)
None = Standard to High Static

KW ELECTRIC HEAT
0kW – Option
3kW – (2.25kW at 208v)
5kW – (3.75kW at 208v)
6kW – (4.5kW at 208v)
8kW – (6kW at 208v)
10kW – (7.5kW at 208v)

COIL CONFIGURATIONS
Rows – Description
3 – 2-Pipe 3 Row
4 – 2-Pipe 4 Row

****COIL CONNECTION SIDE**
RH – Right Hand
LH – Left Hand

HHX • PHHX • CHHX • RHHX

6 R HH S 3 X 4 RH

NOMINAL CFM (100'S)
3 - 300
4 - 400
5 - 500
6 - 600
8 - 800
10 - 1000
12 - 1200

UNIT CONFIGURATION
NONE Basic Unit
P Return Air Plenum
R Recessed, Telescoping Panel
C Ceiling Exposed

HORIZONTAL SERIES WITH ELECTRIC HEAT

STATIC PRESSURE
S = Low Static Model (for ductless applications)
None = Standard to High Static

Available Voltage (PSC Motors)
208-240V/1/60
277V/1/60

KW ELECTRIC HEAT
0kW – Option
3kW – (2.25kW at 208v)
5kW – (3.75kW at 208v)
6kW – (4.5kW at 208v)
8kW – (6kW at 208v)
10kW – (7.5kW at 208v)

MOTOR TYPE
0 - PSC
X - ECM

COIL CONFIGURATIONS
Rows Description
3 – 2-Pipe 3 Row
4 – 2-Pipe 4 Row

****COIL CONNECTION SIDE**
RH – Right Hand
LH – Left Hand

HH SERIES
CEILING FAN COILS

STANDARD FEATURES

BASIC UNIT
All fan coils are manufactured with heavy gauge galvanized steel to resist corrosion. All models are approved for installation with "0" clearance to combustible material.

INSULATION
Plenums and cabinets are insulated with Tuf-Skin dual density fiber glass blanket insulation with an anti-microbial agent.

CEILING PANELS
Hinged access/return panels are manufactured with heavy gauge galvanized steel with captive mounting screws and an attractive white baked powder finish.

MERV 10
Louvered Access Panels

CONDENSATE PANS
Positive sloped drain pans are galvanized steel, coated on the inside surface with insulation. Pan includes both primary and secondary drain connections.

RETURN AIR PLENUMS
Return air plenums are manufactured from galvanized steel insulated with dual density fiber glass blanket insulation and a 1" TA fiber glass filter.

COILS
Constructed with seamless copper tubes and headers. The tubes are mechanically expanded into corrugated aluminum fin material for a permanent primary to secondary surface bond. Coils are tested under water at 450 PSI for operation at 300 PSI. Coils include manual air vents.

FAN WHEELS-HOUSING
The fan wheels are double width, double inlet (DWDI) forward curved, centrifugal type. Wheels are statically and dynamically balanced for smooth, quite operation. The housing is constructed from heavy gauge galvanized steel with die-formed inlet cones.

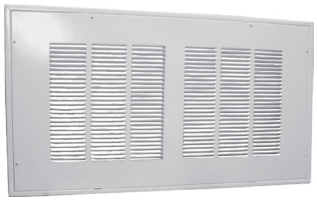
MOTORS
Standard motors are PSC, permanently lubricated type with internal thermal overload protection.

OPTIONS
Factory mounted options include motors, stainless steel drain pans, foil faced cabinet insulation, Multi-24 3-speed 24V control, valve packages, thermostats, aqua stats, service switches.

HH SERIES
CEILING FAN COILS

ACCESS PANELS /FILTER



*STANDARD PANEL OPTIONS FOR HH SERIES				
PART #	**UNIT SIZE**	**PANEL TYPE**	**FRAME DIMENSIONS**	***FILTER SIZE**
965	3,4,5,6,8	LOUVERED	27-1/2 X 43	20X20X1 (1)
965-1		SOLID		
966	10	LOUVERED	27-1/2 X 49	20X20X1 (1)
966-1		SOLID		
967	12	LOUVERED	27-1/2 X 55-1/2	20X20X1 (1)
967-1		SOLID		

NOTE: * Filters not included

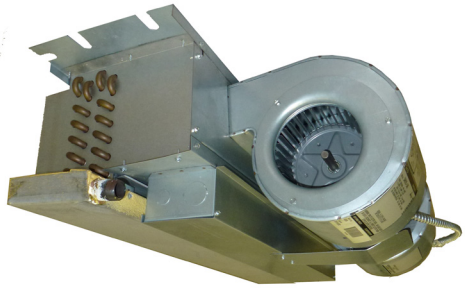
*IAQ MERV 10 PANEL OPTIONS FOR HH SERIES				
PART #	**UNIT SIZE**	**PANEL TYPE**	**FRAME DIMENSIONS**	***FILTER SIZE**
965-M8	3,4,5,6,8	LOUVERED	27-1/2 X 43	20X30X1 (1)
966-M8	10	LOUVERED	27-1/2 X 49	20X20X1 (2)
967-M8	12	LOUVERED	27-1/2 X 55-1/2	20X20X1 (2)

IAQ PANEL PERFORMANCE DATA (4) (CLEAN FILTER)										
PART NUMBER	**CFM**									
	500	**600**	**700**	**800**	**900**	**1000**	**1100**	**1200**	**1300**	**1500**
965-M8 with AF20301 (20 X 030, MERV 10) Filters (2)	0.04	0.06	0.06	0.08	0.09	0.10	– – –	– – –	– – –	– – –
966-M8 with AF20201 (20 X 020, Merv 10) Filters (2)	0.04	0.06	0.06	0.08	0.09	0.10	– – –	– – –	– – –	– – –
967-M8 with AF20201 (20 X 020, MERV 10) Filters (2)	– – –	0.05	0.05	0.07	0.08	0.10	– – –	– – –	– – –	– – –
967-6-M8 with AF20251 (20 X 025, MERV 10) Filters (2)	– – –	– – –	– – –	0.05	0.06	0.07	0.08	0.09	– – –	– – –
967-8-M8 with AF20301 (20 X 30, MERV 10) Filters (2)	– – –	– – –	– – –	– – –	– – –	0.06	0.06	0.08	0.08	0.10

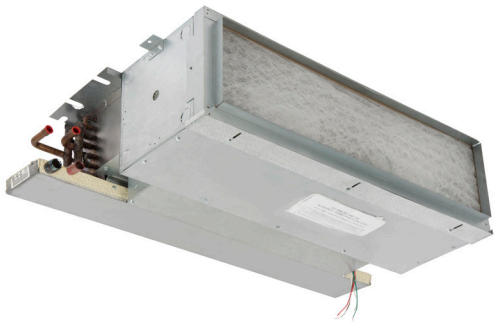
NOTES:
(1) The above is the actual laboratory test data or these panels.
(2) Glassfloss® Industries HV series MERV 10 filters were used to generate above data (filters must be field supplied)
(3) Alternate MERV 10 filters would be acceptable provided they have equal or less resistance.
(4) Refer to fan coil specification sheets for fan coil blower data.

HH SERIES
CEILING FAN COILS

MOTOR OPTION
(X) SERIES
This new ECM motor option includes 24V controls, a constant torque, permanent magnet, brushless DC motor, with four discrete speed taps that allow for precise air balancing.



HH(X) SERIES
CEILING CONCEALED
The *HH series is designed for fully concealed applications. This 10" high space saving unit provides easy access for service and maintenance.

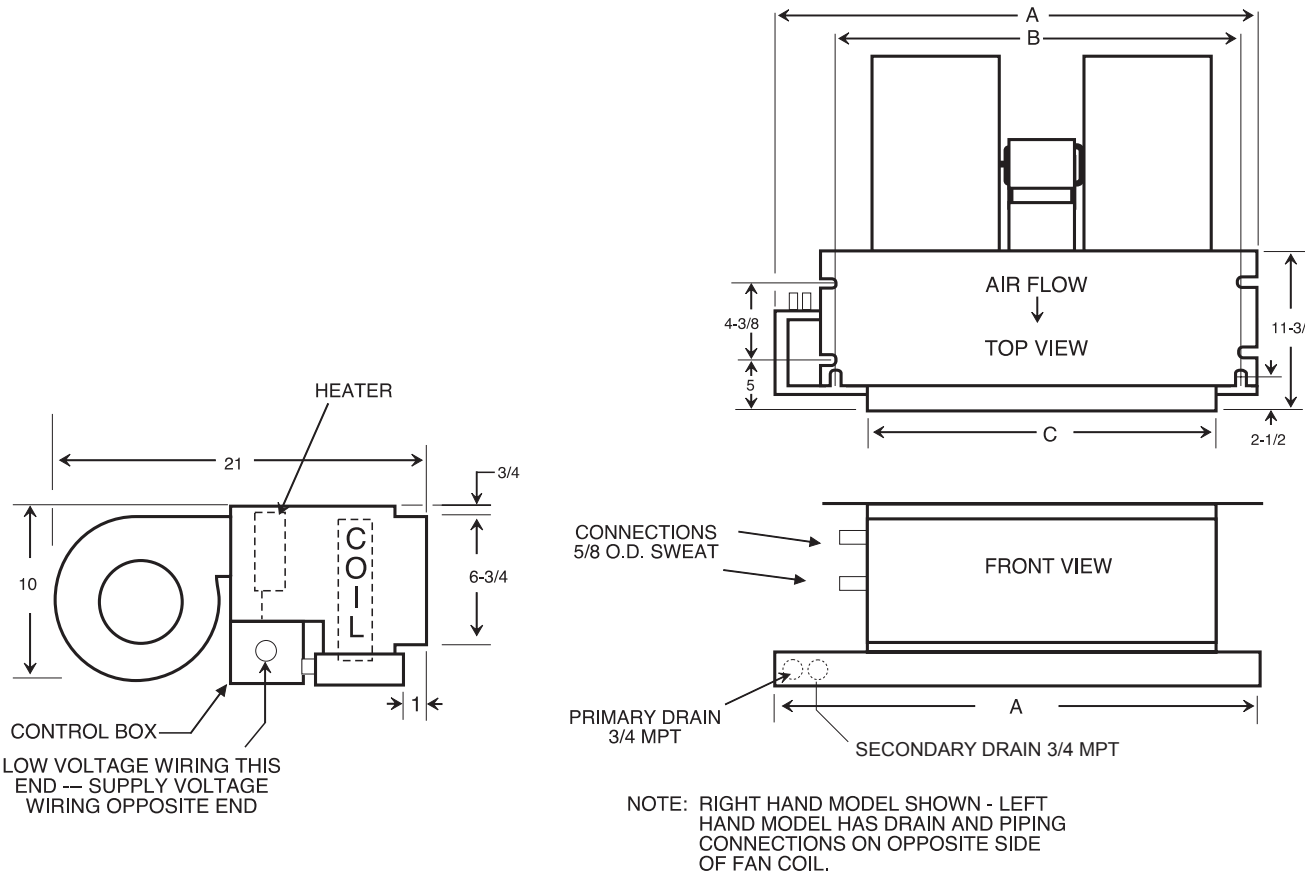


PHH(X) SERIES
CEILING CONCEALED WITH PLENUM
The *PHH series is designed for fully concealed applications. This 10" high space saving unit provides easy access for service and maintenance.

RHH(X) SERIES
CEILING RECESSED
Includes adjustable hinged access/return panel with 1" TA fiber glass filter. The cabinet allows for a field mounted rear return duct connection by using a solid access panel.

CHH(X) SERIES
CEILING EXPOSED
Cabinet with an attractive baked powder finish. Cabinet includes stamped discharge opening and hinged bottom panel with 1" TA fiber glass filter.

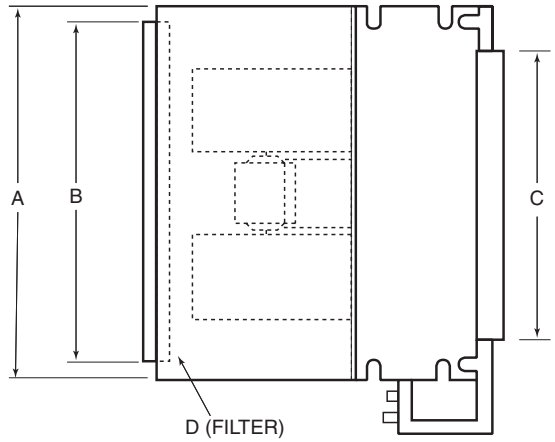
CEILING RECESSED

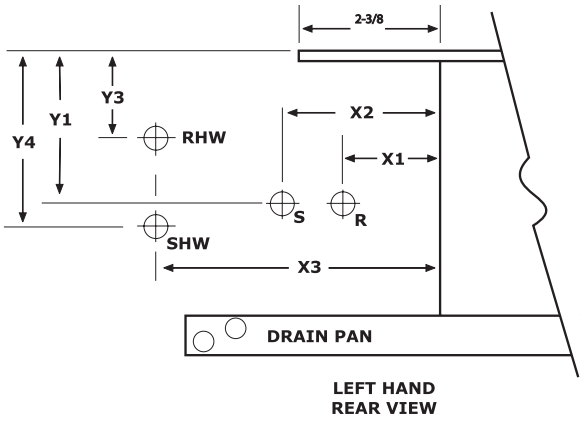


NOTE: RIGHT HAND MODEL SHOWN - LEFT HAND MODEL HAS DRAIN AND PIPING CONNECTIONS ON OPPOSITE SIDE OF FAN COIL.

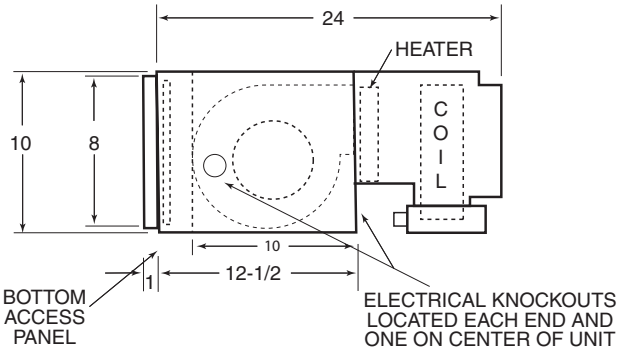
PHYSICAL DIMENSIONS					
MODEL	**A**	**B**	**C**	**NUMBER OF MOTORS**	**NUMBER OF BLOWERS**
3HHS	25	19-11/16	15	1	1
4HHS(X) 6HHS(X) 6HH(X) 8HH(X)	40	34-11/16	30	1	2
10HH(X)	46	40-11/16	36	1	2
12HH(X)	52	46-11/16	42	1	2

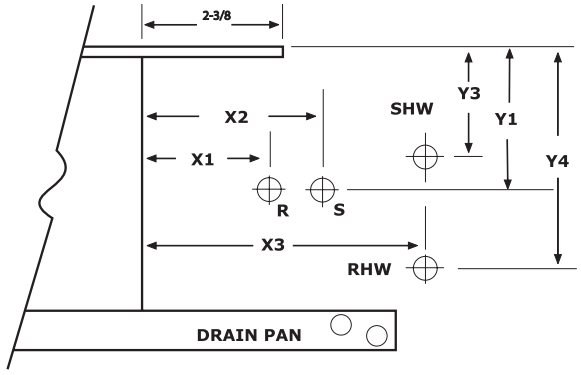
CEILING RECESSED





LEFT HAND
REAR VIEW



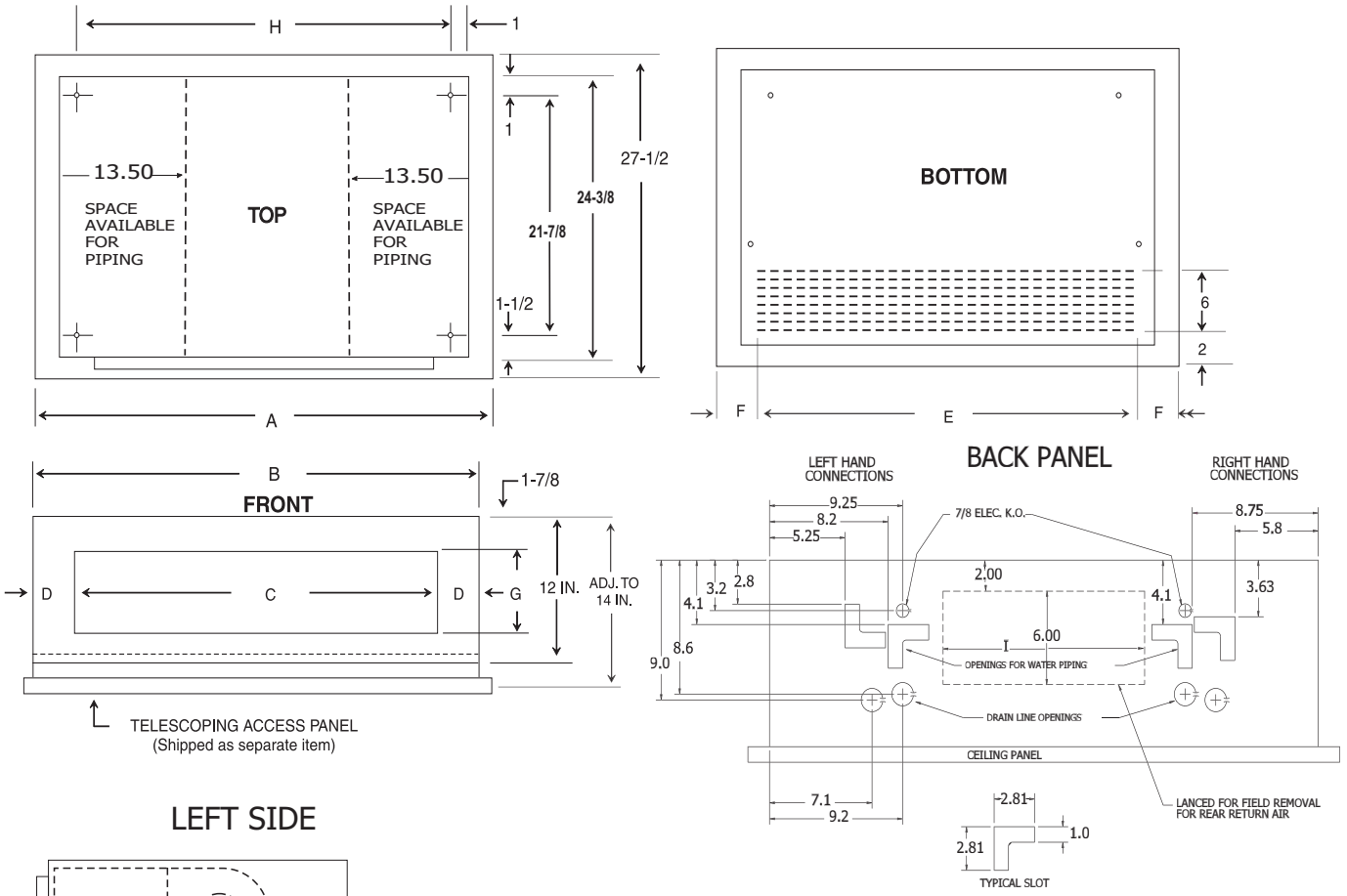


RIGHT HAND
REAR VIEW

PLENUM DATA				
MODEL	**A**	**B**	**C**	**D (FILTER)**
3PHHS	20	18	15	10 X 20 X 1
4PHHS(X) **6PHHS(X)** **6PHH(X)** **8PHH(X)**	34	32	30	10 X 34 X1
10PHH(X)	40	38	36	10 X 40 X 1
12PHH(X)	46	44	42	10 X 46 X 1

NOTE: 1. Return plenums are insulated
2. All plenums include throw away filter

CEILING RECESSED



NOTES:

1. All dimensions in inches.
2. Coil connection tolerance ± 1/4".
3. Left hand unit shown, right hand mirror image. (Hand is determined by facing the blower end)

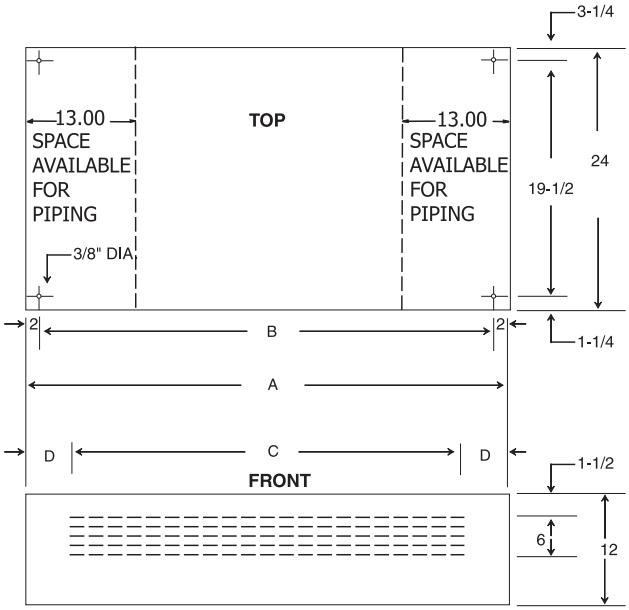
NOTES:

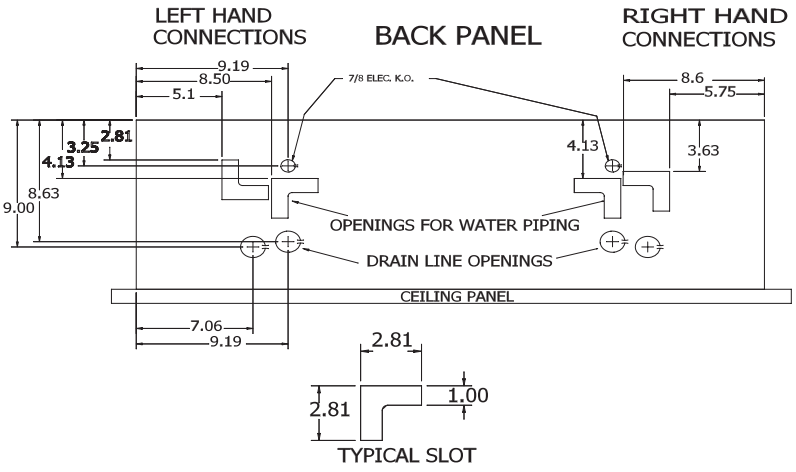
1. Telescoping panel allows the cabinet to be installed to within 2 inches of the ceiling line. The adjustable panel frame ensures a flush installation.
2. Louvered access panel (bottom return) is standard. Specify solid panel if ducted rear return air is required.

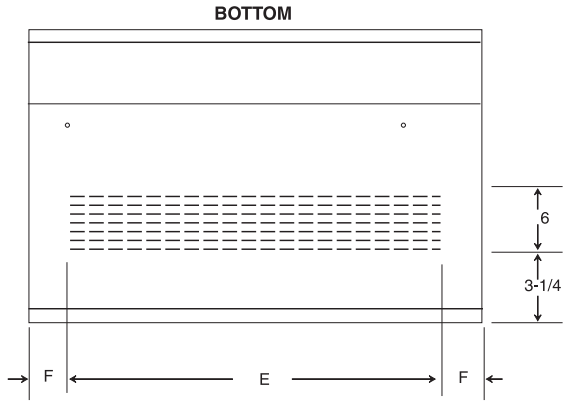
GENERAL DIMENSIONS

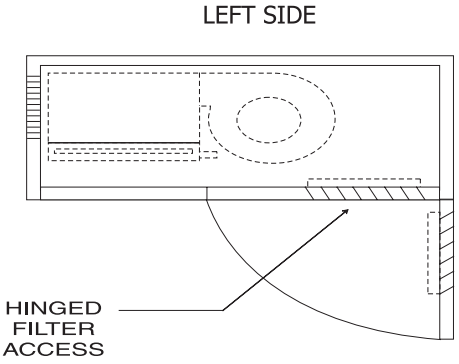
MODEL	A	B	C	D	E	F	G	H	I	TELESCOPING LOUVERED ACCESS PANEL	TELESCOPING SOLID ACCESS PANEL	FILTER SIZE (INCL)
3RHHS	41	38-1/8	29	4-1/2	36-5/8	2-3/16	5-1/2	36	14	968-1	968-1S	10 X 37
4RHHS(X)	51	48-1/8	39	4-1/2	47-1/4	1-7/8	5-1/2	46	24	968-3	968-3S	10 X 47.5
6RHHS(X) 6RHH(X) 8RHH(X)	51	48-1/8	39	4-1/2	47-1/4	1-7/8	5-1/2	46	24	968-3	968-3S	10 X 47.5
10RHH(X)	57	54-1/8	45	4-1/2	52-1/2	2-1/4	5-1/2	52	30	968-4	968-4S	10 X 53
12RHH(X)	63	60-1/8	51	4-1/2	57-7/8	2-9/16	5-1/2	58	36	968-5	968-5S	10 X 59

CEILING EXPOSED









NOTES:
1. All dimensions in inches.
2. Coil connection tolerance ± 1/4".
3. Left hand unit shown, right hand mirror image. (Hand is determined by facing the blower end)

NOTES:
1. Side panels are removable for easier valve access..
2. Plastic thumb screws are provided for easy filter access.

GENERAL DIMENSIONS								
MODEL	**A**	**B**	**C**	**D**	**E**	**F**	**FILTER SIZE (INCL)**	**CONNECTIONS PRIMARY O.D.**
3CHHS(X)	33	29	21	6	25-1/2	3-1/2	10 X30	5/8"
4CHHS(X)	48	44	37	5-1/2	41-1/2	3-1/2	10 X 46	
6CHHS(X) 6CHH(X)	48	44	37	5-1/2	41-1/2	3-1/2	10 X 46	
8CHH(X)	48	44	37	5-1/2	41-1/2	3-1/2	10 X 46	
10CHH(X)	54	50	42-1/2	5-3/4	46-1/2	3-1/2	10 X 53	
12CHH(X)	60	56	48	6	52	4	10 X 59	

HH SERIES
CEILING FAN COILS

COOLING CAPACITIES
PRODUCT SPECIFICATIONS – HORIZONTAL FAN COILS 2 PIPE

COOLING / HEATING CAPACITIES							
MODEL	COIL ROWS	NOM. CFM	GPM	P.D. (FT. WTR)	TOTAL (2) COOLING	SENSIBLE COOLING	WATER (3) HEATING CAPACITY
3HHS	3	270	1.0 2.0 3.0	1.4 5.0 10.5	6.1 8.1 8.9	5.1 5.9 6.2	18.9 21.0 21.8
	4	215	1.0 2.0 3.0	1.8 6.3 13.1	6.7 8.4 9.0	5.1 5.7 6.0	18.8 20.5 21.1
4HHS	3	410	1.5 2.0 2.5	4.2 7.0 10.5	11.1 12.5 13.5	8.6 9.2 9.5	32.2 33.6 34.5
	4	390	1.5 2.0 2.5	5.8 9.7 14.5	12.5 14.1 15.1	9.3 9.9 10.3	34.9 36.4 37.4
6HHS	3	535	3.0 4.0 5.0	5.7 9.5 14.2	15.3 16.6 17.5	11.3 11.8 12.1	41.1 42.4 43.3
	4	490	3.0 4.0 5.0	3.9 6.5 9.7	16.5 18.0 18.9	11.9 12.5 12.8	43.5 45.0 46.0
6HH	3	600	3.0 4.0 5.0	5.7 9.5 14.2	16.3 17.7 18.7	12.3 12.8 13.1	44.2 45.7 46.7
	4	600	3.0 4.0 5.0	3.9 6.5 9.7	18.2 20.1 21.3	13.7 14.4 14.8	50.1 52.0 53.2
8HH	3	800	4.0 5.0 6.0	5.4 8.0 11.0	19.6 21.1 22.1	15.0 15.6 15.9	54.2 55.8 56.9
	4	800	4.0 5.0 6.0	6.5 9.6 13.3	23.2 24.9 26.2	17.4 18.0 18.5	63.4 65.3 66.5
10HH	3	1000	4.0 5.0 6.0	5.5 8.4 11.7	22.9 24.9 26.3	18.1 18.8 19.3	65.5 67.7 69.2
	4	1000	4.0 5.0 6.0	4.3 6.5 9.1	28.6 30.3 31.6	21.5 22.1 22.6	78.3 80.2 81.6
12HH	3	1200	6.0 7.0 8.0	7.9 10.5 13.3	28.6 30.0 31.2	22.0 22.5 23.0	79.4 81.0 82.3
	4	1200	6.0 7.0 8.0	10.0 13.1 16.5	33.9 35.6 37.0	25.6 26.2 26.8	93.2 95.1 96.6

(1) Cooling at 80DB/67WB, 45°F EWT.
(2) Heating at 70DB/180°F EWT.

HH SERIES
CEILING FAN COILS

COOLING CAPACITIES
PRODUCT SPECIFICATIONS – HORIZONTAL FAN COILS 2 PIPE

AIR STANDARD APPROVED RATINGS								
MODEL	COIL	CFM	GPM	P.D. (FT.WTR.)	COOLING (1000 BTUH)		POWER INPUT (WATTS)	MOTOR TYPE
					TH	SH		
3HHS(*)-240-3	3 ROW	280	1.5	3.3	7.5	4.9	130	SP
4HHS(*)-240-3		410	2.6	12.0	12.9	8.9		PSC
4HHX(*)-240-3								ECM
6HHS(*)-240-3		590	3.1	7.0	15.4	10.5		PSC
6HH(*)-240-3		790	4.0	10.5	19.8	14.2		PSC
6HHX(*)-240-3								ECM
8HH(*)-240-3		950	4.2	6.5	21.2	16.3	320	PSC
8HHX(*)-240-3								ECM
10HH(*)-240-3		1170	5.2	10.0	26.2	20.2	398	PSC
10HHX(*)-240-3								ECM
12HH(*)-240-3		1460	6.4	9.2	32.1	24.9	490	PSC
12HHX(*)-240-3								ECM
3HHS(*)-240-4	4 ROW	220	1.7	5.0	8.5	5.1	120	SP
4HHS(*)-240-4		400	3.2	24.0	15.8	9.8		PSC
4HHX(*)-240-4								ECM
6HHS(*)-240-4		550	3.3	6.0	16.5	11.0		PSC
6HH(*)-240-4		770	4.5	9.0	22.5	15.5		PSC
6HHX(*)-240-4								ECM
8HH(*)-240-4		920	5.0	10.0	24.9	17.5	310	PSC
8HHX(*)-240-4								ECM
10HH(*)-240-4		1160	6.2	10.5	30.9	22.1	390	PSC
10HH(*)-240-4								ECM
12HH(*)-240-4		1440	8.4	18.4	42.2	30.7	485	PSC
12HHX*)-240-4								ECM

NOTE:
Ratings based on high fan speed, standard air at dry coil operation, 10°F water temp. rise, ent. air 80DB, 67WB entering water at 45°F. Rated in accordance with ARI Standard 440.

MOTOR TYPE:
SH – Sensible Heat
TH – Total Heat
SP – Shaded Pole Motor
PSC – Perm. Split Capacitor
ECM – Electrically Commutated Motor
Power input is for motor only.

HH SERIES
CEILING FAN COILS

ELECTRICAL

ELECTRICAL DATA (240V)										
UNIT MODEL	NOM. CFM	HEAT				TOTAL AMPS (1)	MIN. CIR. AMPACITY (MCA)		MAX. OVERCURRENT. PROTECTION (MOP)	
		kW @ 240v	BTUH @ 240v	kW @ 208V	BTUH @ 208V		208V	240V	208V	240V
3HHS-2	300	2	6,820	1.5	5,120	9.3	11	12	15	15
-3		3	10,230	2.3	7,680	13.5	15	17	15	20
-4		4	13,640	3.0	10,240	17.6	20	23	20	25
-5		5	17,050	3.8	12,800	21.8	24	28	25	30
4HHS-3	400	3	10,230	2.3	7,680	13.3	15	17	15	20
-5		5	17,050	3.8	12,800	21.6	24	27	25	30
-6		6	20,460	4.5	15,360	25.8	28	33	30	35
6HHS-3	600	3	10,230	2.3	7,680	13.8	16	18	20	20
-5		5	17,050	3.8	12,800	22.1	23	28	25	30
-6		6	20,460	4.5	15,360	26.3	30	34	30	35
6HH-3	600	3	10,230	2.3	7,680	14.5	16	20	20	20
-4		4	13,640	3.0	10,240	18.7	21	24	25	25
-5		5	17,050	3.8	12,800	22.8	25	30	25	30
-6		6	20,460	4.5	15,360	27	30	35	30	35
-8		8	27,280	6.0	20,480	35.3	39	47	40	50
-10		10	34,100	7.5	25,600	43.7	48	55	50	60
8HH-3	800	3	10,230	2.3	7,680	14.5	16	20	20	20
-4		4	13,640	3.0	10,240	18.7	24	21	25	25
-5		5	17,050	3.8	12,800	22.8	25	30	25	30
-6		6	20,460	4.5	15,360	27	30	35	30	35
-8		8	27,280	6.0	20,480	35.3	39	47	40	50
-10		10	34,100	7.5	25,600	43.7	48	55	50	60
10HH-3	1000	3	10,230	2.3	7,680	14.5	16	20	20	20
-4		4	13,640	3.0	10,240	18.7	21	24	25	25
-5		5	17,050	3.8	12,800	22.8	25	30	25	30
-6		6	20,460	4.5	15,360	27	30	35	30	35
-8		8	27,280	6.0	20,480	35.3	39	47	40	50
-10		10	34,100	7.5	25,600	43.7	48	55	50	60
12HH-3	1200	3	10,230	2.3	7,680	15.3	18	20	20	20
-5		5	17,050	3.8	12,800	23.6	27	30	30	30
-6		6	20,460	4.5	15,360	27.8	31	35	35	35
-8		8	27,280	6.0	20,480	36.1	40	46	40	50
-10		10	34,100	7.5	25,600	44.5	49	56	50	60

(1) Includes motor and heaters (at 240V)

HH SERIES

CEILING FAN COILS

ELECTRICAL DATA (277V)								
UNIT MODEL	NOM. CFM	Heat		MOTOR HP	MOTOR AMPS	TOTAL AMPS (1)	MIN. CIR. AMPACITY (MCA)	MAX. OVERCURRENT. PROTECTION (MOP)
		kW	BTUH				277V	277V
3HHS-1-277	300	1	3,410	1/20	0.48	4.1	6	15
-2-277		2	6,820		0.48	7.7	10	15
-3-277		3	10,230		0.48	11.3	15	15
4HHS-1-277	400	1	3,410	1/10	0.90	4.5	6	15
-2-277		2	6,820		0.90	8.1	11	15
-3-277		3	10,230		0.90	11.7	15	15
-4-277		4	13,640		0.90	15.3	20	20
4HHS-1-277	400	1	3,410	1/6	1.40	5.0	7	15
-2-277		2	6,820		1.40	8.6	11	15
-3-277		3	10,230		1.40	12.2	16	20
-4-277		4	13,640		1.40	15.8	20	20
6HHS-1-277	600	1	3,410	1/6	1.40	5.0	7	15
-2-277		2	6,820		1.40	8.6	11	15
-3-277		3	10,230		1.40	12.2	16	20
-4-277		4	13,640		1.40	15.8	20	20
6HH-1-277	600	1	3,410	1/2	3.60	7.2	10	15
-2-277		2	6,820		3.60	10.8	14	15
-3-277		3	10,230		3.60	14.4	19	20
-4-277		4	13,640		3.60	18.0	23	25
-5-277		5	17,050		3.60	21.7	28	30
-6-277		6	20,460		3.60	25.3	32	35
8HH-1-277	800	1	3,410	1/2	3.60	7.2	10	15
-2-277		2	6,820		3.60	10.8	14	15
-3-277		3	10,230		3.60	14.4	19	20
-4-277		4	13,640		3.60	18.0	23	25
-5-277		5	17,050		3.60	21.7	28	30
-6-277		6	20,460		3.60	25.3	32	35
-8-277		8	27,280		3.60	32.5	41	45
10HH-2-277	1000	2	6,820	1/2	3.60	10.8	14	15
-3-277		3	10,230		3.60	14.4	19	20
-4-277		4	13,640		3.60	18.0	23	25
-5-277		5	17,050		3.60	21.7	28	30
-6-277		6	20,460		3.60	25.3	32	35
-8-277		8	27,280		3.60	32.5	41	45
-10-277		10	34,100		3.60	39.7	50	50
12HH-2-277	1200	2	6,820	1/2	3.60	10.8	14	15
-3-277		3	10,230		3.60	14.4	19	20
-4-277		4	13,640		3.60	18.0	23	25
-5-277		5	17,050		3.60	21.7	28	30
-6-277		6	20,460		3.60	25.3	32	35
-8-277		8	27,280		3.60	32.5	41	45
-10-277		10	34,100		3.60	39.7	50	50

HH SERIES
CEILING FAN COILS

HHS 240 VOLT PSC
BLOWER PERFORMANCE

HH SERIES – CFM VS EXTERNAL STATIC PRESSURE (3 ROW)									
MODEL	H.P.	FAN SPEED	EXTERNAL STATIC PRESSURE (inches of water)						
			0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35
3HHS-3	1/30	COOL	300	270	235	205	---	---	---	---
		HEAT	265	230	210	200	---	---	---	---
4HHS-3	1/15	COOL	425	410	380	330	---	---	---	---
		HEAT	395	360	320	285	---	---	---	---
6HHS-3	1/12	COOL	605	535	485	425	---	---	---	---
		HEAT	500	390	320	270	---	---	---	---
6HH-3	1/8	COOL	---	---	805	770	735	700	665	625
		HEAT	---	---	700	970	640	610	580	550
8HH-3	1/4	COOL	---	---	895	860	825	795	760	725
		HEAT	---	---	775	750	720	690	655	625
10HH-3	1/4	COOL	---	---	1110	1075	1040	1000	955	915
		HEAT	---	---	715	695	670	645	620	600
12HH-3	1/3	COOL	---	---	1395	1345	1295	1245	1195	1145
		HEAT	---	---	950	920	890	855	820	775

HH SERIES – CFM VS EXTERNAL STATIC PRESSURE (4 ROW)									
MODEL	H.P.	FAN SPEED	EXTERNAL STATIC PRESSURE (inches of water)						
			0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35
3HHS-4	1/30	COOL	255	215	200	175	---	---	---	---
		HEAT	230	200	175	150	---	---	---	---
4HHS-4	1/15	COOL	410	390	335	265	---	---	---	---
		HEAT	325	320	290	235	---	---	---	---
6HHS-4	1/12	COOL	535	490	435	365	---	---	---	---
		HEAT	350	335	320	290	---	---	---	---
6HH-4	1/8	COOL	---	---	740	705	675	640	605	565
		HEAT	---	---	650	625	600	570	535	495
8HH-4	1/4	COOL	---	---	810	780	750	715	680	645
		HEAT	---	---	730	700	670	640	610	580
10HH-4	1/4	COOL	---	---	1070	1030	995	960	930	895
		HEAT	---	---	775	750	725	700	670	640
12HH-4	1/3	COOL	---	---	1270	1215	1165	1115	1070	1025
		HEAT	---	---	950	915	880	850	820	790

RHH 277 VOLT PSC
BLOWER PERFORMANCE

RHH SERIES – CFM VS EXTERNAL STATIC PRESSURE (3 ROW)										
MODEL	H.P.	FAN SPEED	EXTERNAL STATIC PRESSURE (inches of water)							
			0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35
3RHHS-3	1/20	COOL	265	235	205	170	- - -	- - -	- - -	- - -
		HEAT	230	195	165	135	- - -	- - -	- - -	- - -
4RHHS-3	1/15	COOL	530	465	415	365	- - -	- - -	- - -	- - -
		HEAT	445	390	335	280	- - -	- - -	- - -	- - -
6RHHS-3	1/15	COOL	525	445	375	300	- - -	- - -	- - -	- - -
		HEAT	425	370	305	225	- - -	- - -	- - -	- - -
6RHH-3	1/12	COOL	- - -	- - -	565	515	470	420	375	- - -
		HEAT	- - -	- - -	445	400	360	- - -	- - -	- - -
8RHH-3	1/6	COOL	- - -	- - -	745	715	690	665	650	635
		HEAT	- - -	- - -	660	630	600	570	535	495
10RHH-3	1/4	COOL	- - -	- - -	990	950	910	870	830	795
		HEAT	- - -	- - -	870	830	795	765	730	700
12RHH-3	1/3	COOL	- - -	- - -	1305	1260	1220	1185	1145	1100
		HEAT	- - -	- - -	1180	1140	1105	1070	1030	990

RHH SERIES – CFM VS EXTERNAL STATIC PRESSURE (4 ROW)										
MODEL	H.P.	FAN SPEED	EXTERNAL STATIC PRESSURE (inches of water)							
			0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35
3RHHS-4	1/20	COOL	230	215	180	160	- - -	- - -	- - -	- - -
		HEAT	205	180	150	125	- - -	- - -	- - -	- - -
4RHHS-4	1/15	COOL	490	420	360	295	- - -	- - -	- - -	- - -
		HEAT	415	365	310	230	- - -	- - -	- - -	- - -
6RHHS-4	1/15	COOL	485	410	330	250	- - -	- - -	- - -	- - -
		HEAT	420	345	280	210	- - -	- - -	- - -	- - -
6RHH-4	1/12	COOL	- - -	- - -	560	525	490	455	415	370
		HEAT	- - -	- - -	480	445	415	380	350	- - -
8RHH-4	1/6	COOL	- - -	- - -	660	610	565	520	470	415
		HEAT	- - -	- - -	585	535	490	445	395	350
10RHH-4	1/4	COOL	- - -	- - -	925	890	860	830	795	765
		HEAT	- - -	- - -	820	790	765	740	710	680
12RHH-4	1/3	COOL	- - -	- - -	1190	1145	1105	1065	1030	995
		HEAT	- - -	- - -	1070	1030	995	960	920	885

PHH / RHH / CHH 240 VOLT PSC
BLOWER PERFORMANCE

PHH / RHH / CHH SERIES 240V									
PHH/RHH SERIES – CFM vs EXTERNAL STATIC PRESSURE (3 ROW)									
MODEL	H.P.	FAN SPEED	EXTERNAL STATIC PRESSURE (inches of water)							
			0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35
3PHHS-3	1/30	COOL	270	255	215	180	150	105	---	---
		HEAT	250	215	185	160	130	80	---	---
4PHHS-3	1/15	COOL	430	395	350	295	239	---	---	---
		HEAT	340	320	295	255	202	---	---	---
6PHHS-3	1/12	COOL	570	490	415	335	245	140	---	---
		HEAT	290	285	270	230	175	60	---	---
6PHH-3	1/8	COOL	820	765	710	660	615	570	530	485
		HEAT	720	673	625	575	535	495	460	415
8PHH-3	1/4	COOL	---	---	860	830	800	770	740	710
		HEAT	---	---	555	540	525	505	490	470
10PHH-3	1/4	COOL	---	---	1050	1010	965	920	875	825
		HEAT	---	---	760	735	710	675	640	600
12PHH-3	1/3	COOL	---	---	1230	1205	1165	1115	1065	1005
		HEAT	---	---	910	870	835	805	765	720

PHH / RHH / CHH SERIES									
HH SERIES – CFM vs EXTERNAL STATIC PRESSURE (4 ROW)									
MODEL	H.P.	"FAN SPEED"	EXTERNAL STATIC PRESSURE (inches of water)							
			0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35
3PHHS-4	1/30	COOL	225	195	165	130	90	55	---	---
		HEAT	210	175	145	115	80	45	---	---
4PHHS-4	1/15	COOL	420	375	315	243	170	50	---	---
		HEAT	330	305	265	208	150	50	---	---
6PHHS-4	1/12	COOL	500	450	395	320	245	245	---	---
		HEAT	325	320	300	245	190	100	---	---
6PHH-4	1/8	COOL	---	---	680	645	610	570	530	490
		HEAT	---	---	645	565	485	430	395	360
8PHH-4	1/4	COOL	---	---	740	690	645	605	560	515
		HEAT	---	---	650	610	570	530	490	445
10PHH-4	1/4	COOL	---	---	990	950	915	875	840	800
		HEAT	---	---	750	725	700	675	650	620
12PHH-4	1/3	COOL	---	---	1200	1150	1110	1065	1020	975
		HEAT	---	---	900	870	840	800	760	710

PHH / RHH / CHH 208 VOLT PSC
BLOWER PERFORMANCE

PHH / RHH / CHH SERIES 208V									
RHH SERIES – CFM vs EXTERNAL STATIC PRESSURE (3 ROW)									
MODEL	H.P.	FAN SPEED	EXTERNAL STATIC PRESSURE (inches of water)							
			0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35
3RHHS-3	1/30	COOL	265	237	205	176	146	104	---	---
		HEAT	250	215	185	160	130	80	---	---
4RHHS-3	1/50	COOL	359	336	312	263	214	131	47	---
		HEAT	278	256	233	198	162	103	43	---
6RHHS-3	1/12	COOL	547	471	394	317	239	141	---	---
		HEAT	227	218	208	168	128	59	---	---
6RHH-3	1/8	COOL	779	726	673	633	592	545	498	448
		HEAT	640	592	544	510	475	435	394	348
8RHH-3	1/4	COOL	875	838	800	768	736	701	666	629
		HEAT	730	704	677	650	623	596	568	538
10RHH-3	1/4	COOL	1075	1034	993	952	911	875	839	786
		HEAT	702	679	656	631	606	579	552	511
12RHH-3	1/3	COOL	1304	1256	1208	1168	1127	1076	1025	971
		HEAT	851	813	774	738	702	671	640	605

RHH SERIES – CFM VS EXTERNAL STATIC PRESSURE (4 ROW)									
MODEL	H.P.	FAN SPEED	EXTERNAL STATIC PRESSURE (inches of water)							
			0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35
3RHHS-4	1/30	COOL	220	180	162	125	93	58	---	---
		HEAT	198	170	141	109	80	43	---	---
4RHHS-4	1/50	COOL	360	319	278	214	149	48	---	---
		HEAT	---	---	224	166	108	34	---	---
6RHHS-4	1/12	COOL	489	434	379	347	249	149	48	---
		HEAT	227	210	157	84	157	---	---	---
6RHH-4	1/8	COOL	736	700	663	630	596	558	520	476
		HEAT	641	585	529	486	443	399	355	301
8RHH-4	1/4	COOL	834	779	723	684	645	600	555	502
		HEAT	710	659	607	568	529	491	453	408
10RHH-4	1/4	COOL	1025	991	956	922	887	847	807	770
		HEAT	687	664	640	619	597	579	561	537
12RHH-4	1/3	COOL	1284	1233	1182	1133	1084	1036	988	941
		HEAT	832	796	760	731	702	671	640	605

ELECTRICAL DATA ECM (240V)											
UNIT MODEL		NOM. CFM	HEAT				TOTAL AMPS (1)	MIN. CIR. AMPACITY (MCA)		MAX. OVERCURRENT PROTECTION (MOP)	
			KW @ 240V	BTUH @ 240V	KW @ 208V	BTUH @ 208V		208V	240V	208V	240V
4HHSX	-2	400	2	6,820	1.5	5,120	9.7	11	13	15	15
	-3		3	10,230	2.3	7,680	13.9	16	18	20	20
	-4		4	13,640	3.0	10,240	18.1	20	23	20	25
	-5		5	17,050	3.8	12,800	22.2	25	28	25	30
6HHSX	-3	600	3	10,230	2.3	7,680	13.9	16	18	20	20
	-4		4	13,640	3.0	10,240	18.1	20	23	20	25
	-5		5	17,050	3.8	12,800	22.2	25	28	25	30
	-6		6	20,460	4.5	15,360	26.4	29	33	30	35
6HHX	-3	600	3	10,230	2.3	7,680	16.8	19	21	20	25
	-4		4	13,640	3.0	10,240	21.0	24	27	25	30
	-5		5	17,050	3.8	12,800	25.1	28	32	30	35
	-6		6	20,460	4.5	15,360	29.3	33	37	35	40
	-8		8	27,280	6.0	20,480	37.6	42	47	50	50
	-10		10	34,100	7.5	25,600	46.0	51	58	60	60
8HHX	-3	800	3	10,230	2.3	7,680	16.8	19	21	20	25
	-4		4	13,640	3.0	10,240	21.0	24	27	25	30
	-5		5	17,050	3.8	12,800	25.1	28	32	30	35
	-6		6	20,460	4.5	15,360	29.3	33	37	35	40
	-8		8	27,280	6.0	20,480	37.6	42	47	50	50
	-10		10	34,100	7.5	25,600	46.0	51	58	60	60
10HHX	-3	1000	3	10,230	2.3	7,680	16.8	19	21	20	25
	-4		4	13,640	3.0	10,240	21.0	24	27	25	30
	-5		5	17,050	3.8	12,800	25.1	28	32	30	35
	-6		6	20,460	4.5	15,360	29.3	33	37	35	40
	-8		8	27,280	6.0	20,480	37.6	42	47	50	50
	-10		10	34,100	7.5	25,600	46.0	51	58	60	60
12HHX	-3	1200	3	10,230	2.3	7,680	16.8	19	21	20	25
	-5		5	17,050	3.8	12,800	25.1	28	32	30	35
	-6		6	20,460	4.5	15,360	29.3	33	37	35	40
	-8		8	27,280	6.0	20,480	37.6	42	47	50	50
	-10		10	34,100	7.5	25,600	46.0	51	58	60	60

(1) Includes motor and heaters (at 240V)

ELECTRICAL DATA ECM (277V)									
UNIT MODEL		NOM. CFM	HEAT		MOTOR HP	MOTOR AMPS	TOTAL AMPS (1)	MIN. CIR. AMPACITY (MCA)	MAX. OVERCURRENT PROTECTION (MOP)
			KW @ 277V	BTUH @ 277V				277V	277V
4HHSX	-3-277	400	3	10,230	1/6	1.4	12.2	16	20
	-5-277		5	17,050		1.4	19.5	25	25
	-6-277		6	20,460		1.4	23.1	29	30
6HHSX	-3-277	600	3	10,230	1/6	1.4	12.2	16	20
	-5-277		5	17,050		1.4	19.5	25	25
	-6-277		6	20,460		1.4	23.1	29	30
6HHX	-3-277	600	3	10,230	1/2	3.6	14.4	18	20
	-4-277		4	13,640		3.6	18.0	23	25
	-5-277		5	17,050		3.6	21.7	28	30
	-6-277		6	20,460		3.6	25.3	32	35
8HHX	-3-277	800	3	10,230	1/2	3.6	14.4	18	20
	-4-277		4	13,640		3.6	18.0	23	25
	-5-277		5	17,050		3.6	21.7	28	30
	-6-277		6	20,460		3.6	25.3	32	35
	-8-277		8	27,280		3.6	32.5	41	45
	-10-277		10	34,100		3.6	39.7	50	50
10HHX	-3-277	1000	3	10,230	1/2	3.6	14.4	18	20
	-4-277		4	13,640		3.6	18.0	23	25
	-5-277		5	17,050		3.6	21.7	28	30
	-6-277		6	20,460		3.6	25.3	32	35
	-8-277		8	27,280		3.6	32.5	41	45
	-10-277		10	34,100		3.6	39.7	50	50
12HHX	-3-277	1200	3	10,230	1/2	3.6	14.4	18	20
	-5-277		5	17,050		3.6	21.7	28	30
	-6-277		6	20,460		3.6	25.3	32	35
	-8-277		8	27,280		3.6	32.5	41	45
	-10-277		10	34,100		3.6	39.7	50	50

(1) Includes motor and heaters

HHX 240 VOLT ECM
BLOWER PERFORMANCE

HHX SERIES 240V												
MODEL	MOTOR HP	SPEED TAP	EXTERNAL STATIC PRESSURE (inches of water)									
			0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
3HHSX	1/20	Optional High	353	333	319	305	269	258	246	234	220	206	193
		Std. High	293	277	245	234	224	211	201	191	180	169	159
		Std. Low	248	229	216	202	188	177	165	153	140	129	---
4HHSX	1/7 or 1/10	Optional High	473	430	409	392	371	357	341	328	---	---	---
		Std. High	395	373	350	332	308	290	247	229	---	---	---
		Std. Low	323	290	263	241	217	196	176	149	---	---	---
6HHSX	1/7	Optional High	665	625	595	570	545	525	505	---	---	---	---
		Std. High	625	575	545	520	495	475	455	---	---	---	---
		Std. Low	520	480	445	415	390	365	340	---	---	---	---
6HHX	1/2	Optional High	806	780	754	734	714	698	683	662	642	608	575
		Std. High	679	654	629	609	589	570	551	530	510	495	479
		Std. Low	589	555	520	502	483	467	452	427	402	378	354
8HHX	1/2	Optional High	916	879	842	810	779	742	706	671	637	601	565
		Std. High	864	840	816	790	765	731	698	665	633	597	560
		Std. Low	761	733	706	682	658	637	616	597	579	558	536
10HHX	1/2	Optional High	1275	1252	1229	1212	1196	1174	1152	1108	1064	1016	969
		Std. High	1177	1152	1127	1109	1091	1072	1053	1037	1020	986	951
		Std. Low	992	969	946	927	908	886	864	848	832	812	791
12HHX	1/2	Optional High	1363	1344	1325	1305	1285	1268	1252	1234	1217	1199	1181
		Std. High	1267	1244	1221	1202	1184	1167	1150	1132	1115	1097	1079
		Std. Low	1110	1092	1073	1060	1047	1039	1030	994	957	939	921

HHSX-HHX 240V ECM
BLOWER PERFORMANCE

HHX 3-ROW (240V)											
UNIT MODEL	MOTOR HP	SPEED TAP	EXTERNAL STATIC PRESSURE (inches of water)									
			0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.5
4HHSX-3	1/7	Opt. High	495	465	435	410	380	355	330	-	-	-
		Std. High	435	415	385	360	335	305	280	-	-	-
		Std. Low	370	345	320	290	265	240	210	-	-	-
6HHSX-3	1/7	Opt. High	700	665	630	605	580	555	535	-	-	-
		Std. High	645	610	580	550	525	505	480	-	-	-
		Std. Low	545	510	470	440	410	385	360	-	-	-
6HHX-3	1/2	Opt. High	980	950	920	890	865	840	810	785	755	695
		Std. High	815	790	765	740	715	695	675	650	630	590
		Std. Low	715	680	650	625	600	575	555	530	510	465
8HHX-3	1/2	Opt. High	1040	1010	975	940	905	865	830	795	760	680
		Std. High	1030	1000	965	930	895	860	825	790	755	680
		Std. Low	895	870	845	820	790	760	735	705	680	625
10HHX-3	1/2	Opt. High	1325	1305	1285	1265	1240	1210	1180	1145	1100	1000
		Std. High	1220	1195	1170	1150	1130	1110	1085	1060	1035	960
		Std. Low	1025	1005	980	960	940	915	890	870	845	790
12HHX-3	1/2	Opt. High	1415	1395	1375	1355	1330	1310	1295	1275	1255	1220
		Std. High	1300	1280	1260	1240	1225	1205	1185	1170	1150	1115
		Std. Low	1160	1140	1120	1100	1080	1060	1040	1015	990	945

HHX 4-ROW (240V)											
UNIT MODEL	MOTOR HP	SPEED TAP	EXTERNAL STATIC PRESSURE (inches of water)									
			0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.5
4HHSX-4	1/7	Opt. High	465	440	410	385	360	335	310	-	-	-
		Std. High	410	390	365	340	315	290	265	-	-	-
		Std. Low	350	325	300	275	250	225	200	-	-	-
6HHSX-4	1/7	Opt. High	660	625	595	570	545	525	505	-	-	-
		Std. High	610	575	545	520	495	475	455	-	-	-
		Std. Low	515	480	445	415	390	365	340	-	-	-
6HHX-4	1/2	Opt. High	925	895	870	845	815	790	765	735	710	655
		Std. High	770	745	720	695	675	655	635	615	595	555
		Std. Low	675	645	615	590	570	545	520	500	480	440
8HHX-4	1/2	Opt. High	980	950	920	885	855	820	785	750	715	640
		Std. High	970	940	910	880	845	815	780	745	710	640
		Std. Low	845	820	795	770	745	720	695	665	640	590
10HHX-4	1/2	Opt. High	1250	1230	1210	1190	1170	1145	1115	1080	1040	945
		Std. High	1150	1125	1105	1085	1065	1045	1025	1000	975	905
		Std. Low	965	945	925	905	885	865	840	820	795	745
12HHX-4	1/2	Opt. High	1335	1315	1295	1275	1255	1235	1220	1200	1185	1150
		Std. High	1225	1210	1190	1175	1155	1135	1120	1105	1085	1050
		Std. Low	1095	1075	1055	1040	1020	1000	980	960	935	890

HHX 277 VOLT ECM
BLOWER PERFORMANCE

HHX 3-ROW (277V)											
UNIT MODEL	MOTOR HP	SPEED TAP	EXTERNAL STATIC PRESSURE (inches of water)									
			0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.5
4HHSX-3 277	1/6	Opt. High	500	465	435	400	370	345	315	-	-	-
		Std. High	445	410	375	340	310	280	255	-	-	-
		Std. Low	360	320	285	255	225	195	165	-	-	-
6HHSX-3 277	1/6	Opt. High	645	615	585	555	530	505	480	-	-	-
		Std. High	560	520	485	455	425	400	370	-	-	-
		Std. Low	445	405	365	330	295	260	225	-	-	-
6HHX-3 277	1/2	Opt. High	845	820	795	770	750	725	700	680	655	610
		Std. High	700	675	650	625	605	585	560	540	515	465
		Std. Low	600	575	550	525	500	475	450	425	400	350
8HHX-3 277	1/2	Opt. High	945	910	875	840	810	775	740	705	670	595
		Std. High	915	890	860	830	800	770	735	700	665	590
		Std. Low	795	770	745	720	700	675	650	630	610	560
10HHX-3 277	1/2	Opt. High	1315	1290	1265	1245	1225	1200	1175	1150	1115	1010
		Std. High	1210	1185	1160	1140	1120	1095	1070	1040	1010	930
		Std. Low	1025	1000	970	940	915	890	865	840	810	730
12HHX-3 277	1/2	Opt. High	1385	1355	1325	1295	1270	1240	1215	1190	1165	1120
		Std. High	1380	1350	1320	1290	1265	1235	1210	1185	1160	1115
		Std. Low	1250	1225	1195	1170	1145	1115	1085	1060	1030	970

HHX 4-ROW (277V)											
UNIT MODEL	MOTOR HP	SPEED TAP	EXTERNAL STATIC PRESSURE (inches of water)									
			0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.5
4HHSX-4 277	1/6	Opt. High	470	440	410	380	350	325	295	-	-	-
		Std. High	420	390	355	320	290	265	240	-	-	-
		Std. Low	340	305	270	240	210	185	155	-	-	-
6HHSX-4 277	1/6	Opt. High	610	580	550	525	500	480	455	-	-	-
		Std. High	530	490	455	425	400	375	350	-	-	-
		Std. Low	420	380	340	310	280	245	210	-	-	-
6HHX-4 277	1/2	Opt. High	795	770	750	730	705	685	665	640	620	575
		Std. High	670	640	615	590	570	550	530	510	485	440
		Std. Low	575	545	520	495	470	450	425	400	375	330
8HHX-4 277	1/2	Opt. High	890	855	825	795	765	735	700	665	630	560
		Std. High	865	835	810	785	755	725	695	660	625	555
		Std. Low	750	730	705	680	660	635	615	595	575	530
10HHX-4 277	1/2	Opt. High	1240	1215	1195	1175	1155	1135	1110	1085	1050	955
		Std. High	1140	1115	1095	1075	1055	1035	1010	985	955	875
		Std. Low	965	940	915	890	865	840	815	790	765	690
12HHX-4 277	1/2	Opt. High	1305	1280	1250	1225	1200	1170	1145	1125	1100	1055
		Std. High	1300	1275	1245	1220	1195	1165	1140	1120	1095	1050
		Std. Low	1180	1150	1125	1100	1080	1055	1025	1000	970	915

HHSX-HHX 240V ECM
BLOWER PERFORMANCE

PHHX, RHHX, CHHX 3-ROW (240V)											
UNIT MODEL	MOTOR HP	SPEED TAP	EXTERNAL STATIC PRESSURE (inches of water)									
			0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.5
4*HHSX-3	1/7	Opt. High	435	410	385	360	335	310	290	-	-	-
		Std. High	385	365	340	315	295	270	245	-	-	-
		Std. Low	325	305	280	255	235	210	185	-	-	-
6*HHSX-3	1/7	Opt. High	615	585	555	530	510	490	470	-	-	-
		Std. High	570	535	510	485	465	445	420	-	-	-
		Std. Low	480	450	415	385	365	340	315	-	-	-
6*HHX-3	1/2	Opt. High	870	845	820	795	770	745	720	695	670	620
		Std. High	725	700	680	660	635	615	600	580	560	525
		Std. Low	635	605	580	560	535	515	495	475	455	415
8*HHX-3	1/2	Opt. High	925	900	870	835	805	770	740	710	675	605
		Std. High	915	890	860	830	795	765	735	700	670	605
		Std. Low	795	775	750	730	705	680	655	630	605	555
10*HHX-3	1/2	Opt. High	1260	1240	1220	1200	1180	1150	1120	1085	1045	950
		Std. High	1160	1135	1110	1090	1070	1055	1035	1010	985	910
		Std. Low	975	955	930	910	890	870	850	825	805	750
12*HHX-3	1/2	Opt. High	1360	1340	1320	1300	1280	1260	1240	1225	1205	1170
		Std. High	1250	1230	1210	1190	1175	1160	1140	1125	1105	1070
		Std. Low	1115	1095	1075	1055	1040	1020	995	975	950	905

PHHX, RHHX, CHHX 4-ROW (240V)											
UNIT MODEL	MOTOR HP	SPEED TAP	EXTERNAL STATIC PRESSURE (inches of water)									
			0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.5
4*HHSX-4	1/7	Opt. High	410	385	360	340	315	295	275	-	-	-
		Std. High	365	345	320	300	275	255	235	-	-	-
		Std. Low	310	285	265	240	220	200	175	-	-	-
6*HHSX-4	1/7	Opt. High	580	550	525	500	480	460	445	-	-	-
		Std. High	535	505	480	455	435	420	400	-	-	-
		Std. Low	445	415	385	355	335	315	290	-	-	-
6*HHX-4	1/2	Opt. High	840	815	790	765	740	720	695	670	645	595
		Std. High	700	675	655	635	615	600	580	560	540	505
		Std. Low	610	580	555	535	515	495	470	450	430	395
8*HHX-4	1/2	Opt. High	890	860	835	805	780	750	715	685	650	580
		Std. High	885	860	830	800	770	740	710	680	645	580
		Std. Low	770	745	725	705	680	655	630	605	580	535
10*HHX-4	1/2	Opt. High	1190	1170	1150	1130	1110	1085	1060	1025	990	900
		Std. High	1095	1070	1050	1030	1010	995	975	950	925	860
		Std. Low	915	900	880	860	840	820	800	780	755	710
12*HHX-4	1/2	Opt. High	1280	1265	1245	1225	1205	1185	1170	1155	1140	1105
		Std. High	1175	1155	1140	1125	1110	1095	1075	1060	1040	1010
		Std. Low	1050	1035	1015	1000	980	960	940	920	900	855

HHX 277 VOLT ECM
BLOWER PERFORMANCE

PHHX, RHHX, CHHX 3-ROW (277V)											
UNIT MODEL	MOTOR HP	SPEED TAP	EXTERNAL STATIC PRESSURE (inches of water)									
			0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.5
4*HHSX-3 277	1/6	Opt. High	440	410	380	350	325	300	275	-	-	-
		Std. High	390	360	330	300	270	245	225	-	-	-
		Std. Low	315	280	250	225	200	170	145	-	-	-
6*HHSX-3 277	1/6	Opt. High	570	540	515	490	465	445	420	-	-	-
		Std. High	480	445	415	390	365	345	320	-	-	-
		Std. Low	375	340	305	275	250	220	190	-	-	-
6*HHX-3 277	1/2	Opt. High	750	730	710	690	665	645	625	605	585	545
		Std. High	625	600	580	560	540	520	500	480	460	415
		Std. Low	535	515	490	470	445	425	400	380	355	310
8*HHX-3 277	1/2	Opt. High	840	810	780	750	720	690	660	630	595	530
		Std. High	815	790	765	740	710	685	655	625	590	525
		Std. Low	710	690	665	645	625	600	580	565	545	500
10*HHX-3 277	1/2	Opt. High	1250	1225	1200	1180	1160	1140	1120	1090	1060	960
		Std. High	1150	1125	1100	1080	1060	1040	1020	990	960	885
		Std. Low	975	950	920	895	870	845	820	795	770	695
12*HHX-3 277	1/2	Opt. High	1330	1300	1270	1245	1220	1190	1165	1145	1120	1075
		Std. High	1325	1295	1265	1240	1215	1185	1160	1140	1115	1070
		Std. Low	1200	1175	1145	1120	1095	1070	1045	1015	990	930

PHHX, RHHX, CHHX 4-ROW (277V)											
UNIT MODEL	MOTOR HP	SPEED TAP	EXTERNAL STATIC PRESSURE (inches of water)									
			0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.5
4*HHSX-4 277	1/6	Opt. High	405	380	355	325	300	275	255	-	-	-
		Std. High	360	330	300	270	245	225	205	-	-	-
		Std. Low	275	245	220	195	170	150	125	-	-	-
6*HHSX-4 277	1/6	Opt. High	535	510	485	460	440	420	400	-	-	-
		Std. High	455	420	390	365	345	325	300	-	-	-
		Std. Low	355	320	290	260	235	205	175	-	-	-
6*HHX-4 277	1/2	Opt. High	730	710	690	670	650	630	610	590	570	530
		Std. High	610	585	560	540	520	500	480	460	440	400
		Std. Low	520	495	470	445	425	405	385	365	340	295
8*HHX-4 277	1/2	Opt. High	820	790	760	735	705	675	645	615	580	515
		Std. High	805	780	755	730	700	675	645	615	580	515
		Std. Low	700	675	655	635	615	595	575	555	535	495
10*HHX-4 277	1/2	Opt. High	1180	1155	1135	1115	1095	1075	1055	1030	1000	905
		Std. High	1085	1060	1040	1020	1000	980	960	935	905	830
		Std. Low	905	885	860	835	815	790	765	745	720	650
12*HHX-4 277	1/2	Opt. High	1225	1200	1175	1150	1125	1100	1080	1055	1035	990
		Std. High	1220	1195	1170	1145	1120	1095	1075	1050	1030	985
		Std. Low	1110	1085	1060	1040	1015	990	965	940	910	860

HH SERIES
CEILING FAN COILS

ACCESSORIES – VALVE PACKAGES AND ACCESSORIES

ACTUATOR		
2-POSITION (ON-OFF) 50/60HZ		
VOLTAGE	PART #	2-WAY VALVE AND ACTUATOR
24V	E50131180	
120/1/60	E50132180	

ACTUATOR – MATERIALS								
BASE	COVER	BASE PLATE	LEAD LENGTH	POWER REQ.	AMBIENT TEMP. RANGE	MICRO SWITCH	HUMIDITY	APPROVALS
POLY-CARBONATE	POLY-CARBONATE	ALUMINUM	6" - (24V 18")	6.5W, 7 VA	32°F TO 170°F	5 A, 250 V	95% NON-CONDENSING	ETL, Cul, CE

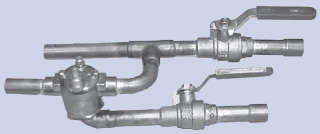
VALVE BODIES (2-POSITION) / MATERIALS								
BODY	STEM	(2) O-RINGS SEALS	PADDLE	FLUID	MAX. % OF GLYCOL	TEMP. RANGE	MAX. STATIC PRESSURE	SWEAT CONN.
BRASS	STAINLESS STEEL	EPDM	EPDM	WATER / GLYCOL	50%	32°F TO 230°F	300 PSI	1/2", 3/4", 1"

E43XXXX 3-WAY	E42XXXX 2-WAY
	

VALVE PACKAGE ACCESSORIES		
AUTOMATIC FIXED FLOW CONTROL		
1/2"	3/4"	
CP654XXXXX	CP655XXXXX	
PETE'S PLUG	REQUIRES CP6025 CP61712	
MANUAL ADJUSTMENT FLOW SETTER		
1/2"	3/4"	
CP601	CP6011	
Y-STRAINER (SWEAT)		
1/2"	3/4"	
CP603	CP6031	
BALL VALVES (SWEAT) FULL PORT (T-HANDLE)		
1/2" / 3/4"	1"	
CP9 / CP90	CP905	
EXTENDED DRIP LIPS		
919-1 15" 919-1X1ss 15" 919-1EXT 19"		

ACCESSORIES (CONT'D)
VALVE PACKAGES AND ACCESSORIES

FLOW CHARACTERSISTICS		
CONNECTION SIZE	**FLOW COEFFICIENT**	**MAXIMUM CLOSE-OFF PRESSURE AP**
1/2"	3.5Cv	30
1"	5 Cv	25
3/4"	7.5 Cv	20

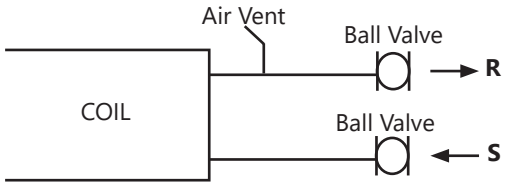
STANDARD VALVE PACKAGE – FACTORY MOUNTED 2-POSITION (ON-OFF)	
2-WAY 9VH*22BM WITH 2-BV'S	
3-WAY 9VH*23BM WITH 2-BV'S	
T4071 5/8 **T4072 7/8** **Auto Changeover Requires Aguastat (2-pipe applications)**	
Strap-on Aquastat 5/8" O.D. Tubing **10 amps induction** **60 amps locked rotor** **25 amps resistive** **Temperature Changes at 95°F + 10°F** **Resets at 65°F + 5°F**	– – –

HH SERIES
CEILING FAN COILS

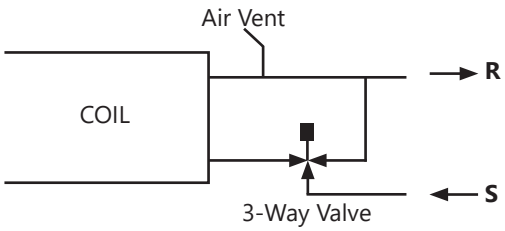
PIPING PACKAGE OPTIONS
TWO POSITION OR MODULATING

Manual air vents are standard and are factory mounted on all chilled water and hot water coils.
All pre-piped on/off or modulating valve packages are factory assembled with sweat connections.

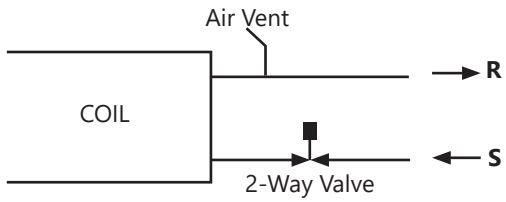
Ball Valves only, No Control Valve



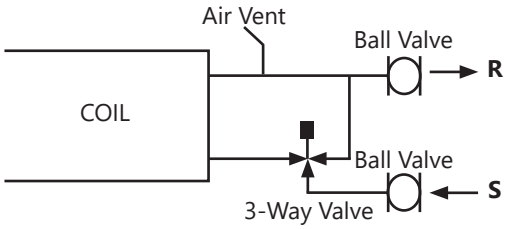
3-Way Valve, No Ball Valves



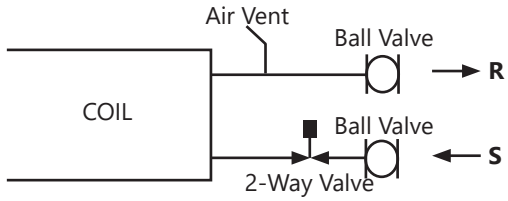
2-Way Valve, No Ball Valves



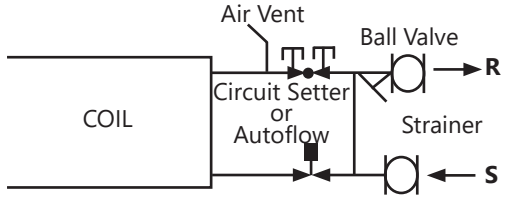
3-Way Valve, with 2-Ball Valves



2-Way Valve with 2-Ball Valves



3-Way Valve, with 2-Ball valve and Manual Circuit Setter or Automatic Flow Control, Y-Strainer, PT's

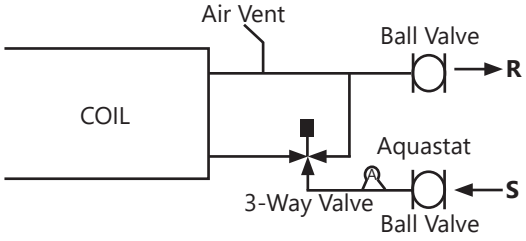


Additional Options:
Y-Strainers, Pete's Plugs, Cleanout Blow-Down, SS Hose Kits, Aquastats

Contact factory for availability.

Valve packages are available as kits or factory mounted on certain products. Contact factory for availability.

3-Way Valve with 2-Ball Valves and Aquastat



HH SERIES
CEILING FAN COILS

SPECIFICATION GUIDE
PART 1 — GENERAL

1.01 SECTION INCLUDES

A. Fan Coil Units

1.02 REFERENCES

AMCA 99 – Standards Handbook
AMCA 210 -- Laboratory Methods for Testing Fans for Rating Purposes
AMCA 300 – Test Code for Sound Rating Air Moving Devices
ARI 440 – Room Fan-Coil Unit
ASTMB117 – Standard Practice for Operating Salt Spray Apparatus
NEMA MGI – Motors and Generators
NFPA 70 – National Electric Code
SMACNA – HVAC Duct Construction Standards – Metal and Flexible
UL 723 – Test for Surface Burning Characteristics of Building Materials
UL 900 – Test Performance of Air Filter Units
UL 1995 – Standard for Heating and Cooling Equipment
UL 94 – Test for Flammability of Plastic Materials for Parts in Devices and Appliances

1.03 SUBMITTALS

A. Shop drawings: Indicate assembly, unit dimensions, weight loading, required clearances, construction details, field connection details, and electrical characteristics and connection requirements. A computer generated capacity selection shall be submitted for each cooling coil with design points and final operating point clearly noted.
B. Product Data:
1. Provide literature that indicates dimensions, weights, capacities, ratings, fan performance, finishes of materials, and electrical characteristics and connection requirements.
2. Provide data of filter media, filter performance data.
3. Manufacturer's installation instructions.

1.04 OPERATION AND MAINTENANCE DATA

A. Maintenance Data: Include instructions for lubrication, filter replacement and motor and drive replacement.

1.05 QUALIFICATIONS

A. Maintenance Data: Include instructions for lubrication, filter replacement and motor and drive replacement.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Accept products on site on factory-installed shipping skids. Inspect for damage.
B. Store in clean dry place and protect from weather and construction traffic. Handle carefully to avoid damage to components, enclosures, and finish.

1.07 ENVIRONMENTAL REQUIREMENTS

A. Do not operate units for any purpose, temporary or permanent, until ductwork is clean, filters are in place, and fan has been test run under observation.

SPECIFICATION GUIDE (CONT'D)

PART 2 — PRODUCTS

2.01 MANUFACTURERS

A. The following manufacturers are approved for use. No substitutions will be permitted. First Company, Dallas TX

2.02 CASING

A. Unit shall have corrosion resistant casing consisting of galvanized steel panels. Unit panels shall be fully insulated with 1.5lb fiberglass insulation with anti-microbial agent. Removable panels shall provide full access to unit components..

B. Drain pans shall be heavy gauge galvanized steel with an insulating coating. Optional stainless steel drain pan shall include an insulating coating. Drain pans shall be removable for cleaning or replacement without removing coils or disturbing coil connections.

2.03 SUPPLY FAN

A. Provide DWDI forward-curved supply fans. Fan assemblies shall be statically and dynamically balanced by manufacturer. The housings are constructed from heavy gauge galvanized steel with die-formed inlet cones.

B. Fan and motor mounting platform shall be a minimum of 12 gauge LFQ galvanized steel.

2.04 MOTORS

A. Direct drive motors to be PSC or ECM type, permanently lubricated type with internal thermal overload protection and mounted with rubber isolation bushings.

2.05 ELECTRICAL

A. Provide units with 115, 208-240, or 277V, 3-speed with 24v control transformer, and 15 amp service switch or optional ECM motor with 120/24V control transformer, 15 amp service switch, 3 speed taps. Controls to be factory mounted and tested.

2.07 COOLING AND HEATING COIL SECTIONS

A. Provide access to coils for service and cleaning..

B. Water Coils: fins shall have full drawn collars to provide a continuous surface cover over the entire tube for maximum heat transfer. Tubes shall be mechanically expanded into the fins to provide a continuous primary-to-secondary compression bond over the entire finned length for maximum heat transfer rates. Bare copper tube shall not be visible between fins. Coil tubes shall be seamless copper, expanded into fins, and brazed at joints. Coil connections shall be copper with sweat connection size to be determined by manufacturer based upon the most efficient coil circuiting. Manual air vent connections shall be provided at the highest point to assure proper venting. Coils shall be tested with 350 pounds air pressure and suitable for 300 psig working pressure. Coil casings shall be a formed channel frame of galvanized steel.

2.08 FILTERS

A. Filter to be disposable type and media shall be UL 900 listed, Class I or Class II.

B. MERV 10 can be used as an option, will increase static by 0.25

PART 3 — EXECUTION

3.01 INSTALLATION

A. Install in accordance with manufacturer's instructions.

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MAY 2025