



3900 Dr. Greaves Rd. • Kansas City, MO 64030 • (816) 761-7476 • FAX (816) 765-8955

DX COIL
EVT-074 TOTAL UNIT COOLING CAPACITY

EVT-074 TOTAL UNIT COOLING CAPACITY -- DIRECT EXPANSION COIL																								
SUMMER APPLICATION RATINGS - ENTHALPY WHEEL													PERFORMANCE RATINGS - DIRECT EXPANSION COIL						UNIT PERFORMANCE					
AIR VOLUME (cfm)	OA CONDITIONS			RA CONDITIONS		EFFECTIVENESS		AIR--LVG WHL / ENT DXC		COOLING CAP--ENTHALPY WHEEL				REFRIGERANT DATA		LVG AIR TEMP		COOLING CAP--DX COIL			COMBINED COOLING CAP			
	DB (deg F)	RH (%)	WB (deg F)	DB (deg F)	WB (deg F)	LATENT (%)	SENS (%)	DB (deg F)	WB (deg F)	SENS (Btuh)	LATENT (Btuh)	TOTAL (Btuh)	S/T	SUC TEMP (deg F)	PR DROP (psi)	DB (deg F)	WB (deg F)	TOTAL (Btuh)	SENS (Btuh)	S/T	TOTAL (Btuh)	SENS (Btuh)	S/T	
5400	80	5	50.4	75.0	47.8	65.79	72.41	76.31	48.48	20,817	3,031	23,848	0.87	40	2.73	57.2	38.8	111,500	111,500	1.00	135,348	132,317	0.98	
		40	63.5		59.6	65.89	72.49	76.31	60.77	20,755	23,976	44,731	0.46	45	1.89	60.1	40.3	94,690	94,690	1.00	118,538	115,507	0.97	
		75	73.8		69.2	66.00	72.57	76.30	70.62	20,692	44,566	65,258	0.32	50	1.23	63.0	41.8	77,740	77,740	1.00	101,588	98,557	0.97	
	95	5	57.7	75.0	47.8	66.12	72.71	80.19	50.63	82,969	14,078	97,047	0.85	40	3.27	59.0	40.2	123,900	123,900	1.00	220,947	206,869	0.94	
		40	75.1		59.6	66.26	72.82	80.16	64.71	82,685	119,157	201,842	0.41	45	2.36	61.7	41.6	107,700	107,700	1.00	204,747	190,669	0.93	
		75	87.7		69.2	66.40	72.94	80.14	75.64	82,399	227,761	310,160	0.27	50	1.61	64.6	43.0	90,770	90,770	1.00	187,817	173,739	0.93	
	110	5	64.6	75.0	47.8	66.4	73.0	83.98	52.81	144,683	30,199	174,882	0.83	40	4.70	60.6	55.5	152,800	114,200	0.75	354,642	196,885	0.56	
		40	86.8		59.6	66.6	73.2	83.92	69.43	144,091	264,071	408,162	0.35	45	3.03	62.5	57.3	124,500	103,300	0.83	326,342	185,985	0.57	
		75	101.7		69.2	66.8	73.3	83.87	81.82	143,494	513,681	657,175	0.22	50	1.64	64.6	59.4	91,840	91,190	0.99	293,682	173,875	0.59	
	6400	80	5	50.4	75.0	47.8	61.30	68.95	76.49	48.58	23,485	3,351	26,836	0.88	40	10.38	65.5	64.0	242,800	85,940	0.35	552,960	168,339	0.30
			40	63.5		59.6	61.49	69.04	76.48	60.92	23,420	26,518	49,938	0.47	45	7.73	67.0	65.5	214,700	76,940	0.36	524,860	159,339	0.30
			75	73.8		69.2	61.61	69.14	76.48	70.82	23,356	49,311	72,667	0.32	50	5.50	68.6	67.1	184,700	67,670	0.37	494,860	150,069	0.30
95		5	57.7	75.0	47.8	61.76	69.30	80.87	51.00	93,611	15,576	109,187	0.86	40	3.80	60.7	41.8	135,100	135,100	1.00	309,982	279,783	0.90	
		40	75.1		59.6	61.93	69.44	80.85	65.36	93,314	131,899	225,213	0.41	45	2.85	63.3	43.1	120,000	120,000	1.00	294,882	264,683	0.90	
		75	87.7		69.2	62.10	69.58	80.82	76.44	93,015	252,228	345,243	0.27	50	2.01	66.2	44.5	103,100	103,100	1.00	277,982	247,783	0.89	
110		5	64.6	75.0	47.8	62.1	69.7	85.16	53.44	163,254	33,438	196,692	0.83	40	6.78	63.8	59.0	189,100	117,100	0.62	597,262	261,191	0.44	
		40	86.8		59.6	62.4	69.9	85.09	70.60	162,629	292,545	455,174	0.36	45	4.78	65.5	60.7	162,100	107,400	0.66	570,262	251,491	0.44	
		75	101.7		69.2	62.6	70.1	85.03	83.25	161,996	569,353	731,349	0.22	50	3.10	67.2	62.4	132,400	97,180	0.73	540,562	241,271	0.45	
7400		80	5	50.4	75.0	47.8	56.93	65.47	76.66	48.68	25,777	3,595	29,372	0.88	40	14.82	69.9	69.3	300,200	81,690	0.27	957,375	225,184	0.24
			40	63.5		59.6	57.08	65.59	76.65	61.08	25,714	28,461	54,175	0.47	45	11.55	71.3	70.6	272,100	73,700	0.27	929,275	217,194	0.23
			75	73.8		69.2	57.22	65.70	76.65	71.01	25,651	52,948	78,599	0.33	50	8.72	72.7	72.1	241,900	65,390	0.27	899,075	208,884	0.23
	95	5	57.7	75.0	47.8	57.40	65.89	81.56	51.36	102,781	16,729	119,510	0.86	40	3.27	58.6	39.5	123,900	123,900	1.00	150,736	147,385	0.98	
		40	75.1		59.6	57.08	65.59	76.65	61.08	25,714	28,461	54,175	0.47	45	2.29	61.2	40.9	105,800	105,800	1.00	132,636	129,285	0.97	
		75	87.7		69.2	57.22	65.70	76.65	71.01	25,651	52,948	78,599	0.33	50	1.50	63.9	42.3	87,030	87,030	1.00	113,866	110,515	0.97	
	110	5	64.6	75.0	47.8	57.9	66.3	86.34	54.06	179,292	35,952	215,244	0.83	40	3.75	59.3	53.6	134,100	119,100	0.89	184,038	142,520	0.77	
		40	86.8		59.6	57.60	66.06	81.53	66.00	102,486	141,736	244,222	0.42	45	2.28	61.2	55.2	105,800	105,800	1.00	155,738	129,220	0.83	
		75	101.7		69.2	57.79	66.22	81.49	77.23	102,190	271,188	373,378	0.27	50	1.49	63.9	56.3	86,990	86,990	1.00	136,928	110,410	0.81	

NOTES: 1. Entering liquid temperature is constant at 110°F. 2. Coil face area is 14.89 sq. ft. 3. All data based on balanced system (Exhaust cfm = Supply cfm).



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EVT-088

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TOTAL UNIT COOLING CAPACITY**

EVT-088

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SUMMER APPLICATION RATINGS - ENTHALPY WHEEL														PERFORMANCE RATINGS - DIRECT EXPANSION COIL							UNIT PERFORMANCE			
AIR VOLUME (cfm)	OA CONDITIONS			RA CONDITIONS		EFFECTIVENESS		AIR--LVG WHL / ENT DXC		COOLING CAP--ENTHALPY WHEEL				REFRIGERANT DATA		LVG AIR TEMP		COOLING CAP--DX COIL			COMBINED COOLING CAP			
	DB (deg F)	RH (%)	WB (deg F)	DB (deg F)	WB (deg F)	LATENT (%)	SENS (%)	DB (deg F)	WB (deg F)	SENS (Btuh)	LATENT (Btuh)	TOTAL (Btuh)	S/T	SUC TEMP (deg F)	PR DROP (psi)	DB (deg F)	WB (deg F)	TOTAL (Btuh)	SENS (Btuh)	S/T	TOTAL (Btuh)	SENS (Btuh)	S/T	
6400	80	5	50.4	75.0	47.8	65.78	72.40	76.32	48.49	24,668	3,592	28,260	0.87	40	3.59	56.2	38.3	139,000	139,000	1.00	167,260	163,668	0.98	
		40	63.5		59.6	65.88	72.48	76.32	60.78	24,595	28,410	53,005	0.46	45	2.54	59.0	39.8	119,400	119,400	1.00	147,660	144,068	0.98	
		50			62.1	41.3	98,120	98,120	1.00	126,380	122,788	0.97	40	4.12	56.9	52.5	150,700	134,100	0.89	203,705	158,695	0.78		
	95	40	63.5	59.6	66.24	72.82	80.21	64.75	97,985	141,197	239,182	0.41	45	2.55	59.0	54.3	119,800	119,800	1.00	172,805	144,395	0.84		
		50		62.1	55.5	98,120	98,120	1.00	151,205	122,715	0.81	40	1.66	62.1	41.3	98,120	98,120	1.00	126,380	122,788	0.97			
		75	73.8	69.2	65.98	72.56	76.31	70.64	24,521	52,808	77,329	0.32	45	6.57	63.1	61.5	207,000	91,360	0.44	284,329	115,881	0.41		
	110	5	57.7	47.8	66.10	72.70	80.23	50.65	98,322	16,681	115,003	0.85	50	4.40	64.8	63.2	172,300	79,570	0.46	249,629	104,091	0.42		
			40	75.1	59.6	66.24	72.82	80.21	64.75	97,985	141,197	239,182	0.41	40	4.27	58.0	39.8	153,600	153,600	1.00	268,603	251,922	0.94	
			50		63.6	42.7	114,600	114,600	1.00	229,603	212,922	0.93	45	3.15	60.6	41.2	135,300	135,300	1.00	250,303	233,622	0.93		
		40	87.7	69.2	66.38	72.93	80.19	75.69	97,647	269,890	367,537	0.27	50	2.22	63.5	59.1	116,000	115,300	0.99	355,182	213,285	0.60		
			5	64.6	47.8	66.4	73.0	84.06	52.85	171,456	35,785	207,241	0.83	40	12.64	65.2	64.0	290,900	103,700	0.36	658,437	201,347	0.31	
			40	86.8	59.6	66.6	73.2	84.00	69.50	170,757	312,921	483,678	0.35	45	9.53	66.7	65.5	258,000	93,160	0.36	625,537	190,807	0.31	
75		101.7	69.2	66.8	73.3	83.94	81.91	170,050	608,711	778,761	0.22	50	6.83	68.3	67.1	222,600	82,210	0.37	590,137	179,857	0.30			
		5	64.6	47.8	66.4	73.0	84.06	52.85	171,456	35,785	207,241	0.83	40	4.97	59.7	41.4	167,800	167,800	1.00	375,041	339,256	0.90		
		40	86.8	59.6	66.6	73.2	84.00	69.50	170,757	312,921	483,678	0.35	45	3.75	62.4	42.7	149,700	149,700	1.00	356,941	321,156	0.90		
7600	80	5	50.4	75.0	47.8	61.28	68.88	76.50	48.59	27,861	3,974	31,835	0.88	50	2.72	65.1	44.1	130,600	130,600	1.00	337,841	302,056	0.89	
		40	63.5		59.6	61.41	68.98	76.49	60.94	27,785	31,447	59,232	0.47	40	8.47	63.0	58.9	229,400	145,400	0.63	713,078	316,157	0.44	
		50			60.1	64.7	60.5	196,700	133,700	0.68	680,378	304,457	0.45	45	2.03	63.1	41.8	110,100	110,100	1.00	141,935	137,961	0.97	
	95	40	63.5	59.6	61.85	69.38	80.90	65.41	110,707	156,421	267,128	0.41	40	4.72	58.3	53.4	162,600	149,100	0.92	221,832	176,885	0.80		
		50		63.0	60.3	54.8	133,400	133,400	1.00	192,632	161,185	0.84	45	3.07	60.3	54.8	133,400	133,400	1.00	192,632	161,185	0.84		
		75	73.8	69.2	61.53	69.08	76.49	70.83	27,708	58,476	86,184	0.32	50	2.03	63.1	56.0	110,100	110,100	1.00	169,332	137,885	0.81		
	110	5	57.7	47.8	61.68	69.24	80.93	51.03	111,058	18,472	129,530	0.86	40	10.37	63.0	61.2	258,600	111,100	0.43	344,784	138,808	0.40		
			40	75.1	59.6	61.85	69.38	80.90	65.41	110,707	156,421	267,128	0.41	45	7.51	64.4	62.7	224,200	99,390	0.44	310,384	127,098	0.41	
			50		66.0	64.2	185,500	86,490	0.47	271,684	114,198	0.42	40	4.99	66.0	64.2	185,500	86,490	0.47	271,684	114,198	0.42		
		40	87.7	69.2	62.02	69.52	80.87	76.50	110,354	299,125	409,479	0.27	40	5.17	60.0	40.8	171,800	171,800	1.00	301,330	282,858	0.94		
			5	64.6	47.8	62.1	69.6	85.25	53.49	193,684	39,656	233,340	0.83	45	3.85	62.4	42.1	151,800	151,800	1.00	281,330	262,858	0.93	
			40	86.8	59.6	62.3	69.8	85.19	70.69	192,946	346,949	539,895	0.36	50	2.73	65.0	43.3	130,800	130,800	1.00	260,330	241,858	0.93	
75		101.7	69.2	62.5	70.0	85.12	83.36	192,199	675,254	867,453	0.22	40	7.00	61.7	56.8	204,700	157,800	0.77	471,828	268,507	0.57			
		5	64.6	47.8	62.1	69.6	85.25	53.49	193,684	39,656	233,340	0.83	45	4.60	63.3	58.5	168,400	144,200	0.86	435,528	254,907	0.59		
		40	86.8	59.6	62.3	69.8	85.19	70.69	192,946	346,949	539,895	0.36	50	2.80	64.9	60.0	132,700	131,300	0.99	399,828	242,007	0.61		
8800	80	5	50.4	75.0	47.8	56.77	65.34	76.68	48.69	30,592	4,262	34,854	0.88	40	14.88	67.3	66.0	320,700	111,700	0.35	730,179	222,054	0.30	
		40	63.5		59.6	56.91	65.46	76.67	61.10	30,518	33,748	64,266	0.47	45	11.29	68.7	67.3	284,100	100,500	0.35	693,579	210,854	0.30	
		50			70.1	68.7	246,000	89,060	0.36	655,479	199,414	0.30	40	8.10	70.1	68.7	246,000	89,060	0.36	655,479	199,414	0.30		
	95	40	63.5	59.6	56.91	65.46	76.67	61.10	30,518	33,748	64,266	0.47	40	6.12	62.1	42.8	189,400	189,400	1.00	422,740	383,084	0.91		
		50		67.0	45.1	149,400	149,400	1.00	382,740	343,084	0.90	45	4.66	64.5	43.9	169,600	169,600	1.00	402,940	363,284	0.90			
		75	73.8	69.2	57.05	65.57	76.67	71.02	30,443	62,785	93,228	0.33	50	3.44	67.0	45.1	149,400	149,400	1.00	382,740	343,084	0.90		
	110	5	57.7	47.8	57.24	65.77	81.62	51.40	121,986	19,837	141,823	0.86	40	10.30	65.6	61.1	256,800	161,000	0.63	796,695	353,946	0.44		
			40	75.1	59.6	57.44	65.93	81.59	66.06	121,639	168,081	289,720	0.42	45	7.34	67.1	62.5	221,300	148,900	0.67	761,195	341,846	0.45	
			50		67.6	64.0	183,100	136,200	0.74	722,995	329,146	0.46	40	4.88	68.1	64.0	183,100	136,200	0.74	722,995	329,146	0.46		
		40	87.7	69.2	57.64	66.10	81.56	77.30	121,290	321,607	442,897	0.27	40	21.42	72.6	72.2	400,200	103,100	0.26	1,267,653	295,299	0.23		
			5	64.6	47.8	57.7	66.2	86.45	54.12	212,803	42,636	255,439	0.83	45	17.16	73.8	73.3	364,700	93,580	0.26	1,232,153	285,779	0.23	
			40	86.8	59.6	58.0	66.4	86.37	71.84	212,069	373,278	585,347	0.36	50	13.09	75.0	74.5	480,400	326,700	0.68	1,347,853	518,899	0.38	
75		101.7	69.2	58.3	66.7	86.29	84.76	211,324	726,992	938,316	0.23	40	4.93	59.1	39.8	166,900	166,900	1.00	201,754	197,492	0.98			
		5	64.6	47.8	57.7	66.2	86.45	54.12	212,803	42,636	255,439	0.83	45	3.56	61.4	41.0	145,200	145,200	1.00	180,054	175,792	0.98		
		40	86.8	59.6	58.0	66.4	86.37	71.84	212,069	373,278	585,347	0.36	50	2.40	63.9	42.3	121,300	121,300	1.00	156,154	151,892	0.97		
110	5	57.7	47.8	57.24	65.77	81.62	51.40	121,986	19,837	141,823	0.86	40	5.29	59.6	54.3	174,100	162,800	0.36	238,366	193,318	0.81			
		40	75.1	59.6	57.44	65.93	81.59	66.06	121,639	168,081	289,720	0.42	45	3.56	61.4	55.5	145,200	145,200	1.00	209,466	175,718	0.84		
		50		63.9	56.4	121,300	121,300	1.00	185,566	151,818	0.82	40	2.40	63.9	56.4	121,300	121,300	1.00	185,566	151,818	0.82			
	40	87.7	69.2	57.64	66.10	81.56																		