

# Magic Aire®

## DVX SERIES



### VERTICAL DIRECT DRIVE DIRECT EXPANSION AIR UNITS

#### OPTIONAL ACCESSORIES

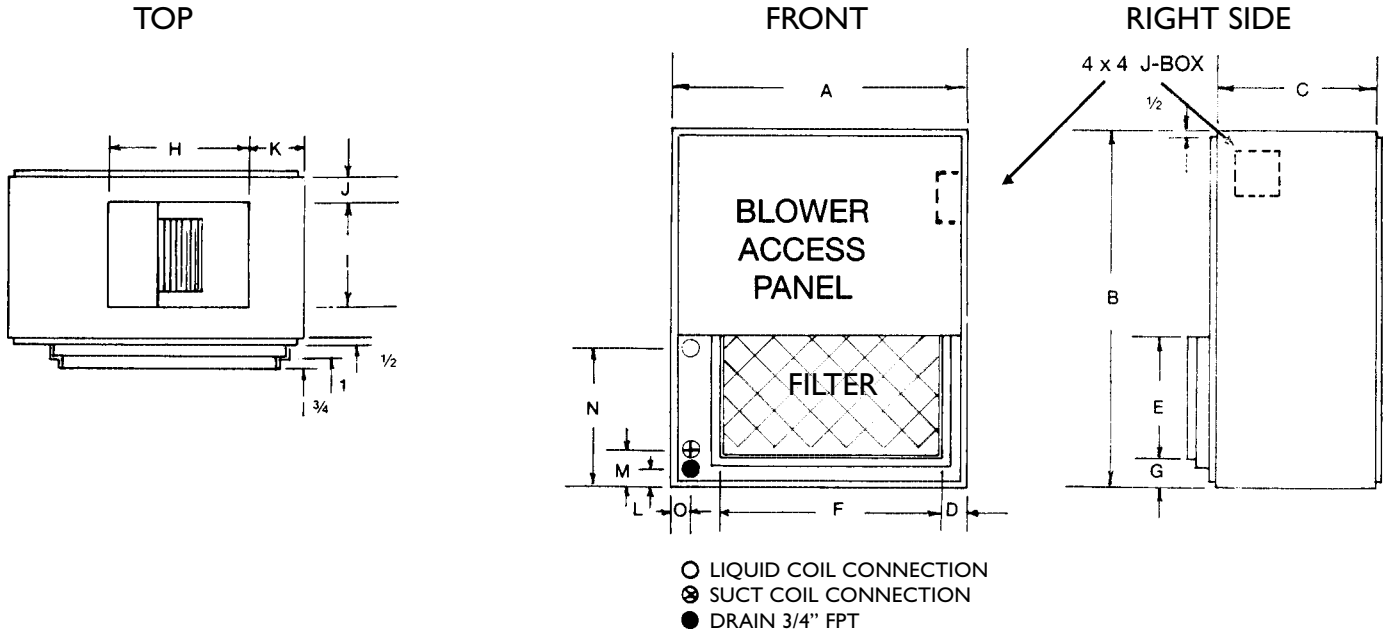
Two Row Hot Water Coil



MAGIC AIRE DVX 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, Texas 76301 • 940-397-2100 • Fax 940-397-2166



## DVX Series Unit Cabinet Dimensions

MODEL	UNIT		RETURN DUCT INLET				BLOWER OPEN OUTLET				STUBOUTS LOCATIONS				
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
DVX-400	24	25.00	13	2	6.50	18	2.625	10.50	7	3.00	4.5	1.50	2.875	7.50	1.5
DVX-600	24	29.00	13	2	10.00	18	2.50	10.50	8.5	3.00	4.5	1.25	3.00	12.75	1.5
DVX-800	24	33.00	13	2	14.25	18	2.75	10.50	8.5	3.00	4.5	1.50	3.00	16.00	1.5
DVX-1000	29	34.75	14	2	14.25	23	2.75	11.75	8.5	2.75	5.5	1.50	3.00	16.00	1.5

## DVX Series Specifications

Model	Face Area Sq. Ft.	Rows Tube	Nominal Rating In Tons	DD Motor HP/AMP			Blower DD	Throwaway Filters 7/8" Thick (Actual Size)	Coil Connection		Unit Shipping Weight
				115/1	208-230/1	277/1			Liquid	Suction	
									O.D. SWT	O.D. SWT	
DVX-400	1.00	4-3/8	1	1/10/1.2	0.8	0.9	9-4	8.00 X 19.25	3/8"	5/8"	67
DVX-600	1.50	4-3/8	1.5	1/6/3.7	1.0	0.9	9-6	11.5 X 19.25	3/8"	5/8"	75
DVX-800	2.00	4-3/8	2	1/4/3.7	1.3	2.2	9-6	15.5 X 19.50	3/8"	5/8"	84
DVX-1000	2.56	4-3/8	2.5	1/3/4.9		2.4	10-6	15.5 X 24.00	3/8"	3/4"	103

Motors – PSC 115V-1-60 Speed Direct Drive; 3 Speed Wall Switch (opt.) 1075 RPM

### DVX CFM vs. External Static for Standard Unit

MODEL	SPEED SETTINGS	.10 ESP CFM	.20 ESP CFM	.30 ESP CFM	.40 ESP CFM	.50 ESP CFM
DVX-400	HIGH	515	485	455	415	370
	MEDIUM	405	385	355	320	275
	LOW	280	265	245	225	190
DVX-600	HIGH	755	725	690	650	605
	MEDIUM	585	570	550	530	495
	LOW	490	480	470	460	430
DVX-800	HIGH	950	900	830	760	710
	MEDIUM	865	815	760	710	665
	LOW	700	685	665	640	600
DVX-1000	HIGH	1270	1215	1170	1120	1070
	MEDIUM	1100	1060	1030	1010	970
	LOW	930	905	890	880	860

### DVX with VH-2 CFM vs. External Static for Standard Unit with Hot Water Coil

MODEL	SPEED SETTINGS	.10 ESP CFM	.20 ESP CFM	.30 ESP CFM	.40 ESP CFM	.50 ESP CFM
DVX-400 w/VH-400-2	HIGH	495	465	430	390	345
	MEDIUM	395	370	340	305	265
	LOW	275	260	240	220	185
DVX-600 w/VH-600-2	HIGH	720	690	650	610	560
	MEDIUM	570	555	535	510	470
	LOW	485	475	465	450	395
DVX-800 w/VH-800-2	HIGH	850	790	745	705	650
	MEDIUM	790	745	705	660	610
	LOW	685	665	640	605	560
DVX-1000 w/VH-1000-2	HIGH	1180	1135	1090	1035	985
	MEDIUM	1045	1020	1000	950	905
	LOW	905	890	880	860	830



# DVX Series

## DIRECT EXPANSION COOLING CAPACITIES

### DVX-400

			85 degF DB/71 deg F WB				80 degF DB/67 deg F WB				75 degF DB/63 deg F WB			
Suct Temp	PD PSI	CFM	TTL MBH	SENS MBH	LVG AIR		TTL MBH	SENS MBH	LVG AIR		TTL MBH	SENS MBH	LVG AIR	
					DB	WB			DB	WB			DB	WB
40	7.93	300	16.7	10.0	54.1	53.5	14.3	9.2	51.6	51.0	11.2	7.9	50.5	49.6
		400	19.3	11.8	57.5	56.3	16.3	10.8	54.8	53.6	13.6	9.8	52.3	50.9
		500	21.4	13.4	60.1	58.3	18.1	12.3	57.1	55.3	15.5	11.3	53.9	52.1
45	5.60	300	14.9	9.2	56.5	55.8	11.5	7.9	55.4	54.4	8.5	6.7	54.2	53.1
		400	16.9	10.8	59.8	58.4	14.1	9.8	57.1	55.7	10.0	8.1	56.1	54.4
		500	18.7	12.4	62.0	60.0	16.0	11.4	58.8	56.8	11.8	9.7	57.0	54.9
50	3.74	300	11.9	8.0	60.3	59.3	8.6	6.7	59.2	58.0	6.1	5.6	57.5	56.1
		400	14.5	9.9	62.0	60.4	10.0	8.2	61.0	59.2	7.3	6.9	59.0	56.9
		500	16.0	11.2	64.2	61.8	11.9	9.7	61.9	59.6	8.3	8.0	60.1	57.5

### DVX-600

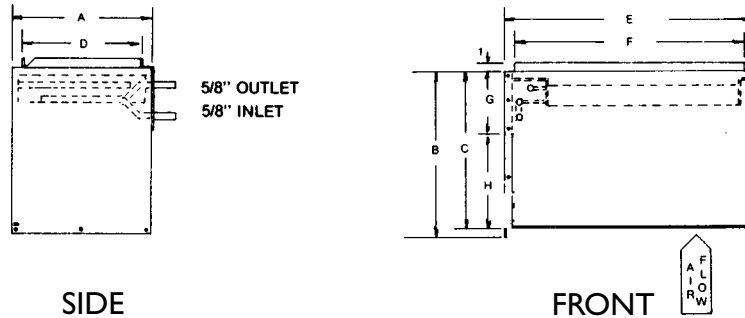
			85 degF DB/71 deg F WB				80 degF DB/67 deg F WB				75 degF DB/63 deg F WB			
Suct Temp	PD PSI	CFM	TTL MBH	SENS MBH	LVG AIR		TTL MBH	SENS MBH	LVG AIR		TTL MBH	SENS MBH	LVG AIR	
					DB	WB			DB	WB			DB	WB
40	16.78	500	22.9	14.4	58.2	57.3	19.6	13.3	55.2	54.2	16.5	12.1	52.5	51.4
		600	24.5	15.9	60.4	59.0	21.1	14.7	57.2	55.7	17.8	13.5	54.1	52.7
		700	25.8	17.2	62.1	60.3	22.3	16.0	58.7	56.9	18.8	14.7	55.5	53.7
45	12.74	500	20.5	13.4	60.0	58.9	17.0	12.2	57.2	56.1	13.8	11.0	54.6	53.4
		600	22.1	15.0	61.8	60.3	18.4	13.7	58.8	57.3	15.2	12.4	55.8	54.3
		700	23.3	16.2	63.4	61.5	19.5	14.9	60.2	58.2	16.2	13.7	56.8	55.1
50	8.95	500	17.6	12.4	62.0	60.8	14.2	11.1	59.4	58.1	9.9	9.2	57.9	56.3
		600	19.0	13.8	63.6	61.9	15.6	12.6	60.5	58.9	11.1	10.5	58.7	56.8
		700	20.2	15.1	64.9	62.8	16.6	13.9	61.5	59.7	12.2	11.7	59.4	57.1

### DVX-800

			85 degF DB/71 deg F WB				80 degF DB/67 deg F WB				75 degF DB/63 deg F WB			
Suct Temp	PD PSI	CFM	TTL MBH	SENS MBH	LVG AIR		TTL MBH	SENS MBH	LVG AIR		TTL MBH	SENS MBH	LVG AIR	
					DB	WB			DB	WB			DB	WB
40	24.58	700	25.7	17.6	61.6	60.3	22.4	16.5	58.1	56.9	19.1	15.2	54.8	53.6
		800	26.5	18.8	63.1	61.5	23.4	17.7	59.4	57.8	20.1	16.3	56.0	54.4
		900	26.4	19.1	65.2	62.7	24.1	18.9	60.5	58.7	20.8	17.4	57.0	55.2
45	19.42	700	23.5	16.8	62.7	61.3	20.0	15.5	59.4	58.0	16.4	14.0	56.4	55.0
		800	24.5	18.1	63.9	62.3	20.9	16.8	60.5	58.9	17.2	15.2	57.3	55.7
		900	25.3	19.3	65.0	63.1	21.7	17.9	61.5	59.6	17.9	16.2	58.2	56.3
50	14.39	700	20.8	15.8	64.0	62.6	16.9	14.3	61.0	59.5	13.1	12.6	58.3	56.7
		800	21.7	17.1	65.1	63.3	17.7	15.6	61.9	60.2	14.0	13.7	59.1	57.1
		900	22.5	18.3	66.1	64.0	18.4	16.6	62.8	60.7	15.1	14.8	59.7	57.4

### DVX-1000

			85 degF DB/71 deg F WB				80 degF DB/67 deg F WB				75 degF DB/63 deg F WB			
Suct Temp	PD PSI	CFM	TTL MBH	SENS MBH	LVG AIR		TTL MBH	SENS MBH	LVG AIR		TTL MBH	SENS MBH	LVG AIR	
					DB	WB			DB	WB			DB	WB
40	21.90	900	34.6	23.3	61.0	59.8	30.2	21.8	57.6	56.3	25.7	20.0	54.4	53.1
		1000	35.7	24.7	62.1	60.7	31.2	23.1	58.6	57.1	26.7	21.3	55.3	53.8
		1100	36.6	25.9	63.2	61.4	32.1	24.2	59.6	57.8	27.5	22.4	56.1	54.4
45	17.26	900	31.6	22.2	62.2	60.9	26.7	20.4	59.0	57.7	22.0	18.2	56.2	54.6
		1000	32.7	23.5	63.2	61.6	27.7	21.7	59.9	58.3	22.9	19.5	56.8	55.2
		1100	33.6	24.8	64.1	62.3	28.7	22.9	60.7	58.9	23.6	20.8	57.5	55.7
50	12.65	900	27.8	20.8	63.6	62.2	23.0	18.9	60.4	59.1	17.1	16.2	58.2	56.6
		1000	28.8	22.1	64.5	62.9	23.5	20.0	61.5	59.8	18.1	17.4	58.8	56.9
		1100	29.7	23.4	65.3	63.4	24.3	21.3	62.1	60.2	19.0	18.6	59.3	57.2



The Hot Water Coils are to be field installed on the discharge side of the unit. When the hot water coils section is placed on top of the DVW or DVX unit, a flange will extend down over the unit on each side. Two screws should be placed in each of these two flanges to secure the hot water coil section to the unit.

### Hot Water Section Cabinet Dimensions

MODEL	A	B	C	D	E	F	G	H	SHIPPING WEIGHTS
VH-400-2	13.5	16	15	12.5	24.0	23.00	6	10	27
VH-600-2	13.5	16	15	12.5	24.0	23.00	6	10	27
VH-800-2	13.5	16	15	12.5	24.0	23.00	6	10	27
VH-1000-2	13.5	16	15	13.5	29.5	28.25	6	10	36

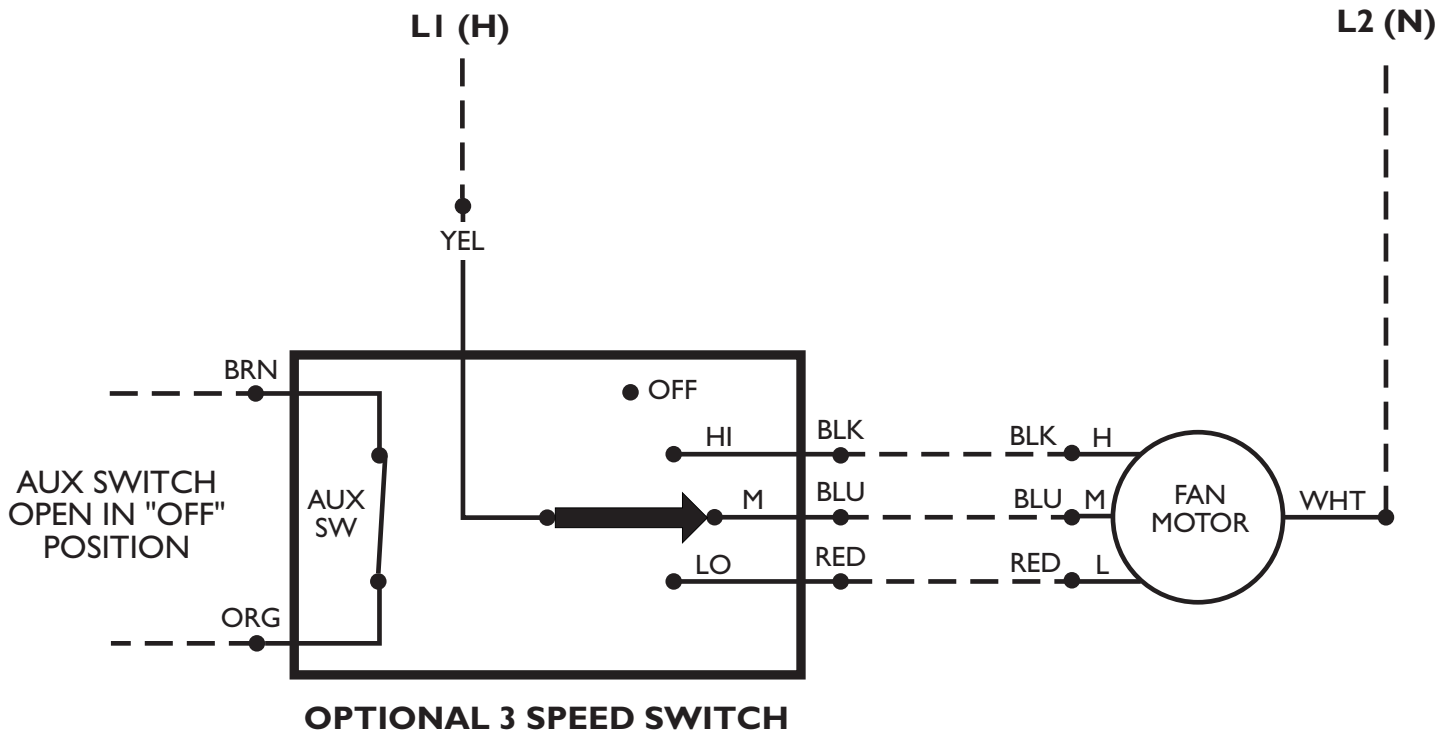
### Two Row Coil Heating Capacities

120°F ENTERING WATER TEMPERATURE										150°F ENTERING WATER TEMPERATURE										180°F ENTERING WATER TEMPERATURE									
GPM	PD FT.	TOT MBH	LVG AIR °F	LVG WTR °F	TOT MBH	LVG AIR °F	LVG WTR °F	TOT MBH	LVG AIR °F	LVG WTR °F	TOT MBH	LVG AIR °F	LVG WTR °F	TOT MBH	LVG AIR °F	LVG WTR °F	TOT MBH	LVG AIR °F	LVG WTR °F	TOT MBH	LVG AIR °F	LVG WTR °F	TOT MBH	LVG AIR °F	LVG WTR °F	TOT MBH	LVG AIR °F	LVG WTR °F	
VH-400-2		300 CFM			400 CFM			500 CFM			300 CFM			400 CFM			500 CFM			300 CFM			400 CFM			500 CFM			
1.0	0.15	9	86.9	102.4	10	82.9	100.0	11	80.2	98.0	13	100.7	123.4	15	94.6	119.8	17	90.5	116.8	18	114.1	144.6	20	106.1	139.8	22	100.6	135.8	
2.0	0.60	10	90.0	109.9	12	86.6	108.4	13	84.0	106.9	15	106.2	134.9	17	99.9	132.5	20	95.8	130.5	20	121.8	159.8	23	113.4	156.7	26	107.9	153.9	
3.0	1.36	11	92.1	113.0	12	88.2	111.8	14	85.7	110.7	16	108.6	139.4	19	102.4	137.7	21	98.7	135.9	21	124.2	166.0	25	116.7	163.5	28	111.6	161.3	
VH-600-2		500 CFM			600 CFM			700 CFM			500 CFM			600 CFM			700 CFM			500 CFM			600 CFM			700 CFM			
2.0	0.60	13	84.0	106.9	14	81.7	105.8	15	79.9	104.8	20	95.8	130.5	21	92.6	128.7	23	90.0	127.1	26	107.9	153.9	29	103.6	151.5	30	99.8	149.6	
3.0	1.36	14	85.7	110.7	16	83.7	109.7	17	81.9	108.9	21	98.7	135.9	23	95.5	134.5	25	92.8	133.3	28	111.6	161.3	31	107.6	159.3	33	103.8	157.7	
4.0	2.41	14	86.4	112.8	16	84.5	112.0	17	82.5	111.4	22	99.8	139.1	24	96.7	138.0	26	93.8	137.1	29	112.7	165.6	32	108.9	164.0	34	105.1	162.8	
VH-800-2		700 CFM			800 CFM			900 CFM			700 CFM			800 CFM			900 CFM			700 CFM			800 CFM			900 CFM			
3.0	1.36	17	81.9	108.9	18	80.3	108.2	19	79.1	107.5	25	92.8	133.3	27	90.5	132.3	28	88.6	131.3	33	103.8	157.7	35	100.6	156.4	38	98.2	155.0	
4.0	2.41	17	82.5	111.4	18	81.0	110.8	19	79.8	110.3	26	93.8	137.1	28	91.7	136.2	29	89.9	135.3	34	105.1	162.8	37	102.1	161.6	39	99.8	160.5	
5.0	3.77	18	82.8	113.0	19	81.6	112.5	20	80.4	112.0	26	94.3	139.5	28	92.6	138.6	30	90.7	138.0	35	106.8	165.9	38	103.1	165.0	40	100.7	164.0	
VH-1000-2		900 CFM			1000 CFM			1100 CFM			900 CFM			1000 CFM			1100 CFM			900 CFM			1000 CFM			1100 CFM			
4.0	0.90	21	81.4	109.5	22	80.4	108.9	23	79.3	108.4	32	92.1	134.2	33	90.6	133.3	35	89.1	132.5	42	102.8	159.0	45	100.8	157.7	47	98.8	156.7	
5.0	1.32	22	82.0	111.4	23	81.0	110.8	24	80.0	110.4	33	93.3	136.9	34	91.6	136.2	36	90.0	135.6	44	104.4	162.6	46	102.1	161.6	48	100.0	160.8	
6.0	1.83	22	82.7	112.6	24	81.6	112.2	25	80.5	111.8	33	94.0	138.9	35	92.5	138.2	37	90.9	137.7	45	105.6	165.1	47	103.0	164.4	49	100.9	163.7	

Capacities calculated and based on entering air temperatures of 60 degrees.  
Units not recommended for heating applications when leaving air exceeds 140 degrees.

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

When correction factors are used for various entering water temperatures, multiply the correction factor times the 180° E.W.T. capacity. The correction factors may be used with all Magic Aire published 180° E.W.T. heating capacities.





# Magic Aire®

## FEATURES

1. Aluminum fin-copper tube coils.
2. Direct drive motors.
3. Forward curve blower wheels factory balanced.
4. Motors have overload protection.
5. Piston flow control for R-22 only.
6. Heat pump by-pass included.
7. Fully insulated with 3/4" fiberglass with an R value equal to 3.26.
8. 1" throwaway filters are standard on all units.
9. DVX units have duct connections on return air inlet.
10. Large blower access panel on front.
11. Manifold connections are located on front left hand side (when looking with airflow).

**NOTICE:** When Magic Aire® coils are used with ground or well water, the water must be free of sand or other contaminants. Magic Aire will not be responsible nor liable for any kind of damages incurred by the ground or well water systems which contain sand or any other corrosive contaminants. Contact the factory for further information.



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