

# CHX Series

## Horizontal - *Heat Pump / DX* Belt Drive Blower - Coil Unit



**First Co.** commercial - duty **CHX** heat pump / DX units are designed for installation within the conditioned area or as remote units with duct systems. These air handlers are compact, with large removable panels on both sides for installation and ease of service. Separate filter panels are provided on both sides of unit. Standard coil has a piston-type metering device for heat pump or straight cool (DX) operation. Optional accessories include hot water coils, plenums, mixing boxes, expansion valves, and various motor options.

Standard models are available in 4 popular sizes - 800, 1200, 1600, and 2000 Nominal CFM (2 through 5 tons). All standard models are ETL and A.R.I. Listed.

**2 THROUGH 5 TONS**

### ***NOW STANDARD WITH IAQ INSULATION***

*(Meets ASTM C 1071, ASTM G 21, ASTM G 22, NFPA 90A, UL-181,  
and the cleaning practices listed by NAIMA)*



# TABLE OF CONTENTS

DESCRIPTION	PAGE
STANDARD FEATURES	3
OPTIONS AND ACCESSORIES	3
UNIT DIMENSIONS	4
GENERAL SPECIFICATIONS	4
MECHANICAL SELECTION	5
COMPONENT STATIC RESISTANCE CHART	5
HOT WATER HEATING CORRECTION FACTORS	6
FAN PERFORMANCE	6,7
HEATING AND COOLING CAPACITIES:	
24CHX	8
36CHX	9
48CHX	10
60CHX	11
GUIDE SPECIFICATIONS	12
MODEL NUMBERING SYSTEM	12

## INFORMATION REQUIRED FOR UNIT SELECTION

CFM \_\_\_\_\_ E.S.P. \_\_\_\_\_ MOTOR: HP: \_\_\_\_\_ VOLTAGE: \_\_\_\_\_ PHASE: \_\_\_\_\_

COOLING: INDOOR: DB \_\_\_\_\_ WB \_\_\_\_\_ SUCTION TEMP. \_\_\_\_\_

OUTDOOR: DB \_\_\_\_\_

TOTAL BTUH \_\_\_\_\_ SENS. BTUH \_\_\_\_\_

HEATING: TOTAL BTUH \_\_\_\_\_ GPM \_\_\_\_\_ EWT \_\_\_\_\_ EAT \_\_\_\_\_

MISC: \_\_\_\_\_

## STANDARD FEATURES

### CABINET -

Fabricated of heavy gauge galvanized steel. Seismic resistant mounting brackets are standard on all models.

### BLOWER -

Resiliently mounted, heavy duty, double inlet, forward curved blade, centrifugal type. Each wheel is dynamically balanced for smooth, quiet operation. All blowers are belt driven with field adjustable pulleys to permit variations in static pressure and air requirements. All blowers have ball bearings.

### COILS -

Fabricated of 3/8 OD seamless copper tubes mechanically expanded to highly efficient aluminum fins to maximize heat transfer.

### INSULATION -

The entire interior of the cabinet is insulated with a special one (1) inch insulation coated with an EPA registered agent which effectively resists the growth of bacteria and fungi. This insulation can also handle the abuse of maintenance and cleaning practices listed by NAIMA (North American Insulation Manufacturers Association).

### FILTER -

One inch throwaway filters are provided as standard in all **CHX** units. **Filters can be changed without tools.** Space available for 2".

### FACTORY WIRED -

All standard motors are field or factory installed and wired at voltage specified by customer (if not specified, multi-voltage motors will be wired at highest voltage).

### MOTOR -

Standard motor is 115 volt, single phase, 1725 RPM. The adjustable motor mount permits easy belt adjustment. A variable pitch pulley allows balancing of the system to the desired CFM.

### MISCELLANEOUS -

- Slotted mounting rails for easy installation. Rails are turned down 1/2" on each end for safer and easier installation.
- 4 x 4 junction box accepts a field installed (24 / 120V) relay/transformer for low voltage control.
- 3/4 inch NPT drain connections on both sides of cabinet.
- Header connections on the right side as standard. Knockouts are provided for conversion to the left side. (Looking with air flow)
- Drain pans are mastic-coated for corrosion resistance.

## OPTIONS

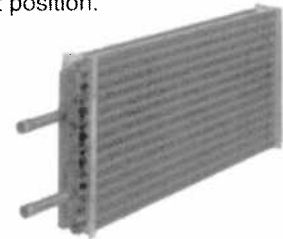
1. Field installed **expansion valve kit**:

Part Number	For Unit Model
24EVK	24CHX
36EVK	36CHX
48EVK	48CHX
60EVK	60CHX

2. Separate 2 row **hot water coil kit** can be field installed or factory installed in the reheat position.

**NOTE: When hot water coils are added, a "Freeze Stat" must be field installed in order to keep hot water coil from freezing.**

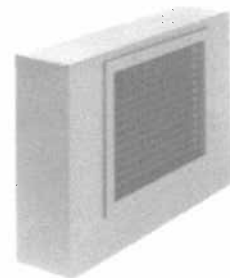
Part Number	For Unit Model	Manifold Connections
24HWK	24CHX	7/8" O.D.
36HWK	36CHX	7/8" O.D.
48HWK	48CHX	7/8" O.D.
60HWK	60CHX	7/8" O.D.



3. **Permanent filters** (contact factory).

4. **Discharge plenum** with four way double - deflection grille (field installed).

Part Number	For Unit Model	Depth
24DP	24CHX	6"
36DP	36CHX	6"
48DP	48CHX	6"
60DP	60CHX	6"

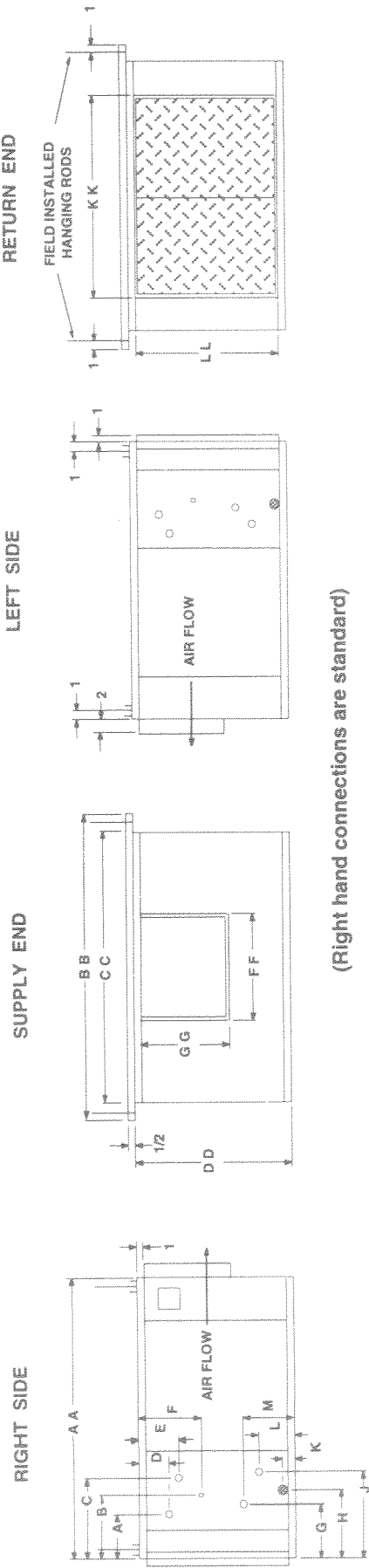


5. **Relay / Transformer** (24 / 120V) mounts directly on 4 x 4 junction box on each unit. Part number is **E301**.

6. **Mixing box** attaches to return end of air handler to allow entry of outside air (field installed). Dampers can be positioned for either rear / top or rear / bottom locations. Crank arms and linkage rod are furnished but not installed. Balance of hardware including motor and controls to be field supplied.

Part Number	For Unit Model	Depth
24MB	24CHX	16"
36MB	36CHX	16"
48MB	48CHX	18"
60MB	60CHX	18"





(Right hand connections are standard)

### UNIT DIMENSIONS

MODEL	UNIT CABINET				BLOWER OUTLET		RETURN DUCT CONNECTION		STUBOUT LOCATION FOR COIL CONNECTIONS											
	AA	BB	CC	DD	FF	GG	KK	LL	A	B	C	D	E	F	G	H	J	K	L	M
24CHX4	37	31	27	18	8-3/4	10-7/8	18	16-1/4	5	7-13/16	12-7/8	3-5/8	6-3/8	5-5/8	--	9-3/4	13-3/4	1-1/2	3-1/4	--
36CHX4	37	40-1/2	36-1/2	18	12-1/4	10-7/8	27-1/2	16-1/4	5	7-13/16	12-7/8	3-5/8	6-3/8	5-5/8	--	9-3/4	13-3/4	1-1/2	3-1/4	--
48CHX4	39	42	38	22	13-5/8	11-7/8	29	20-1/4	--	7-13/16	12-7/8	--	5-5/8	7-7/16	6-1/2	9-3/4	13-3/4	1-1/2	3-1/4	7-5/16
60CHX4	42	49	45	22	16	13-7/8	36	20-1/4	--	7-13/16	12-7/8	--	5-5/8	7-7/16	6-1/2	9-3/4	13-3/4	1-1/2	3-1/4	7-5/16

Notes: 1) Drain connection on both sides are 3/4" MPT.

2) All units have knockouts on both sides for either right (standard) or left side coil stub outs. (Looking with airflow)

### GENERAL SPECIFICATIONS

MODEL	NOM. COOL TONS	FACE AREA SQ. FT.	TUBE SIZE	STD. MOTOR HP	VOLTS	PHASE	BLOWER SIZE	FILTER SIZE	4 ROW COIL			
									LIQUID LINE	SUCTION LINE	SHIPPING WEIGHT	
24CHX	2	1.9	3/8	1/4	115	1	9 x 6	16 x 25	3/8" OD (SWT)	3/4" OD (SWT)	185	
36CHX	3	2.9	3/8	1/3	115	1	9 x 9	16 x 16 (2)	3/8" OD (SWT)	3/4" OD (SWT)	215	
48CHX	4	3.9	3/8	1/2	115	1	10 x 10	16 x 20 (2)	1/2" OD (SWT)	7/8" OD (SWT)	250	
60CHX	5	4.9	3/8	1/2	115	1	12 x 12	20 x 20 (2)	1/2" OD (SWT)	7/8" OD (SWT)	320	

Notes: 1) All technical specifications subject to change without notice.

2) Additional charge for optional motors.

3) When CHX units are used with hot water coil the leaving air temperature must not exceed 150 degrees. At high altitude conditions, blower motor may cutout at a lower LAT. Contact factory for information.

4) Contact factory for electric heat information (supplied by others).

## MECHANICAL SELECTION

In general, unit selection consists of choosing the correct model number that will provide the required BTUH cooling and / or heating capacity.

To select unit RPM and horsepower, first determine the total static pressure which the unit must operate against. For an application without duct work, the total static consists of the sum of the blower coil unit component statics at the desired CFM. See chart below for individual component static resistances at various CFM values. For an application with duct work the total static consists of the sum of the external statics, e.g. duct and duct grilles, and the applicable blower coil unit component statics from below.

After total static pressure has been determined, see pages 6 and 7 to establish required fan RPM and motor HP.

Example: Determine required motor horsepower for a 48CHX having a cooling coil, a 2 row heating coil, throwaway filter and .3 external static pressure. The unit is to deliver 1500 CFM.

Cabinet	.10
4 row coil (clg)	.31
2 row coil (htg)	.10
Filter	.06
External S.P.	<u>.30</u>
	.87

From page 6 it is found that the above 48CHX4 requires a 1/2 horsepower motor to deliver 1500 CFM against a total static pressure of .87.

### COMPONENT STATIC RESISTANCE

MODEL	NOMINAL CFM	COMPONENT STATIC RESISTANCE (INCHES OF WATER)			
		CABINET	COOLING COIL*	HEATING COIL	FILTER
			4ROW	2ROW	
24CHX	600	0.09	0.22	0.07	0.04
	700	0.10	0.29	0.09	0.05
	800	0.11	0.36	0.12	0.06
	900	0.12	0.45	0.14	0.07
	1000	0.13	0.54	0.18	0.08
36CHX	1000	0.09	0.26	0.08	0.04
	1100	0.10	0.31	0.10	0.05
	1200	0.11	0.36	0.12	0.06
	1300	0.12	0.41	0.13	0.07
	1400	0.13	0.46	0.15	0.08
48CHX	1400	0.09	0.29	0.09	0.05
	1500	0.10	0.31	0.10	0.06
	1600	0.11	0.35	0.11	0.06
	1700	0.12	0.39	0.12	0.07
	1800	0.13	0.43	0.13	0.08
60CHX	1800	0.10	0.29	0.09	0.05
	1900	0.11	0.31	0.10	0.06
	2000	0.12	0.35	0.11	0.06
	2100	0.13	0.39	0.12	0.07
	2200	0.15	0.43	0.13	0.08

\* Wet Coil (Dry Coil P.D. = Wet P.D. x .70)

## FAN PERFORMANCE

MODEL	NOMINAL CFM	COIL FACE VELOCITY FPM	TOTAL STATIC PRESSURES - INCHES OF WATER									
			0.5		0.6		0.7		0.8		0.9	
			RPM	HP	RPM	HP	RPM	HP	RPM	HP	RPM	HP
24CHX	600	300	770	1/6	840	1/6	900	1/6	990	1/4	1050	1/4
	700	350	780	1/6	850	1/6	910	1/4	990	1/4	1040	1/4
	800	400	800	1/4	860	1/4	910	1/4	990	1/4	1040	1/4
	900	450	810	1/4	880	1/4	925	1/4	1000	1/4	1050	1/3
	1000	500	830	1/4	900	1/4	950	1/3	1000	1/3	1060	1/3
36CHX	1000	333	805	1/4	880	1/4	940	1/3	1000	1/3	1060	1/3
	1100	367	810	1/4	890	1/3	940	1/3	1000	1/3	1050	1/2
	1200	400	820	1/3	900	1/3	950	1/3	1005	1/2	1050	1/2
	1300	434	840	1/3	905	1/3	960	1/3	1010	1/2	1060	1/2
	1400	466	870	1/3	920	1/3	980	1/2	1020	1/2	1090	1/2
48CHX	1400	350	720	1/3	775	1/3	825	1/3	870	1/2	910	1/2
	1500	375	740	1/3	785	1/2	830	1/2	875	1/2	920	1/2
	1600	400	750	1/2	800	1/2	840	1/2	890	1/2	925	3/4
	1700	425	770	1/2	810	1/2	860	1/2	895	1/2	930	3/4
	1800	450	785	1/2	825	1/2	870	1/2	910	1/2	945	3/4
60CHX	1800	360	580	1/2	630	1/2	680	1/2	725	1/2	770	3/4
	1900	380	580	1/2	630	1/2	680	1/2	725	1/2	775	3/4
	2000	400	590	1/2	635	1/2	680	1/2	730	1/2	770	3/4
	2100	420	600	1/2	640	1/2	690	1/2	730	3/4	770	3/4
	2200	440	600	1/2	645	1/2	690	1/2	735	3/4	775	3/4

- Notes:**
- 1) Shaded area indicates the R.P.M. and C.F.M. range of the standard motor and pulleys.
  - 2) Special pulleys and motors can be factory furnished at an additional charge.
  - 3) Horsepower tabulated indicates minimum recommended motor H.P.
  - 4) Operation as indicated by underline type may result in fluctuating pressures.
  - 5) **Rated in accordance with ARI 430.**

## HOT WATER HEATING CORRECTION FACTORS

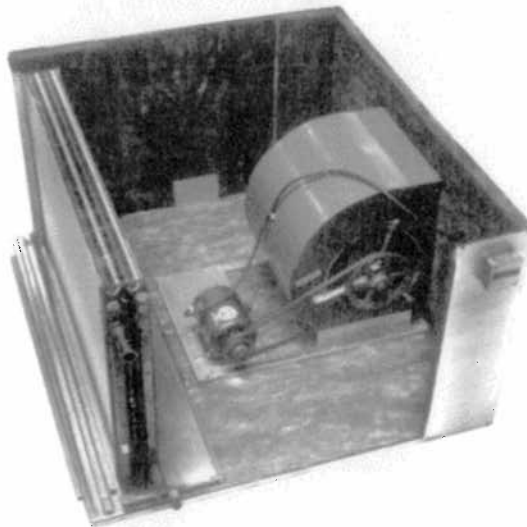
ENTERING AIR TEMP. (°F)	ENTERING WATER TEMPERATURE (°F)								
	100	110	120	130	140	150	160	170	180
50	0.455	0.545	0.636	0.727	0.818	0.909	1.000	1.091	1.182
55	0.409	0.500	0.591	0.682	0.773	0.864	0.955	1.045	1.136
60	0.363	0.455	0.545	0.636	0.727	0.818	0.909	1.000	1.091
65	0.318	0.409	0.500	0.591	0.682	0.773	0.864	0.955	1.045
70	0.272	0.363	0.455	0.545	0.636	0.727	0.818	0.909	1.000
75	0.227	0.318	0.409	0.500	0.591	0.682	0.773	0.864	0.955
80	0.182	0.272	0.363	0.455	0.545	0.636	0.727	0.818	0.909

- Notes:**
- 1) To determine heating capacity at other than 180 deg. E.W.T. and 70 deg. E.A.T. multiply the selected heating capacity at 180 deg. times the appropriate correction factor from above chart.
  - 2) These correction factors may be used on all First Co. published 180 deg. heating capacities.
  - 3) When CHX units are used with hot water coils the leaving air temperature must not exceed 150 degrees.

## FAN PERFORMANCE ( Con't. from previous page)

MODEL	COIL FACE VELOCITY FPM	TOTAL STATIC PRESSURES - INCHES OF WATER											
		1.0		1.2		1.4		1.6		1.8		2.0	
		RPM	HP	RPM	HP	RPM	HP	RPM	HP	RPM	HP	RPM	HP
600	300	1105	1/4	1210	1/3	1310	1/3	1420	1/3	1510	1/2	1600	<u>1/2</u>
700	350	1100	1/4	1200	1/3	1300	1/3	1405	1/2	1500	1/2	1590	<u>1/2</u>
800	400	1100	1/3	1195	1/3	1295	1/2	1395	1/2	1470	1/2	1580	<u>1/2</u>
900	450	1100	1/3	1190	1/3	1290	1/2	1390	1/2	1460	1/2	1540	3/4
1000	500	1110	1/3	1200	1/2	1295	1/2	1390	1/2	1450	3/4	1520	3/4
1000	333	1110	1/2	1230	1/2	<u>1335</u>	<u>1/2</u>	<u>1440</u>	<u>3/4</u>	<u>1540</u>	<u>3/4</u>	<u>1625</u>	<u>3/4</u>
1100	367	1110	1/2	1215	1/2	1325	1/2	<u>1425</u>	<u>3/4</u>	<u>1520</u>	<u>3/4</u>	<u>1615</u>	<u>3/4</u>
1200	400	1110	1/2	1210	1/2	1315	3/4	1415	3/4	<u>1500</u>	<u>3/4</u>	<u>1605</u>	<u>3/4</u>
1300	434	1110	1/2	1220	1/2	1315	3/4	1410	3/4	1490	3/4	1590	1
1400	466	1120	1/2	1220	3/4	1320	3/4	1410	3/4	1500	3/4	1590	1
1400	350	955	1/2	1050	3/4	1135	3/4	1215	3/4	<u>1300</u>	<u>1</u>	<u>1380</u>	<u>1</u>
1500	375	960	1/2	1050	3/4	1135	3/4	1210	3/4	1295	1	1370	1
1600	400	970	3/4	1050	3/4	1140	3/4	1210	3/4	1290	1	1360	1
1700	425	980	3/4	1065	3/4	1140	3/4	1210	1	1290	1	1350	1
1800	450	985	3/4	1070	3/4	1150	3/4	1215	1	1280	1	1350	1
1800	360	820	3/4	900	3/4	<u>975</u>	<u>3/4</u>	<u>1050</u>	<u>1</u>	<u>1125</u>	<u>1</u>	<u>1200</u>	<u>1-1/2</u>
1900	380	815	3/4	895	3/4	970	3/4	<u>1045</u>	<u>1</u>	<u>1120</u>	<u>1</u>	<u>1190</u>	<u>1-1/2</u>
2000	400	815	3/4	890	3/4	965	1	1040	1	<u>1110</u>	<u>1</u>	<u>1180</u>	<u>1-1/2</u>
2100	420	815	3/4	885	3/4	960	1	1035	1	1105	1-1/2	1175	1-1/2
2200	440	815	3/4	885	3/4	960	1	1030	1	1100	1-1/2	1165	1-1/2

- Notes:**
- 1) Special pulleys and motors can be factory furnished at an additional charge.
  - 2) Horsepower tabulated indicates minimum recommended motor H.P.
  - 3) Operation as indicated by underline type may result in fluctuating pressures.
  - 4) **Rated in accordance with ARI 430.**



(CHW unit shown)

# 24CHX4

## DIRECT EXPANSION COOLING CAPACITIES

SUCTION TEMP. °F	CFM	85°F DB / 71°F WB ENT. AIR				80°F DB / 67°F WB ENT. AIR				75°F DB / 63°F WB ENT. AIR			
		TOTAL MBTUH	SENS. MBTUH	LVG. AIR °F		TOTAL MBTUH	SENS. MBTUH	LVG. AIR °F		TOTAL MBTUH	SENS. MBTUH	LVG. AIR °F	
				DB	WB			DB	WB			DB	WB
40	600	35.0	20.3	53.7	52.9	29.2	18.4	51.7	51.0	23.4	16.2	50.0	49.4
	800	41.5	24.7	56.5	55.3	34.6	22.4	54.1	53.0	27.7	19.8	52.0	51.0
	1000	46.5	28.3	58.8	57.2	38.7	25.8	56.1	54.6	31.0	22.9	53.7	52.4
45	600	30.2	18.4	56.6	55.9	24.3	16.4	54.7	54.0	18.5	14.2	53.1	52.5
	800	35.8	22.5	58.9	57.8	28.8	20.2	56.7	55.6	21.9	17.5	54.7	53.7
	1000	40.1	25.9	60.9	59.4	32.3	23.4	58.4	56.9	24.6	20.4	56.1	54.8
50	600	24.9	16.4	59.7	58.9	19.1	14.4	57.8	57.1	13.2	12.1	56.3	55.7
	800	29.5	20.2	61.6	60.4	22.6	17.8	59.4	58.3	15.7	15.1	57.5	56.5
	1000	33.0	23.5	63.2	61.7	25.3	20.8	60.8	59.3	17.7	17.7	58.6	---

## HOT WATER HEATING CAPACITIES

24HWK (2 ROW COIL)					
180°F ENTERING WATER TEMPERATURE					
CFM	GPM	WTR. P.D. FT.	TOTAL MBH	LVG. AIR °F	LVG. WTR. °F
600	3.0	0.9	33.3	121	158
800			38.4	115	154
1000			42.9	110	151
600	6.0	3.2	36.6	126	168
800			43.2	120	166
1000			49.0	115	164
600	9.0	6.7	37.9	128	172
800			45.3	122	170
1000			51.8	118	168

\* 70 degree return air

- Notes:**
- 1) See page 6 for hot water heating correction factors.
  - 2) Optional 2 row hot water coil can be factory installed in either the reheat (std.) or preheat positions.



# 36CHX4

## DIRECT EXPANSION COOLING CAPACITIES

SUCTION TEMP. °F	CFM	85°F DB / 71°F WB ENT. AIR				80°F DB / 67°F WB ENT. AIR				75°F DB / 63°F WB ENT. AIR			
		TOTAL MBTUH	SENS. MBTUH	LVG. AIR °F		TOTAL MBTUH	SENS. MBTUH	LVG. AIR °F		TOTAL MBTUH	SENS. MBTUH	LVG. AIR °F	
				DB	WB			DB	WB			DB	WB
40	1000	55.8	32.7	54.8	53.9	46.5	29.6	52.6	51.8	37.2	26.1	50.8	50.0
	1200	62.0	36.9	56.5	55.4	51.7	33.5	54.1	53.1	41.4	29.7	52.1	51.1
	1400	67.2	40.7	58.1	56.7	56.0	37.0	55.5	54.2	44.8	32.9	53.3	52.0
45	1000	48.1	29.7	57.5	56.6	38.8	26.5	55.4	54.6	29.5	23.0	53.7	53.0
	1200	53.4	33.7	59.0	57.9	43.1	30.2	56.7	55.6	32.8	26.2	54.8	53.8
	1400	57.9	37.2	60.4	58.9	46.7	33.4	57.9	56.5	35.5	29.2	55.7	54.5
50	1000	39.7	26.6	60.4	59.5	30.4	23.3	58.4	57.6	21.1	19.7	56.8	56.0
	1200	44.1	30.3	61.6	60.5	33.8	26.7	59.4	58.3	23.5	22.6	57.6	56.7
	1400	47.8	33.6	62.8	61.3	36.6	29.7	60.4	59.0	25.3	25.3	58.3	---

## HOT WATER HEATING CAPACITIES

36HWK (2 ROW COIL)					
180°F ENTERING WATER TEMPERATURE					
CFM	GPM	WTR. P.D. FT.	TOTAL MBH	LVG. AIR °F	LVG. WTR. °F
1000	4	1.6	53.3	119	153
1200			58.7	115	150
1400			65.4	112	148
1000	8	6.1	59.4	125	165
1200			66.2	121	164
1400			72.5	118	162
1000	12	13.1	61.5	127	170
1200			68.7	123	168
1400			75.4	120	167

\* 70 degree return air

- Notes:**
- 1) See page 6 for hot water heating correction factors.
  - 2) Optional 2 row hot water coil can be factory installed in either the reheat (std.) or preheat positions.

# 48CHX4

## DIRECT EXPANSION COOLING CAPACITIES

SUCTION TEMP. °F	CFM	85°F DB / 71°F WB ENT. AIR				80°F DB / 67°F WB ENT. AIR				75°F DB / 63°F WB ENT. AIR			
		TOTAL MBTUH	SENS. MBTUH	LVG. AIR °F		TOTAL MBTUH	SENS. MBTUH	LVG. AIR °F		TOTAL MBTUH	SENS. MBTUH	LVG. AIR °F	
				DB	WB			DB	WB			DB	WB
40	1400	76.1	44.8	55.4	54.4	63.4	40.6	53.1	52.2	50.8	35.9	51.3	50.4
	1600	82.1	48.9	56.7	55.5	68.4	44.4	54.3	53.2	54.8	39.4	52.2	51.2
	1800	87.3	52.7	57.9	56.5	72.7	48.0	55.3	54.0	58.2	42.6	53.1	51.9
45	1400	65.6	40.7	58.1	57.1	52.9	36.5	55.9	55.0	40.2	31.6	54.1	53.3
	1600	70.7	44.6	59.2	58.0	57.1	40.0	56.9	55.7	43.4	34.8	54.9	53.8
	1800	75.2	48.2	60.2	58.8	60.7	43.3	57.7	56.4	46.2	37.8	55.6	54.4
50	1400	54.1	36.5	60.8	59.8	41.4	32.1	58.8	57.9	28.8	27.2	57.0	56.2
	1600	58.3	40.2	61.8	60.6	44.7	35.4	59.5	58.4	30.0	30.0	57.6	---
	1800	62.0	43.5	62.6	61.2	47.5	38.4	60.2	58.9	32.7	32.7	58.2	---

## HOT WATER HEATING CAPACITIES

48HWK (2 ROW COIL)					
180°F ENTERING WATER TEMPERATURE					
CFM	GPM	WTR. P.D. FT.	TOTAL MBH	LVG. AIR °F	LVG. WTR. °F
1400	5.0	2.0	72.8	118	151
1600			78.0	115	149
1800			82.7	113	147
1400	8.0	4.8	79.2	122	160
1600			85.4	119	159
1800			91.4	117	157
1400	12.0	10.4	83.3	125	166
1600			90.2	122	165
1800			97.0	120	164

\* 70 degree return air

- Notes:**
- 1) See page 6 for hot water heating correction factors.
  - 2) Optional 2 row hot water coil can be factory installed in either the reheat (std.) or preheat positions.

# 60CHX4

## DIRECT EXPANSION COOLING CAPACITIES

SUCTION TEMP. °F	CFM	85°F DB / 71°F WB ENT. AIR				80°F DB / 67°F WB ENT. AIR				75°F DB / 63°F WB ENT. AIR			
		TOTAL MBTUH	SENS. MBTUH	LVG. AIR °F		TOTAL MBTUH	SENS. MBTUH	LVG. AIR °F		TOTAL MBTUH	SENS. MBTUH	LVG. AIR °F	
				DB	WB			DB	WB			DB	WB
40	1800	96.7	57.0	55.7	54.6	80.6	51.8	53.4	52.4	64.5	45.8	51.5	50.6
	2000	102.6	61.1	56.7	55.5	85.5	55.6	54.3	53.2	68.4	49.2	52.2	51.2
	2200	107.9	64.9	57.7	56.3	89.9	59.1	55.1	53.9	72.0	52.4	52.9	51.8
45	1800	83.3	51.9	58.3	57.3	67.2	46.5	56.1	55.1	51.1	40.4	54.2	53.4
	2000	88.4	55.8	59.2	58.0	71.3	50.0	56.9	55.7	54.3	43.5	54.9	53.8
	2200	92.9	59.4	60.0	58.6	75.0	53.3	57.6	56.3	57.0	46.5	55.4	54.3
50	1800	68.7	46.6	61.0	60.0	52.7	41.0	58.9	58.0	36.6	34.7	57.2	56.3
	2000	72.9	50.2	61.8	60.6	55.9	44.2	59.5	58.4	37.5	37.5	57.6	---
	2200	76.7	53.6	62.5	61.1	58.7	47.3	60.1	58.8	40.2	40.2	58.1	---

## HOT WATER HEATING CAPACITIES

60HWK (2 ROW COIL)					
180°F ENTERING WATER TEMPERATURE					
CFM	GPM	WTR. P.D. FT.	TOTAL MBH	LVG. AIR °F	LVG. WTR. °F
1800	6.0	3.1	93.1	118	149
2000			98.2	116	147
2200			103.1	113	145
1800	9.0	6.6	100.4	122	158
2000			106.5	119	156
2200			112.6	117	155
1800	12.0	11.5	104.4	124	163
2000			111.0	121	162
2200			117.7	120	160

\* 70 degree return air

- Notes:**
- 1) See page 6 for hot water heating correction factors.
  - 2) Optional 2 row hot water coil can be factory installed in either the reheat (std.) or preheat positions.

## GUIDE SPECIFICATIONS

Furnish and install First Co. **CHX** Series Blower - Coil units as indicated on the plans.

### CABINETS

Cabinets shall be manufactured of heavy gauge galvanized steel. The entire interior of the cabinet shall be insulated with one inch thick glass fiber insulation. Removable access panels shall be provided on both sides of the cabinet for maintenance and service. All cabinets shall have 2" supply and 1" return flanges.

### INSULATION

The entire interior of the cabinet shall be insulated with one (1) inch insulation. This insulation must meet the requirements of ASTM C 1071, ASTM G 21, ASTM G 22, NFPA 90A, UL-181, and the cleaning practices of NAIMA.

### MOTOR / BLOWERS

Blowers shall be resiliently mounted, with ball bearings, forward curved blade, and of centrifugal type. Each wheel shall be dynamically balanced for smooth, quiet operation. Blowers shall be belt driven with field adjustable pulleys to permit variations in static pressure and air requirements. Standard motors are 1725 RPM either single or three phase.

### COILS

All **CHX** series coils shall consist of aluminum fins mechanically bonded onto 3/8" OD seamless copper tubing. All coils shall be leak tested at 350 PSIG minimum air pressure. Refrigerant coil shall include a piston-type metering device for heat pump or DX operation. Field installed expansion valves are optional. Drain pans shall be mastic-coated for corrosion protection.

### FILTERS

One inch throwaway filters are provided as standard in all **CHX** blower coils. Permanent filters are available as an option. Filters shall be accessible without tools.

### DISCHARGE PLENUMS

Discharge plenums shall be coated with a baked on beige epoxy finish and consist of a 4 way double - deflection grille. Discharge plenums shall be designed to attach directly to the blower - coil unit.

### MIXING BOXES

Mixing boxes shall be coated with a baked on beige epoxy finish. Fresh air dampers shall be of low leakage design and mixing boxes shall be capable of either rear / top or rear / bottom positioning.

### LISTING

All standard motors are ARI 430 and ETL Listed.

### MODEL NUMBERING SYSTEM

