



**AIR-COOLED
CONDENSERS
AND HEAT
RECLAIM UNITS**



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NOMENCLATURE

C V R 0 7 5 H - 9

TYPE OF UNIT

C = Condenser
H = Heat Reclaim
F = Fluid Cooler **

TYPE OF MOTOR

C = 1/4 HP - 825 RPM
M = 1/2 HP - 1140 RPM
L = 1 HP - 825 RPM
H = 1 1/2 HP - 825 RPM
V = 1.5 / 0.95 KW - 780 / 550 RPM
N = 2 HP - 1140 RPM

Design Option

D = Direct Drive Motors
8 = Direct Drive Motors, 8 Fins per Inch
V = Direct Drive Motors, Coils Mounted V Shape
R = Direct Drive Motors, Riffled Tubes
W = Direct Drive Motors, Wide Fins Spacing (8 fpi), Riffled Tubes
X = Direct Drive Motors, Coils Mounted V Shape, Riffled Tubes

VOLTAGE

2 = 240/1/60
3 = 200/3/50
5 = 208-240/3/60
6 = 380/3/50
8 = 600/3/60
9 = 480/3/60

AIR FLOW & SPEED OPTION

H = Horizontal Air Flow
L = Low speed

CAPACITY

NOMINAL CONDENSER
CAPACITY(TONS) @
25°F T.D. (R-22)

** See fluid cooler brochure

INTRODUCTION

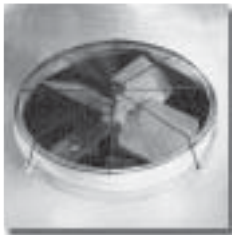
RefPlus offers a complete line of air-cooled condensers for both commercial refrigeration and air conditioning as well as industrial applications. Our air-cooled condensers can be designed to meet any heat load – from as small as 19,000 Btu/hr to over 5.5 million Btu/hr.

RefPlus air-cooled condensers are available in both single and multiple circuit applications. Our standard vertical air flow units are available in low and high CFM configurations. Most importantly, our air-cooled condensers are rated and sized according to the customer's site and requirements.



Special 500-ton air-cooled condenser for chiller application

STANDARD FEATURES



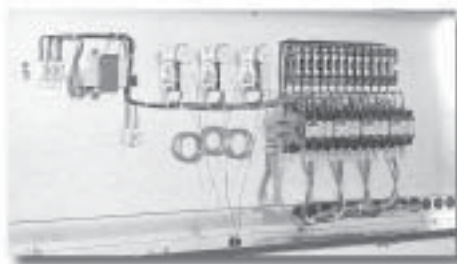
- CL and CN units are manufactured with 3-3/4" spun venturies for maximum efficiency and minimum noise level. Motor mounts and fan guards are epoxy-coated for maximum corrosion protection.

- Side panels are provided with access doors for easy coil cleaning.



- **Friction-Free Coil Tracks®**
Supporting coils for maximum reliability and linear expansion of condenser core.

- Optional control panel comes complete with fan motor contactors and fuses, temperature or pressure fan cycling, terminal block and transformer. Primary voltage is (208-240V, 480V, 600V) and secondary voltage is (24V, 120V, 240V).



OPTIONAL FEATURES

- Fin materials: polyester and copper fins
- Special coil and casing coatings



- Horizontal air flow units
- Wide fin spacing for industrial use (CLW, CVW, CNW)
- Variable speed motor controller
- Low ambient receiver packages



- CVR, CVW and CVX units are manufactured with 7 1/4" full bell mouth venturies and die cast aluminum fan for silent applications.

RefPlus condensers are rated in terms of Total Heat of Rejection (THR). This is the total heat removed in desuperheating, condensing and subcooling the refrigerant. This value is the product of the mass flow of refrigerant and the difference in enthalpy of the superheated refrigerant vapor entering and the subcooled liquid refrigerant leaving the condenser coil.

For **open drive compressors**, the Total of Heat Rejection is the sum of the Net Refrigerating Effect (NRE) and actual power input to the compressor.

- **THR = NRE + (2546 Btu/HP x BHP)**

For **hermetic and semi-hermetic compressors**, the Total Heat of Rejection is the sum of the Net Refrigerating Effect (NRE) and the total motor power input less the heat loss from the surface of the compressor (approximately 8%).

- **THR = NRE + (3413 Btu/kW x kW x .92)**

If the compressor manufacturer's BHP (open compressors) or kW input (hermetic and semi-hermetic compressors) are not available, the Total Heat of Rejection can be estimated by using heat of rejection factors from Tables A and B. Table A lists factors for open drive compressors, while Table B lists factors for hermetic and semi-hermetic compressors.

These factors must be used with **single stage reciprocating compressors only**.

Altitude will also affect the Total Heat of Rejection and should be taken into consideration when selecting an air-cooled condenser. The Total Heat of Rejection at different altitudes may be calculated by using the factors contained in Table C using the following formula:

- **Rated THR = THR required ÷ Altitude Factor**

Terms:

- MBH: 1000 Btu/hr
- SST: Saturated Suction Temperature
- SCT: Saturated Condensing Temperature
- NRE: Net Refrigerating Effect
- °FTD: °F Temperature Difference
- THR: Total Heat of Rejection

SELECTION EXAMPLE

I. OPEN DRIVE COMPRESSORS

A) USING BHP

NRE: 566,300 Btu/hr, 52.6 BHP, R22, 30°F SST, 110°F SCT, 90°F Ambient

°FTD = SCT - Ambient

°FTD = 110°F - 90°F

°FTD = 20°F

THR = NRE + (2546 x BHP)

THR = 566,300 + (2546 x 52.6)

THR = 566,300 + 133,920

THR = 700,220 Btu/hr

THR = 700.2 MBH @ 20°F_{TD}

B) USING THR FACTOR

THR = NRE x Heat Rejection Factor

THR = 566,300 x 1.21

THR = 685,223 Btu/hr

THR = 685.2 MBH @ 20°F_{TD}

CLR069 Capacity: **689.8 MBH @ 20°F_{TD}**

CLW075 Capacity: **753.3 MBH @ 20°F_{TD}**

CNR069 Capacity: **693.4 MBH @ 20°F_{TD}**

2. HERMETIC AND SEMI-HERMETIC COMPRESSORS

A) USING kW INPUT

NRE: 50,000 Btu/hr, 10.1 kW, R22, -20°F SST, 110°F SCT, 95°F Ambient

°FTD = SCT - Ambient

°FTD = 110°F - 95°F

°FTD = 15°F

THR = NRE + (3413 X kW x .92)

THR = 50,000 + (3413 x 10.1 x .92)

THR = 50,000 + 31,714

THR = 81,714 Btu/hr

THR = 81.7 MBH @ 15°F_{TD}

B) USING THR FACTOR

THR = Btu/hr x Heat Rejection Factor

THR = 50,000 x 1.58

THR = 79,000 Btu/hr

THR = 79 MBH @ 15°F_{TD}

CMR12 Capacity: **90.9 MBH @ 15°F_{TD}**

3. MULTIPLE COMPRESSORS

INFORMATION REQUIRED: Type of compressors, refrigerant, local design ambient temperature, saturated condensing temperature (SCT), saturated suction temperature (SST) and compressor capacities.

Note: °FTD = SCT - local design ambient temperature

METHOD:

1. Fill customer data in columns 2, 3, 4 and 6.
2. From Table A or B, select heat rejection factors and note them in column 5.
3. Multiply column 4 by column 5 and divide by column 6 to obtain heat rejection/°FTD and note them in column 7.

4. Add all capacities in column 7 to obtain the total Btu/hr of heat rejection required per °FTD and use the total to select the unit.

Note: Total should be divided by 1000 to obtain capacity in MBH.

5. Adjust CAPACITY/CIRCUIT/Btu/hr/°FTD from Table D for various refrigerants using correction factor and note them in column 8.
6. Divide column 7 by column 8 to obtain the number of circuits required.
7. Assign number of circuits in column 10.

Note: If the total number of circuits required exceeds the quantity of circuits as listed in capacity tables, it becomes necessary to permit a slightly higher condensing temperature than specified on some circuits. A second alternative is to select the next larger unit.

ACCEPTABLE REFRIGERANT: R22, R404A, R507, R134A										
1	2	3	4	5	6	7	8	9	10	11
CIRCUIT NUMBER	REFRIGERANT	SATURATED SUCTION TEMP °F (SST)	NET REFRIGERATION EFFECT (NRE) (BTU/HR)	HEAT REJECTION FACTOR	TEMP. DIFF. °FTD	HEAT REJECTION/°FTD (BTU/HR)	ADJUSTED CAPACITY/CIRCUIT/ (BTU/HR)/°FTD	QUANTITY OF CIRCUITS REQUIRED	QUANTITY OF CIRCUITS ASSIGNED	TOTAL NUMBER OF CIRCUITS
				x	÷	=	÷	=		
1	R22	25	104000	1.31	20	6812	420	16.2	16	16
2	R22	10	62000	1.38	20	4278	420	10.2	10	26
3	R404A	-25	40200	1.61	15	4315	412	10.4	11	37
4	R404A	-10	60200	1.48	15	5940	412	14.4	15	52
TOTAL						21,345				

Model No.: CLR044 Capacity MBH/°FTD: 21.9 Available Circuits: 52

TABLE A Open Drive Compressors Heat Rejection Correction Factors

Saturated suction temp. °F	Condensing temperature °F					
	90	100	105	110	120	130
-40	1.43	1.47	1.50	1.54	1.59	1.67
-30	1.37	1.42	1.45	1.48	1.52	1.60
-20	1.31	1.37	1.39	1.41	1.45	1.52
-10	1.28	1.33	1.35	1.37	1.40	1.47
0	1.25	1.28	1.30	1.32	1.35	1.41
10	1.22	1.25	1.27	1.28	1.32	1.37
20	1.18	1.21	1.22	1.23	1.28	1.32
25	1.16	1.20	1.21	1.22	1.26	1.30
30	1.14	1.18	1.19	1.21	1.24	1.28
40	1.11	1.15	1.16	1.18	1.20	1.23

TABLE B Hermetic and Semi-Hermetic Compressors Heat Rejection Correction Factors

Saturated suction temp. °F	Condensing temperature °F					
	90	100	105	110	120	130
-40	1.66	1.73	1.77	1.80	2.00	2.14
-30	1.57	1.62	1.65	1.68	1.80	1.93
-20	1.49	1.53	1.56	1.58	1.63	1.78
-10	1.42	1.46	1.48	1.50	1.57	1.64
0	1.36	1.40	1.42	1.44	1.50	1.56
10	1.31	1.34	1.36	1.38	1.43	1.49
20	1.26	1.29	1.31	1.33	1.37	1.43
25	1.24	1.27	1.29	1.31	1.35	1.40
30	1.22	1.25	1.27	1.28	1.32	1.37
40	1.18	1.21	1.23	1.24	1.27	1.31
45	1.16	1.19	1.21	1.22	1.25	1.29

TABLE C ALTITUDE CORRECTION FACTORS

Altitude (ft)	1000	2000	3000	4000	5000	6000
Factor	0.98	0.96	0.93	0.91	0.89	0.87

TABLE E RECOMMENDED CONNECTION SIZE

Size O.D.	Maximum Net Refrigerating Effect MBH			
	R22		R404A, R507	
	DISCHARGE	LIQUID	DISCHARGE	LIQUID
1/2"	12	18	6	12
5/8"	24	36	18	24
7/8"	75	100	48	72
1-1/8"	150	200	100	100
1-3/8"	300	300	200	200
1-5/8"	400	600	300	400
2-1/8"	800	1200	500	800
2-5/8"	1500		1000	

TABLE D

For R404A and R507, multiply capacity by 0.98
 For 50 HZ operation, multiply capacity by 0.92

CAPACITY TABLES (CCR-CMR)

LOW CFM COMPACT

MODEL	Total Heat of Rejection (MBH) (R-22, R-134a) Temperature Difference °F					Num. Cir.	Cap./Cir. BTU/FTD	Fan Arr.		Connection Sizes (Ø")		Refrigerant Charge (Lbs)		Ship. Weight (Lbs)
	1	15	20	25	30					Discharge	Liquid	Summer	Winter	
CCR02	1.9	28.1	37.5	46.9	56.3	3	633	1	1	7/8	7/8	1.8	5.8	190
CCR03	2.2	32.9	43.9	54.8	65.8	4	550	1	1	7/8	7/8	2.7	8.7	201
CCR04	2.3	35.1	46.8	58.5	70.1	6	383	1	1	7/8	7/8	3.5	12	210

NOTE :

For R404A and R507 multiply capacity by 0.98
 For R407C multiply capacity by 0.98
 For 50 HZ units multiply capacity by 0.92

Connections are based on 30° FTD, 40°F suction and R-22
 Refrigerant summer charge is based on 100° F liquid, 30% liquid and 70% vapor.
 Refrigerant winter charge is based on -20° F liquid, 90% liquid and 10% vapor.

LOW CFM MEDIUM

MODEL	Total Heat of Rejection (MBH) (R-22, R-134a) Temperature Difference °F					Num. Cir.	Cap./Cir. BTU/FTD	Fan Arr.		Connection Sizes (Ø")		Refrigerant Charge (Lbs)		Ship. Weight (Lbs)
	1	15	20	25	30					Discharge	Liquid	Summer	Winter	
CMR06	3.0	45.5	60.6	75.8	90.9	7	429	1	1	1 1/8	7/8	3.3	11	308
CMR07	3.7	56.0	74.6	93.3	111.9	7	529	1	1	1 1/8	7/8	4.9	16	335
CMR08	4.1	61.6	82.1	102.6	123.2	7	586	1	1	1 1/8	1 1/8	6.5	22	350
CMR12	6.1	90.9	121.2	151.5	181.8	13	469	1	2	1 3/8	1 1/8	6.3	21	489
CMR15	7.5	111.9	149.2	186.5	223.8	14	536	1	2	1 3/8	1 1/8	9.5	31	532
CMR16	8.2	123.2	164.2	205.3	246.3	14	586	1	2	1 3/8	1 3/8	13	42	566
CMR18	9.1	136.4	181.8	227.3	272.8	13	700	1	3	1 3/8	1 3/8	9.9	33	727
CMR22	11.2	167.9	223.8	279.8	335.8	20	560	1	3	1 3/8	1 3/8	14.7	48	741
CMR25	12.3	184.8	246.3	307.9	369.5	27	456	1	3	1 5/8	1 5/8	19.5	66	789
CMR30	14.9	223.8	298.5	373.1	447.7	28	532	2	2	1 3/8	1 1/8	19	62	1064
CMR33	16.4	246.3	328.4	410.6	492.7	28	586	2	2	1 3/8	1 3/8	26	84	1132
CMR36	18.2	272.8	363.7	454.6	545.5	40	455	2	3	1 3/8	1 3/8	19.8	66	1454
CMR45	22.4	335.8	447.7	559.6	671.5	40	560	2	3	1 3/8	1 3/8	29.4	96	1482
CMR49	24.6	369.5	492.7	615.8	739.0	54	456	2	3	1 5/8	1 5/8	39	132	1578

NOTE :

For R404A and R507 multiply capacity by 0.98
 For R407C multiply capacity by 0.98
 For 50 HZ units multiply capacity by 0.92

Connections are based on 30° FTD, 40°F suction and R-22
 Refrigerant summer charge is based on 100° F liquid, 30% liquid and 70% vapor.
 Refrigerant winter charge is based on -20° F liquid, 90% liquid and 10% vapor.

LOW CFM														
MODEL	Total Heat of Rejection (MBH) (R-22, R-134a) Temperature Difference °F					Num. Cir.	Cap./Cir. BTU/FTD	Fan Arr.		Connection Sizes (Ø")		Refrigerant Charge (Lbs)		Ship. Weight (Lbs)
	1	15	20	25	30					Discharge	Liquid	Summer	Winter	
CLR010	5.2	78.3	104.4	130.5	156.6	11	475	1	1	1 1/8	1 1/8	5.8	19	515
CLR011	5.7	86.2	115.0	143.7	172.5	11	523	1	1	1 1/8	1 1/8	5.8	19	525
CLR013	6.7	100.6	134.1	167.7	201.2	17	394	1	1	1 3/8	1 1/8	8.8	29	592
CLR014	7.3	109.3	145.7	182.2	218.6	17	429	1	1	1 3/8	1 1/8	8.8	29	602
CLR015	7.6	114.7	153.0	191.2	229.5	17	450	1	1	1 3/8	1 1/8	12	38	641
CLR016	8.1	121.6	162.1	202.6	243.1	17	477	1	1	1 3/8	1 3/8	12	38	654
CLR021	10.4	156.6	208.8	261.0	313.2	17	614	1	2	1 3/8	1 3/8	12	38	985
CLR023	11.5	172.5	229.9	287.4	344.9	17	676	1	2	1 3/8	1 3/8	12	38	1005
CLR027	13.4	201.2	268.3	335.3	402.4	26	516	1	2	1 5/8	1 5/8	17	57	1063
CLR029	14.6	218.6	291.5	364.3	437.2	26	561	1	2	1 5/8	1 5/8	17	57	1091
CLR031	15.3	229.5	306.0	382.5	459.0	35	437	1	2	1 5/8	1 5/8	23	76	1117
CLR032	16.2	243.1	324.2	405.2	486.3	35	463	1	2	2 1/8	1 5/8	23	76	1159
CLR040	20.1	301.8	402.4	503.0	603.6	52	387	1	3	2 1/8	1 5/8	26	85	1460
CLR044	21.9	327.9	437.2	546.5	655.8	52	420	1	3	2 1/8	1 5/8	26	85	1490
CLR046	22.9	344.2	459.0	573.7	688.5	70	328	1	3	2 1/8	1 5/8	34	112	1570
CLR049	24.3	364.7	486.3	607.8	729.4	70	347	1	3	2 1/8	2 1/8	34	112	1609
CLR053	26.8	402.4	536.5	670.6	804.8	52	516	1	4	2 1/8	2 1/8	34	112	1875
CLR054	26.8	402.4	536.5	670.6	804.8	52	516	2	2	1 5/8	1 5/8	35	115	1792
CLR057	29.1	437.2	583.0	728.7	874.4	70	416	1	4	2 1/8	2 1/8	34	112	1915
CLR058	29.1	437.2	583.0	728.7	874.4	70	416	2	2	1 5/8	1 5/8	35	115	1781
CLR060	30.6	459.0	612.0	765.0	917.9	70	437	1	4	2 1/8	2 1/8	46	150	2019
CLR062	30.6	459.0	612.0	765.0	917.9	70	437	2	2	1 5/8	1 5/8	47	153	1882
CLR064	32.4	486.3	648.3	810.4	972.5	70	463	1	4	2 5/8	2 1/8	46	150	2071
CLR065	32.4	486.3	648.3	810.4	972.5	70	463	2	2	2 1/8	1 5/8	47	153	1934
CLR069	34.5	517.4	689.8	862.3	1034.8	70	493	2	3	2 1/8	1 5/8	36	114	2323
CLR072	36.1	540.8	721.0	901.3	1081.5	43	838	1	5	2 5/8	2 1/8	68	230	2338
CLR077	38.7	581.0	774.7	968.4	1162.1	43	901	1	5	2 5/8	2 1/8	68	230	2403
CLR081	40.3	604.3	805.7	1007.2	1208.6	56	719	1	5	2 5/8	2 1/8	90	298	2475
CLR084	42.1	631.3	841.8	1052.2	1262.6	56	752	1	5	2 5/8	2 1/8	90	298	2540
CLR080	40.2	603.6	804.8	1006.0	1207.2	104	387	2	3	2 1/8	1 5/8	52	170	2430
CLR086	43.3	648.9	865.2	1081.5	1297.8	43	1006	1	6	2 5/8	2 1/8	82	276	2730
CLR087	43.7	655.8	874.4	1093.0	1311.6	104	420	2	3	2 1/8	1 5/8	52	170	2508
CLR093	46.5	697.3	929.7	1162.1	1394.5	43	1081	1	6	2 5/8	2 1/8	82	276	2808
CLR092	45.9	688.5	917.9	1147.4	1376.9	140	328	2	3	2 1/8	1 5/8	68	224	2664
CLR096	48.3	725.2	966.9	1208.6	1450.3	58	834	1	6	2 5/8	2 1/8	109	359	2964
CLR097	48.6	729.4	972.5	1215.6	1458.8	140	347	2	3	2 1/8	2 1/8	68	224	2742
CLR101	50.5	757.6	1010.1	1262.6	1515.2	58	871	1	6	2 5/8	2 1/8	109	359	3042
CLR107	53.7	804.8	1073.0	1341.3	1609.5	104	516	2	4	2 1/8	2 1/8	68	224	3029
CLR117	58.3	874.4	1165.9	1457.4	1748.9	104	561	2	4	2 1/8	2 1/8	68	224	3129
CLR122	61.2	917.9	1223.9	1529.9	1835.9	140	437	2	4	2 1/8	2 1/8	92	300	3338
CLR130	64.8	972.5	1296.7	1620.9	1945.0	140	463	2	4	2 5/8	2 1/8	92	300	3442
CLR144	72.1	1081.5	1442.0	1802.5	2163.0	86	838	2	5	2 5/8	2 1/8	136	460	4198
CLR155	77.5	1162.1	1549.5	1936.8	2324.2	86	901	2	5	2 5/8	2 1/8	136	460	4298
CLR161	80.6	1208.6	1611.5	2014.4	2417.2	116	695	2	5	2 5/8	2 1/8	180	596	4560
CLR167	84.2	1262.6	1683.5	2104.4	2525.3	116	726	2	5	2 5/8	2 1/8	180	596	4690
CLR173	86.5	1297.8	1730.4	2163.0	2595.6	86	1006	2	6	2 5/8	2 1/8	164	552	5292
CLR186	93.0	1394.5	1859.4	2324.2	2789.0	86	1081	2	6	2 5/8	2 1/8	164	552	5642
CLR193	96.7	1450.3	1933.8	2417.2	2900.7	116	834	2	6	2 5/8	2 1/8	218	718	5798
CLR202	101.0	1515.2	2020.2	2525.3	3030.3	116	871	2	6	2 5/8	2 1/8	218	718	5798

NOTE :

For R404A and R507 multiply capacity by 0.98
 For R407C multiply capacity by 0.98
 For 50 HZ units multiply capacity by 0.92

Connections are based on 30° FTD, 40°F suction and R-22
 Refrigerant summer charge is based on 100° F liquid, 30% liquid and 70% vapor.
 Refrigerant winter charge is based on -20° F liquid, 90% liquid and 10% vapor.

CAPACITY TABLES (CVR)

TWO SPEED VERSATILE

MODEL	Total Heat of Rejection (MBH) (R-22, R-134a) Temperature Difference °F					Num. Cir.	Cap./Cir. BTU/FTD	Fan Arr.		Connection Sizes (Ø")		Refrigerant Charge (Lbs)		Ship. Weight (Lbs)
	1	15	20	25	30					Discharge	Liquid	Summer	Winter	
CVR012	6.2	92.3	123.1	153.9	184.7	11	564	1	1	1 3/8	1 1/8	5.8	19	565
CVR014	6.9	103.2	137.6	172.0	206.4	11	627	1	1	1 3/8	1 1/8	5.8	19	575
CVR016	7.8	116.8	155.7	194.7	233.6	17	459	1	1	1 3/8	1 1/8	8.8	29	642
CVR017	8.5	127.0	169.3	211.6	254.0	17	500	1	1	1 3/8	1 3/8	8.8	29	652
CVR018	8.8	132.5	176.6	220.8	265.0	17	518	1	1	1 3/8	1 3/8	12	38	691
CVR019	9.3	139.9	186.5	233.2	279.8	17	547	1	1	1 3/8	1 3/8	12	38	704
CVR025	12.3	184.7	246.2	307.8	369.4	17	724	1	2	1 5/8	1 5/8	12	38	1085
CVR028	13.8	206.4	275.2	344.0	412.7	17	812	1	2	1 5/8	1 5/8	12	38	1105
CVR031	15.6	233.6	311.5	389.3	467.2	26	600	1	2	1 5/8	1 5/8	17	57	1163
CVR034	16.9	254.0	338.6	423.3	507.9	26	650	1	2	2 1/8	1 5/8	17	57	1191
CVR035	17.7	265.0	353.3	441.6	529.9	35	506	1	2	2 1/8	1 5/8	23	76	1217
CVR037	18.7	279.8	373.1	466.3	559.6	35	534	1	2	2 1/8	1 5/8	23	76	1259
CVR047	23.4	350.4	467.2	584.0	700.8	52	450	1	3	2 1/8	1 5/8	26	85	1610
CVR051	25.4	380.9	507.9	634.9	761.9	52	488	1	3	2 1/8	2 1/8	26	85	1640
CVR053	26.5	397.4	529.9	662.4	794.9	70	379	1	3	2 1/8	2 1/8	34	112	1720
CVR056	28.0	419.7	559.6	699.5	839.4	70	400	1	3	2 1/8	2 1/8	34	112	1759
CVR061	31.1	467.2	622.9	778.7	934.4	52	598	1	4	2 1/8	2 1/8	34	112	2075
CVR062	31.1	467.2	622.9	778.7	934.4	52	598	2	2	1 5/8	1 5/8	35	115	1910
CVR067	33.9	507.9	677.2	846.5	1015.8	70	484	1	4	2 5/8	2 1/8	34	112	2115
CVR068	33.9	507.9	677.2	846.5	1015.8	70	484	2	2	2 1/8	1 5/8	35	115	1992
CVR070	35.3	529.9	706.5	883.2	1059.8	70	504	1	4	2 5/8	2 1/8	46	150	2219
CVR071	35.3	529.9	706.5	883.2	1059.8	70	504	2	2	2 1/8	1 5/8	47	153	2082
CVR074	37.3	559.6	746.1	932.7	1119.2	70	533	1	4	2 5/8	2 1/8	46	150	2271
CVR075	37.3	559.6	746.1	932.7	1119.2	70	533	2	2	2 1/8	1 5/8	47	153	2134
CVR083	41.3	619.1	825.5	1031.9	1238.2	70	590	2	3	2 1/8	1 5/8	36	114	2623
CVR084	41.2	617.6	823.4	1029.3	1235.1	43	958	1	5	2 5/8	2 1/8	68	230	2653
CVR089	44.2	663.5	884.7	1105.9	1327.1	43	1028	1	5	2 5/8	2 1/8	68	230	2653
CVR092	46.1	691.7	922.3	1152.9	1383.4	56	823	1	5	2 5/8	2 1/8	90	298	2725
CVR096	48.1	721.8	962.4	1203.0	1443.5	56	859	1	5	2 5/8	2 1/8	90	298	2790
CVR094	46.7	700.8	934.4	1168.0	1401.6	104	449	2	3	2 1/8	1 5/8	52	170	2730
CVR099	49.4	741.1	988.1	1235.1	1482.1	43	1149	1	6	2 5/8	2 1/8	82	276	3000
CVR101	50.8	761.9	1015.8	1269.8	1523.8	104	488	2	3	2 1/8	2 1/8	52	170	2808
CVR105	53.1	796.2	1061.6	1327.1	1592.5	43	1235	1	6	2 5/8	2 1/8	82	276	3108
CVR106	53.0	794.9	1059.8	1324.8	1589.7	140	379	2	3	2 1/8	2 1/8	68	224	2964
CVR111	55.3	830.1	1106.7	1383.4	1660.1	58	953	1	6	2 5/8	2 1/8	109	359	3264
CVR112	56.0	839.4	1119.2	1399.0	1678.8	140	400	2	3	2 1/8	2 1/8	68	224	3042
CVR116	57.7	866.1	1154.8	1443.5	1732.2	58	995	1	6	2 5/8	2 1/8	109	359	3342
CVR125	62.3	934.4	1245.9	1557.3	1868.8	104	599	2	4	2 1/8	2 1/8	68	224	3429
CVR135	67.7	1015.8	1354.5	1693.1	2031.7	104	651	2	4	2 5/8	2 1/8	68	224	3529
CVR141	70.7	1059.8	1413.1	1766.3	2119.6	140	505	2	4	2 5/8	2 1/8	92	300	3738
CVR149	74.6	1119.2	1492.3	1865.3	2238.4	140	533	2	4	2 5/8	2 1/8	92	300	3842
CVR165	82.3	1235.1	1646.8	2058.5	2470.2	86	957	2	5	2 5/8	2 1/8	136	460	4698
CVR177	88.5	1327.1	1769.4	2211.8	2654.1	86	1029	2	5	2 5/8	2 1/8	136	460	4798
CVR184	92.2	1383.4	1844.6	2305.7	2766.9	116	795	2	5	2 5/8	2 1/8	180	596	5060
CVR192	96.2	1443.5	1924.7	2405.9	2887.1	116	829	2	5	2 5/8	2 1/8	180	596	5190
CVR200	98.8	1482.1	1976.2	2470.2	2964.2	86	1149	2	6	2 5/8	2 1/8	164	552	5736
CVR212	106.2	1592.5	2123.3	2654.1	3184.9	86	1235	2	6	2 5/8	2 1/8	164	552	5892
CVR221	110.7	1660.1	2213.5	2766.9	3320.2	116	954	2	6	2 5/8	2 1/8	218	718	6242
CVR231	115.5	1732.2	2309.7	2887.1	3464.5	116	996	2	6	2 5/8	2 1/8	218	718	6398

NOTE :

For R404A and R507 multiply capacity by 0.98
 For R407C multiply capacity by 0.98
 For 50 HZ units multiply capacity by 0.92

Connections are based on high speed at 30° FTD, 40°F suction and R-22
 Refrigerant summer charge is based on 100° F liquid, 30% liquid and 70% vapor.
 Refrigerant winter charge is based on -20° F liquid, 90% liquid and 10% vapor.

LOW SPEED VERSATILE

MODEL	Total Heat of Rejection (MBH) (R-22, R-134a) Temperature Difference °F					Num. Cir.	Cap./Cir. BTU/FTD	Fan Arr.		Connection Sizes (Ø")		Refrigerant Charge (Lbs)		Ship. Weight (Lbs)
	1	15	20	25	30					Discharge	Liquid	Summer	Winter	
CVR012L	5.3	79.4	105.8	132.3	158.7	11	482	1	1	1 1/8	1 1/8	5.8	19	565
CVR014L	5.7	85.5	114.0	142.4	170.9	11	518	1	1	1 1/8	1 1/8	5.8	19	575
CVR016L	6.3	94.5	126.0	157.5	189.0	17	371	1	1	1 3/8	1 1/8	8.8	29	642
CVR017L	6.6	98.6	131.5	164.4	197.3	17	388	1	1	1 3/8	1 1/8	8.8	29	652
CVR018L	6.6	99.3	132.4	165.5	198.5	17	388	1	1	1 3/8	1 1/8	12	38	691
CVR019L	6.7	100.4	133.9	167.3	200.8	17	394	1	1	1 3/8	1 1/8	12	38	704
CVR025L	10.6	158.7	211.6	264.5	317.4	17	624	1	2	1 3/8	1 3/8	12	38	1085
CVR028L	11.4	170.9	227.9	284.9	341.9	17	671	1	2	1 3/8	1 3/8	12	38	1105
CVR031L	12.6	189.0	252.0	315.0	378.0	26	485	1	2	1 5/8	1 5/8	17	57	1163
CVR034L	13.2	197.3	263.0	328.8	394.5	26	508	1	2	1 5/8	1 5/8	17	57	1191
CVR035L	13.2	198.5	264.7	330.9	397.1	35	377	1	2	1 5/8	1 5/8	23	76	1217
CVR037L	13.4	200.8	267.7	334.6	401.6	35	383	1	2	1 5/8	1 5/8	23	76	1259
CVR047L	18.9	283.5	378.0	472.5	567.0	52	363	1	3	2 1/8	1 5/8	26	85	1610
CVR051L	19.7	295.9	394.5	493.1	591.8	52	379	1	3	2 1/8	1 5/8	26	85	1640
CVR053L	19.9	297.8	397.1	496.4	595.6	70	284	1	3	2 1/8	1 5/8	34	112	1720
CVR056L	20.1	301.2	401.6	501.9	602.3	70	287	1	3	2 1/8	1 5/8	34	112	1759
CVR061L	25.2	378.0	504.0	630.0	756.0	52	485	1	4	2 1/8	2 1/8	34	112	2075
CVR062L	25.2	378.0	504.0	630.0	756.0	52	485	2	2	1 5/8	1 5/8	35	115	1910
CVR067L	26.3	394.5	526.0	657.5	789.0	70	376	1	4	2 1/8	2 1/8	34	112	2115
CVR068L	26.3	394.5	526.0	657.5	789.0	70	376	2	2	1 5/8	1 5/8	35	115	1992
CVR070L	26.5	397.1	529.5	661.8	794.2	70	379	1	4	2 1/8	2 1/8	46	150	2219
CVR071L	26.5	397.1	529.5	661.8	794.2	70	379	2	2	1 5/8	1 5/8	47	153	2082
CVR074L	26.8	401.6	535.4	669.3	803.1	70	383	1	4	2 1/8	2 1/8	46	150	2271
CVR075L	26.8	401.6	535.4	669.3	803.1	70	383	2	2	1 5/8	1 5/8	47	153	2134
CVR083L	34.2	512.8	683.7	854.6	1025.6	70	489	2	3	2 1/8	1 5/8	36	114	2623
CVR084L	31.5	472.2	629.6	787.0	944.4	43	733	1	5	2 1/8	2 1/8	68	230	2653
CVR089L	32.8	491.5	655.3	819.1	983.0	43	763	1	5	2 5/8	2 1/8	68	230	2653
CVR092L	33.4	501.1	668.2	835.2	1002.3	56	596	1	5	2 5/8	2 1/8	90	298	2725
CVR096L	33.8	506.4	675.2	843.9	1012.7	56	604	1	5	2 5/8	2 1/8	90	298	2790
CVR094L	37.8	567.0	756.0	945.0	1134.0	104	363	2	3	2 1/8	1 5/8	52	170	2730
CVR099L	37.8	566.6	755.5	944.4	1133.2	43	879	1	6	2 5/8	2 1/8	82	276	3000
CVR101L	39.5	591.8	789.0	986.3	1183.6	104	380	2	3	2 1/8	1 5/8	52	170	2808
CVR105L	39.3	589.8	786.4	983.0	1179.5	43	914	1	6	2 5/8	2 1/8	82	276	3108
CVR106L	39.7	595.6	794.2	992.7	1191.3	140	284	2	3	2 1/8	1 5/8	68	224	2964
CVR111L	40.1	601.4	801.8	1002.3	1202.7	58	691	1	6	2 5/8	2 1/8	109	359	3264
CVR112L	40.2	602.3	803.1	1003.9	1204.7	140	287	2	3	2 1/8	1 5/8	68	224	3042
CVR116L	40.5	607.6	810.2	1012.7	1215.3	58	698	1	6	2 5/8	2 1/8	109	359	3342
CVR125L	50.4	756.0	1008.0	1260.0	1512.0	104	485	2	4	2 1/8	2 1/8	68	224	3429
CVR135L	52.6	789.0	1052.0	1315.1	1578.1	104	506	2	4	2 1/8	2 1/8	68	224	3529
CVR141L	52.9	794.2	1058.9	1323.6	1588.4	140	378	2	4	2 1/8	2 1/8	92	300	3738
CVR149L	53.5	803.1	1070.8	1338.5	1606.2	140	382	2	4	2 1/8	2 1/8	92	300	3842
CVR165L	63.0	944.4	1259.1	1573.9	1888.7	86	733	2	5	2 1/8	2 1/8	136	460	4698
CVR177L	65.5	983.0	1310.6	1638.3	1965.9	86	762	2	5	2 5/8	2 1/8	136	460	4798
CVR184L	66.8	1002.3	1336.3	1670.4	2004.5	116	576	2	5	2 5/8	2 1/8	180	596	5060
CVR192L	67.5	1012.7	1350.3	1687.9	2025.5	116	582	2	5	2 5/8	2 1/8	180	596	5190
CVR200L	75.5	1133.2	1511.0	1888.7	2266.5	86	878	2	6	2 5/8	2 1/8	164	552	5736
CVR212L	78.6	1179.5	1572.7	1965.9	2359.1	86	914	2	6	2 5/8	2 1/8	164	552	5892
CVR221L	80.2	1202.7	1603.6	2004.5	2405.4	116	691	2	6	2 5/8	2 1/8	218	718	6242
CVR231L	81.0	1215.3	1620.4	2025.5	2430.5	116	698	2	6	2 5/8	2 1/8	218	718	6398

NOTE :

For R404A and R507 multiply capacity by 0.98
 For R407C multiply capacity by 0.98
 For 50 HZ units multiply capacity by 0.92

Connections are based on high speed at 30° FTD, 40°F suction and R-22
 Refrigerant summer charge is based on 100° F liquid, 30% liquid and 70% vapor.
 Refrigerant winter charge is based on -20° F liquid, 90% liquid and 10% vapor.

CAPACITY TABLES (CNR)

HIGH CFM

MODEL	Total Heat of Rejection (MBH) (R-22, R-134a) Temperature Difference °F					Num. Cir.	Cap./Cir. BTU/FTD	Fan Arr.		Connection Sizes (Ø")		Refrigerant Charge (Lbs)		Ship. Weight (Lbs)
	1	15	20	25	30					Discharge	Liquid	Summer	Winter	
CNR012	6.1	91.5	122.0	152.5	182.9	11	554	1	1	1 3/8	1 1/8	5.8	19	515
CNR014	6.8	102.1	136.2	170.2	204.3	11	619	1	1	1 3/8	1 1/8	5.8	19	525
CNR016	7.9	119.0	158.7	198.3	238.0	17	467	1	1	1 3/8	1 1/8	8.8	29	592
CNR017	8.7	130.0	173.4	216.7	260.0	17	510	1	1	1 3/8	1 3/8	8.8	29	602
CNR018	9.1	135.8	181.1	226.4	271.6	17	533	1	1	1 3/8	1 3/8	12	38	641
CNR019	9.6	144.4	192.6	240.7	288.9	17	566	1	1	1 3/8	1 3/8	12	38	654
CNR024	12.2	182.9	243.9	304.9	365.9	17	717	1	2	1 5/8	1 5/8	12	38	985
CNR027	13.6	204.3	272.3	340.4	408.5	17	801	1	2	1 5/8	1 5/8	12	38	1005
CNR032	15.9	238.0	317.3	396.6	476.0	26	610	1	2	1 5/8	1 5/8	17	57	1063
CNR035	17.3	260.0	346.7	433.4	520.1	26	667	1	2	2 1/8	1 5/8	17	57	1091
CNR036	18.1	271.6	362.2	452.7	543.3	35	517	1	2	2 1/8	1 5/8	23	76	1117
CNR039	19.3	288.9	385.1	481.4	577.7	35	550	1	2	2 1/8	1 5/8	23	76	1159
CNR048	23.8	357.0	476.0	595.0	714.0	52	458	1	3	2 1/8	1 5/8	26	85	1460
CNR052	26.0	390.1	520.1	650.1	780.1	52	500	1	3	2 1/8	2 1/8	26	85	1490
CNR054	27.2	407.5	543.3	679.1	814.9	70	388	1	3	2 1/8	2 1/8	34	112	1570
CNR058	28.9	433.3	577.7	722.2	866.6	70	413	1	3	2 1/8	2 1/8	34	112	1609
CNR063	31.7	476.0	634.6	793.3	951.9	52	610	1	4	2 1/8	2 1/8	34	112	1875
CNR064	31.7	476.0	634.6	793.3	951.9	52	610	2	2	1 5/8	1 5/8	35	115	1792
CNR069	34.7	520.1	693.4	866.8	1040.2	70	495	1	4	2 5/8	2 1/8	34	112	1915
CNR070	34.7	520.1	693.4	866.8	1040.2	70	495	2	2	2 1/8	1 5/8	35	115	1781
CNR072	36.2	543.3	724.4	905.5	1086.6	70	517	1	4	2 5/8	2 1/8	46	150	2019
CNR073	36.2	543.3	724.4	905.5	1086.6	70	517	2	2	2 1/8	1 5/8	47	153	1934
CNR077	38.5	577.7	770.3	962.9	1155.4	70	550	1	4	2 5/8	2 1/8	46	150	2071
CNR078	38.5	577.7	770.3	962.9	1155.4	70	550	2	2	2 1/8	1 5/8	47	153	2071
CNR082	40.9	612.8	817.0	1021.3	1225.5	70	584	2	3	2 1/8	1 5/8	36	114	2323
CNR085	42.7	641.1	854.8	1068.5	1282.2	43	994	1	5	2 5/8	2 1/8	68	230	2338
CNR092	46.2	693.2	924.2	1155.3	1386.3	43	1075	1	5	2 5/8	2 1/8	68	230	2403
CNR096	48.2	722.5	963.3	1204.1	1445.0	56	860	1	5	2 5/8	2 1/8	90	298	2475
CNR101	50.6	758.4	1011.2	1264.0	1516.7	56	903	1	5	2 5/8	2 1/8	90	298	2540
CNR095	47.6	714.0	951.9	1189.9	1427.9	104	458	2	3	2 1/8	1 5/8	52	170	2430
CNR102	51.3	769.3	1025.8	1282.2	1538.7	43	1193	1	6	2 5/8	2 1/8	82	276	2730
CNR104	52.0	780.1	1040.2	1300.2	1560.3	104	500	2	3	2 1/8	2 1/8	52	170	2508
CNR111	55.5	831.8	1109.1	1386.3	1663.6	43	1290	1	6	2 5/8	2 1/8	82	276	2808
CNR109	54.3	814.9	1086.6	1358.2	1629.9	140	388	2	3	2 1/8	2 1/8	68	224	2664
CNR116	57.8	867.0	1156.0	1445.0	1734.0	58	997	1	6	2 5/8	2 1/8	109	359	2964
CNR115	57.8	866.6	1155.4	1444.3	1733.2	140	413	2	3	2 1/8	2 1/8	68	224	2742
CNR121	60.7	910.0	1213.4	1516.7	1820.1	58	1046	1	6	2 5/8	2 1/8	109	359	3000
CNR127	63.5	951.9	1269.3	1586.6	1903.9	104	610	2	4	2 1/8	2 1/8	68	224	3029
CNR139	69.3	1040.2	1386.9	1733.6	2080.3	104	667	2	4	2 5/8	2 1/8	68	224	3129
CNR145	72.4	1086.6	1448.8	1811.0	2173.2	140	517	2	4	2 5/8	2 1/8	92	300	3338
CNR154	77.0	1155.4	1540.6	1925.7	2310.9	140	550	2	4	2 5/8	2 1/8	92	300	3442
CNR171	85.5	1282.2	1709.6	2137.1	2564.5	86	994	2	5	2 5/8	2 1/8	136	460	4198
CNR185	92.4	1386.3	1848.4	2310.6	2772.7	86	1075	2	5	2 5/8	2 1/8	136	460	4298
CNR193	96.3	1445.0	1926.6	2408.3	2889.9	116	830	2	5	2 5/8	2 1/8	180	596	4560
CNR202	101.1	1516.7	2022.3	2527.9	3033.5	116	872	2	5	2 5/8	2 1/8	180	596	4690
CNR205	102.6	1538.7	2051.6	2564.5	3077.4	86	1193	2	6	2 5/8	2 1/8	164	552	5136
CNR222	110.9	1663.6	2218.1	2772.7	3327.2	86	1290	2	6	2 5/8	2 1/8	164	552	5292
CNR231	115.6	1734.0	2311.9	2889.9	3467.9	116	997	2	6	2 5/8	2 1/8	218	718	5642
CNR243	121.3	1820.1	2426.8	3033.5	3640.2	116	1046	2	6	2 5/8	2 1/8	218	718	5798

NOTE :

For R404A and R507 multiply capacity by 0.98
 For R407C multiply capacity by 0.98
 For 50 HZ units multiply capacity by 0.92

Connections are based on 30° FTD, 40°F suction and R-22
 Refrigerant summer charge is based on 100° F liquid, 30% liquid and 70% vapor.
 Refrigerant winter charge is based on -20° F liquid, 90% liquid and 10% vapor.

CAPACITY TABLES (CLW-CNW)

LOW CFM 8 FPI

MODEL	Total Heat of Rejection (MBH) (R-22, R-134a) Temperature Difference °F					Num. Cir.	Cap./Cir. BTU/FTD	Fan Arr.		Connection Sizes (Ø")		Refrigerant Charge (Lbs)		Ship. Weight (Lbs)
	1	15	20	25	30					Discharge	Liquid	Summer	Winter	
CLW009	4.6	69.4	92.6	115.7	138.9	11	421	1	1	1 1/8	1 1/8	5.8	19	515
CLW012	6.1	91.2	121.6	152.0	182.4	17	358	1	1	1 3/8	1 1/8	8.8	29	592
CLW014	7.1	106.1	141.4	176.8	212.1	17	416	1	1	1 3/8	1 1/8	12	38	641
CLW019	9.3	138.9	185.2	231.5	277.8	17	545	1	2	1 3/8	1 3/8	12	38	985
CLW024	12.2	182.4	243.2	304.0	364.8	26	468	1	2	1 5/8	1 5/8	23	76	1063
CLW028	14.1	212.1	282.9	353.6	424.3	35	404	1	2	1 5/8	1 5/8	23	76	1117
CLW036	18.2	273.6	364.8	456.0	547.3	52	351	1	3	2 1/8	1 5/8	26	85	1460
CLW042	21.2	318.2	424.3	530.4	636.4	70	303	1	3	2 1/8	1 5/8	34	112	1570
CLW048	24.3	364.8	486.4	608.1	729.7	52	468	1	4	2 1/8	2 1/8	34	112	1875
CLW049	24.3	364.8	486.4	608.1	729.7	52	468	2	2	1 5/8	1 5/8	35	115	1792
CLW056	28.3	424.3	565.7	707.2	848.6	70	404	1	4	2 1/8	2 1/8	46	150	2019
CLW057	28.3	424.3	565.7	707.2	848.6	70	404	2	2	1 5/8	1 5/8	47	153	1882
CLW066	32.9	493.5	658.1	822.6	987.1	43	765	1	5	2 5/8	2 1/8	68	230	2403
CLW075	37.7	565.0	753.3	941.6	1130.0	56	673	1	5	2 5/8	2 1/8	90	298	2475
CLW073	36.5	547.3	729.7	912.1	1094.5	104	351	2	3	2 1/8	1 5/8	52	170	2508
CLW079	39.5	592.3	789.7	987.1	1184.5	43	918	1	6	2 5/8	2 1/8	82	276	2808
CLW085	42.4	636.4	848.6	1060.7	1272.9	140	303	2	3	2 1/8	1 5/8	68	224	2664
CLW090	45.2	678.0	904.0	1130.0	1355.9	58	779	1	6	2 5/8	2 1/8	109	359	2964
CLW097	48.6	729.7	972.9	1216.1	1459.3	104	468	2	4	2 1/8	2 1/8	68	224	3029
CLW113	56.6	848.6	1131.4	1414.3	1697.2	140	404	2	4	2 1/8	2 1/8	92	300	3338
CLW131	65.8	987.1	1316.1	1645.2	1974.2	86	765	2	5	2 5/8	2 1/8	136	460	4198
CLW151	75.3	1130.0	1506.6	1883.3	2259.9	112	673	2	5	2 5/8	2 1/8	180	596	4560
CLW158	79.0	1184.5	1579.3	1974.2	2369.0	86	918	2	6	2 5/8	2 1/8	164	552	5292
CLW181	90.4	1355.9	1807.9	2259.9	2711.9	116	779	2	6	2 5/8	2 1/8	218	718	5642

NOTE :

For R404A and R507 multiply capacity by 0.98
 For R407C multiply capacity by 0.98
 For 50 HZ units multiply capacity by 0.92

Connections are based on 30° FTD, 40°F suction and R-22
 Refrigerant summer charge is based on 100° F liquid, 30% liquid and 70% vapor.
 Refrigerant winter charge is based on -20° F liquid, 90% liquid and 10% vapor.

HIGH CFM 8 FPI

MODEL	Total Heat of Rejection (MBH) (R-22, R-134a) Temperature Difference °F					Num. Cir.	Cap./Cir. BTU/FTD	Fan Arr.		Connection Sizes (Ø")		Refrigerant Charge (Lbs)		Ship. Weight (Lbs)
	1	15	20	25	30					Discharge	Liquid	Summer	Winter	
CNW011	5.3	79.9	106.5	133.1	159.7	11	484	1	1	1 1/8	1 1/8	5.8	19	520
CNW014	7.1	105.9	141.3	176.6	211.9	17	415	1	1	1 3/8	1 1/8	8.8	29	597
CNW017	8.3	124.4	165.9	207.4	248.9	17	488	1	1	1 3/8	1 3/8	12	38	648
CNW021	10.6	159.7	213.0	266.2	319.5	17	626	1	2	1 3/8	1 3/8	12	38	612
CNW028	14.1	211.9	282.5	353.1	423.8	26	543	1	2	1 5/8	1 5/8	23	76	995
CNW033	16.6	248.9	331.8	414.8	497.7	35	474	1	2	2 1/8	1 5/8	23	76	1138
CNW042	21.2	317.8	423.8	529.7	635.6	52	407	1	3	2 1/8	1 5/8	26	85	1475
CNW050	24.9	373.3	497.7	622.2	746.6	70	356	1	3	2 1/8	2 1/8	34	112	1590
CNW056	28.3	423.8	565.0	706.3	847.5	52	543	1	4	2 1/8	2 1/8	34	112	1796
CNW057	28.3	423.8	565.0	706.3	847.5	52	543	2	2	1 5/8	1 5/8	35	115	1900
CNW066	33.2	497.7	663.6	829.5	995.4	70	474	1	4	2 5/8	2 1/8	46	150	1908
CNW067	33.2	497.7	663.6	829.5	995.4	70	474	2	2	2 1/8	1 5/8	47	153	2045
CNW077	38.5	577.6	770.1	962.7	1155.2	43	895	1	5	2 5/8	2 1/8	68	230	2361
CNW089	44.7	670.8	894.3	1117.9	1341.5	56	799	1	5	2 5/8	2 1/8	90	298	2507
CNW085	42.4	635.6	847.5	1059.4	1271.3	104	407	2	3	2 1/8	1 5/8	52	170	2468
CNW092	46.2	693.1	924.1	1155.2	1386.2	43	1075	1	6	2 5/8	2 1/8	82	276	2768
CNW100	49.8	746.6	995.4	1244.3	1493.2	140	356	2	3	2 1/8	2 1/8	68	224	2703
CNW107	53.7	804.9	1073.2	1341.5	1609.8	58	925	1	6	2 5/8	2 1/8	109	359	3003
CNW113	56.5	847.5	1130.0	1412.5	1695.0	104	543	2	4	2 1/8	2 1/8	68	224	3079
CNW133	66.4	995.4	1327.3	1659.1	1990.9	140	474	2	4	2 5/8	2 1/8	92	300	3390
CNW154	77.0	1155.2	1540.2	1925.3	2310.4	86	895	2	5	2 5/8	2 1/8	136	460	4248
CNW179	89.4	1341.5	1788.7	2235.9	2683.0	112	799	2	5	2 5/8	2 1/8	180	596	4625
CNW185	92.4	1386.2	1848.3	2310.4	2772.4	86	1075	2	6	2 5/8	2 1/8	164	552	5242
CNW215	107.3	1609.8	2146.4	2683.0	3219.6	116	925	2	6	2 5/8	2 1/8	218	718	5716

NOTE :

For R404A and R507 multiply capacity by 0.98
 For R407C multiply capacity by 0.98
 For 50 HZ units multiply capacity by 0.92

Connections are based on 30° FTD, 40°F suction and R-22
 Refrigerant summer charge is based on 100° F liquid, 30% liquid and 70% vapor.
 Refrigerant winter charge is based on -20° F liquid, 90% liquid and 10% vapor.

CAPACITY TABLES (CVW)

TWO SPEED VERSATILE 8 FPI

MODEL	Total Heat of Rejection (MBH) (R-22, R-134a) Temperature Difference °F					Num. Cir.	Cap./Cir. BTU/FTD	Fan Arr.		Connection Sizes (Ø")		Refrigerant Charge (Lbs)		Ship. Weight (Lbs)
	1	15	20	25	30					Discharge	Liquid	Summer	Winter	
CVW011	5.4	80.6	107.4	134.3	161.2	11	488	1	1	1 1/8	1 1/8	5.8	19	570
CVW014	7.0	104.6	139.5	174.4	209.3	17	410	1	1	1 3/8	1 1/8	8.8	29	647
CVW016	8.1	122.2	162.9	203.6	244.3	17	479	1	1	1 3/8	1 3/8	12	38	698
CVW021	10.7	161.2	214.9	268.6	322.3	17	632	1	2	1 3/8	1 3/8	12	38	1012
CVW028	14.0	209.3	279.1	348.8	418.6	26	537	1	2	1 5/8	1 5/8	23	76	1095
CVW033	16.3	244.3	325.8	407.2	488.7	35	465	1	2	2 1/8	1 5/8	23	76	1238
CVW042	20.9	313.9	418.6	523.2	627.9	52	402	1	3	2 1/8	1 5/8	26	85	1625
CVW049	24.4	366.5	488.7	610.9	733.0	70	349	1	3	2 1/8	2 1/8	34	112	1740
CVW055	27.9	418.6	558.1	697.7	837.2	52	537	1	4	2 1/8	2 1/8	34	112	2100
CVW056	27.9	418.6	558.1	697.7	837.2	52	537	2	2	1 5/8	1 5/8	35	115	1996
CVW064	32.6	488.7	651.6	814.5	977.4	70	465	1	4	2 5/8	2 1/8	46	150	2245
CVW065	32.6	488.7	651.6	814.5	977.4	70	465	2	2	2 1/8	1 5/8	47	153	2108
CVW070	34.9	523.2	697.7	872.1	1046.5	43	811	1	5	2 5/8	2 1/8	68	230	2611
CVW081	40.7	610.9	814.5	1018.1	1221.7	56	727	1	5	2 5/8	2 1/8	90	298	2757
CVW084	41.9	627.9	837.2	1046.5	1255.8	104	402	2	3	2 1/8	1 5/8	52	170	2768
CVW090	41.9	627.9	837.2	1046.5	1255.8	43	973	1	6	2 5/8	2 1/8	82	276	3068
CVW098	48.9	733.0	977.4	1221.7	1466.1	140	349	2	3	2 1/8	2 1/8	68	224	3003
CVW104	48.9	733.0	977.4	1221.7	1466.1	58	843	1	6	2 5/8	2 1/8	109	359	3303
CVW112	55.8	837.2	1116.3	1395.3	1674.4	104	537	2	4	2 1/8	2 1/8	68	224	3479
CVW130	65.2	977.4	1303.2	1629.0	1954.8	140	465	2	4	2 5/8	2 1/8	92	300	3790
CVW140	69.8	1046.5	1395.3	1744.2	2093.0	86	811	2	5	2 5/8	2 1/8	136	460	4748
CVW163	81.4	1221.7	1629.0	2036.2	2443.5	112	727	2	5	2 5/8	2 1/8	180	596	5125
CVW167	83.7	1255.8	1674.4	2093.0	2511.6	86	973	2	6	2 5/8	2 1/8	164	552	5842
CVW195	97.7	1466.1	1954.8	2443.5	2932.2	116	843	2	6	2 5/8	2 1/8	218	718	6316

NOTE :

For R404A and R507 multiply capacity by 0.98

For R407C multiply capacity by 0.98

For 50 HZ units multiply capacity by 0.92

Connections are based on high speed at 30° FTD, 40°F suction and R-22
Refrigerant summer charge is based on 100° F liquid, 30% liquid and 70% vapor.
Refrigerant winter charge is based on -20° F liquid, 90% liquid and 10% vapor.

LOW SPEED VERSATILE 8 FPI

MODEL	Total Heat of Rejection (MBH) (R-22, R-134a) Temperature Difference °F					Num. Cir.	Cap./Cir. BTU/FTD	Fan Arr.		Connection Sizes (Ø")		Refrigerant Charge (Lbs)		Ship. Weight (Lbs)
	1	15	20	25	30					Discharge	Liquid	Summer	Winter	
CVW011L	4.8	72.1	96.1	120.1	144.1	11	437	1	1	1 1/8	1 1/8	5.8	19	570
CVW014L	5.9	88.7	118.2	147.8	177.3	17	348	1	1	1 1/8	1 1/8	8.8	29	647
CVW016L	6.4	96.1	128.1	160.1	192.2	17	377	1	1	1 3/8	1 1/8	12	38	698
CVW021L	9.6	144.1	192.2	240.2	288.3	17	565	1	2	1 3/8	1 3/8	12	38	1012
CVW028L	11.8	177.3	236.4	295.5	354.6	26	455	1	2	1 3/8	1 3/8	23	76	1095
CVW033L	12.8	192.2	256.2	320.3	384.3	35	366	1	2	1 5/8	1 5/8	23	76	1238
CVW042L	17.7	266.0	354.6	443.3	531.9	52	341	1	3	2 1/8	1 5/8	26	85	1625
CVW049L	19.2	288.3	384.3	480.4	576.5	70	275	1	3	2 1/8	1 5/8	34	112	1740
CVW055L	23.6	354.6	472.8	591.0	709.2	52	455	1	4	2 1/8	1 5/8	34	112	2100
CVW056L	23.6	354.6	472.8	591.0	709.2	52	455	2	2	1 3/8	1 3/8	35	115	1996
CVW064L	25.6	384.3	512.5	640.6	768.7	70	366	1	4	2 1/8	2 1/8	46	150	2245
CVW065L	25.6	384.3	512.5	640.6	768.7	70	366	2	2	1 5/8	1 5/8	47	153	2108
CVW070L	29.6	443.3	591.0	738.8	886.6	43	687	1	5	2 1/8	2 1/8	68	230	2611
CVW081L	32.0	480.4	640.6	800.7	960.9	56	572	1	5	2 5/8	2 1/8	90	298	2757
CVW084L	35.5	531.9	709.2	886.6	1063.9	104	341	2	3	2 1/8	1 5/8	52	170	2768
CVW090L	35.5	531.9	709.2	886.6	1063.9	43	825	1	6	2 5/8	2 1/8	82	276	3068
CVW098L	38.4	576.5	768.7	960.9	1153.0	140	275	2	3	2 1/8	1 5/8	68	224	3003
CVW104L	38.4	576.5	768.7	960.9	1153.0	58	663	1	6	2 5/8	2 1/8	109	359	3303
CVW112L	47.3	709.2	945.7	1182.1	1418.5	104	455	2	4	2 1/8	1 5/8	68	224	3479
CVW130L	51.2	768.7	1024.9	1281.2	1537.4	140	366	2	4	2 1/8	2 1/8	92	300	3790
CVW140L	59.1	886.6	1182.1	1477.6	1773.1	86	687	2	5	2 1/8	2 1/8	136	460	4748
CVW163L	64.1	960.9	1281.2	1601.5	1921.7	112	572	2	5	2 5/8	2 1/8	180	596	5125
CVW167L	70.9	1063.9	1418.5	1773.1	2127.7	86	825	2	6	2 5/8	2 1/8	164	552	5842
CVW195L	76.9	1153.0	1537.4	1921.7	2306.1	116	663	2	6	2 5/8	2 1/8	218	718	6316

NOTE :

For R404A and R507 multiply capacity by 0.98

For R407C multiply capacity by 0.98

For 50 HZ units multiply capacity by 0.92

Connections are based on high speed at 30° FTD, 40°F suction and R-22
Refrigerant summer charge is based on 100° F liquid, 30% liquid and 70% vapor.
Refrigerant winter charge is based on -20° F liquid, 90% liquid and 10% vapor.

HEAT RECLAIM UNITS (HCD, HMD)

MODEL	Capacity MBH (R-22, R-134a) Temperature Difference °F					Num. Cir.	Cap./Cir. BTU/FTD	Fan Arr.		Connection Sizes (Ø")		Refrigerant Charge (Lbs)	Ship. Weight (Lbs)
	I	15	20	25	30					In	Out		
	HCD02	1.38	41.28	48.16	55.04					61.92	19		
HCD03	1.69	50.79	59.25	67.72	76.18	14	121	I	I	1-1/8	1-1/8	0.9	201
HCD04	1.89	56.73	66.18	75.64	85.09	19	100	I	I	1-1/8	1-1/8	1.2	210
HMD05	2.63	79.00	92.17	105.34	118.50	27	98	I	I	1-3/8	1-3/8	1.1	308
HMD07	3.33	99.79	116.42	133.06	149.69	20	166	I	I	1-3/8	1-3/8	1.6	335
HMD08	3.73	111.97	130.63	149.29	167.95	27	138	I	I	1-3/8	1-3/8	2.1	350
HMD09	5.27	158.00	184.34	210.67	237.01	27	195	I	2	1-5/8	1-5/8	2.1	489
HMD11	5.99	179.69	209.63	239.58	269.53	40	150	I	2	1-5/8	1-5/8	3.1	518
HMD12	6.65	199.58	232.85	266.11	299.38	40	166	I	2	2-1/8	2-1/8	3.1	532
HMD13	6.87	206.12	240.47	274.82	309.18	27	254	I	2	2-1/8	2-1/8	4.3	544
HMD14	7.46	223.94	261.26	298.58	335.91	27	276	I	2	2-1/8	2-1/8	4.3	566
HMD18	8.98	269.38	314.28	359.17	404.07	40	224	I	3	2-1/8	2-1/8	4.6	727
HMD20	9.98	299.38	349.27	399.17	449.06	40	249	I	3	2-1/8	2-1/8	4.6	741
HMD21	10.31	309.18	360.71	412.24	463.77	54	191	I	3	2-1/8	2-1/8	6.3	767
HMD23	11.20	335.91	391.89	447.88	503.86	54	207	I	3	2-1/8	2-1/8	6.3	789

NOTE :

For R404A and R507 multiply capacity by 0.98

For 50 HZ units multiply capacity by 0.92

Connections sizes based on 40°F TTD @ 50% recovery

Refrigerant charge is based on 10% liquid and 90% vapor

CONTROL PANEL NOMENCLATURE

For the proper operation of a refrigeration system, the condensing pressure and temperature must be maintained within certain limits.

To prevent excessively low head pressure during winter operation, two basic control methods are used: **refrigerant side control** and **air side control**.

1. Refrigerant side control is accomplished by modulating the amount of active condensing surface available for condensing by flooding the coil with liquid refrigerant. This method requires a receiver and a larger refrigerant charge.

2. Air side control is accomplished by cycling fans in response to condensing pressure (single circuit) or outdoor ambient temperature (single or multiple circuits).

To reduce stress on the condenser coil, one fan or one pair of fans must operate when a compressor is operating. Speed control on the constant operating fan may be used to reduce motor cycling and stabilize the operating pressure.

For very low ambient operation, the air side method should be combined with refrigerant flooding control.

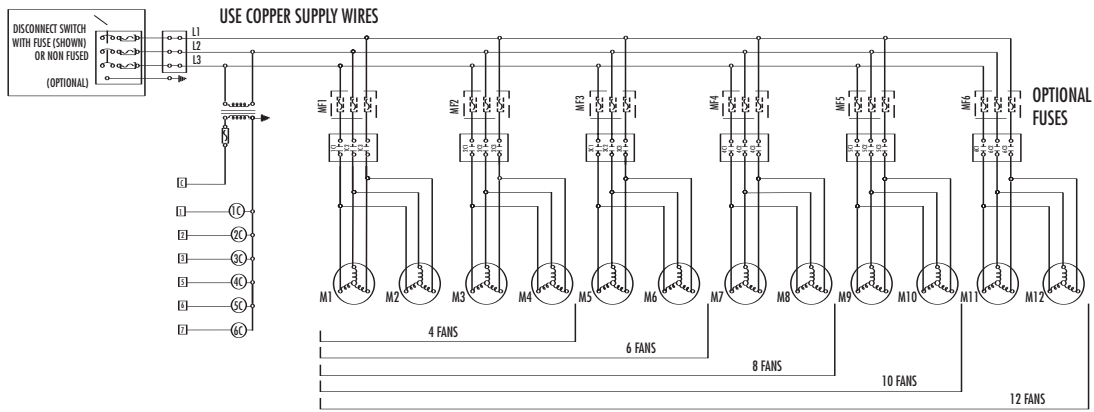
REFPLUS PANEL	TYPE OF PANEL	FAN ARRANGEMENT	UNIT VOLTAGE	CONTROL VOLTAGE	OPTIONS
P	19	24	8	I	BDF
	11 = I X I 12 = I X 2 13 = I X 3 14 = I X 4 15 = I X 5 16 = I X 6 17 = I X 7 18 = I X 8	22 = 2 X 2 23 = 2 X 3 24 = 2 X 4 25 = 2 X 5 26 = 2 X 6 27 = 2 X 7 28 = 2 X 8	2 3 5 6 8 9 240/1/60 200/3/50 208-240/3/60 380/3/50 600/3/60 480/3/60	I 2 X N 120V 240V 24V NONE	
STANDARD PANELS:					
01	CONTROL BOX, TERMINAL BLOCK, NO CONTROLS, NO CONTACTORS				
02	CONTACTOR(S) WITHOUT CONTROLS				
03	CONTACTOR(S), AMBIENT FAN CYCLING				
04	CONTACTOR(S), PRESSURE FAN CYCLING				
05	CONTACTOR(S), PRESSURE FAN CYCLING, DUAL CIRCUITS				
12	CONTACTOR(S), MOTORS INDIVIDUALLY WIRED, NO CONTROLS				
18	SPLIT ELECTRICAL, CONTACTOR(S), AMBIENT FAN CYCLING				
19	SPLIT ELECTRICAL, CONTACTOR(S), PRESSURE FAN CYCLING				
20	CONTACTOR(S), AMBIENT FAN CYCLING WITH PRESSURE OVERRIDE				
N	NONE				
A	MOTOR FUSING (IN PAIR FOR TWO FAN WIDE UNIT)				
B	INDIVIDUAL MOTOR FUSING (FOR TWO FAN WIDE UNIT ONLY)				
C	SPEED MOTOR CONTROLLER (PRESSURE SENSING)				
D	SPEED MOTOR CONTROLLER (TEMPERATURE SENSING)				
E	NON-FUSED DISCONNECT				
F	FUSED DISCONNECT				
T	TWO SPEED				

NOTE: PANEL AVAILABILITY DEPENDS ON MODEL CHOSEN. (PLEASE CONSULT FACTORY)

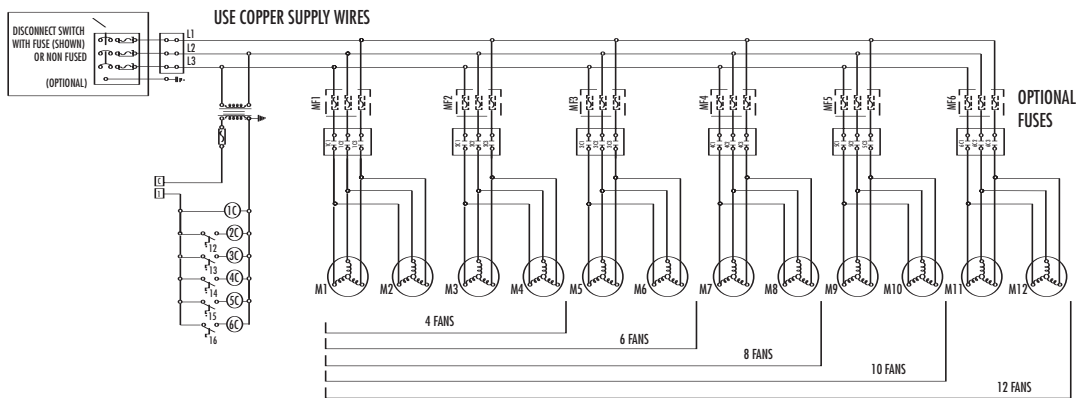
FAN MOTOR ELECTRICAL DATA

FAN MOTOR ELECTRICAL DATA									
MODEL	QTY OF FANS	240/1/60		208-240/3/60		480/3/60		600/3/60	
		MCA	MOP	MCA	MOP	MCA	MOP	MCA	MOP
CCR, HCD	1	2.2	15	N/A	N/A	N/A	N/A	N/A	N/A
CMR, HMD	1	3.7	15	3.3	15	1.7	15	1.0	15
	2	6.6	15	5.9	15	3.0	15	1.8	15
	3	9.5	15	8.5	15	4.3	15	2.6	15
	4	12.3	15	11	15	5.5	15	3.4	15
	5	15.2	20	13.7	15	6.8	15	4.2	15
	6	18.1	20	16.3	20	8.1	15	5	15
CVR, CVW, CVX High Speed	1	N/A	N/A	8	15	4	15	3	15
	2	N/A	N/A	14	20	7	15	5	15
	3	N/A	N/A	21	25	10	15	8	15
	4	N/A	N/A	27	30	12	15	10	15
	5	N/A	N/A	33	35	15	20	12	15
	6	N/A	N/A	39	40	18	20	14	15
	7	N/A	N/A	45	50	21	25	16	20
	8	N/A	N/A	52	60	24	25	19	20
	10	N/A	N/A	64	70	29	30	23	25
	12	N/A	N/A	76	80	35	35	27	30
CVR, CVW, CVX Low Speed	1	N/A	N/A	4	15	2	15	2	15
	2	N/A	N/A	8	15	4	15	3	15
	3	N/A	N/A	11	15	5	15	4	15
	4	N/A	N/A	15	20	7	15	6	15
	5	N/A	N/A	18	20	8	15	7	15
	6	N/A	N/A	22	25	10	15	8	15
	7	N/A	N/A	25	30	12	15	9	15
	8	N/A	N/A	29	30	13	15	11	15
	10	N/A	N/A	36	40	16	20	13	15
	12	N/A	N/A	43	45	20	20	16	20
CLR, CLW, CLX	1	N/A	N/A	7	15	4	15	3	15
	2	N/A	N/A	12	15	6	15	5	15
	3	N/A	N/A	18	20	9	15	7	15
	4	N/A	N/A	23	25	12	15	9	15
	5	N/A	N/A	28	30	14	15	11	15
	6	N/A	N/A	34	35	17	20	14	15
	7	N/A	N/A	39	40	19	20	16	20
	8	N/A	N/A	44	45	22	25	18	20
	10	N/A	N/A	55	60	27	30	22	25
	12	N/A	N/A	65	70	32	35	26	30
CNR, CNW, CNX	1	N/A	N/A	9	15	5	15	4	15
	2	N/A	N/A	17	20	8	15	7	15
	3	N/A	N/A	24	30	12	15	9	15
	4	N/A	N/A	31	35	15	15	12	15
	5	N/A	N/A	38	45	18	20	15	15
	6	N/A	N/A	45	50	22	25	17	20
	7	N/A	N/A	53	60	25	25	20	20
	8	N/A	N/A	60	70	29	35	23	25
	10	N/A	N/A	74	80	35	35	28	30
	12	N/A	N/A	89	90	42	45	34	35
14	N/A	N/A	103	110	49	50	39	40	
16	N/A	N/A	117	125	56	60	44	45	

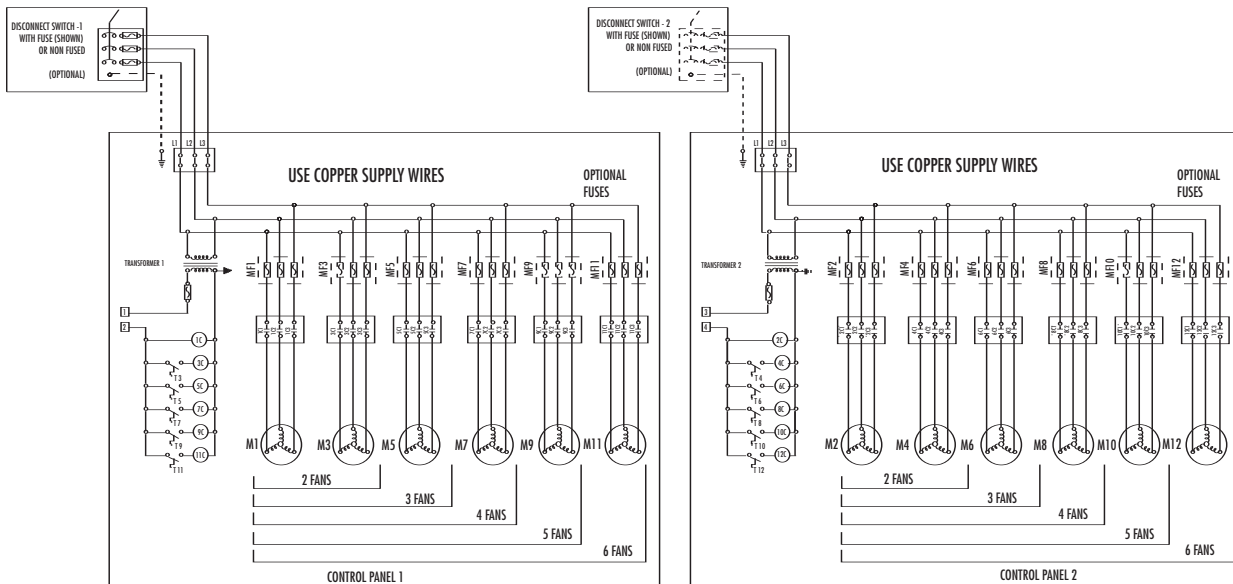
MULTIPLE CONTACTORS WITHOUT CONTROLS



MULTIPLE CONTACTORS WITH CONTROLS

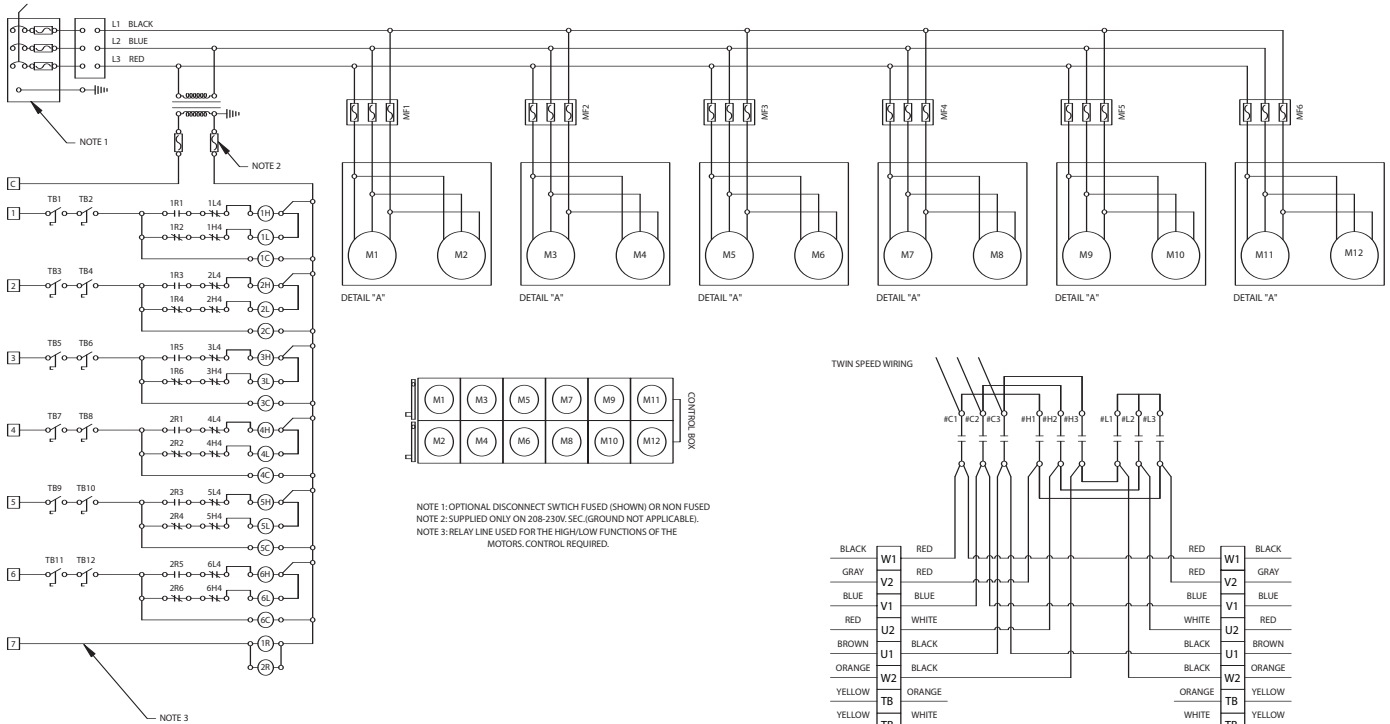


SPLIT ELECTRICAL

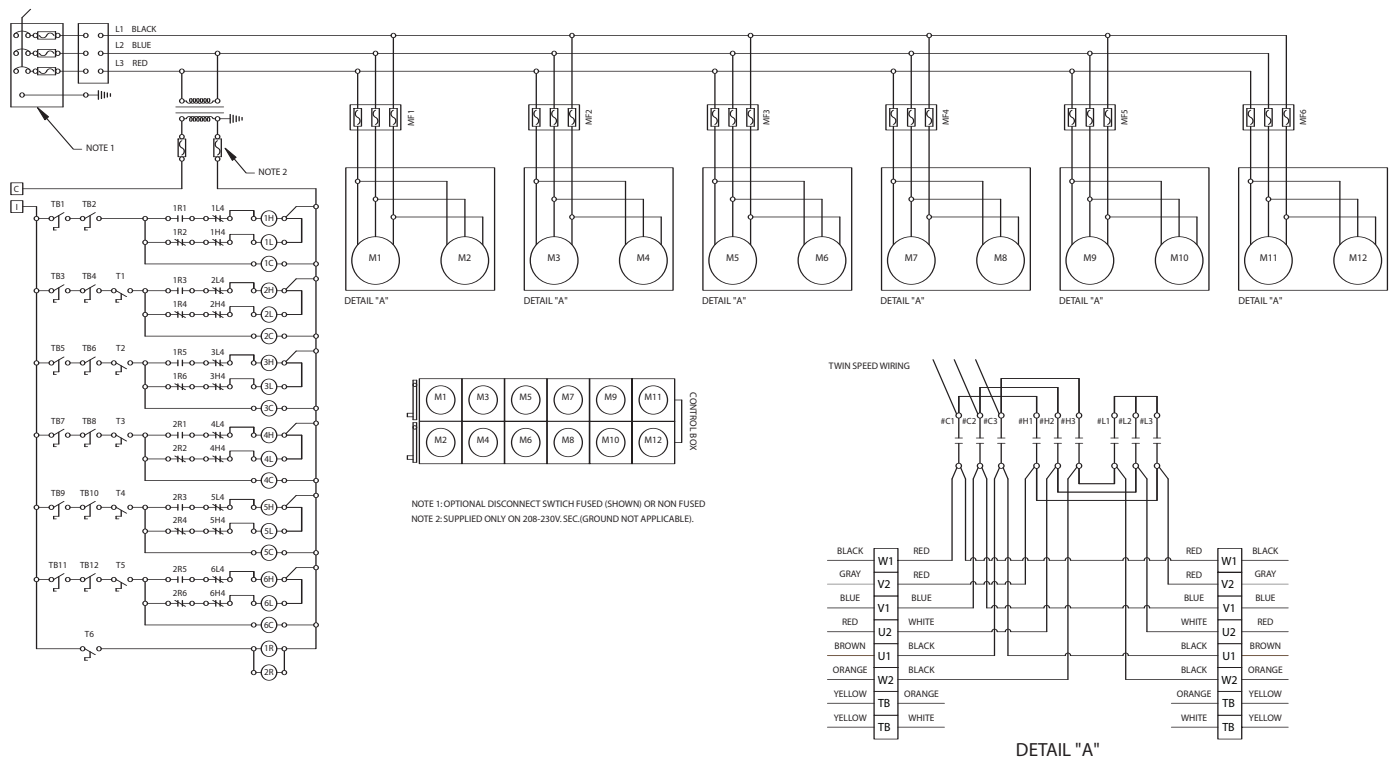


ELECTRICAL DIAGRAMS - VERSATILE MODELS

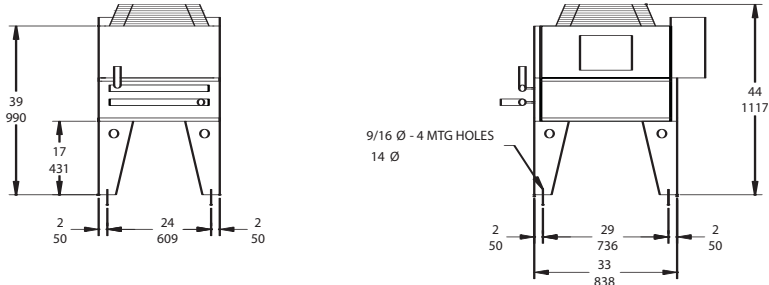
MULTIPLE CONTACTORS WITHOUT CONTROLS



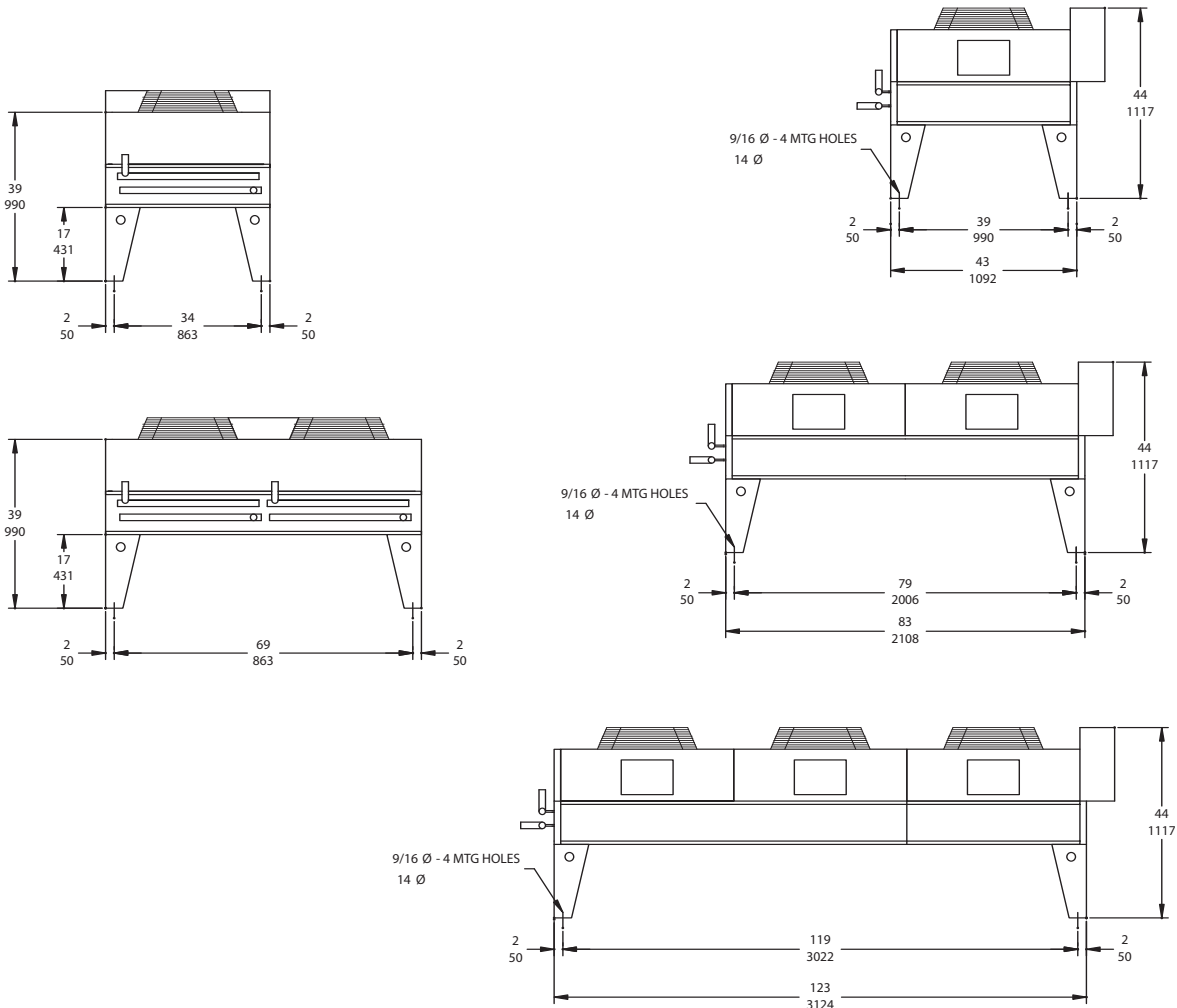
MULTIPLE CONTACTORS WITH CONTROLS



CCR CONDENSER DIMENSIONS (CCR)

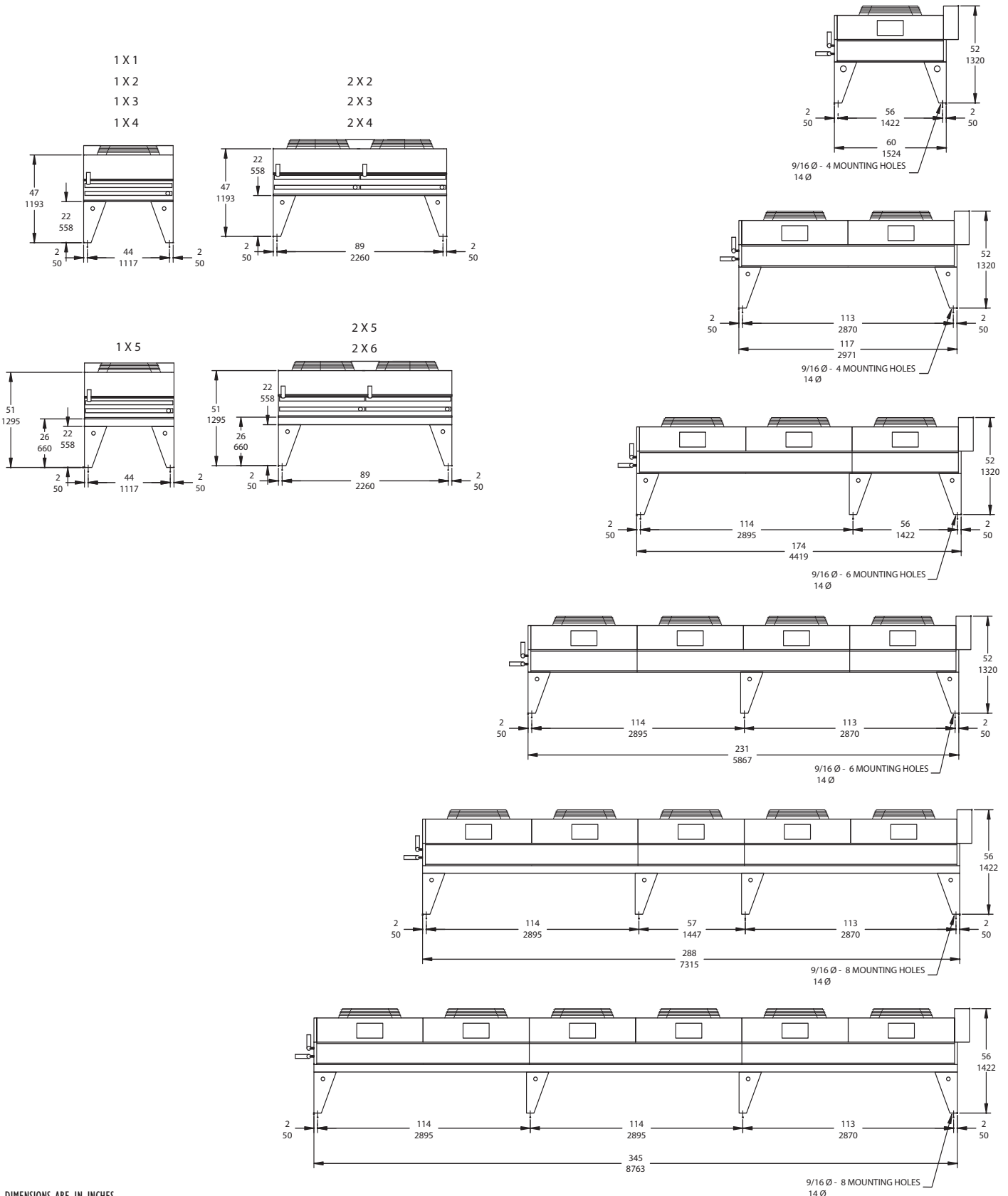


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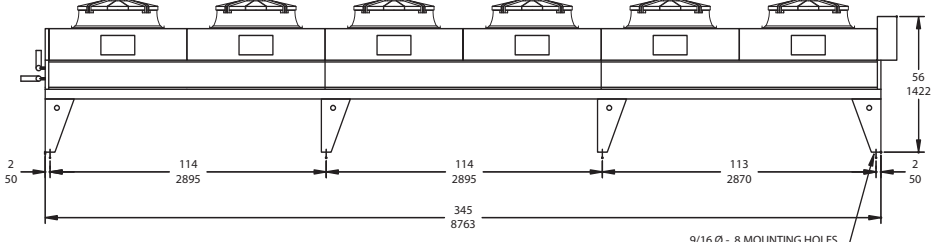
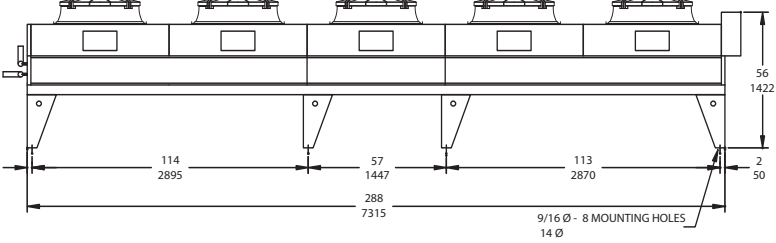
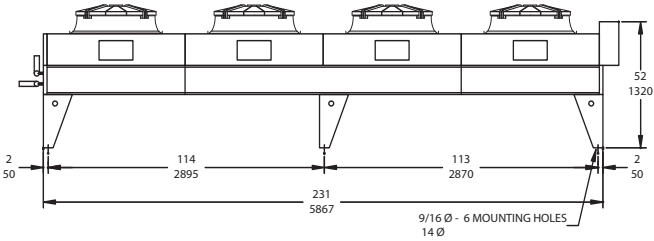
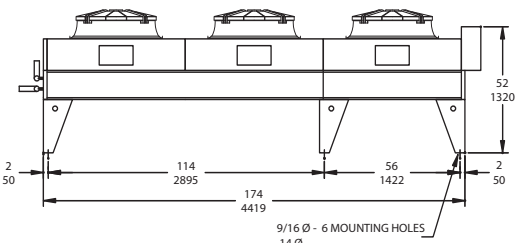
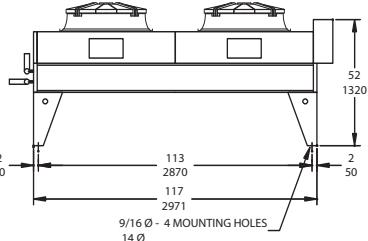
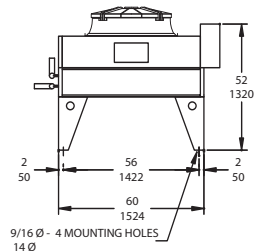
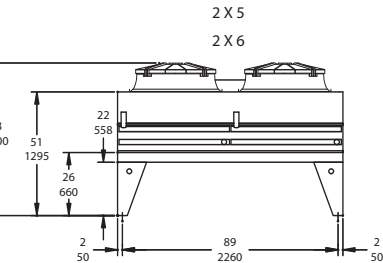
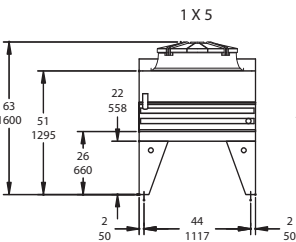
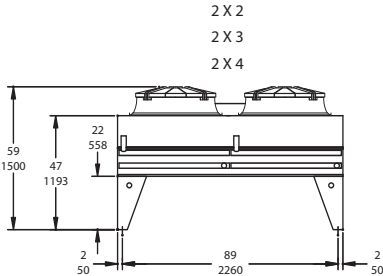
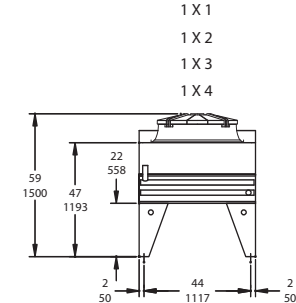
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MM

CLR - CNR - CLW - CNW LARGE UNIT CONDENSER DIMENSIONS



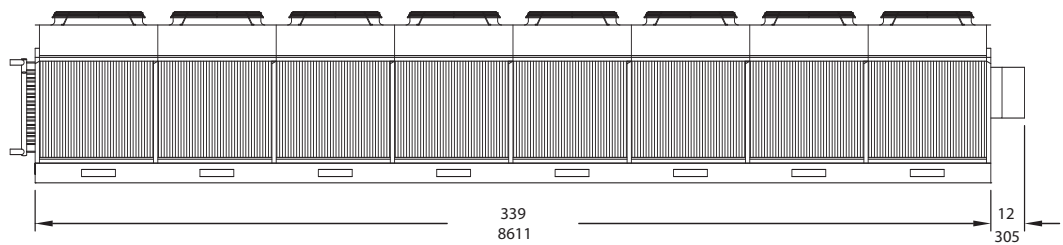
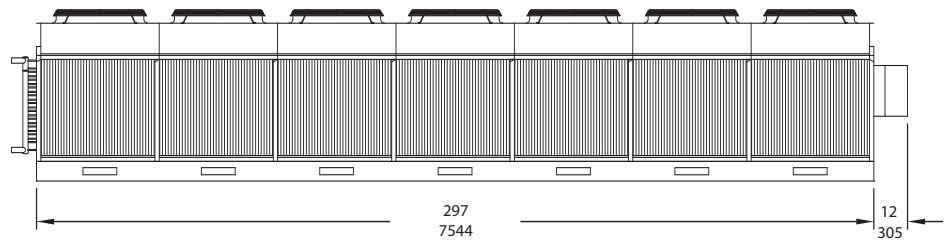
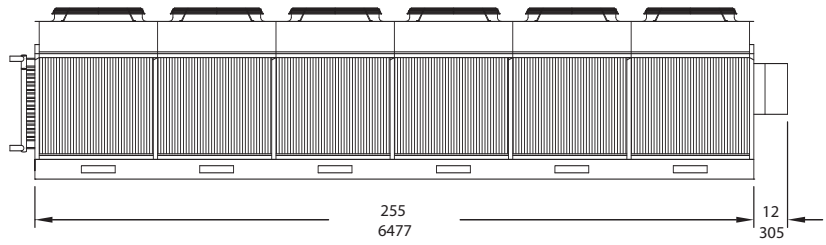
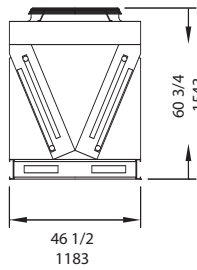
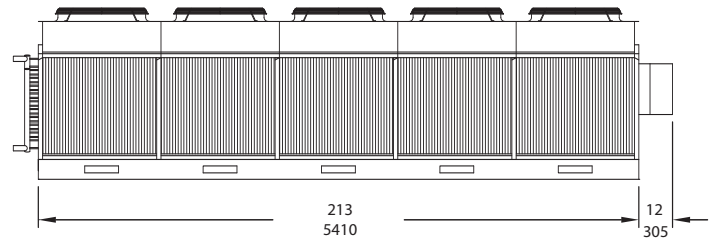
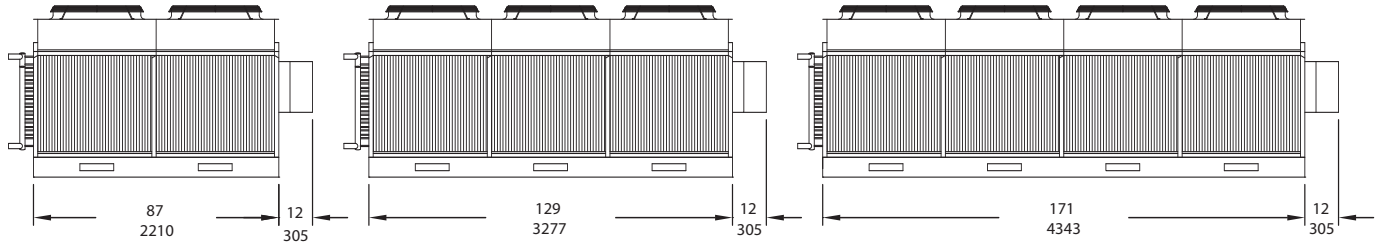
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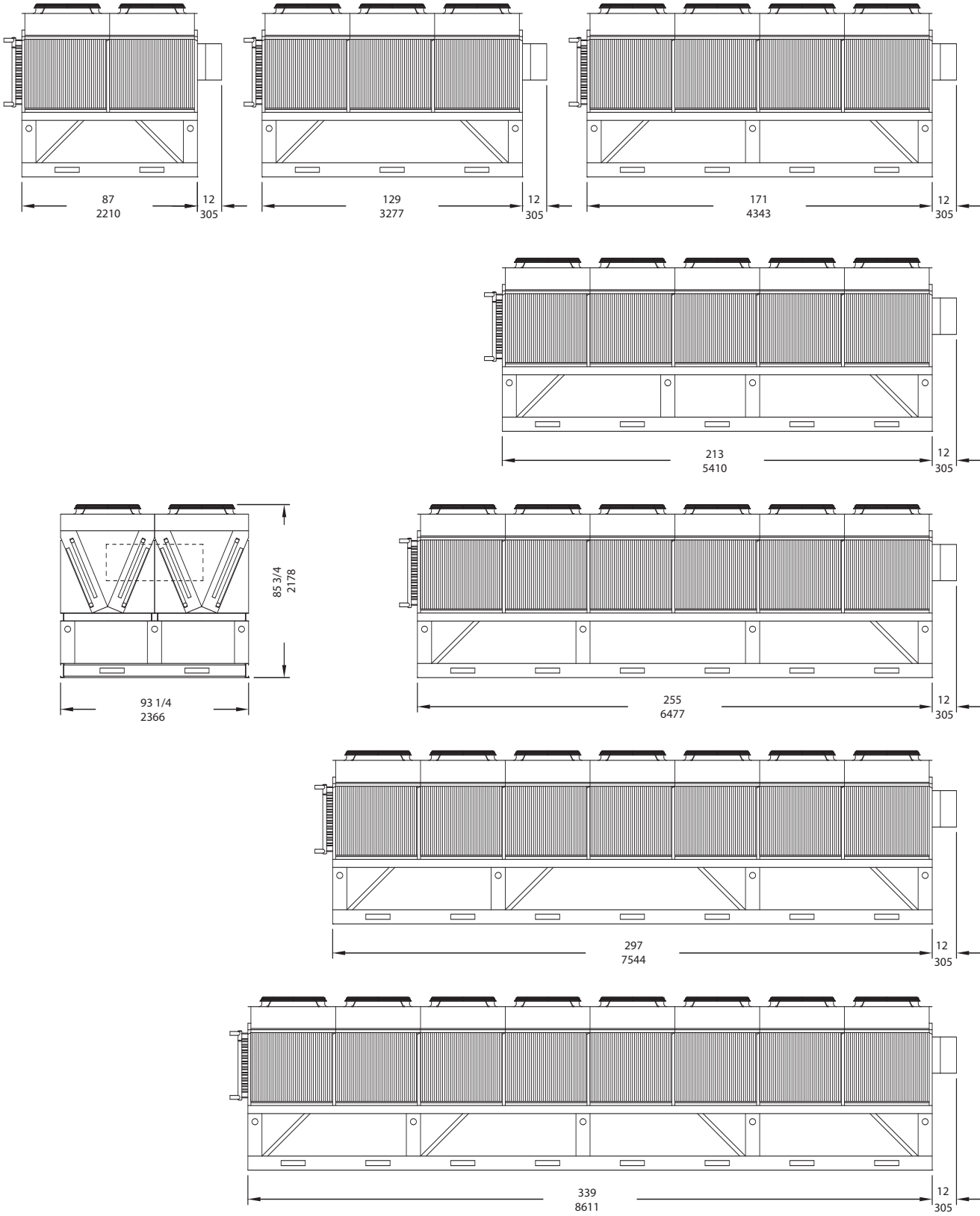
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CLX-CNX CONDENSER DIMENSIONS



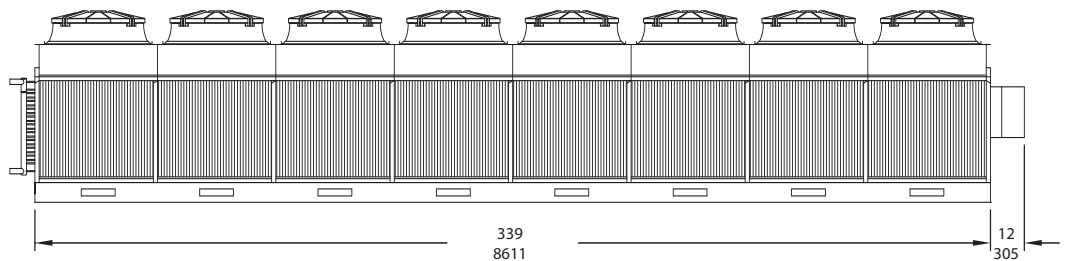
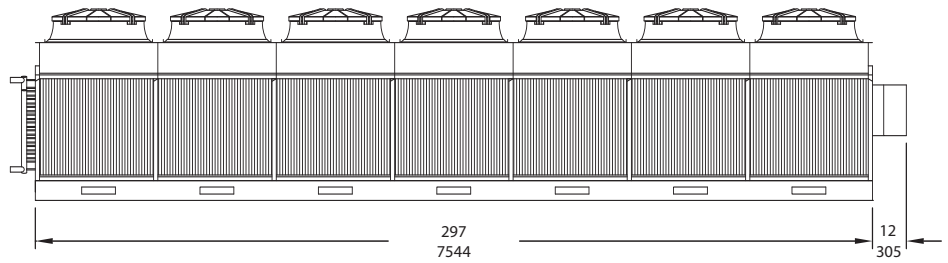
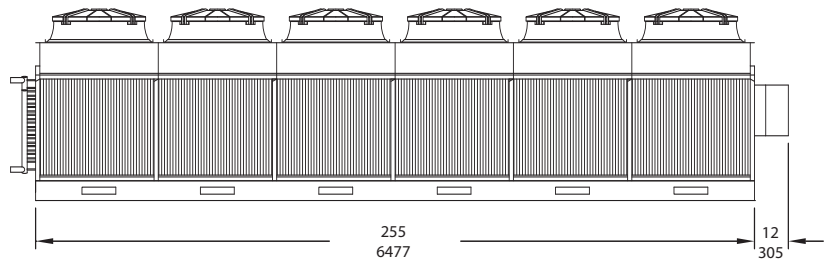
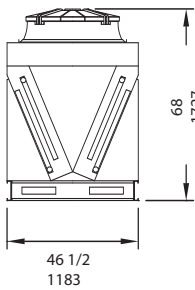
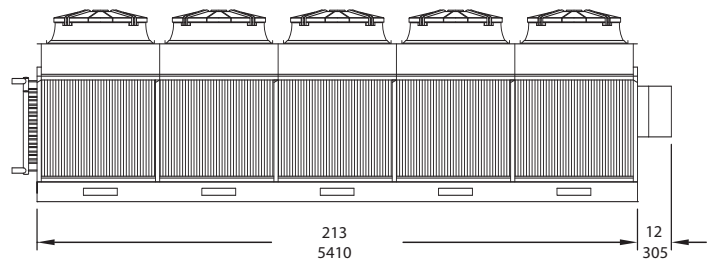
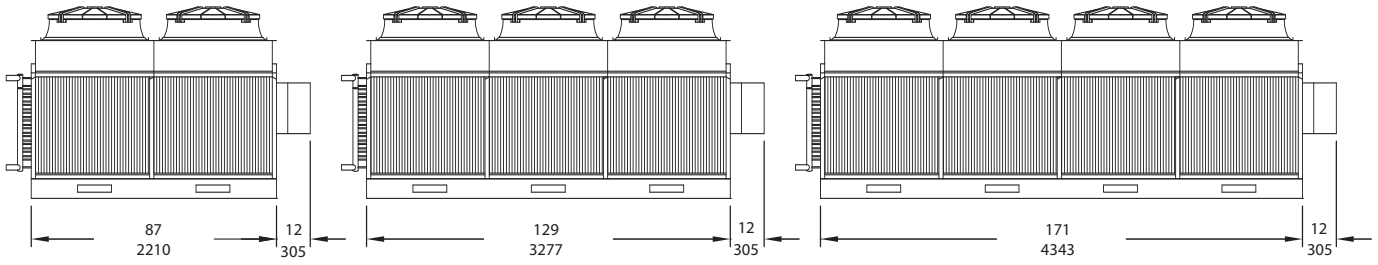
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CLX - CNX CONDENSER DIMENSIONS



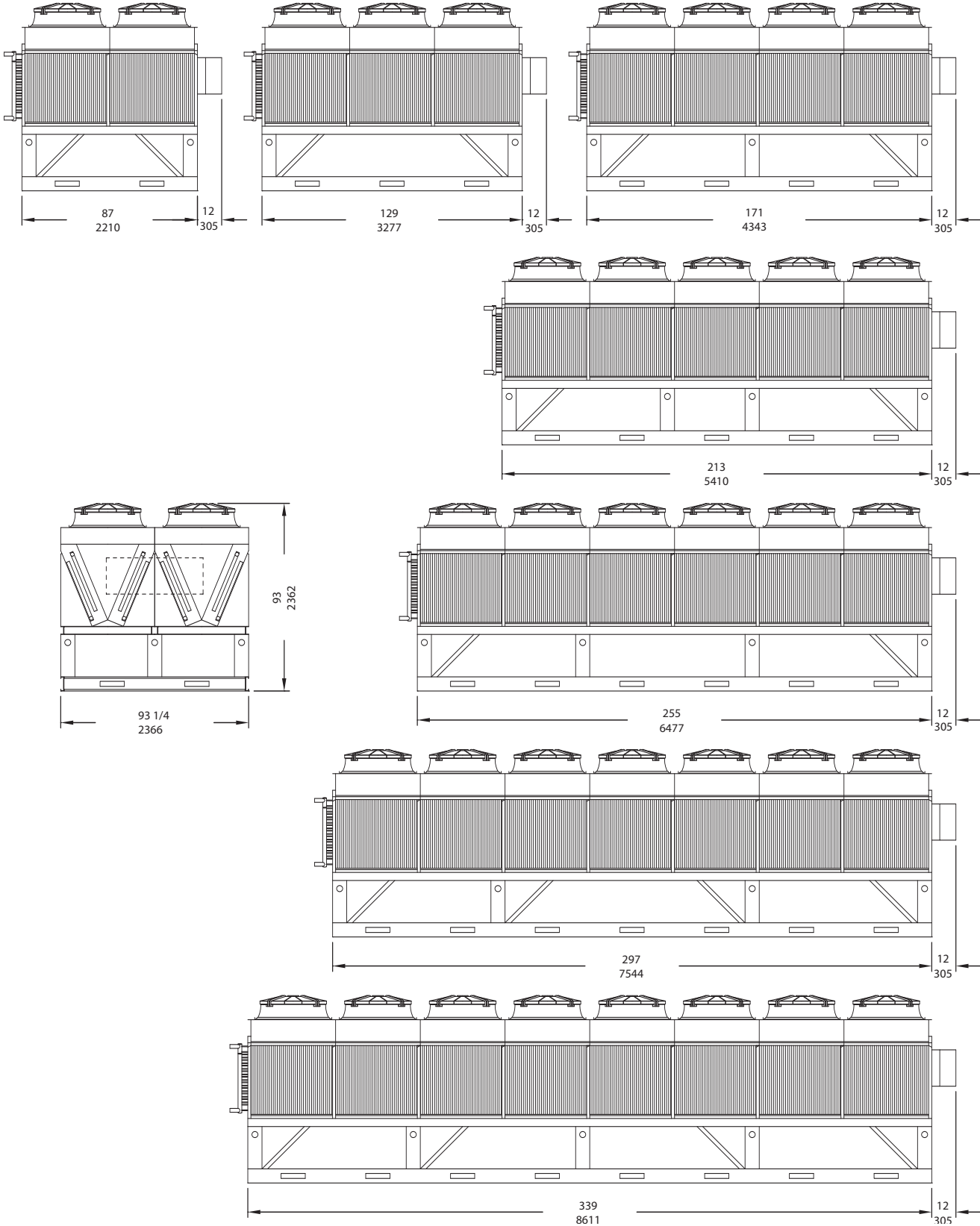
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CVX CONDENSER DIMENSIONS



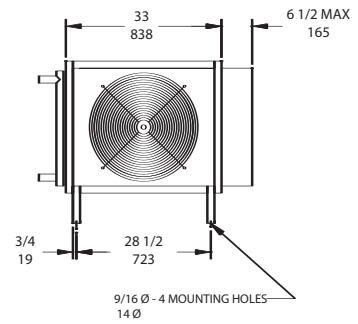
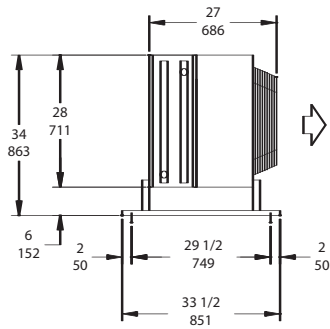
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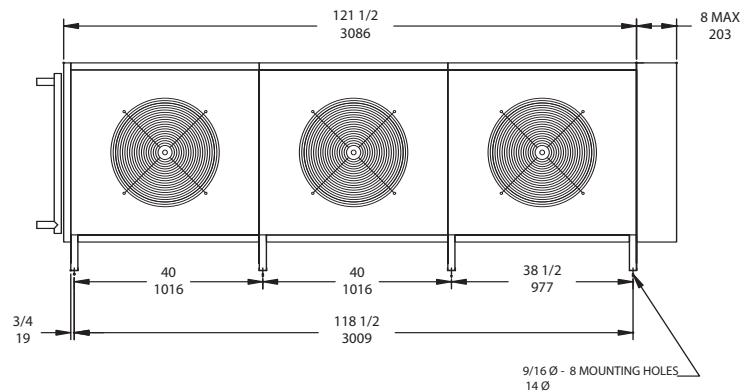
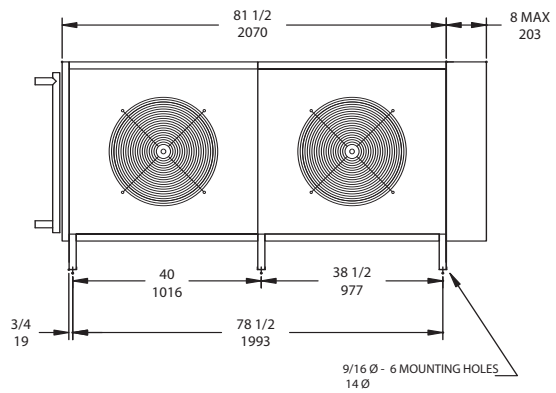
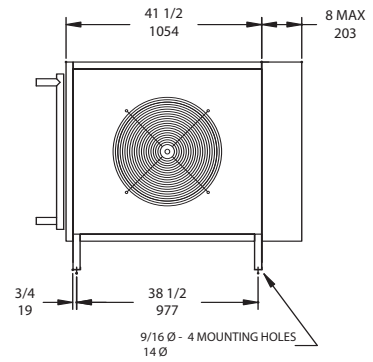
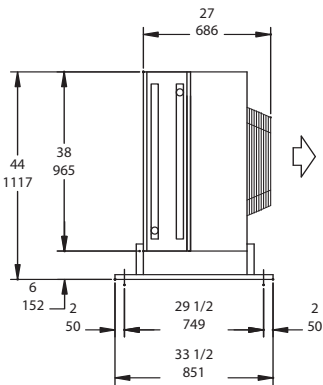


DIMENSIONS ARE IN INCHES
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CCR CONDENSER HORIZONTAL AIR DIMENSIONS

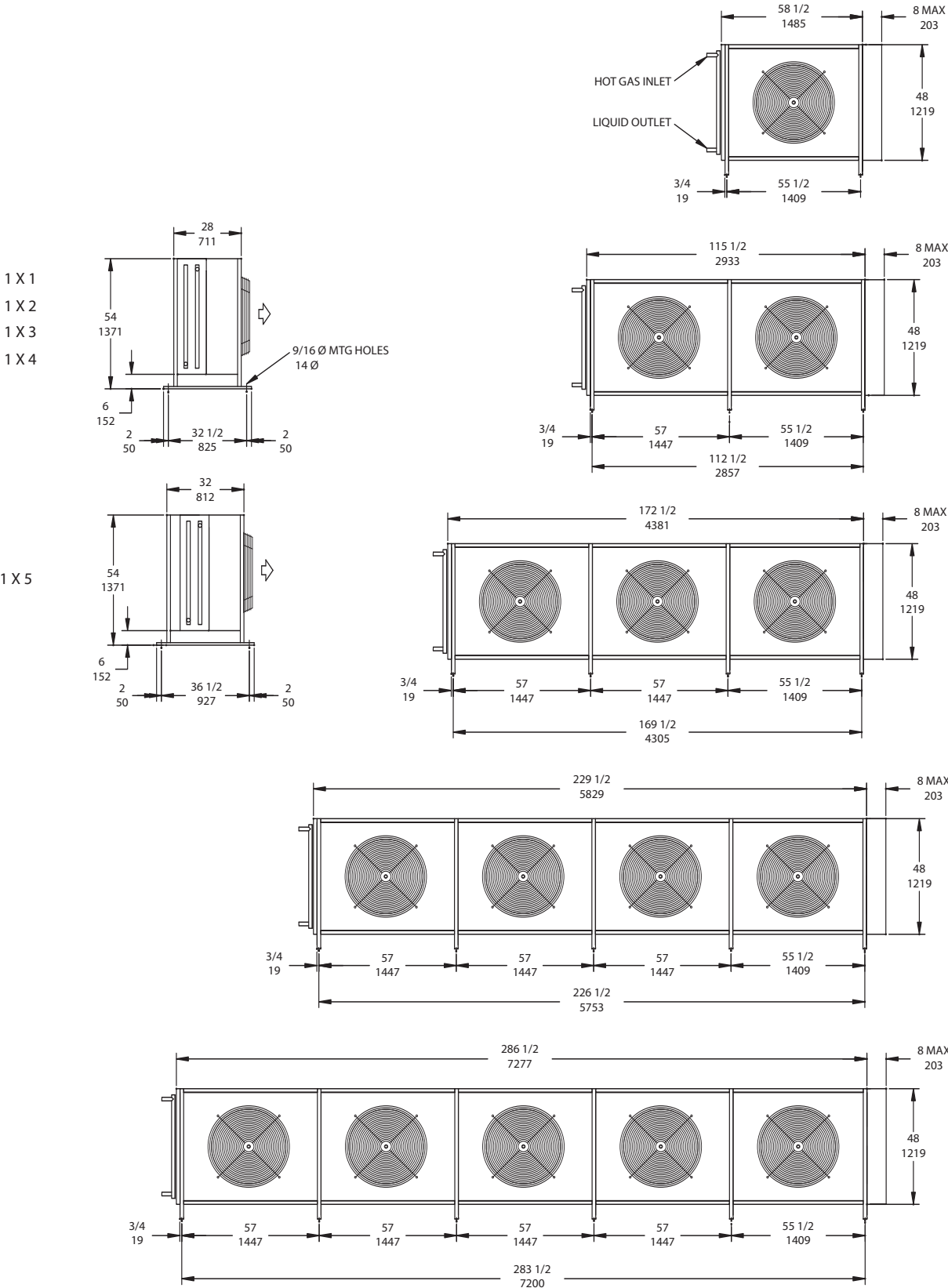


CMR CONDENSER HORIZONTAL AIR DIMENSIONS



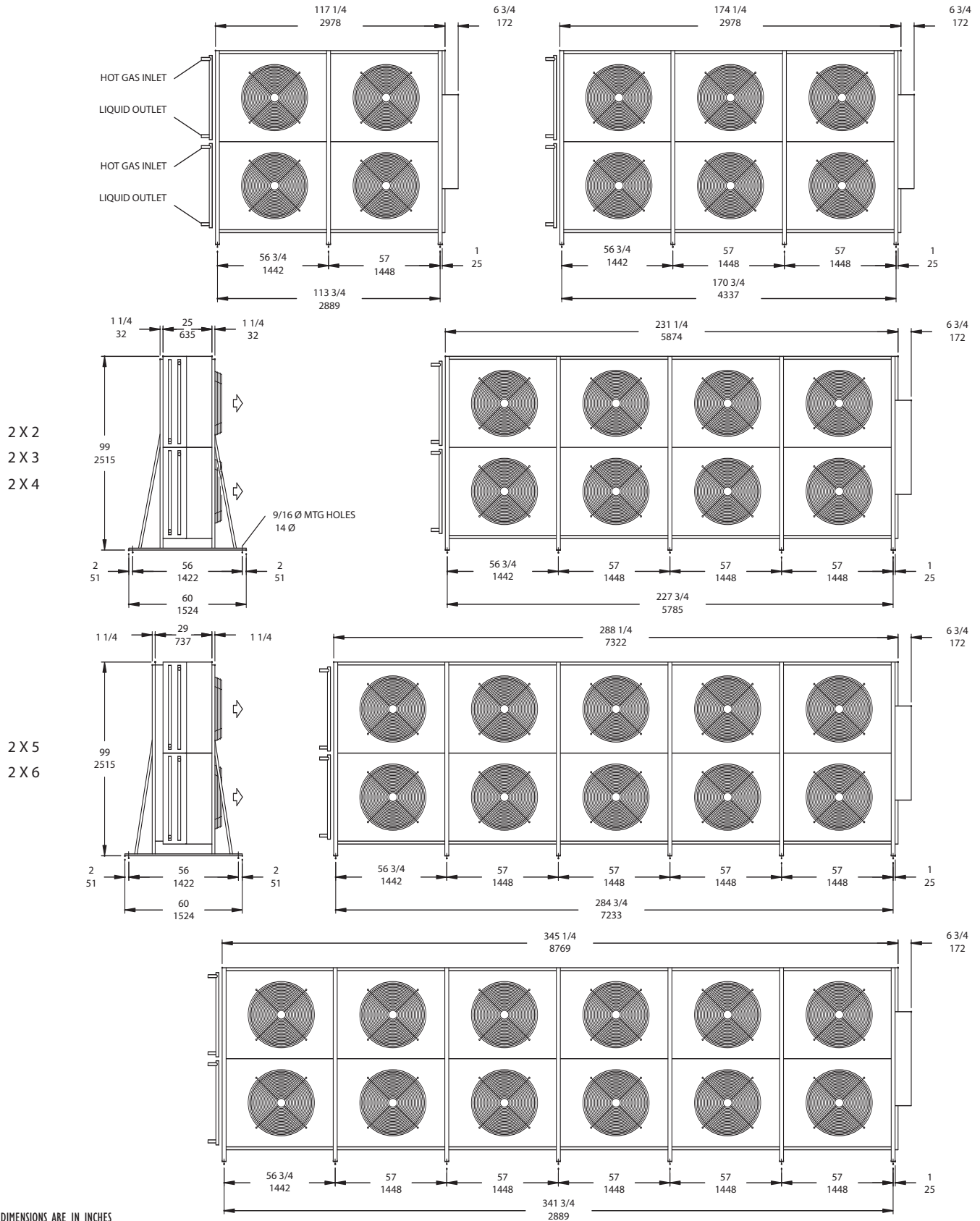
DIMENSIONS ARE IN INCHES
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CLR - CLW - CNR - CNW CONDENSER HORIZONTAL AIR FLOW DIMENSIONS



DIMENSIONS ARE IN INCHES
MM

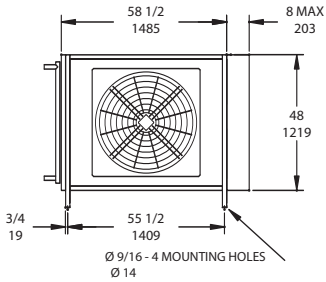
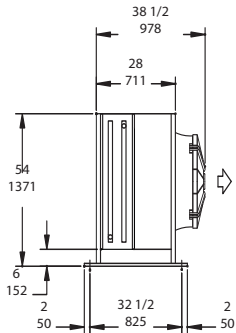
CLR - CLW - CNR - CNW CONDENSER HORIZONTAL AIR FLOW DIMENSIONS



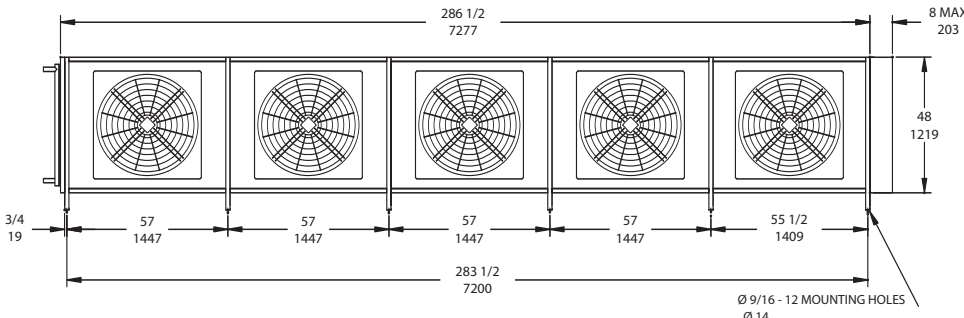
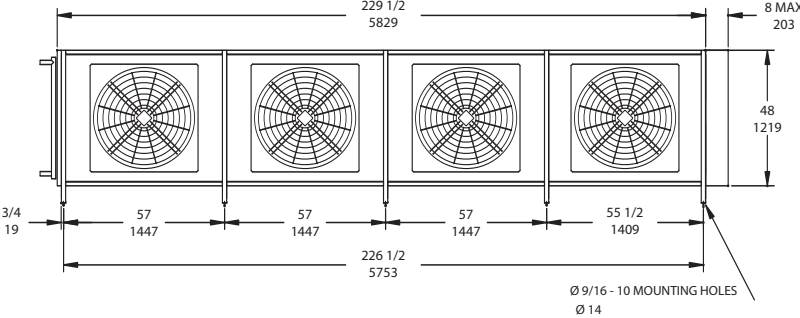
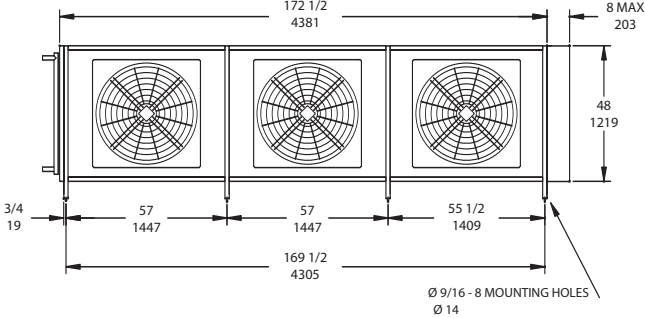
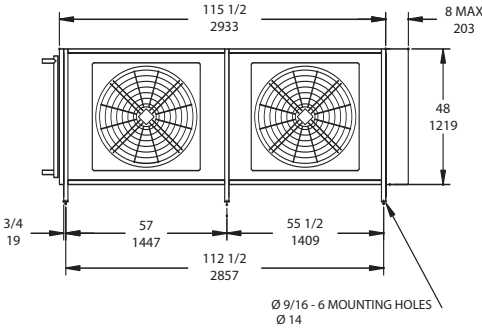
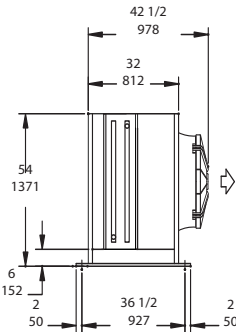
DIMENSIONS ARE IN INCHES
MM

CVR - CVW CONDENSER HORIZONTAL AIR FLOW DIMENSIONS

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1 X 2
1 X 3
1 X 4

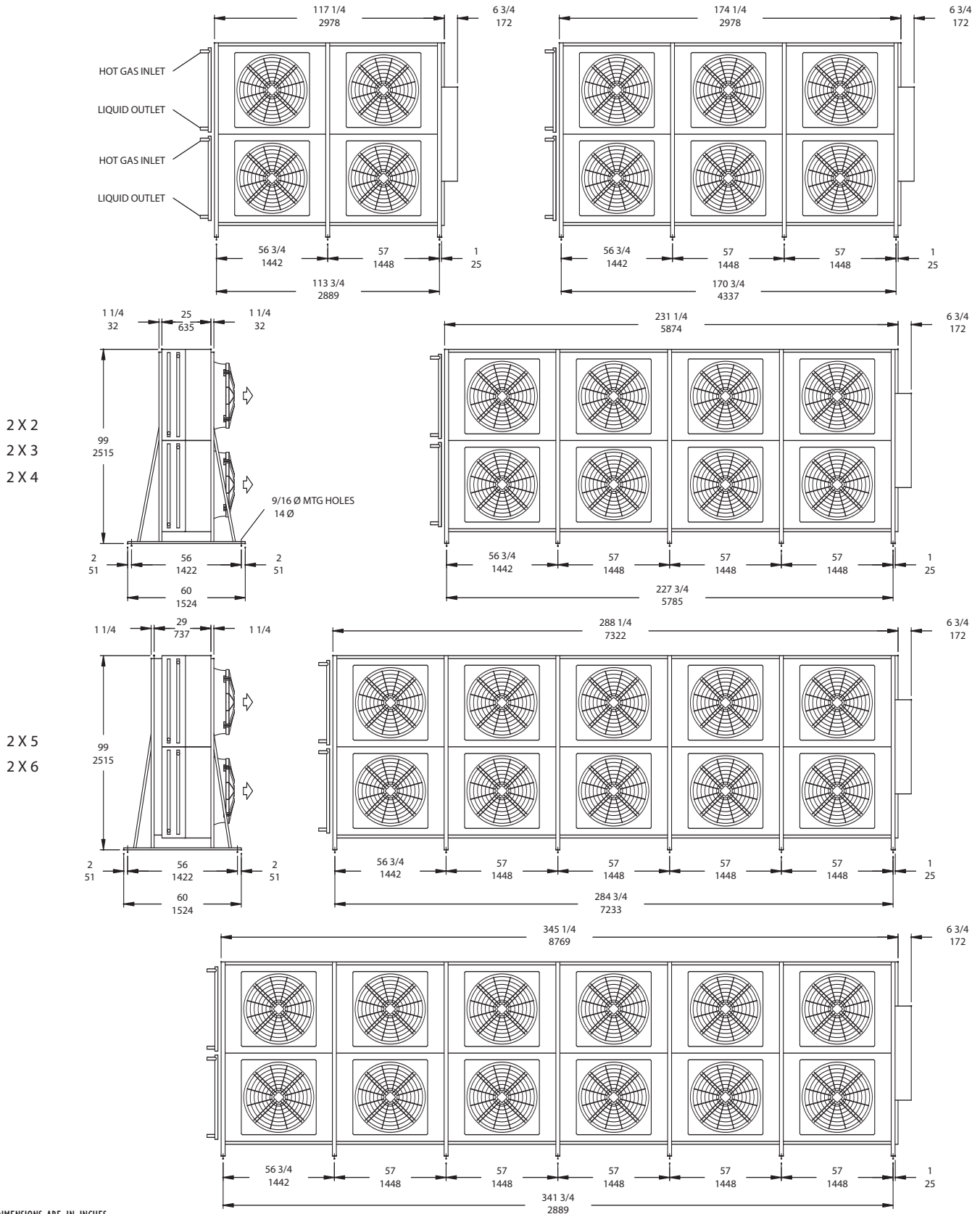


1 X 5



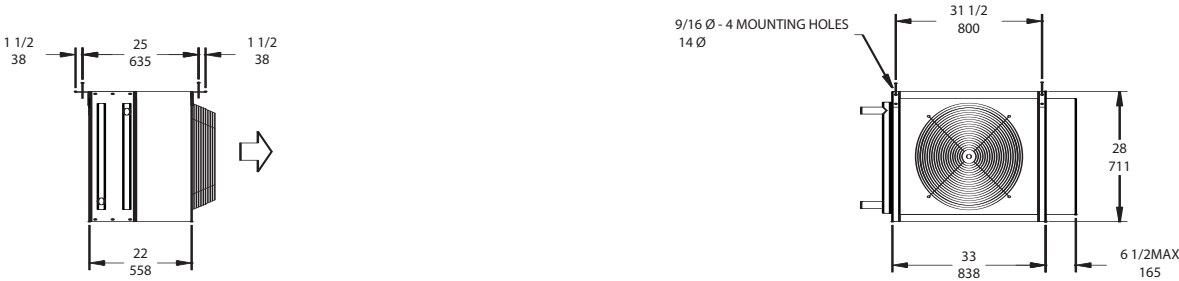
DIMENSIONS ARE IN INCHES
MM

CVR - CVW CONDENSER HORIZONTAL AIR FLOW DIMENSIONS

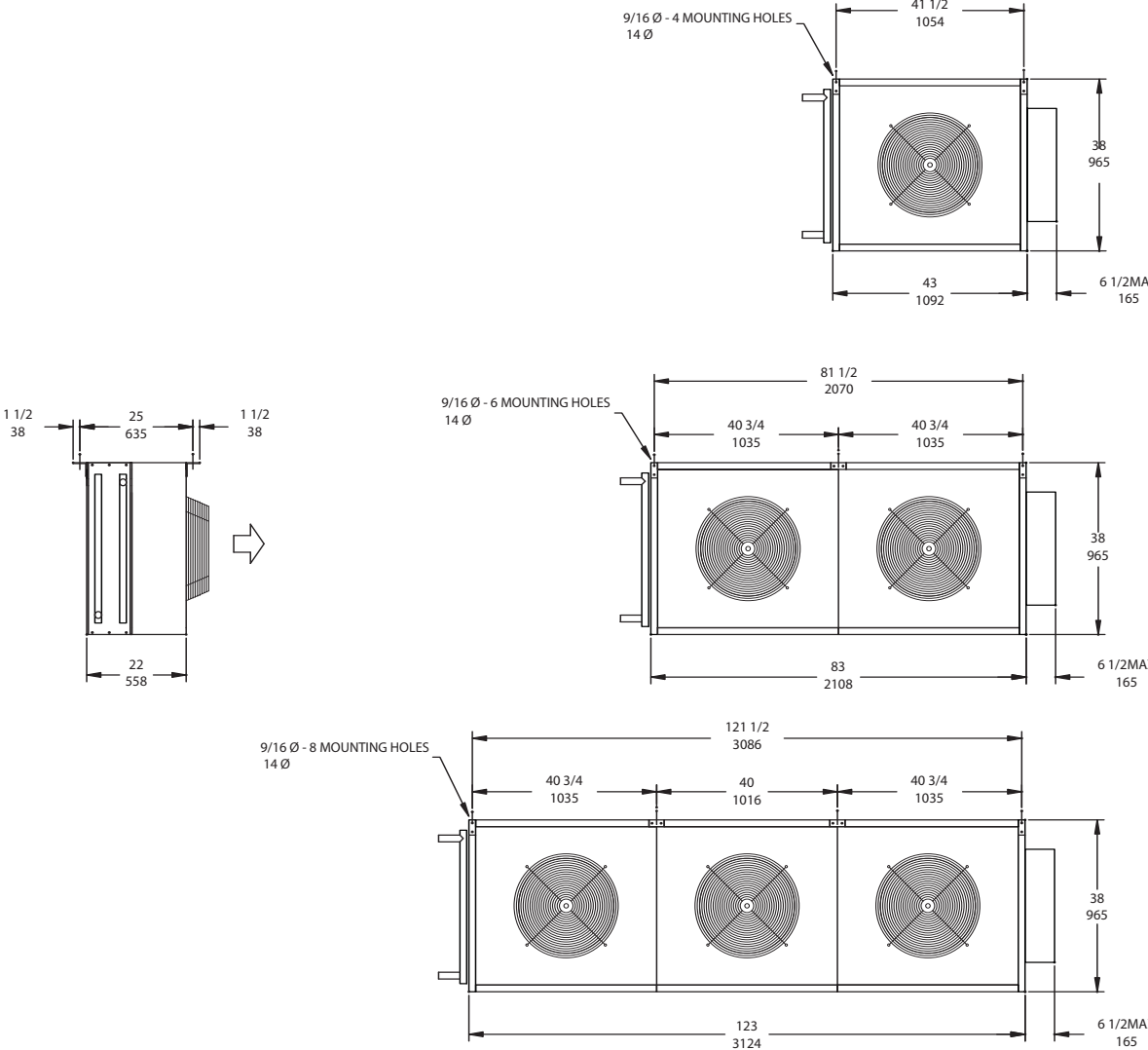


DIMENSIONS ARE IN INCHES
MM

HCD HEAT RECLAIM DIMENSIONS



HMD HEAT RECLAIM DIMENSIONS



DIMENSIONS ARE IN INCHES
MM

CCR, CMR, CLR, CLW, CLX, CNR, CNW & CNX

AIR-COOLED CONDENSER GENERAL SPECIFICATIONS

COILS are manufactured using seamless, deoxidized, heavy wall, microgroove copper tubes, mechanically expanded in self-spaced, full collared aluminum corrugated plate fins for permanent bond and maximum heat transfer. Connections and bends are brazed with high temperature brazing alloy. The coil is factory leak tested at 400 psig using -40 °F/°C dew point dry air. Coils are pressurized and sealed at 20 psig before assembly.

FRICION-FREE COIL TRACKS®

All tubes sheets are provided with oversized holes and tubes are supported in sliding cushions for friction-free assembly and maximum reliability.

HEADERS are made with seamless copper tube type **K OR L** and connections.

CASINGS for all condensers are heavy-gauge galvanized steel G90 with plated hardware for a corrosion-free assembly. The cabinet is sectionalized with individual fan chambers. The unit is a bolted construction. Coil section is independent of the fan section. **CCR/CMR** models are provided with 1" punched venturies. **ALL CLR, CLW, CLX, CNR, CNW & CNX** models are provided with 3 3/4" high spun venturies for a minimum noise and maximum efficiency. All models include side access panels for easy coil inspection and cleaning.

FANS are aluminum blades riveted to a steel hub. They are statically and dynamically balanced for smooth and vibration free operation. **CCR/CMR** fans are 20" in diameter with 4 blades. **CLR, CLW & CLX** fans are 30" in diameter with 4 blades and **CNR, CNW & CNX** fans are 30" in diameter with 5 blades.

FAN MOTORS feature permanently lubricated, sealed ball bearings and inherent thermal protection for long life and dependable service.

FAN GUARDS AND MOTOR MOUNTS are welded wire construction for full protection from moving parts with baked-on powder epoxy coating for corrosion protection.

OPTIONAL CONTROL PANELS can come complete with motor contactors and fuses (per motor or per pair of motors), temperature or pressure fan cycling, terminal block & control transformer.

Primary voltage is (208-240V, 480V, 600V) and secondary voltage is (24V, 120V & 240V).

ALL MOTORS ARE WIRED to weather resistance box. The unit is provided with terminal blocks for easy field installation. Terminals are clearly identified to match wiring diagram supplied with the unit. Motors are wired using flexible cord type SOW 90°C #16 AWG and they are terminated with liquid tight straight-thru fittings.

CVR, CVW & CVX**AIR-COOLED CONDENSER GENERAL SPECIFICATIONS**

COILS are manufactured using seamless, deoxidized, heavy wall, microgroove copper tubes, mechanically expanded in self-spaced, full collared aluminum corrugated plate fins for permanent bond and maximum heat transfer. Connections and bends are brazed with high temperature brazing alloy. The coil is factory leak tested at 400 psig using -40 °F/°C dew point dry air. Coils are pressurized and sealed at 20 psig before assembly.

FRICTION-FREE COIL TRACKS®

All tubes sheets are provided with oversized holes and tubes are supported in sliding cushions for friction-free assembly and maximum reliability.

HEADERS are made with seamless copper tube type **K OR L** and connections.

CASINGS for all condensers are heavy-gauge galvanized steel G90 with plated hardware for a corrosion-free assembly. The cabinet is sectionalized with individual fan chambers. The unit is a bolted construction. Coil section is independent of the fan section. **ALL VERSATILE** models are provided with 7 1/4" full bell mouth venturies. All models include side access panels for easy coil inspection and cleaning.

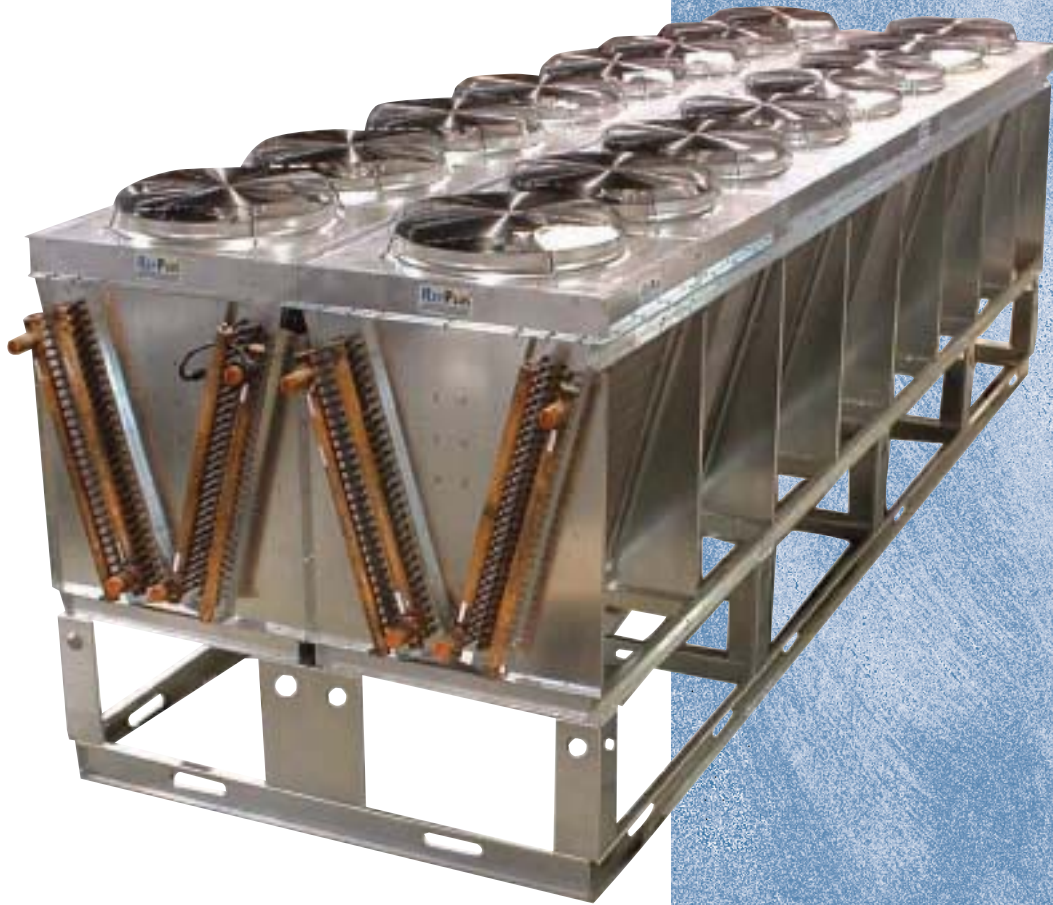
FANS are die cast aluminum. They are profiled in a sickle shape design for optimal sound behavior and low noise. Fan hubs are integrated to the external motor rotor. They are statically and dynamically balanced for smooth and vibration-free operation. **CVD, CVR, CVW & CVX** fans are 31 1/2" in diameter with 7 blades.

FAN MOTORS are totally enclosed, soft start, reverse rotor design. They feature permanently lubricated, double sealed, deep groove ball bearings. They are greased with special all temperature grease from sub zero to Class F. Motors can be single or two speed (550 or 780 RPM), Class F insulation, thermally protected, 575, 460, 208/230 3-phase 60 Hz and 400, 200 3-phase 50 Hz. Motors are designed for frequency drive; speed can be reduced down to 200 rpm. Frequency drive must have omni-pole sine filter on all phases.

FAN GUARDS AND MOTOR MOUNTS are welded wire construction for full protection from moving parts with baked-on powder epoxy coating for corrosion protection.

OPTIONAL CONTROL PANELS can come complete with motor contactors and fuses (per motor or per pair of motors), temperature or pressure fan cycling, terminal block & control transformer. Primary voltage is (208-240V, 480V, 600V) and secondary voltage is (24V, 120V & 240V). For two-speed applications, a timer, thermostat or pressure switch can be used as the last control to switch from low to high speed. An optional frequency drive can be provided for the constant operating motors or the whole condenser.

ALL MOTORS ARE WIRED to weather resistance box. The unit is provided with terminal blocks for easy field installation. Terminals are clearly identified to match wiring diagram supplied with the unit. Motors are wired using flexible cord type SOW 90°C #16 AWG and they are terminated with liquid tight straight-thru fittings.



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