

Magic Aire®

Producing Quality Heating & Cooling Equipment For Over 50 Years

DUW/DUX SERIES

**1.5 THROUGH 5 TON
VERTICAL OR HORIZONTAL FAN COIL UNITS**

**The Premium Quality Fan Coil Units
for Vertical, Horizontal (Left or Right)
Application with Direct Expansion,
Hydronic or Electric Heat**



**MAGIC AIRE DU SERIES FAN COILS ARE ETL
LISTED IN ACCORDANCE WITH UL 1995
AND ARE ASSEMBLED TO ORDER FOR COMPETITIVE DELIVERY.**



United Electric Company, L.P.

501 Galveston St. • Wichita Falls, TX 76301 • 940-397-2100 • Fax: 940-397-2166 • www.magicaire.com

MODEL NUMBER IDENTIFICATION

NOMINAL COOLING CAPACITY IN MBH _____

TYPE BLOWER DRIVE (DIRECT) _____

TYPE CABINET (COMBINATION VERT/HORZ) _____

TYPE COIL (X= DX/HP COMPATIBLE COIL) (W= HW/CW COIL) _____

DESIGN SERIES _____

COOLING COIL ROWS _____

HEATING COIL ROWS (4HW) OR KW FOR ELECTRIC HEAT (15KW) _____

60 - D U W - B - 3 - 4HW

Magic Aire DUW/DUX Series fan coils are designed for upscale homes, apartments and condominiums. Engineered with the distributor and installer in mind, one unit satisfies all demands.
Additional features include:

DUW

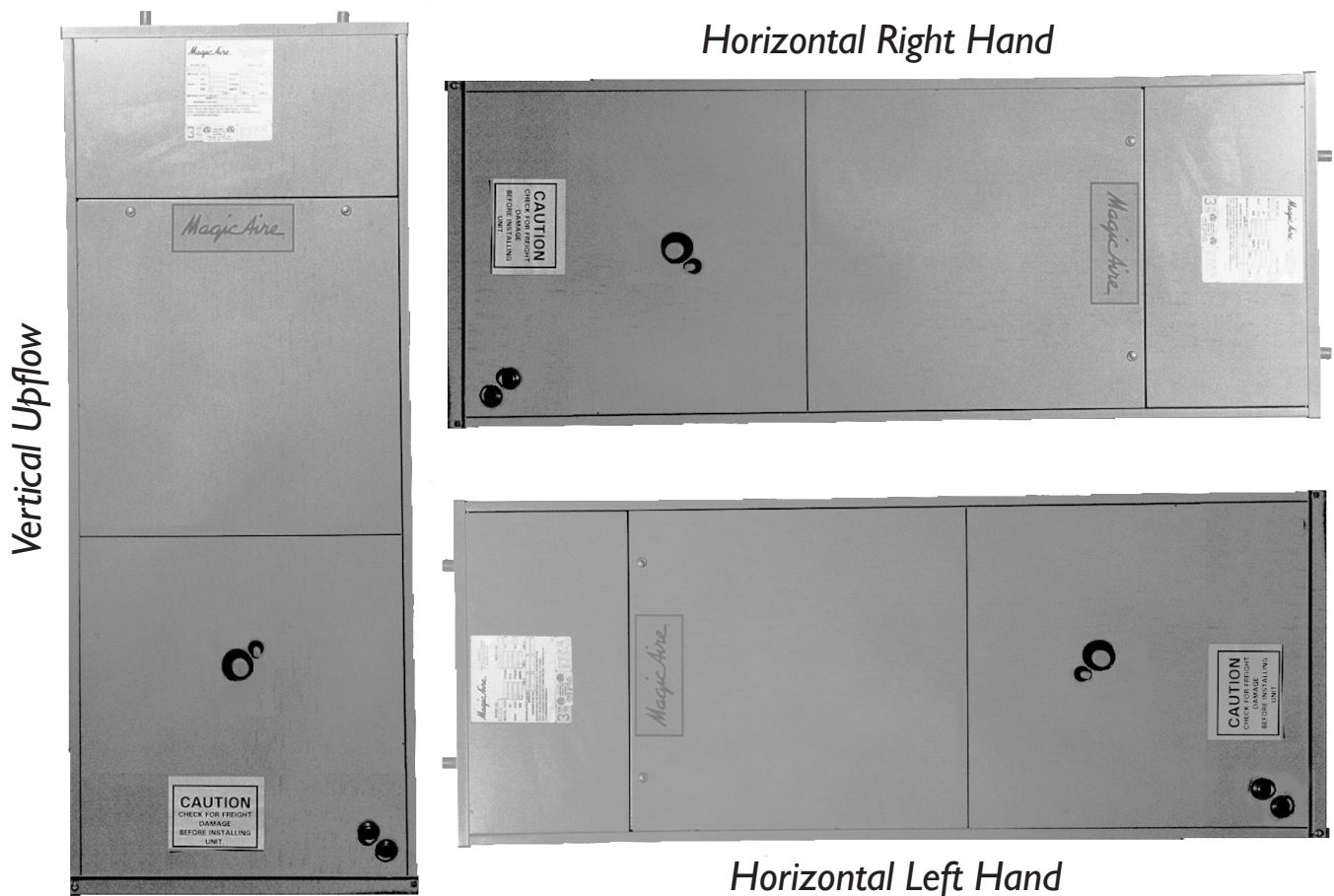
- 1" throwaway filter
- Three speed motors w/ thermal overload protection
- Hot Water Coils (Capacity to 124,000 BTU/H) with optional 115v pump assembly
- 3 and 4 row water coils
- Electric heating elements to 20KW
- Multiple access panels for easy servicing
- All metal parts are fabricated from heavy gauge galvanized steel w/ polyurethane coating for the best finish in the industry
- All interior surfaces are fully insulated w/material to comply w/NFPA 90A and 90B
- Low RPM oversized fans are balanced for quiet, vibration free operation
- 24v transformer and fan relay

DUX

- SEER Ratings to 13+
- 24v 40 VA transformer and relay(s)
- 1" throwaway filter
- Two speed motors w/ thermal overload protection
- Hot Water Coils (Capacity to 124,000 BTU/H) with optional 115v pump assembly
- 3 and 4 row copper tube/aluminum fin DX coils to match most heat pump condensing units have piston metering refrigerant control
- Multiple access panels for easy servicing
- All metal parts are fabricated from heavy gauge galvanized steel w/polyurethane coating for the best finish in the industry
- All interior surfaces are fully insulated w/material to comply w/NFPA 90A and 90B
- Low RPM oversized fans are balanced for quiet, vibration free operation

**The Premium Quality, High Seer Combination
Fan Coil Units for Vertical and Horizontal Application
with Hydronic or Electric Heat**

All From One Unit!

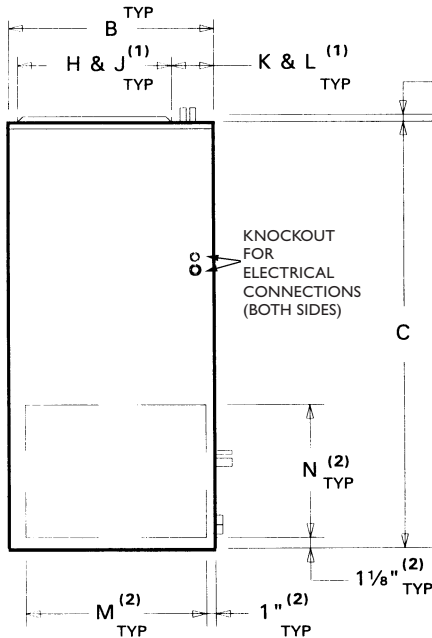


Magic Aire® DU Series Fan Coils are designed for upscale homes, apartments, and condominiums. Engineered with the distributor and installer in mind, one unit satisfies all demands.

DUW UNIT DIMENSIONAL INFORMATION

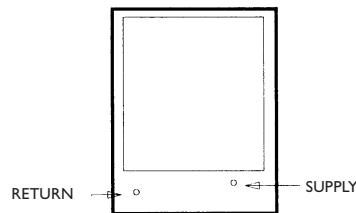
MODEL	A	B	C	D	E	F	G	H	J	K	L	M	N	WT.#
24	17.5	22.0	46.0	35.75	10.25	15.0	13.56	16.5	11.25	4.63	8.06	18.25	14.31	135
36	20.0	25.0	51.0	40.75	10.25	17.0	14.75	19.5	12.25	4.63	10.06	22.25	16.31	145
48	22.0	27.0	55.0	43.75	11.25	19.0	15.56	21.5	12.25	4.63	10.06	23.25	18.31	158
60	24.0	31.0	57.0	45.75	11.25	21.0	16.94	25.5	13.88	4.63	10.44	28.25	18.31	190

STANDARD ONE PIECE CABINET (Cooling & Heating)



LEFT VIEW

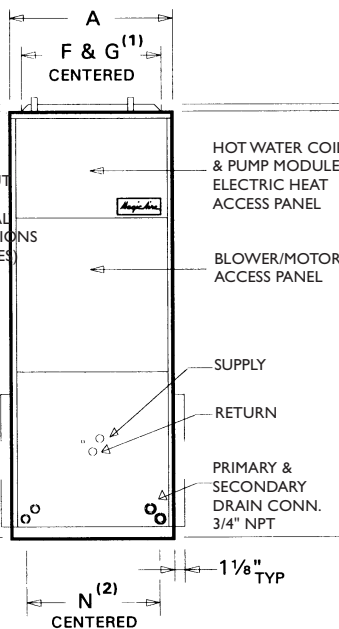
TOP VIEW (Hot Water Heat Unit)



NOTES:

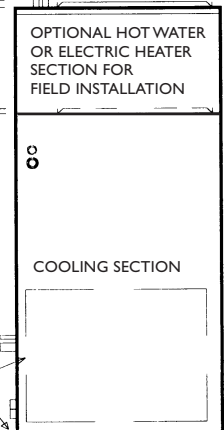
- (1) Dimensions F, H, and K are for no heat and hydronic heat units. Dimensions G, J, and L apply to electric heat units only.
- (2) Return air openings – Side return air openings require field modification.
- (3) On 60-DU electric heat units 1/2HP-230v-1ø.
- (4) Hot Water Pump Module (not shown) is 115v (.52 FLA).

FRONT VIEW



FRONT VIEW

TWO PIECE CABINET



RIGHT VIEW

MODEL	COIL CONN.		HOT WATER		FILTER 1"	MOTOR		
	SUPPLY	RETURN	SUPPLY	RETURN		HP	AMPS/115	AMPS/230
24	7/8	7/8	5/8	5/8	16 x 20	1/4	2.9	1.3
36	7/8	7/8	5/8	5/8	18 x 24	1/3	4.0	2.2
48	7/8	7/8	7/8	7/8	20 x 25	3/4	7.0	3.6
60 ³	1 1/8	1 1/8	N/A	N/A	20 x 30	1/2	N/A	3.9
60 ⁴	1 1/8	1 1/8	7/8	7/8	20 x 30	3/4	7.0	3.6

AIRFLOW DATA DUW-B SERIES FAN COIL CFM @ .00" – .50" ESP

24	3 ROW COOLING COIL			4 ROW COOLING COIL		
ESP	ELEC. OR NO HEAT	w/ 2HW	w/ 3HW	ELEC. OR NO HEAT	w/ 2HW	w/ 3HW
0.50	660	610	587	630	588	568
0.40	735	676	651	700	650	628
0.30	805	739	712	766	709	685
0.20	870	799	770	829	766	740
0.10	932	856	826	889	821	793
0.00	991	911	879	947	874	845

48	3 ROW COOLING COIL			4 ROW COOLING COIL		
ESP	ELEC. OR NO HEAT	w/ 3HW	w/ 4HW	ELEC. OR NO HEAT	w/ 3HW	w/ 4HW
0.50	1426	1243	1193	1370	1203	1157
0.40	1534	1348	1296	1478	1306	1258
0.30	1629	1442	1389	1574	1398	1348
0.20	1716	1527	1473	1661	1482	1432
0.10	1797	1606	1552	1742	1561	1509
0.00	1871	1680	1625	1818	1635	1582

36	3 ROW COOLING COIL			4 ROW COOLING COIL		
ESP	ELEC. OR NO HEAT	w/ 2HW	w/ 3HW	ELEC. OR NO HEAT	w/ 2HW	w/ 3HW
0.50	1056	963	920	1013	928	889
0.40	1147	1053	1010	1103	1016	976
0.30	1226	1131	1089	1182	1093	1053
0.20	1297	1202	1160	1253	1163	1123
0.10	1362	1267	1225	1319	1228	1188
0.00	1423	1327	1285	1380	1288	1248

60	3 ROW COOLING COIL			4 ROW COOLING COIL		
ESP	ELEC. OR NO HEAT	w/ 3HW	w/ 4HW	ELEC. OR NO HEAT	w/ 3HW	w/ 4HW
0.50	1586	1566	1523	1506	1486	1449
0.40	1715	1695	1654	1636	1616	1579
0.30	1830	1810	1770	1752	1732	1695
0.20	1935	1915	1865	1858	1838	1801
0.10	2032	2012	1973	1956	1936	1899
0.00	2122	2102	2067	2047	2027	1992

NOTE: All data assumes dry cooling unit.

UNIT ELECTRICAL INFORMATION

MODEL NO.	MTR FLA 240v	KW HEAT 240v	HEAT AMPS 240v	TOTAL AMPS 240v	KW HEAT 208v	HEAT AMPS 208v	TOTAL AMPS 208v	MIN AMPACITY @240v		MIN AMPACITY @208v		MAX FUSE SIZE @240v		MAX FUSE SIZE @208v	
								CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2	CKT 1	CKT 2
24...0KW	1.3	0	0	1.3	0	0	1.3	1.63	N/A	1.63	N/A	15	N/A	15	N/A
24...3KW	1.3	3	12.5	13.8	2.25	10.83	12.13	17.25	N/A	15.17	N/A	20	N/A	20	N/A
24...4KW	1.3	4	16.67	17.97	3	14.44	15.74	22.46	N/A	19.68	N/A	25	N/A	20	N/A
24...5KW	1.3	5	20.83	22.13	3.76	18.06	19.36	27.67	N/A	24.19	N/A	30	N/A	25	N/A
24...6KW	1.3	6	25	26.3	4.51	21.67	22.97	32.88	N/A	28.71	N/A	35	N/A	30	N/A
24...8KW	1.3	8	33.33	34.63	6.01	28.89	30.19	43.29	N/A	37.74	N/A	45	N/A	40	N/A
24...10KW	1.3	10	41.67	42.97	7.51	36.11	37.41	53.71	N/A	46.76	N/A	60	N/A	50	N/A
36...0KW	2.2	0	0	2.2	0	0	2.2	2.75	N/A	2.75	N/A	15	N/A	15	N/A
36...3KW	2.2	3	12.5	14.7	2.25	10.83	13.08	18.38	N/A	16.29	N/A	20	N/A	20	N/A
36...4KW	2.2	4	16.67	18.87	3	14.44	16.64	23.58	N/A	20.81	N/A	25	N/A	25	N/A
36...5KW	2.2	5	20.83	23.03	3.76	18.06	20.26	28.79	N/A	25.32	N/A	30	N/A	30	N/A
36...6KW	2.2	6	25	27.2	4.51	21.67	23.87	34	N/A	29.83	N/A	35	N/A	30	N/A
36...8KW	2.2	8	33.33	35.53	6.01	28.89	31.09	44.42	N/A	38.86	N/A	45	N/A	40	N/A
36...10KW	2.2	10	41.67	43.87	7.51	36.11	38.31	54.83	N/A	47.89	N/A	60	N/A	50	N/A
36...15KW	2.2	15	62.5	64.7	11.27	54.17	56.37	41.81	39.06	36.6	33.85	45	40	40	35
48...0KW	3.6	0	0	3.6	0	0	3.6	4.5	N/A	4.5	N/A	15	N/A	15	N/A
48...8KW	3.6	8	33.33	36.93	6.01	28.89	32.49	46.17	N/A	40.61	N/A	50	N/A	45	N/A
48...10KW	3.6	10	41.67	45.27	7.51	36.11	39.71	56.58	N/A	49.64	N/A	60	N/A	50	N/A
48...15KW	3.6	15	62.5	66.1	11.27	54.17	57.77	43.56	39.06	38.35	33.85	45	40	40	35
48...20KW	3.6	20	83.33	86.93	15.02	72.22	75.82	56.58	52.08	49.64	45.14	60	60	50	50
60...0KW	3.9	0	0	3.9	0	0	3.9	4.88	N/A	4.88	N/A	15	N/A	15	N/A
60...8KW	3.9	8	33.33	37.23	6.01	28.89	32.79	46.54	N/A	40.99	N/A	50	N/A	45	N/A
60...10KW	3.9	10	41.67	45.57	7.51	36.11	40.01	56.96	N/A	50.01	N/A	60	N/A	60	N/A
60...15KW	3.9	15	62.5	66.4	11.27	54.17	58.07	43.94	39.06	38.73	33.85	45	40	40	35
60...20KW	3.9	20	83.33	87.23	15.02	72.22	76.12	56.96	52.08	50.01	45.14	60	60	60	50

NOTE: 10, 15 & 20KW require 2 supply circuits.

HOT WATER HEATING CORRECTION FACTORS

Entering Air Temp (F)	Entering Water Temp (F)								
	100°	110°	120°	130°	140°	150°	160°	170°	180°
50°	.419	.500	.579	.665	.742	.838	.917	1.000	1.090
55°	.376	.460	.544	.629	.708	.791	.873	.963	1.048
60°	.335	.419	.500	.579	.665	.742	.838	.917	1.000
65°	.290	.376	.460	.544	.629	.708	.791	.873	.963
70°	.251	.335	.419	.500	.579	.665	.742	.838	.917
75°	.205	.290	.376	.460	.544	.629	.708	.791	.873
80°	.167	.251	.335	.419	.500	.579	.665	.742	.838

DUWB-3 Coil Capacities

024-DUWB-3

Ent Wtr	GPM	PD FT.	CFM	85 deg.F DB/71 deg.F WB				Deg F	80 deg.F DB/67 deg.F WB				Deg F	75 deg.F DB/63 deg.F WB				Deg F
				TTL	SENS	LVG	AIR		TTL	SENS	LVG	AIR		TTL	SENS	LVG	AIR	
				MBH	MBH	DB	WB		MBH	MBH	DB	WB		MBH	MBH	DB	WB	
45	3.5	2.87	600	22.5	15.1	61.6	60.0	57.9	18.4	13.7	58.8	57.2	55.6	14.8	12.2	56.0	54.5	53.6
			800	25.1	18.1	63.9	61.9	59.4	20.9	16.6	60.7	58.8	57.0	16.9	15.0	57.6	55.8	54.8
			1000	27.3	21.1	65.5	63.2	60.7	22.9	19.3	62.0	59.9	58.1	18.7	17.5	58.7	56.7	55.8
	4.7	4.47	600	24.9	16.0	60.2	58.6	55.7	20.4	14.4	57.6	56.1	53.7	16.2	12.8	55.1	53.7	51.9
			800	28.3	19.2	62.6	60.7	57.1	23.3	17.5	59.6	57.8	55.0	18.7	15.7	56.8	55.0	53.0
			1000	30.8	22.3	64.3	62.1	58.2	25.6	20.4	61.1	59.0	56.0	20.8	18.3	57.9	56.0	53.9
	6.5	7.50	600	27.4	17.0	58.7	57.2	53.5	22.3	15.2	56.4	54.9	51.9	17.5	13.4	54.2	52.8	50.4
			800	31.6	20.6	61.2	59.3	54.8	25.8	18.5	58.5	56.7	53.0	20.6	16.4	55.9	54.2	51.4
			1000	34.8	23.7	63.0	60.8	55.8	28.6	21.6	60.0	58.0	53.9	23.0	19.2	57.1	55.2	52.1

036-DUWB-3

45	5.4	3.64	1000	36.2	24.7	62.1	60.4	58.5		29.9	22.5	59.2	57.5	56.1		24.1	20.1	56.4	54.8	54.0	
			1200	39.0	27.7	63.6	61.6	59.5		32.3	25.4	60.4	58.6	57.0		26.2	22.9	57.3	55.6	54.8	
			1400	41.3	30.7	64.7	62.6	60.3		34.4	28.1	61.4	59.4	57.8		28.1	25.5	58.1	56.3	55.5	
	7.2	5.72	1000	40.3	26.2	60.8	59.1	56.2		32.9	23.7	58.1	56.5	54.2		26.3	21.0	55.5	54.0	52.3	
			1200	43.6	29.4	62.3	60.4	57.1		35.8	26.7	59.4	57.6	55.0		28.7	23.9	56.6	54.9	53.0	
			1400	46.4	32.5	63.5	61.4	57.9		38.4	29.6	60.4	58.4	55.7		30.9	26.6	57.4	55.5	53.6	
	9.9	9.65	1000	44.3	27.7	59.3	57.7	54.0		36.0	24.9	56.9	55.4	52.3		28.5	22.0	54.7	53.2	50.8	
			1200	48.5	31.3	60.9	59.0	54.8		39.6	28.2	58.2	56.5	53.0		31.4	25.0	55.7	54.0	51.4	
			1400	52.0	34.5	62.2	60.1	55.5		42.6	31.2	59.3	57.4	53.6		33.9	27.8	56.6	54.7	51.9	

048-DUWB-3

45	7.2	4.13	1400	49.2	33.9	62.6	60.8	58.7		40.7	30.9	59.6	57.9	56.3		32.7	27.7	56.7	55.1	54.1	
			1600	51.8	36.9	63.6	61.7	59.4		43.1	33.7	60.5	58.6	57.0		34.8	30.4	57.4	55.6	54.7	
			1800	54.1	39.9	64.5	62.4	60.1		45.2	36.5	61.2	59.2	57.6		36.7	33.0	58.0	56.1	55.3	
	9.5	6.46	1400	54.5	35.8	61.3	59.5	56.5		44.7	32.4	58.5	56.9	54.4		35.6	28.9	55.9	54.3	52.5	
			1600	57.7	39.1	62.4	60.5	57.2		47.5	35.5	59.5	57.6	55.0		38.2	31.7	56.6	54.9	53.1	
			1800	60.5	42.2	63.4	61.3	57.8		50.0	38.5	60.3	58.3	55.6		40.4	34.4	57.3	55.4	53.5	
	13.2	11.19	1400	60.4	38.2	59.8	58.1	54.2		49.2	34.2	57.4	55.7	52.5		39.0	30.2	55.0	53.4	50.9	
			1600	64.4	41.6	61.0	59.1	54.8		52.6	37.4	58.3	56.5	53.0		41.8	33.2	55.8	54.1	51.3	
			1800	68.0	44.9	61.9	59.9	55.3		55.6	40.6	59.1	57.2	53.4		44.4	36.1	56.4	54.6	51.7	

060-DUWB-3

45	9.5	5.36	1800	66.0	44.7	62.1	60.3	58.9		54.4	40.7	59.1	57.5	56.5		43.8	36.3	56.3	54.7	54.2	
			2000	68.8	47.8	62.9	61.0	59.5		57.0	43.6	59.9	58.1	57.0		46.1	39.2	56.9	55.2	54.7	
			2200	71.4	50.8	63.7	61.6	60.0		59.3	46.5	60.5	58.6	57.5		48.2	41.9	57.4	55.6	55.2	
	12.6	8.48	1800	73.0	47.3	60.7	59.0	56.6		59.7	42.7	58.1	56.4	54.5		47.6	38.0	55.5	54.0	52.6	
			2000	76.5	50.6	61.6	59.8	57.1		62.8	45.9	58.8	57.1	55.0		50.2	40.9	56.1	54.5	53.0	
			2200	79.6	53.8	62.4	60.4	57.7		65.6	48.9	59.5	57.6	55.4		52.6	43.7	56.7	54.9	53.4	
	17.2	14.25	1800	80.0	50.0	59.3	57.7	54.3		65.2	44.9	57.0	55.4	52.6		51.5	39.6	54.7	53.2	51.0	
			2000	84.4	53.6	60.2	58.5	54.8		68.9	48.3	57.7	56.0	53.0		54.5	42.6	55.3	53.7	51.4	
			2200	88.3	57.1	61.0	59.1	55.3		72.2	51.5	58.4	56.6	53.4		57.3	45.6	55.9	54.1	51.7	

2 Row Heating

024-DUWB-2HW

Ent Wtr	GPM	PD FT.	CFM	60 DegF Ent Air		
				TTL MBH	LAT F	LWT F
180	3.5	5.69	600	35.5	114.4	159.6
			800	40.5	106.3	156.8
			1000	44.3	100.6	154.6
	4.1	7.29	600	36.1	115.3	162.3
			800	41.3	107.3	159.8
			1000	45.3	101.5	157.8
	4.6	8.76	600	36.5	115.9	164.0
			800	41.8	107.9	161.8
			1000	46.0	102.1	160.0

036-DUWB-2HW

Ent Wtr	GPM	PD FT.	CFM	60 DegF Ent Air		
				TTL MBH	LAT F	LWT F
180	5.4	8.05	1000	53.6	109.1	160.1
			1200	57.9	104.2	158.5
			1400	61.7	100.4	157.1
	5.9	9.31	1000	54.1	109.5	161.6
			1200	58.5	104.7	160.1
			1400	62.4	100.8	158.8
	6.5	10.94	1000	54.6	110.0	163.2
			1200	59.2	105.2	161.8
			1400	63.1	101.3	160.5

3 Row Heating

024-DUWB-3HW

Ent Wtr	GPM	PD FT.	CFM	60 DegF Ent Air		
				TTL MBH	LAT F	LWT F
180	5.0	7.85	600	47.1	131.9	161.1
			800	54.7	122.6	158.1
			1000	60.8	115.7	155.6
	5.5	9.17	600	47.5	132.5	162.7
			800	55.2	123.3	159.9
			1000	61.5	116.4	157.6
	6.0	10.58	600	47.8	133.0	164.0
			800	55.7	123.8	161.4
			1000	62.1	116.9	159.2

036-DUWB-3HW

Ent Wtr	GPM	PD FT.	CFM	60 DegF Ent Air		
				TTL MBH	LAT F	LWT F
180	7.5	12.48	1000	71.8	125.7	160.8
			1200	78.6	120.0	159.0
			1400	84.6	115.3	157.4
	7.9	13.64	1000	72.1	126.0	161.7
			1200	79.1	120.3	160.0
			1400	85.1	115.6	158.4
	8.5	15.48	1000	72.6	126.5	162.9
			1200	79.7	120.8	161.2
			1400	85.8	116.1	159.8

DUWB-4 Coil Capacities

Ent Wtr	GPM	PD FT.	CFM	85 degF DB/71 deg.F WB				LWT Deg F	80 deg.F DB/67 degF WB				LWT Deg F	75 degF DB/63 deg.F WB				LWT Deg F
				TTL	SENS	LVG	AIR		TTL	SENS	LVG	AIR		TTL	SENS	LVG	AIR	
				MBH	MBH	DB	WB		MBH	MBH	DB	WB		MBH	MBH	DB	WB	
024-DUWB-4	4.3	3.32	600	27.2	17.4	58.1	57.3	57.7	22.4	15.7	55.6	54.9	55.5	17.8	13.9	53.4	52.6	53.4
			800	30.9	21.1	60.6	59.6	59.5	25.7	19.1	57.7	56.8	57.0	20.7	17.2	55.0	54.1	54.7
			1000	33.8	24.4	62.4	61.2	60.8	28.2	22.4	59.3	58.1	58.2	23.0	20.2	56.2	55.2	55.8
	5.7	5.13	600	29.8	18.4	56.5	55.8	55.5	24.3	16.5	54.4	53.7	53.6	19.2	14.5	52.5	51.7	51.8
			800	34.3	22.4	59.1	58.1	57.1	28.2	20.2	56.6	55.6	55.0	22.6	17.9	54.1	53.2	53.0
			1000	38.0	25.9	61.0	59.8	58.3	31.3	23.6	58.2	57.0	56.1	25.3	21.2	55.4	54.4	53.9
	7.8	8.52	600	32.2	19.3	55.0	54.3	53.3	26.2	17.3	53.2	52.5	51.8	20.7	15.1	51.6	50.9	50.3
			800	38.0	23.7	57.5	56.6	54.8	30.9	21.3	55.3	54.4	53.0	24.5	18.7	53.2	52.3	51.3
			1000	42.3	27.5	59.5	58.4	55.9	34.7	24.9	56.9	55.9	53.9	27.7	22.1	54.5	53.5	52.1
036-DUWB-4	6.7	4.83	1000	44.6	28.7	58.4	57.6	58.3	36.6	25.9	56.0	55.2	56.0	29.3	23.1	53.6	52.8	53.8
			1200	48.4	32.3	60.1	59.1	59.5	40.0	29.4	57.3	56.4	57.0	32.2	26.3	54.7	53.8	54.7
			1400	51.6	35.7	61.3	60.2	60.4	42.9	32.7	58.4	57.3	57.8	34.7	29.4	55.6	54.5	55.4
	8.8	7.50	1000	48.7	30.3	57.0	56.2	56.1	39.8	27.2	54.8	54.0	54.1	31.5	24.0	52.8	52.0	52.2
			1200	53.3	34.2	58.6	57.7	57.1	43.8	30.9	56.2	55.2	55.0	34.9	27.4	53.8	52.9	53.0
			1400	57.2	37.9	60.0	58.9	58.0	47.2	34.3	57.3	56.2	55.7	37.9	30.7	54.7	53.7	53.6
	11.9	12.42	1000	52.7	31.8	55.5	54.7	53.9	42.9	28.5	53.6	52.9	52.2	33.7	25.0	51.9	51.1	50.7
			1200	58.3	36.1	57.1	56.2	54.8	47.6	32.4	55.0	54.1	53.0	37.6	28.6	52.9	52.1	51.3
			1400	63.1	40.2	58.5	57.4	55.6	51.7	36.1	56.1	55.1	53.7	41.1	32.0	53.8	52.9	51.9
048-DUWB-4	9.0	5.92	1400	61.0	39.6	58.9	58.0	58.6	50.3	35.8	56.3	55.4	56.2	40.3	31.9	53.9	53.1	54.0
			1600	64.8	43.3	60.0	59.0	59.4	53.5	39.4	57.3	56.3	56.9	43.1	35.1	54.7	53.8	54.6
			1800	68.1	46.7	61.0	59.9	60.2	56.4	42.7	58.1	57.1	57.6	45.7	38.3	55.3	54.3	55.2
	11.7	9.16	1400	66.6	41.8	57.4	56.6	56.4	54.5	37.5	55.2	54.4	54.3	43.3	33.1	53.1	52.3	52.4
			1600	71.1	45.7	58.6	57.7	57.2	58.3	41.3	56.2	55.2	55.0	46.6	36.5	53.9	53.0	53.0
			1800	75.1	49.3	59.7	58.6	57.8	61.8	44.7	57.0	56.0	55.6	49.6	39.9	54.5	53.6	53.5
	15.9	15.45	1400	72.3	44.0	56.0	55.1	54.1	58.8	39.4	54.0	53.2	52.4	46.4	34.5	52.2	51.4	50.9
			1600	77.8	48.3	57.1	56.2	54.8	63.4	43.3	55.0	54.1	53.0	50.2	38.2	53.0	52.1	51.3
			1800	82.7	52.3	58.2	57.2	55.4	67.6	47.1	55.9	54.9	53.5	53.7	41.6	53.6	52.7	51.8
060-DUWB-4	11.7	7.70	1800	81.1	52.0	58.3	57.5	58.9	66.7	47.0	55.9	55.0	56.4	53.4	41.8	53.6	52.8	54.1
			2000	85.1	55.7	59.3	58.3	59.6	70.3	50.6	56.7	55.7	57.0	56.4	45.1	54.2	53.3	54.7
			2200	88.7	59.3	60.1	59.1	60.2	73.5	54.0	57.4	56.4	57.6	59.2	48.3	54.7	53.8	55.1
	15.3	12.02	1800	88.3	54.8	56.9	56.1	56.6	72.2	49.2	54.7	53.9	54.4	57.2	43.4	52.7	51.9	52.5
			2000	93.2	58.8	57.9	56.9	57.2	76.4	53.0	55.5	54.6	55.0	60.7	46.9	53.3	52.5	53.0
			2200	97.6	62.6	58.7	57.7	57.8	80.2	56.6	56.2	55.3	55.5	64.0	50.3	53.9	53.0	53.4
	20.6	19.88	1800	95.2	57.6	55.5	54.7	54.2	77.5	51.4	53.6	52.8	52.5	61.0	45.1	51.9	51.1	50.9
			2000	101.1	61.9	56.4	55.5	54.8	82.4	55.5	54.4	53.5	53.0	65.1	48.8	52.5	51.6	51.3
			2200	106.5	66.2	57.2	56.3	55.3	86.9	59.4	55.1	54.1	53.4	68.9	52.3	53.0	52.1	51.7

3 Row Heating

048-DUWB-3HW

Ent Wtr	GPM	PD FT.	CFM	60 DegF Ent Air		
				TTL	LAT	LWT
				MBH	F	F
180	9.0	8.83	1400	94.2	121.6	159.1
			1600	100.4	117.4	157.7
			1800	106.0	113.9	156.4
	9.5	9.65	1400	94.7	121.9	160.0
			1600	101.1	117.8	158.7
			1800	106.8	114.3	157.5
	10.0	10.51	1400	95.2	122.2	160.9
			1600	101.6	118.1	159.7
			1800	107.4	114.6	158.5

060-DUWB-3HW

Ent Wtr	GPM	PD FT.	CFM	60 DegF Ent Air		
				TTL	LAT	LWT
				MBH	F	F
180	12.5	13.26	1800	123.4	122.8	160.2
			2000	130.0	119.5	159.2
			2200	136.1	116.6	158.2
	13.0	14.16	1800	123.9	123.0	160.9
			2000	130.6	119.7	159.9
			2200	136.7	116.9	159.0
	13.5	15.10	1800	124.3	123.2	161.6
			2000	131.0	120.0	160.6
			2200	137.2	117.1	159.7

4 Row Heating

048-DUWB-4HW

Ent Wtr	GPM	PD FT.	CFM	60 DegF Ent Air		
				TTL	LAT	LWT
				MBH	F	F
180	11.0	15.64	1400	113.7	134.4	159.3
			1600	122.3	130.0	157.7
			1800	130.1	126.1	156.3
	11.5	16.85	1400	114.2	134.7	160.1
			1600	122.9	130.3	158.6
			1800	130.7	126.4	157.3
	12.0	18.10	1400	114.6	134.9	160.9
			1600	123.4	130.6	159.4
			1800	131.3	126.7	158.1

060-DUWB-4HW

Ent Wtr	GPM	PD FT.	CFM	60 DegF Ent Air		
				TTL	LAT	LWT
				MBH	F	F
180	15.0	17.14	1800	148.0	135.2	160.3
			2000	156.8	131.8	159.1
			2200	165.0	128.7	158.0
	15.7	18.53	1800	148.5	135.5	161.1
			2000	157.5	132.1	159.9
			2200	165.8	129.0	158.9
	16.5	20.17	1800	149.1	135.8	161.9
			2000	158.2	132.4	160.8
			2200	166.6	129.3	159.8

Unit Dimensional Information

MODEL	A	B	C	D	E	F	G	H	J	K	L	M	N	WT.#
18-24	17.5	22.0	46.0	35.75	10.25	15.0	13.56	16.5	11.25	4.63	8.06	18.25	14.31	135
30-36	20.0	25.0	51.0	40.75	10.25	17.0	14.75	19.5	12.25	4.63	10.06	22.25	16.31	145
42-48	22.0	27.0	55.0	43.75	11.25	19.0	15.56	21.5	12.25	4.63	10.06	23.25	18.31	158
60	24.0	31.0	57.0	45.75	11.25	21.0	16.94	25.5	13.88	4.63	10.44	28.25	18.31	190

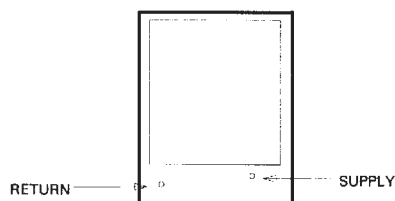
NOTES: (1) Dimensions F, H, & K are for no heat & hydronic heat units; Dimensions G, J & L apply to electric heat units only.

(2) Return air openings--Side return air openings requires field modifications.

NOTES: (3) On 60-DUX model, no heat.

(4) Hot water heat units are 3/4HP-115v.

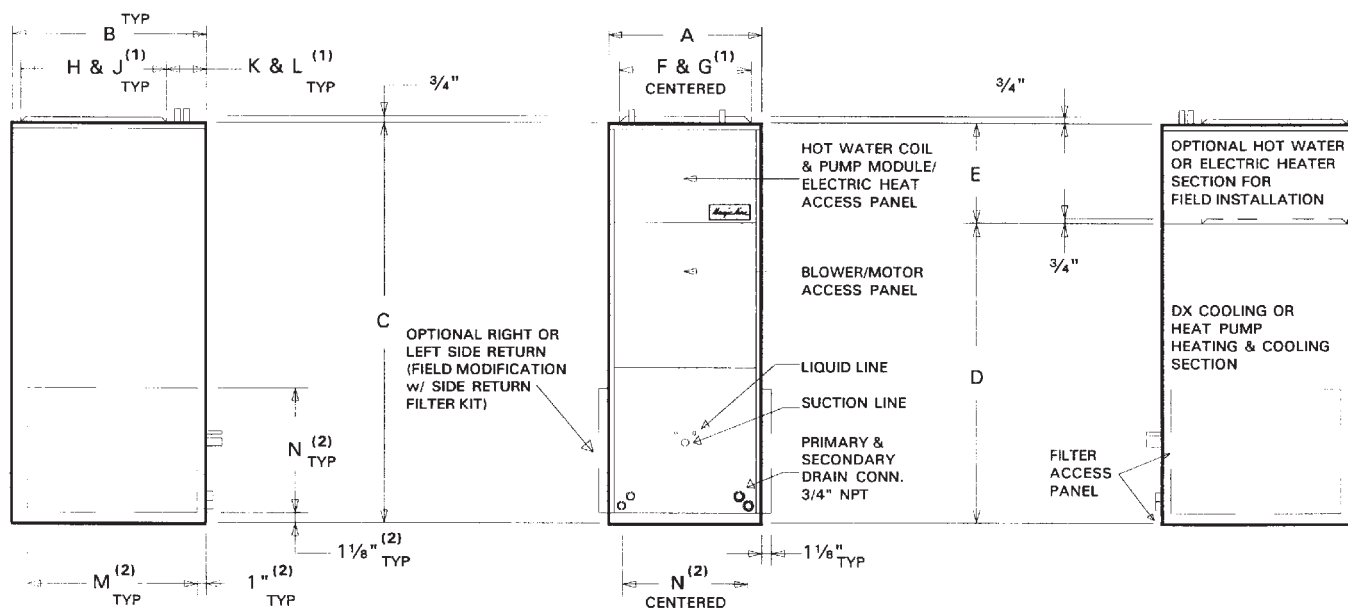
(5) Hot Water Pump Module (not shown) is 115v (.52 FLA).



TOP VIEW
(HOT WATER HEAT UNIT)

STANDARD
ONE PIECE
CABINET

OPTIONAL
TWO PIECE
CABINET



LEFT VIEW

FRONT VIEW

RIGHT VIEW

MODEL	DX COIL CONN.		HOT WATER		FILTER 1"	MOTOR		
	LIQ.	SUCT.	SUPPLY	RETURN		HP	AMPS/115	AMPS/230
18-24	3/8	7/8	5/8	5/8	16 x 20	1/4	2.9	1.3
30-36	3/8	7/8	5/8	5/8	18 x 24	1/3	4.0	2.2
42-48	3/8	7/8	7/8	7/8	20 x 25	3/4	7.0	3.6
60 ³	3/8	1 1/8	N/A	N/A	(2) 15 x 20	1/2	N/A	3.9
60 ⁴	3/8	1 1/8	7/8	7/8	(2) 15 x 20	3/4	7.0	3.6

Airflow Data DUX-B Series Fan Coil CFM @ .00" – .50" ESP

18	3 ROW COOLING COIL			4 ROW COOLING COIL		
ESP	ELEC. OR NO HEAT	w/ 2HW	w/ 3HW	ELEC. OR NO HEAT	w/ 2HW	w/ 3HW
0.50	585	551	534	557	529	514
0.40	650	609	590	618	584	567
0.30	711	665	644	676	636	618
0.20	768	717	695	731	686	666
0.10	823	768	745	784	735	714
0.00	876	817	792	835	782	760

24	3 ROW COOLING COIL			4 ROW COOLING COIL		
ESP	ELEC. OR NO HEAT	w/ 2HW	w/ 3HW	ELEC. OR NO HEAT	w/ 2HW	w/ 3HW
0.50	660	610	587	630	588	568
0.40	735	676	651	700	650	628
0.30	805	739	712	766	709	685
0.20	870	799	770	829	766	740
0.10	932	856	826	889	821	793
0.00	991	911	879	947	874	845

30	3 ROW COOLING COIL			4 ROW COOLING COIL		
ESP	ELEC. OR NO HEAT	w/ 2HW	w/ 3HW	ELEC. OR NO HEAT	w/ 2HW	w/ 3HW
0.50	935	869	836	891	832	803
0.40	1018	949	916	974	911	881
0.30	1090	1020	987	1046	981	950
0.20	1155	1084	1051	1112	1045	1014
0.10	1215	1143	1110	1172	1104	1072
0.00	1271	1197	1164	1229	1159	1127

36	3 ROW COOLING COIL			4 ROW COOLING COIL		
ESP	ELEC. OR NO HEAT	w/ 2HW	w/ 3HW	ELEC. OR NO HEAT	w/ 2HW	w/ 3HW
0.50	1056	963	920	1013	928	889
0.40	1147	1053	1010	1103	1016	976
0.30	1226	1131	1089	1182	1093	1053
0.20	1297	1202	1160	1253	1163	1123
0.10	1362	1267	1225	1319	1228	1188
0.00	1423	1327	1285	1380	1288	1248

42	3 ROW COOLING COIL			4 ROW COOLING COIL		
ESP	ELEC. OR NO HEAT	w/ 3HW	w/ 4HW	ELEC. OR NO HEAT	w/ 3HW	w/ 4HW
0.50	1277	1142	1104	1225	1103	1068
0.40	1376	1236	1197	1324	1195	1158
0.30	1464	1321	1280	1412	1278	1240
0.20	1544	1399	1356	1492	1355	1316
0.10	1618	1470	1427	1567	1427	1386
0.00	1687	1537	1494	1636	1494	1452

48	3 ROW COOLING COIL			4 ROW COOLING COIL		
ESP	ELEC. OR NO HEAT	w/ 3HW	w/ 4HW	ELEC. OR NO HEAT	w/ 3HW	w/ 4HW
0.50	1426	1243	1193	1370	1203	1157
0.40	1534	1348	1296	1478	1306	1258
0.30	1629	1442	1389	1574	1398	1348
0.20	1716	1527	1473	1661	1482	1432
0.10	1797	1606	1552	1742	1561	1509
0.00	1871	1680	1625	1818	1635	1582

60	3 ROW COOLING COIL			4 ROW COOLING COIL		
ESP	ELEC. OR NO HEAT	w/ 3HW	w/ 4HW	ELEC. OR NO HEAT	w/ 3HW	w/ 4HW
0.50	1586	1566	1523	1506	1486	1449
0.40	1715	1695	1654	1636	1616	1579
0.30	1830	1810	1770	1752	1732	1695
0.20	1935	1915	1865	1858	1838	1801
0.10	2032	2012	1973	1956	1936	1899
0.00	2122	2102	2067	2047	2027	1992

NOTE:

(1) All data assumes dry cooling coil.

Direct Expansion Coil Cooling Capacities

	MODEL	NOM. CFM	SUCTION TEMP	80/67 EAT			
				TOTAL MBH	SENSIBLE MBH	LEAVING AIR TEMP	
						DB	WB
3 R O W	18-DUX-B	600	40	28595	18749	51.2	51.2
			45	24601	16731	53.3	53.3
			50	18617	14713	57.4	57.3
	24-DUX-B	800	40	36204	24217	52.1	52.0
			45	31899	22394	54.2	54.1
			50	22409	18488	58.7	58.3
	30-DUX-B	1000	40	45667	30489	51.9	51.9
			45	40139	28210	54.0	54.0
			50	28618	23436	58.4	58.1
	36-DUX-B	1200	40	54067	36326	52.1	52.1
			45	47686	33592	54.2	54.1
			50	33830	27863	58.6	58.2
4 R O W	42-DUX-B	1400	40	62103	41924	52.4	52.4
			45	54640	38738	54.5	54.4
			50	38364	32051	58.9	58.5
	48-DUX-B	1600	40	69926	47393	52.7	52.6
			45	61422	43747	54.8	54.6
			50	42972	36109	59.2	58.7
	60-DUX-B	2000	40	84398	57939	53.3	53.2
			45	70995	52514	54.9	54.9
			50	57592	47089	58.3	58.0
	18-DUX-B	600	40	33761	21027	47.7	47.4
			45	29007	18944	50.9	50.9
			50	20727	15559	56.1	56.1
	24-DUX-B	800	40	42908	27082	48.8	48.8
			45	36949	24564	51.7	51.7
			50	25716	20051	56.9	56.9
	30-DUX-B	1000	40	53262	33744	48.9	48.9
			45	46449	30814	51.6	51.6
			50	33654	25606	56.4	56.4
	36-DUX-B	1200	40	62854	39971	49.3	49.3
			45	55111	36716	51.8	51.8
			50	40546	30857	56.3	56.3
	42-DUX-B	1400	40	71773	46026	49.7	49.7
			45	63109	42228	52.2	52.2
			50	46709	35696	56.5	56.5
	48-DUX-B	1600	40	80317	51733	50.2	50.2
			45	70800	47740	52.5	52.5
			50	52808	40622	56.6	56.6
	60-DUX-B	2000	40	95368	62496	51.2	51.2
			45	81437	56962	52.9	52.9
			50	67506	51429	56.3	56.3

Hot Water Coil Heating Capacities

	MODEL	GPM	PD. FT.	MBTUH at EWT (70° EAT)			
				120°	140°	160°	180°
2 R O W	18-DUX	1.5	1.8	12.6	17.8	23.0	28.3
		2.5	3.5	14.0	19.7	25.5	31.3
		3.5	5.9	14.7	20.7	26.7	32.7
	24-DUX	1.5	1.8	13.9	19.7	25.5	31.4
		2.5	3.5	15.8	22.2	28.7	35.3
		3.5	5.9	16.7	23.5	30.3	37.2
	30-DUX	2	2	18.2	25.8	33.4	41.0
		3	3.3	20.1	28.4	36.7	45.0
		4	5.1	21.2	29.8	38.5	47.3
	36-DUX	2	2	19.4	27.4	35.4	43.6
		3	3.3	21.5	30.4	39.3	48.3
		4	5.1	22.8	32.1	41.5	50.9
3 R O W	18-DUX	2	2.1	16.9	23.8	30.8	37.8
		3	3.6	18.2	25.7	33.2	40.7
		4	5.6	19.0	26.7	34.5	42.3
	24-DUX	2	2.1	19.0	26.8	34.6	42.6
		3	3.6	20.8	29.3	37.9	46.6
		4	5.6	21.9	30.8	39.8	48.8
	30-DUX	2.5	2.3	24.4	34.4	44.6	54.8
		3.5	3.7	26.5	37.3	48.2	59.2
		4.5	5.4	27.7	39.0	50.4	61.9
	36-DUX	2.5	2.3	26.1	36.8	47.7	58.7
		3.5	3.7	28.6	40.2	52.1	64.0
		4.5	5.4	30.1	42.3	54.7	67.2
	42-DUX	3	2.6	31.4	44.3	57.3	70.5
		4	3.9	33.9	47.8	61.8	75.9
		5	5.5	35.6	50.1	64.7	79.5
	48-DUX	3	2.6	32.9	46.4	60.1	73.9
		4	3.9	35.7	50.3	65.1	80.0
		5	5.5	37.6	53.0	68.5	84.1
	60-DUX	3.5	2.9	40.8	57.6	74.5	91.6
		4.5	4.2	44.1	62.1	80.4	98.8
		5.5	5.7	46.4	65.3	84.5	103.8
4 R O W	42-DUX	3.5	2.7	38.5	54.2	70.1	86.1
		4.5	3.8	41.1	57.8	74.7	91.6
		5.5	5.2	42.8	60.2	77.7	95.4
	48-DUX	3.5	2.6	40.6	57.2	73.9	90.8
		4.5	3.9	43.5	61.3	79.2	97.2
		5.5	5.2	45.5	64.1	82.7	101.6
	60-DUX	4	2.2	49.5	69.7	90.2	110.8
		5	3	53.0	74.6	96.5	118.5
		6	3.9	55.5	78.2	101.0	124.0

CAPACITIES CALCULATED

NOTES:

1. **IMPORTANT** –When application calls for DUX series used in conjunction with a heat pump, contact factory for ratings and to confirm compatibility with specific outdoor unit models.

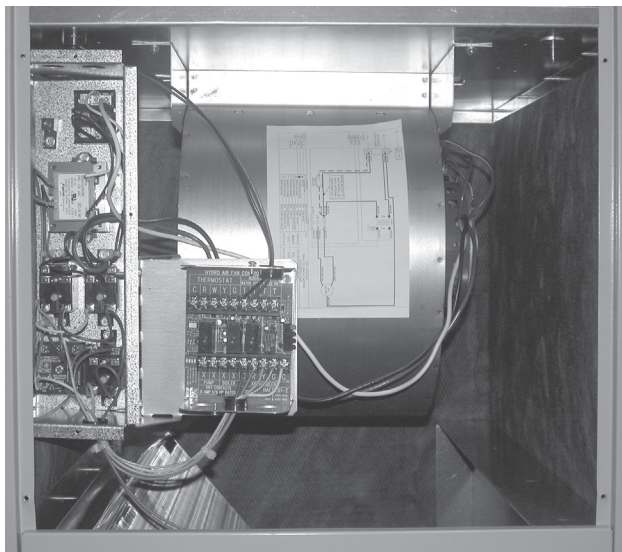
2. DX cooling capacities are computer generated evaporator ratings based on specific entering conditions listed in the table. Actual performance with different condensing units may vary.

3. Contact factory for S.E.E.R. ratings with most major manufacturers' condensing units.

4. When ordering DUX series units with hydronic heat, specify whether pump module is required, and if so, whether it is required factory installed or shipped separately as a kit (See LIST PRICES for details).

5. Contact the factory for wiring diagrams of all unit combinations.

6. Due to continuous efforts to improve our products, all specifications subject to change without notice.



Description

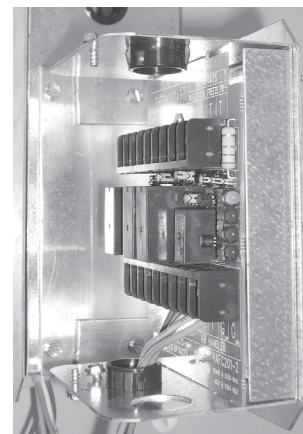
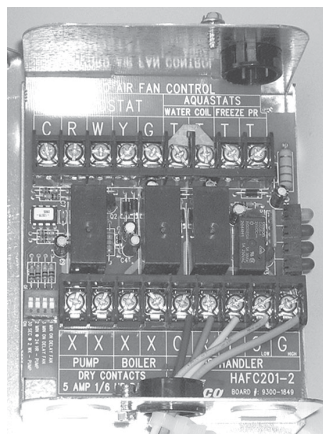
DUX series multi-position air handlers are available with a Multi-Function Controller that reduces the number of electrical connections and field supplied parts required to install these units with boilers, pumps and condensing units.

Heating: Air handlers can now be directly wired from the boiler to the air handler without adding additional relays or related controls. Multiple air handlers may be connected to a single, high-efficiency natural gas or oil fired hot water boiler to provide complete, whole house hydronic space heating. Each air handler includes a high-efficiency cooling coil, a separate hot water coil, drain pan, 115, 208, 230 volt three speed blower motor, throwaway filter and a 24V transformer.

Cooling: These air handlers are completely compatible with all split system type condensing units. Cooling coils in the DUX-HW air handlers are extra-large and engineered to offer cooling efficiencies to 13 SEER, depending on the condensing unit used.

Features Include:

- Diagnostic Indicator Lights
- 100% Factory Tested
- Automatic Multi-Speed Switching
- Prevents False Calls for Fan Operation
- Simplified Wiring
- Universal Thermostat Compatibility
- Contractor Friendly PC Board Layout
- Increased Operating Efficiency
- Available in 115, 208, 230 volts
- Made in USA



DX Cooling / Boiler Heating

Heating Cycle

1. Boiler Start Relay: Eliminates field installed boiler relay, allowing direct wiring from the boiler to the air handler.
2. Heating Cycle Blower Delay: User selectable 1, 3, or 4 minutes delay of the blower start to allow the coil to be preheated before the blower energizes.

Cooling Cycle

1. Cooling Cycle Blower Delay: Maximizes cooling efficiency by allowing the blower to run 1 to 100 seconds after the thermostat is satisfied.
2. Horizontal Drain Pan: Factory installed. (re-positions within cabinet for right-to-left airflow)
3. Drain Connections: Primary and secondary on cooling coil.

Optional Features

1. Freeze Protector: (Optional freeze protector switch required) Reduces the possibility of the water coil freezing by switching the pump on if the water temperature is nearing a freezing condition.
2. Aquastat: An optional aquastat is an available feature that ensures that there is hot water available prior to fan start up.

Additional Standard Features

1. The diagnostic lights show full functionality of the Fan Control. The green light should always be on indicating that power is connected. Red lights indicate fan operation for heating and cooling modes.
2. Pump dry contact activated for 2 minutes every 24 hours (boiler contacts not activated). User selectable.
3. Pump dry contacts activated for 30 seconds every two weeks (boiler contacts not activated). User selectable.
4. Compatible with most major brands of split condensing units.

ENGINEERING SPECIFICATIONS

- Cabinets shall be fabricated of LFQ (min) steel. External parts are to be made with a polyurethane based powder coated heavy gauge galvanealed, while internal parts are to be built from heavy gauge galvanized steel. Units shall pass 500 hour salt spray test as described in ASTM B-117
- Coils are to be tested at 500 PSI for operation at 400 PSI guage. All water coils have air vents.
- Fan wheel bearings shall be self aligning, sealed cartridge, permanently lubricated ball bearings that provide dependable fan operation for an average life of 200,000 hours (belt drive only).
- Variable pitch motor sheaves.

Magic Aire®

United Electric Company designs and builds its Magic Aire® products to comply and perform to one or more of the following standards:

AIR FLOW	General Belt Drive Equipment Direct Drive Equipment	AMCA 210 ASHRAE 51 ARI 430 ARI 440
COIL CAPACITY	Hydronic Direct Expansion	ARI 410 ARI 210
IN DUCT SOUND RATINGS	Air Moving Equipment	ASHRAE 68 AMCA 330
SAFETY AGENCY LISTINGS	Coils UL Report # Equipment ETL Report #	UL 207 SA 3438 CAN/CSA C22.2 #236 ANSI/UL-1995 491893
MATERIAL SPECIFICATIONS	Sheet Metal Copper Tubing Aluminum	ASTM A525 ASTM A527 ASTM B68 ASTM B75 ASTM B88 ASTM B251 ASTM B209
MAJOR COMPONENTS	Motors Wire Electrical Filters Fiberglass Paint	UL/CSA NEMA UL/CSA UL/CSA UL ASHRAE 52 UL 181 UL 723 (25/50) ASTM E-84 ASTM B117

**MAGIC AIRE DU SERIES FAN COILS ARE ETL
LISTED IN ACCORDANCE WITH UL 1995
AND ARE ASSEMBLED TO ORDER FOR COMPETITIVE DELIVERY.**



United Electric Company, L.P.

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