

EVAPORATOR COILS CASED HORIZONTAL R-410A SYSTEMS 2 – 5 Tons

EcoTemp



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.



WLNH

STANDARD FEATURES

- Available for environmentally balanced R-410A systems
- Aluminum hairpin/return-bend/fin "N" coil with the latest high-tech fin design
- Bolt-on TXV metering device factory installed on all models (equalizer tube brazed in)
- Two condensate drain connections
- Cabinet widths match flush with WFMR, WFML, WFEL, WFAR, WFHR, WFSR gas furnace cabinets
- Removable front access panel
- Hemmed flanges for safer handling
- Foil faced insulation
- Non-sweat cabinet, even at extreme conditions
- Cabinets meet or exceed 2% air leakage codes
- Sturdy, pre-painted steel cabinet
- Horizontal installation

LIMITED WARRANTY*

- 5 year parts limited warranty
 - With timely registration, an additional 5 year parts limited warranty
- * For residential applications only. See warranty certificate for complete details and restrictions, including warranty coverage for other applications.

Product Specifications

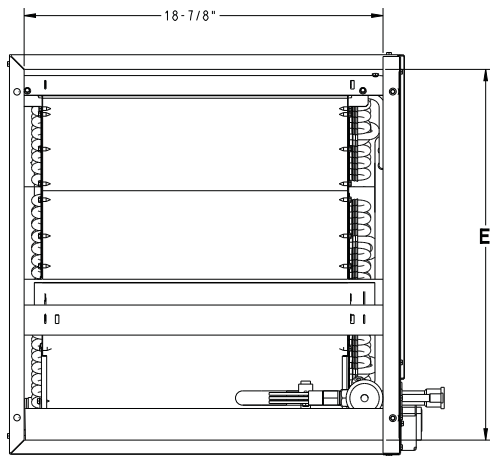
EVAPORATOR COIL MODEL NUMBER IDENTIFICATION GUIDE								
Digit Position:	1, 2	3	4	5, 6	7	8	9	10
	WL	N	H	24	4	B	A	1
WL = Aluminum Evaporator Coil		TYPE						
N = N Coil								
H = Horizontal Bi-Flow		INSTALLATION TYPE						
24 = 24,000 BTU/hr = 2 TONS		NOMINAL COOLING CAPACITY						
31 = 31,000 BTU/hr = 2-1/2 TONS								
36 = 36,000 BTU/hr = 3 TONS								
42, 43 = 42,000 BTU/hr = 3-1/2 TONS								
48 = 48,000 BTU/hr = 4 TONS								
60, 61 = 60,000 BTU/hr = 5 TONS								
4 = R-410A				REFRIGERANT				
B = 17-1/2" (445)				CABINET WIDTH				
C = 21" (533)								
D = 24-1/2" (622)								
SALES DIGIT								
EXTRA DIGIT								

Inches – English Drawing

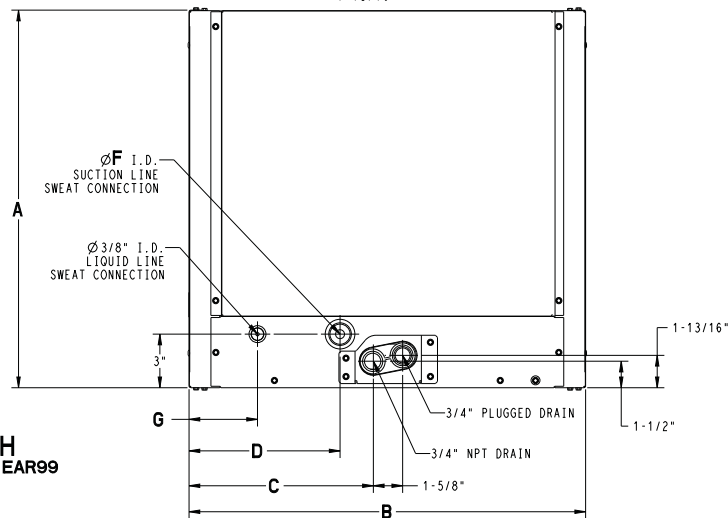
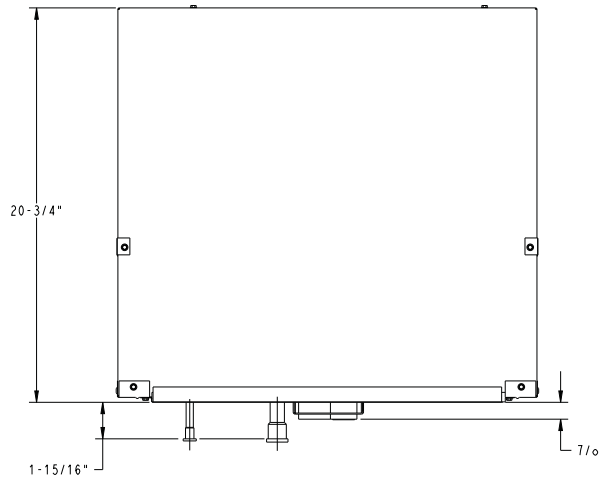
UNIT	SERIES	A	B	C	D	E	F	G	SHIPPING WT (LBS)
WLNH244BA	1	17 1/2"	19"	10 3/4"	9 5/16"	16"	5/8"	3 13/16"	38.6
WLNH304BA	1	17 1/2"	22 1/16"	10 5/16"	8 7/16"	16"	3/4"	3 13/16"	44.8
WLNH314BA	1	17 9/16"	27 1/2"	12 7/16"	7 13/16"	16"	3/4"	3 3/16"	54.7
WLNH364BA	1	17 1/2"	22 1/16"	10 5/16"	8 7/16"	16"	3/4"	3 13/16"	43.7
WLNH424CA	1	21"	22 1/16"	10 5/16"	8 7/16"	19 1/2"	7/8"	3 13/16"	48.3
WLNH434CA	1	21 1/16"	30 1/8"	15 3/16"	10 1/2"	19 1/2"	7/8"	5"	48.5
WLNH484CA	1	21"	28 1/16"	13 3/16"	8 7/16"	19 1/2"	7/8"	3 13/16"	59.5
WLNH604DA	1	24 1/2"	29"	14 1/8"	9 5/16"	23"	7/8"	3 13/16"	70.5
WLNH614DA	1	24 9/16"	29 1/16"	14 1/16"	9 5/16"	23"	7/8"	3 7/8"	76.1

NOTE:

- SERIES DESIGNATION IS THE 10TH POSITION OF UNIT MODEL NUMBER.
- ALL DIMENSIONS ARE IN "INCHES" UNLESS NOTED.



DUCT OPENING
TYP. BOTH SIDES



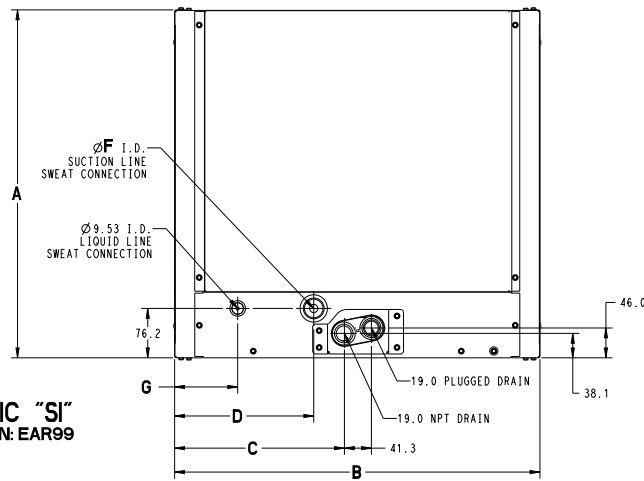
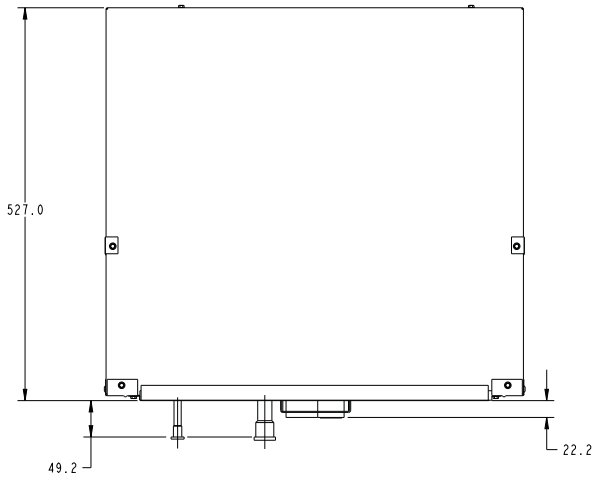
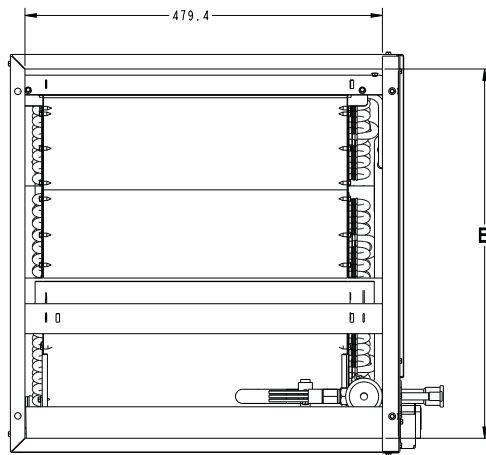
MEASUREMENT- ENGLISH
U.S. EXPORT CLASSIFICATION: EAR99

SD5136 REV B

SI Metric Drawing

UNIT	SERIES	A	B	C	D	E	F	G	SHIPPING WT (Kgs)
WLNH244BA	1	444.5	482.6	273.0	236.6	406.4	15.88	96.8	17.5
WLNH304BA	1	444.5	560.4	262.0	214.3	406.4	19.05	96.8	20.3
WLNH314BA	1	445.5	698.6	316.3	198.2	406.5	19.05	81.2	24.8
WLNH364BA	1	444.5	560.4	262.0	214.3	406.4	19.05	96.8	19.8
WLNH424CA	1	533.4	560.4	262.0	214.3	495.3	22.23	96.8	21.9
WLNH434CA	1	534.5	765.5	384.9	266.3	495.5	22.23	127.3	22.0
WLNH484CA	1	533.4	712.8	335.0	214.3	495.3	22.23	96.8	27.0
WLNH604DA	1	622.3	736.6	358.8	236.6	584.2	22.23	96.8	32.0
WLNH614DA	1	623.5	737.7	357.1	236.8	584.3	22.23	97.8	34.5

NOTE:
 1. SERIES DESIGNATION IS THE 10TH POSITION OF UNIT MODEL NUMBER.
 2. ALL DIMENSIONS ARE IN "MM" UNLESS NOTED.



MEASUREMENT- METRIC "SI"
 U.S. EXPORT CLASSIFICATION: EAR99

SD5136 REV B

COOLING CAPACITIES (MBH)																	
UNIT SIZE	INDOOR COIL AIR		SATURATED TEMPERATURE LEAVING EVAPORATOR °F (°C)														
			30 (-1)			35 (2)			40 (4)			45 (7)			50 (10)		
	CFM	EWB	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF
24	600	72 (22)	39.00	19.00	0.00	36.00	17.50	0.00	32.70	15.90	0.00	28.80	14.10	0.00	24.60	12.30	0.01
		67 (19)	32.80	19.80	0.01	29.80	18.20	0.01	26.30	16.40	0.01	22.40	14.60	0.02	18.10	12.60	0.02
		62 (17)	27.20	20.50	0.02	24.00	18.70	0.02	20.50	16.90	0.02	16.60	15.00	0.02	13.10	13.10	0.05
	800	72 (22)	47.10	22.80	0.00	43.60	21.10	0.00	39.60	19.30	0.00	35.00	17.30	0.02	29.90	15.10	0.02
		67 (19)	39.80	24.20	0.03	36.10	22.30	0.03	32.00	20.30	0.03	27.30	18.10	0.03	22.00	15.90	0.03
		62 (17)	33.10	25.40	0.03	29.30	23.40	0.03	25.10	21.20	0.03	20.50	19.00	0.04	16.70	16.70	0.09
	1000	72 (22)	53.40	25.90	0.00	49.50	24.20	0.00	45.10	22.10	0.02	40.00	19.90	0.03	34.10	17.50	0.04
		67 (19)	45.30	27.90	0.05	41.20	25.90	0.05	36.60	23.70	0.05	31.30	21.30	0.05	25.20	18.70	0.05
		62 (17)	37.80	29.60	0.05	33.60	27.40	0.05	28.80	25.10	0.05	23.80	22.70	0.06	20.00	20.00	0.13
30	750	72 (22)	48.00	23.50	0.00	44.00	21.40	0.00	39.70	19.20	0.00	34.80	17.00	0.00	29.40	14.60	0.01
		67 (19)	40.30	24.20	0.01	36.20	22.00	0.02	31.80	19.70	0.02	26.80	17.40	0.02	21.40	15.00	0.02
		62 (17)	33.20	24.80	0.02	29.10	22.50	0.02	24.60	20.20	0.02	19.90	17.90	0.02	15.60	15.60	0.05
	1000	72 (22)	58.70	28.50	0.00	53.90	26.10	0.00	48.50	23.60	0.00	42.50	20.90	0.02	35.80	18.10	0.03
		67 (19)	49.40	29.90	0.03	44.40	27.30	0.03	38.90	24.60	0.04	32.90	21.70	0.04	26.20	18.80	0.04
		62 (17)	40.80	30.90	0.04	35.80	28.20	0.04	30.30	25.40	0.04	24.60	22.60	0.05	19.90	19.90	0.10
	1250	72 (22)	67.40	32.70	0.00	61.90	30.10	0.00	55.70	27.30	0.02	48.80	24.20	0.04	41.10	21.00	0.05
		67 (19)	56.80	34.70	0.05	51.20	31.80	0.06	44.90	28.70	0.06	37.80	25.50	0.06	30.10	22.20	0.06
		62 (17)	47.10	36.30	0.06	41.30	33.20	0.06	35.00	30.10	0.06	28.60	27.00	0.07	23.70	23.70	0.14
31	750	72 (22)	74.50	37.07	0.00	68.51	33.85	0.00	61.86	30.50	0.00	54.41	27.00	0.00	46.04	23.35	0.00
		67 (19)	62.13	37.73	0.01	56.03	34.37	0.01	49.24	30.87	0.01	41.66	27.24	0.01	32.96	23.39	0.01
		62 (17)	50.98	38.20	0.01	44.75	34.72	0.01	37.95	31.17	0.01	30.17	27.36	0.01	23.70	23.70	0.06
	1000	72 (22)	92.35	45.51	0.00	85.01	41.76	0.00	76.78	37.78	0.00	67.46	33.54	0.01	57.03	29.08	0.01
		67 (19)	77.15	46.96	0.02	69.62	42.94	0.02	61.18	38.71	0.02	51.69	34.27	0.02	41.04	29.62	0.02
		62 (17)	63.39	48.06	0.02	55.66	43.85	0.02	47.21	39.53	0.02	38.21	35.15	0.02	30.59	30.59	0.08
	1250	72 (22)	107.37	52.63	0.00	98.97	48.52	0.00	89.37	44.04	0.01	78.59	39.23	0.02	66.39	34.13	0.02
		67 (19)	89.89	54.97	0.03	81.19	50.47	0.03	71.37	45.67	0.03	60.28	40.57	0.03	47.77	35.20	0.03
		62 (17)	73.97	56.83	0.03	64.99	52.05	0.03	55.22	47.14	0.03	44.93	42.16	0.04	36.94	36.94	0.11
36	900	72 (22)	58.10	28.30	0.00	53.40	25.90	0.00	48.00	23.30	0.00	42.10	20.60	0.01	35.50	17.80	0.02
		67 (19)	48.90	29.50	0.02	44.00	26.90	0.03	38.50	24.20	0.03	32.50	21.30	0.03	25.90	18.40	0.03
		62 (17)	40.40	30.40	0.03	35.40	27.70	0.03	29.90	24.90	0.03	24.20	22.10	0.04	19.40	19.40	0.08
	1200	72 (22)	70.00	33.90	0.00	64.30	31.20	0.00	57.80	28.30	0.02	50.70	25.10	0.04	42.70	21.80	0.05
		67 (19)	58.90	35.90	0.05	53.10	32.90	0.05	46.50	29.70	0.05	39.30	26.40	0.06	31.20	22.90	0.06
		62 (17)	48.80	37.50	0.06	42.80	34.30	0.06	36.30	31.00	0.06	29.60	27.80	0.06	24.40	24.40	0.13
	1500	72 (22)	79.30	38.60	0.00	72.90	35.60	0.02	65.70	32.30	0.05	57.50	28.80	0.06	48.50	25.10	0.07
		67 (19)	67.00	41.30	0.08	60.40	38.00	0.08	53.00	34.40	0.08	44.70	30.70	0.08	35.50	26.80	0.09
		62 (17)	55.70	43.60	0.09	48.80	40.00	0.09	41.60	36.50	0.09	34.20	32.90	0.10	28.80	28.80	0.18
42	1050	72 (22)	74.40	36.30	0.00	68.10	33.10	0.00	61.20	29.70	0.00	53.50	26.20	0.01	45.00	22.60	0.02
		67 (19)	62.30	37.60	0.02	56.00	34.20	0.03	48.90	30.60	0.03	41.20	27.00	0.03	32.80	23.30	0.03
		62 (17)	51.40	38.60	0.03	44.90	35.00	0.03	37.90	31.40	0.03	30.60	27.80	0.04	24.40	24.40	0.08
	1400	72 (22)	90.20	43.80	0.00	82.60	40.10	0.00	74.10	36.20	0.01	64.70	32.00	0.04	54.40	27.60	0.05
		67 (19)	75.80	46.00	0.05	68.00	42.00	0.05	59.40	37.70	0.06	50.00	33.40	0.06	39.60	28.90	0.06
		62 (17)	62.60	47.70	0.06	54.70	43.50	0.06	46.20	39.20	0.06	37.50	35.00	0.07	30.70	30.70	0.13
	1750	72 (22)	103.00	50.00	0.00	94.30	46.00	0.00	84.60	41.50	0.05	73.90	36.80	0.06	62.00	32.00	0.07
		67 (19)	86.70	53.10	0.08	77.80	48.60	0.08	68.00	43.90	0.08	57.10	39.00	0.08	45.20	33.90	0.09
		62 (17)	71.70	55.70	0.09	62.70	50.90	0.09	53.10	46.20	0.09	43.40	41.50	0.10	36.30	36.30	0.18
43	1050	72 (22)	96.72	47.64	0.00	89.31	43.85	0.00	80.91	39.78	0.00	71.39	35.44	0.00	60.74	30.89	0.01
		67 (19)	80.93	49.26	0.01	73.30	45.20	0.01	64.67	40.88	0.01	54.97	36.34	0.01	43.99	31.53	0.01
		62 (17)	66.64	50.56	0.01	58.77	46.28	0.01	50.10	41.84	0.01	40.70	37.29	0.02	32.63	32.63	0.07
	1400	72 (22)	117.07	57.30	0.00	108.20	53.03	0.00	98.03	48.31	0.01	86.74	43.33	0.02	73.81	37.96	0.02
		67 (19)	98.18	60.23	0.03	89.03	55.55	0.03	78.69	50.55	0.03	66.93	45.19	0.03	53.54	39.46	0.03
		62 (17)	81.03	62.70	0.03	71.60	57.72	0.03	61.25	52.56	0.03	50.15	47.21	0.03	41.46	41.46	0.11
	1750	72 (22)	133.38	65.28	0.00	123.30	60.58	0.02	111.98	55.48	0.03	99.21	50.01	0.04	84.49	44.04	0.04
		67 (19)	112.09	69.50	0.04	101.79	64.41	0.05	90.14	58.95	0.05	76.76	52.99	0.05	61.46	46.55	0.05
		62 (17)	92.72	73.26	0.05	82.16	67.85	0.05	70.58	62.18	0.05	58.38	56.24	0.06	49.33	49.33	0.15

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Legend:

CFM – Cubic Ft. per Minute EWB – Entering Wet Bulb LWB – Leaving Wet Bulb TC – Gross Cooling Capacity 1000 Btuh
 SHC – Gross Sensible Capacity 1000 Btuh BF – Bypass Factor MBH – 1000 Btuh

See notes following.

COOLING CAPACITIES (MBH) (cont)																	
UNIT SIZE	INDOOR COIL AIR		SATURATED TEMPERATURE LEAVING EVAPORATOR °F (°C)														
			30 (-1)			35 (2)			40 (4)			45 (7)			50 (10)		
	CFM	EWB	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF
48	1200	72 (22)	79.30	38.70	0.00	72.90	35.40	0.00	65.70	31.90	0.00	57.70	28.20	0.00	48.80	24.40	0.01
		67 (19)	66.60	40.20	0.02	60.00	36.60	0.02	52.70	32.90	0.02	44.60	29.10	0.02	35.70	25.10	0.03
		62 (17)	55.00	41.30	0.03	48.30	37.60	0.03	40.90	33.80	0.03	33.10	30.00	0.03	26.30	26.30	0.07
	1600	72 (22)	96.00	46.60	0.00	88.30	42.90	0.00	79.60	38.90	0.00	69.90	34.50	0.03	59.10	30.00	0.04
		67 (19)	80.90	49.20	0.04	72.90	45.00	0.04	64.10	40.70	0.05	54.20	36.10	0.05	43.30	31.40	0.05
		62 (17)	67.00	51.20	0.05	58.80	46.80	0.05	49.90	42.30	0.05	40.70	37.90	0.05	33.30	33.30	0.11
	2000	72 (22)	109.40	53.10	0.00	100.70	49.10	0.00	90.90	44.60	0.03	79.90	39.80	0.05	67.50	34.70	0.06
		67 (19)	92.40	56.70	0.06	83.40	52.20	0.07	73.30	47.40	0.07	62.00	42.20	0.07	49.50	36.90	0.07
		62 (17)	76.70	59.70	0.07	67.50	54.90	0.08	57.40	49.90	0.08	47.20	44.90	0.08	39.50	39.50	0.16
60	1600	72 (22)	103.20	50.40	0.00	94.40	45.90	0.00	84.80	41.10	0.00	74.10	36.30	0.00	62.40	31.20	0.02
		67 (19)	86.40	52.10	0.02	77.50	47.20	0.02	67.80	42.30	0.02	57.10	37.20	0.03	45.40	32.10	0.03
		62 (17)	71.20	53.30	0.03	62.20	48.30	0.03	52.40	43.30	0.03	42.30	38.30	0.03	33.50	33.50	0.07
	2000	72 (22)	120.70	58.70	0.00	110.40	53.60	0.00	99.00	48.20	0.00	86.40	42.50	0.02	72.60	36.70	0.03
		67 (19)	101.20	61.30	0.03	90.70	55.70	0.04	79.20	50.00	0.04	66.60	44.10	0.04	52.80	38.10	0.05
		62 (17)	83.40	63.20	0.05	72.80	57.40	0.05	61.40	51.60	0.05	49.70	46.00	0.05	40.30	40.30	0.11
	2400	72 (22)	135.60	65.80	0.00	124.10	60.30	0.00	111.20	54.40	0.01	97.00	48.00	0.04	81.30	41.50	0.05
		67 (19)	113.90	69.30	0.05	102.10	63.20	0.06	89.10	56.90	0.06	74.80	50.30	0.06	59.20	43.60	0.06
		62 (17)	94.10	72.10	0.06	82.10	65.70	0.06	69.30	59.30	0.06	56.40	53.00	0.07	46.50	46.50	0.14
61	1600	72 (22)	142.31	69.71	0.00	131.14	64.12	0.00	118.67	58.20	0.00	104.55	51.83	0.01	88.62	45.08	0.02
		67 (19)	119.05	72.45	0.02	107.63	66.45	0.02	94.79	60.09	0.02	80.30	53.36	0.02	63.94	46.26	0.02
		62 (17)	97.96	74.63	0.03	86.21	68.29	0.02	73.29	61.74	0.02	59.53	55.08	0.03	48.11	48.11	0.09
	2000	72 (22)	164.20	80.16	0.00	151.58	74.13	0.00	137.25	67.52	0.02	121.04	60.38	0.03	102.61	52.74	0.03
		67 (19)	137.68	84.38	0.04	124.66	77.75	0.04	109.89	70.63	0.04	93.13	63.00	0.04	74.14	54.89	0.04
		62 (17)	113.54	87.89	0.04	100.05	80.79	0.04	85.34	73.48	0.04	69.79	65.96	0.05	57.86	57.86	0.12
	2400	72 (22)	182.47	89.12	0.00	168.62	82.68	0.02	152.91	75.56	0.04	134.97	67.83	0.04	114.48	59.50	0.05
		67 (19)	153.40	94.82	0.05	139.05	87.71	0.05	122.70	80.00	0.05	104.07	71.67	0.06	82.87	62.74	0.06
		62 (17)	126.74	99.73	0.06	111.87	92.08	0.06	95.76	84.19	0.06	78.98	76.01	0.07	66.58	66.58	0.16

Legend:

CFM – Cubic Ft. per Minute EWB – Entering Wet Bulb LWB – Leaving Wet Bulb TC – Gross Cooling Capacity 1000 Btuh
 SHC – Gross Sensible Capacity 1000 Btuh BF – Bypass Factor MBH – 1000 Btuh

NOTES:

- Contact manufacturer for cooling capacities at conditions other than shown in table.
- Formulas:
 Leaving db = entering db – $\frac{\text{sensible heat cap.}}{1.09 \times \text{CFM}}$
 Leaving wb = wb corresponding to enthalpy of air leaving coil (h_{LWB})

$$h_{LWB} = h_{EWB} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{CFM}}$$
 Where h_{EWB} = enthalpy of air entering coil
- SHC is based on 80°F (27°C) db temperature of air entering the evaporator coil.
 Below 80°F (27°C) db, subtract (Correction Factor x CFM) from SHC.
 Above 80°F (27°C) db, add (Correction Factor x CFM) to SHC.
- Direct interpolation is permissible. Do not extrapolate.
- Fan motor heat has not been deducted.
- All data points are based on 10°F (-12°C) superheat leaving coil and use of thermostatic expansion valve (TXV) device.
- The ENH4X coils can be used in any properly designed system using R-410A refrigerant.
- Before using maximum cfm shown in table, check coil static pressure drop to ensure system blower can provide necessary static pressure needed for coil and duct systems.
- Bypass Factor = 0 indicates no psychometric solution. Use bypass factor of next lower EWB for approximation.

BYPASS FACTOR	ENTERING AIR DRY BULB TEMPERATURE °F (°C)					
	79 (26)	78 (26)	77 (25)	76 (24)	75 (24)	Under 75 (24)
	81 (27)	82 (28)	83 (28)	84 (29)	84 (29)	Above 85 (29)
Correction Factor						
0.10	0.98	1.96	2.94	3.92	4.91	Use formula shown below
0.20	0.87	1.74	2.62	3.49	4.36	
0.30	0.76	1.53	2.29	3.05	3.82	

Interpolation is permissible.
 Correction Factor = 1.09 x (1 - BF) x (db - 80)

COIL STATIC PRESSURE DROP (in. w.c.)																						
UNIT SIZE	Standard CFM																					
	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200			
24	Dry																					
	0.048	0.068	0.090	0.112	0.140	0.170	0.203															
	Wet																					
30	0.064	0.091	0.122	0.150	0.188	0.224	0.263															
	Dry																					
	0.042	0.060	0.080	0.102	0.128	0.157	0.188	0.222	0.259													
31	Wet																					
	0.055	0.076	0.104	0.127	0.158	0.190	0.225	0.266	0.309													
	Dry																					
36	0.031	0.046	0.063	0.083	0.105	0.130	0.156	0.193	0.230													
	Wet																					
	0.039	0.056	0.075	0.097	0.121	0.149	0.179	0.212	0.249													
42	Dry																					
	0.043	0.061	0.082	0.103	0.128	0.157	0.189	0.221	0.259	0.299	0.341											
	Wet																					
43	0.056	0.079	0.107	0.133	0.166	0.200	0.236	0.276	0.315	0.361	0.413											
	Dry																					
	0.030	0.041	0.054	0.066	0.082	0.099	0.118	0.137	0.158	0.180	0.205	0.231	0.259									
48	Wet																					
	0.043	0.059	0.078	0.101	0.126	0.153	0.181	0.207	0.234	0.260	0.288	0.319	0.354									
	Dry																					
60		0.040	0.052	0.066	0.081	0.098	0.177	0.137	0.156	0.183	0.205	0.233										
	Wet																					
		0.049	0.062	0.079	0.096	0.114	0.138	0.162	0.189	0.216	0.239	0.27										
61	Dry																					
			0.047	0.060	0.075	0.092	0.110	0.130	0.152	0.176	0.204	0.230	0.256	0.284	0.318							
	Wet																					
61			0.053	0.067	0.085	0.104	0.125	0.147	0.172	0.200	0.228	0.259	0.292	0.327	0.365							
	Dry																					
					0.062	0.073	0.084	0.097	0.111	0.126	0.138	0.154	0.172	0.190	0.210	0.228	0.251	0.273	0.293			
61	Wet																					
					0.082	0.096	0.112	0.129	0.145	0.163	0.171	0.191	0.212	0.235	0.258	0.283	0.310	0.336	0.366			
	Dry																					
61											0.196	0.216	0.238	0.259	0.286	0.312	0.336	0.363	0.390			
	Wet																					
												0.208	0.233	0.259	0.281	0.307	0.339	0.368	0.400	0.431		

