Remote Condensers

REMOTE CONDENSERS

Desert Aire's remote condensers are designed with a commitment to excellence that will provide you with years of reliable service.

All Desert Aire equipment is consistently manufactured to high performance standards for efficient, reliable service and they are easy to install.

HIGH PERFORMANCE, DURABILITY AND EFFICIENCY

COILS - Round tube coils with enhanced tubing, advanced sinusoidal fin design for optimal performance. Extensive use of 5/16" and 3/8" diameter tubing keeps refrigerant charge to a minimum.

Our optional coil coating provides a uniform, flexible coating over the entire coil with negligible impact on thermal conductivity. 100% coverage is assured by the application process, even in the hard to reach center portions of the coil, without bridging between the fins. We recommend the application anytime a remote condenser is located near a salt water coast or a potential source of corrosive airborne particles.

ELEVATION CORRECTION FACTORS

Elevation above sea level has an effect on the performance of air-cooled condensers. The unit capacities shown in the Performance Table must be multiplied by the correction factors in Table 1 to correct for various elevations.

ELEVATION (FEET)	1,000	2,000	3,000	4,000	5,000	6,000	7,000
CORRECTION FACTOR	0.98	0.96	0.93	0.91	0.89	0.87	0.85

Table 1

EASY INSTALLATION

After uncrating, the condenser legs pivot from their transport to installation position and the condenser easily lifts into place with the use of eye bolts or brackets located on top of the unit. At ground level, the condenser can rest on a solid surface such as a concrete slab. On roofs, the unit should be placed on channels or an I-beam frame.

Desert Aire has a remote condenser for every application. Our complete line of direct-drive condensers complements the wide range of our dehumidification offerings.

TWO CIRCUIT OPTION

Two remote condensers can be combined to service a two-circuit dehumidifier. The electrical power connection is made to a single point on the 'base' condenser. The 'satellite' condenser ships with power and controls pigtails, which connect to the electrical panel on the base.

NOTES: All data contained in this document is subject to change without notice. Please consult factory for most current data. For longer refrigerant line lengths or greater elevation difference, please consult factory.

RCD SERIES™ by Desert Aire

The RCD range of condensers is sized up to 25 MBH/°F of heat rejection. The EC fans are controlled using PID to maintain a condenser pressure set point. Control panels are rated for 65 kA SCCR when power is supplied with class J fuses.

STANDARD FEATURES

- Powder coated galvannealed steel cabinet
- Folding legs, for compact shipping and easy installation
- Terminal block for power connection

OPTIONAL FEATURES

- Coil coating
- Can be mounted for horizontal airflow
- Non-fused or fused disconnect

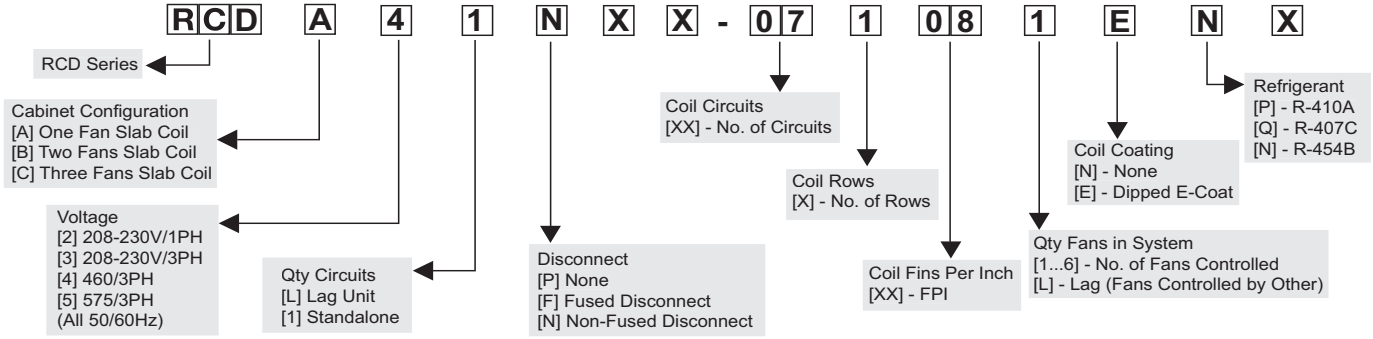
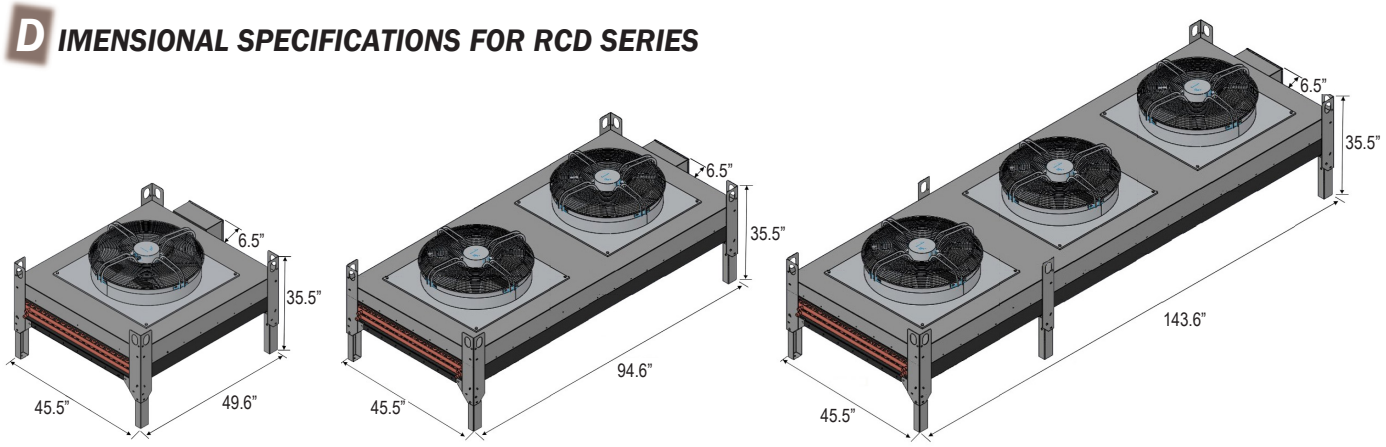


Figure 1 - RCD Model Matrix

DIMENSIONAL SPECIFICATIONS FOR RCD SERIES



			RCDA** NN03108***	RCDA** NN07208***	RCDA** NN18414***	RCDB** NN30414***	RCDC** NN45414***
DIMENSIONS	Connection[1] Size (in)	Discharge	7/8	7/8	7/8	7/8	1-3/8
		Liquid	7/8	7/8	7/8	7/8	7/8
	Fan Layout		1x1	1x1	1x1	1x2	1x3
	Mounting Holes (in)		42.9 x 46.1 (Φ3/8)	42.9 x 46.1 (Φ3/8)	42.9 x 46.1 (Φ3/8)	42.9 x 91.3 (Φ3/8)	42.9 x (91.8 & 140.3) (Φ3/8x6)
	Approximate Weight (lbs)[2]		377	384	397	684	1,020
	dBA[3]		40-68	40-69	40-71	40-69	50-74

[1] *Connection size does not indicate line size. Consult IO Manual.*
[2] *Add 49lbs for 575V applications.*
[3] *Listed dBA values are sound ratings for the maximum number of fans in operation per RC at 3m in accordance with AHRI standard 370-2001. Range indicates maximum and minimum sound intensities across each RC's application range.*

ELECTRICAL SPECIFICATIONS AND PERFORMANCE TABLE FOR RCD SERIES

	Voltage	Rating (Amps)	RCDA**NN03108*** (A1)	RCDA**NN07208*** (A2)	RCDA**NN18414*** (A3)	RCDB**NN30414*** (B1)	RCDC**NN45414*** (C1)
ELECTRICAL	208-230V 1PH 60Hz	FLA	6.9	6.9	6.9	13.8	20.7
		MCA	8.6	8.6	8.6	15.5	22.4
		MOPD[1]	15	15	15	20	25
		Unit kW	0.75	0.75	0.75	1.5	2.25
	208-230V 3PH 60Hz	FLA	4.3	4.3	4.3	8.6	12.9
		MCA	5.4	5.4	5.4	9.7	14
		MOPD[1]	9	9	9	12	15
		Unit kW	1.1	1.1	1.1	2.2	3.3
	460V 3PH 60Hz	FLA	1.75	3.9	3.9	7.8	11.7
		MCA	2.2	4.9	4.9	8.8	12.7
		MOPD[1]	4	8	8	12	15
		Unit kW	1.1	3.1	3.1	6.3	9.4
	575V 3PH 60Hz	FLA	3	6	6	9	15.1
		MCA	3.8	7.5	7.5	11.3	18.8
		MOPD[1]	6	12	12	20	30
		Unit kW	1.1	3.1	3.1	6.3	9.4

[1] *MOPD - Maximum Overcurrent Protection Device.*

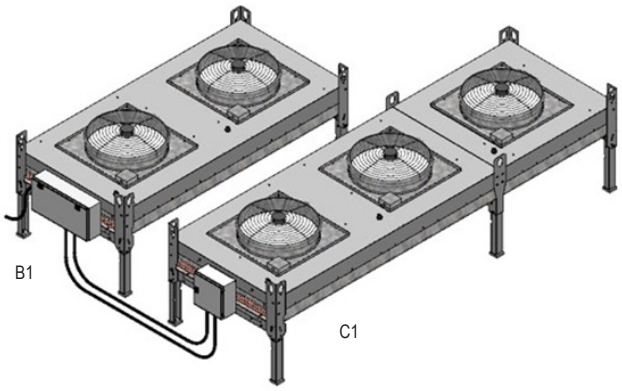
	Voltage	Refrigerant	RCDA**NN03108*** (A1)	RCDA**NN07208*** (A2)	RCDA**NN18414*** (A3)	RCDB**NN30414*** (B1)	RCDC**NN45414*** (C1)
NOMINAL PERFORMANCE (MBH/°F)	208-230V 1PH	R-410A	1.55	2.81	5.50	11.12	17.50
		R-407C	1.55	2.81	5.50	11.12	17.50
		R-454B	1.49	2.69	5.26	10.62	16.61
	208-230V 3PH	R-410A	1.64	2.94	5.80	11.73	18.48
		R-407C	1.64	2.94	5.80	11.73	18.48
		R-454B	1.57	2.81	5.55	11.20	17.55
	460 & 575V 3PH	R-410A	1.64	3.97	8.17	14.58	25.75
		R-407C	1.64	3.97	8.17	14.58	25.75
		R-454B	1.57	3.81	7.82	15.62	25.23

RCD SERIES™ by Desert Aire

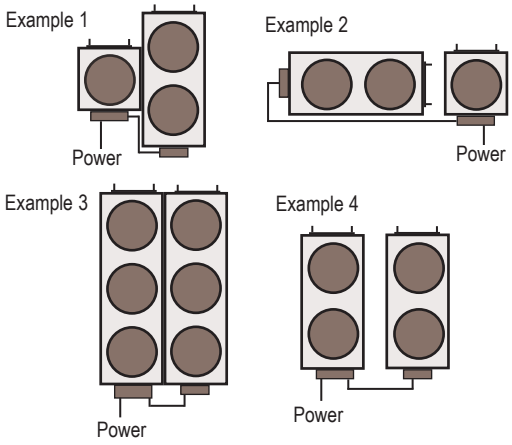
TWO CIRCUIT RCD CONDENSERS

The two condensers are sized to match the two circuits of the dehumidifier. They may be different sizes. The 'Base' unit has the control panel to which power is connected. The central electrical panel is mounted on the Base unit, and powers and controls both units. The two units are controlled independently, maintaining the correct airflow to maintain correct condensing pressures.

Example Pairing for 2 Circuits



Sample Configurations



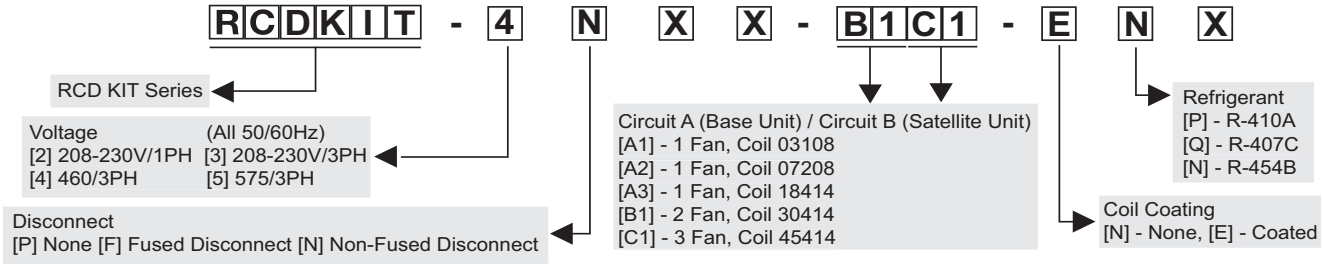


Figure 2 - RCD KIT Matrix

Voltage	Rating (Amps)	Coil Combination (Base, Satellite)							
		A1A1	A1A2 & A1A3	A2A3 & A2A2 &A3A3	A1B1	A2B1 & A3B1	B1B1	B1C1	C1C1
208-230V 1PH 60Hz	FLA	13.8	13.8	13.8	20.7	20.7	27.6	34.5	41.4
	MCA	15.5	15.5	15.5	22.4	22.4	29.3	36.2	43.1
	MOPD	20	20	20	25	25	35	40	50
	Unit kW	1.5	1.5	1.5	2.3	2.3	3.0	3.8	4.5
208-230V 3PH 60Hz	FLA	8.6	8.6	8.6	12.9	12.9	17.2	21.5	25.8
	MCA	9.7	9.7	9.7	14.0	14.0	18.3	22.6	26.9
	MOPD	15	15	15	20	20	20	25	30
	Unit kW	2.2	2.2	2.2	3.3	3.3	4.4	5.5	6.6
460V 3PH 60Hz	FLA	3.5	5.7	7.8	9.6	11.7	15.6	19.5	23.4
	MCA	3.9	6.6	8.8	10.5	12.7	16.6	20.5	24.4
	MOPD	5	10	10	12	15	20	25	30
	Unit kW	2.2	4.2	6.3	7.4	9.4	12.6	15.7	18.8
575V 3PH 60Hz	FLA	6.0	9.0	12.0	12.1	15.1	18.1	24.1	30.1
	MCA	6.8	10.5	13.6	14.3	17.3	20.3	27.9	33.9
	MOPD	10	15	15	20	25	25	40	45
	Unit kW	2.2	4.2	6.3	7.4	9.4	12.6	15.7	18.8

RCL SERIES™ by Desert Aire

Desert Aire's RCL range of condensers is sized up to 129.5 MBH/°F of heat rejection. They feature a high efficiency Floating Tube coil design for optimum performance and strong protection against tube sheet leaks.

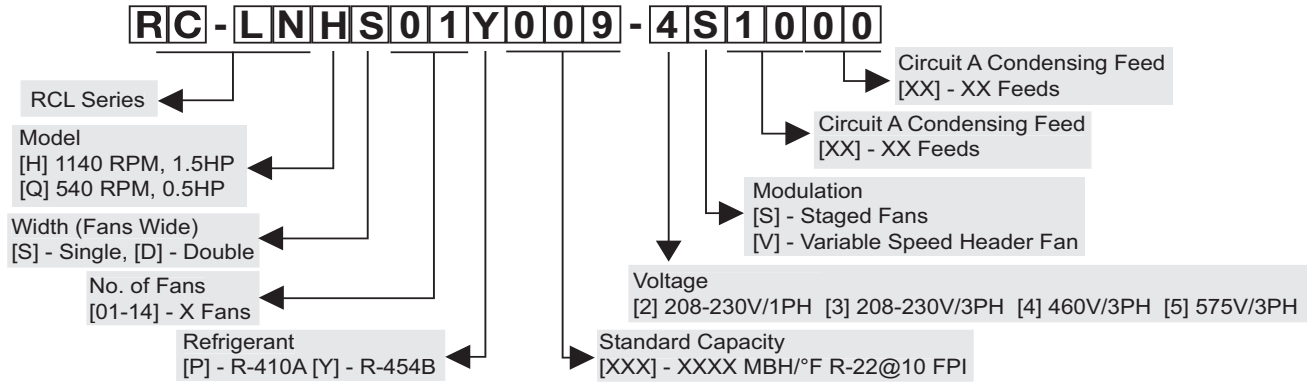


Figure 3 - RCL Model Matrix

RCL SERIES™ by Desert Aire

ELECTRICAL & PERFORMANCE DATA

	Model	Fan Layout	SCCR	208-230V/3PH/60Hz Amps			460/3/60 Amps			575/3/60 Amps			Performance MBH/°F TD	
				FLA	MCA	MOPD[1]	FLA	MCA	MOPD[1]	FLA	MCA	MOPD[1]	R-454B	R-410A
SINGLE WIDTH	LNHS01X007	1x1	5kA	7.0	15.0	25	3.5	15.0	15	2.8	15.0	15	7.5	8.0
	LNHS01X009	1x1	5kA	7.0	15.0	25	3.5	15.0	15	2.8	15.0	15	8.9	9.5
	LNHS02X011	1x2	5kA	14.0	20.0	35	7.0	15.0	15	5.6	15.0	15	11.0	11.7
	LNHS02X015	1x2	5kA	14.0	20.0	35	7.0	15.0	15	5.6	15.0	15	14.7	15.6
	LNHS02X017	1x2	5kA	14.0	20.0	35	7.0	15.0	15	5.6	15.0	15	17.0	18.1
	LNHS03X022	1x3	5kA	21.0	22.8	40	10.5	15.0	20	8.4	15.0	15	22.0	23.4
	LNHS03X026	1x3	5kA	21.0	22.8	40	10.5	15.0	20	8.4	15.0	15	25.5	27.1
	LNHS04X029	1x4	5kA	28.0	29.8	45	14.0	15.0	20	11.2	15.0	15	29.3	31.2
	LNHS04X034	1x4	5kA	28.0	29.8	45	14.0	15.0	20	11.2	15.0	15	33.9	36.1
	LNHS05X037	1x5	5kA	35.0	36.8	50	17.5	20.0	25	14.0	15.0	20	36.9	39.3
	LNHS05X044	1x5	5kA	35.0	36.8	50	17.5	20.0	25	14.0	15.0	20	43.3	46.1
	LNHS06X053	1x6	5kA	42.0	43.8	60	21.0	21.9	30	16.8	20.0	25	52.0	55.3
	LNHS07X061	1x7	5kA	49.0	50.8	70	24.5	25.4	35	19.6	20.3	25	60.8	64.7
DUAL WIDTH	LNHD04X021	2x2	5kA	28.0	29.8	45	14.0	15.0	20	11.2	15.0	15	22.0	23.4
	LNHD04X029	2x2	5kA	28.0	29.8	45	14.0	15.0	20	11.2	15.0	15	29.3	31.2
	LNHD04X034	2x2	5kA	28.0	29.8	45	14.0	15.0	20	11.2	15.0	15	33.9	36.1
	LNHD06X044	2x3	5kA	42.0	43.8	60	21.0	21.9	30	16.8	20.0	25	43.9	46.7
	LNHD06X051	2x3	5kA	42.0	43.8	60	21.0	21.9	30	16.8	20.0	25	50.9	54.2
	LNHD08X058	2x4	5kA	56.0	57.8	70	28.0	28.9	35	22.4	23.1	30	58.6	62.3
	LNHD08X068	2x4	5kA	56.0	57.8	70	28.0	28.9	35	22.4	23.1	30	68.0	72.3
	LNHD10X074	2x5	5kA	70.0	71.8	90	35.0	35.9	45	28.0	28.7	35	73.8	78.5
	LNHD10X088	2x5	5kA	70.0	71.8	90	35.0	35.9	45	28.0	28.7	35	86.6	92.1
	LNHD12X106	2x6	5kA	84.0	85.8	100	42.0	42.9	50	33.6	34.3	40	103.9	110.5
	LNHD14X122	2x7	5kA	98.0	99.8	110	49.0	49.9	60	39.2	39.9	45	121.7	129.5

[1] *MOPD - Maximum Overcurrent Protection Device*

RCL SERIES™ by Desert Aire

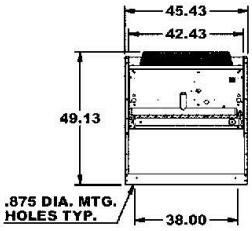
CONNECTION, WEIGHT & SOUND DATA

	Model	Single Circuit Configuration		Dual Circuit Configuration		Weight (lb)	Sound Pressure Level (dBA) [2]
		Discharge Connection (in) [1]	Liquid Connection (in) [1]	Discharge Connection (in) [1]	Liquid Connection (in) [1]		
SINGLE WIDTH	RC-LNHS01*	1 3/8	1 3/8	1 1/8	1 1/8	330	72.3
	RC-LNHS02*	1 3/8	1 3/8	1 1/8	1 1/8	580	75.3
	RC-LNHS03*	2 1/8	2 1/8	1 3/8	1 3/8	930	77.1
	RC-LNHS04*	2 1/8	2 1/8	1 5/8	1 5/8	1,210	78.3
	RC-LNHS05*	2 5/8	2 5/8	2 1/8	2 1/8	1,510	79.3
	RC-LNHS06*	2 5/8	2 5/8	2 1/8	2 1/8	1,950	80.1
	RC-LNHS07*	2 @ 2 5/8	2 @ 2 5/8	2 5/8	2 5/8	2,240	80.8
DUAL WIDTH	RC-LNHD04*	-	-	1 3/8	1 3/8	1,240	78.3
	RC-LNHD06*	-	-	2 1/8	2 1/8	1,990	80.1
	RC-LNHD08*	-	-	2 1/8	2 1/8	2,630	81.3
	RC-LNHD10*	-	-	2 5/8	2 5/8	3,290	82.3
	RC-LNHD12*	-	-	2 5/8	2 5/8	4,230	83.1
	RC-LNHD14*	-	-	2 @ 2 5/8	2 @ 2 5/8	4,910	83.8

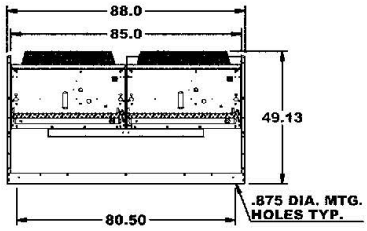
[1] *Connection size does not indicate line size. Consult IO Manual.*
[2] *Listed dBA values are sound ratings for the maximum number of fans in operation per RC at 3m in accordance with AHRI standard 370-2001.*

DIMENSIONS RCL SERIES

Single Row of Fans



Double Row of Fans



Side Views

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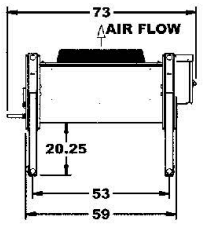

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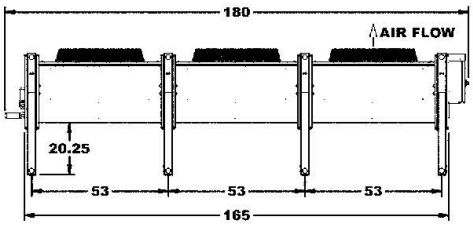

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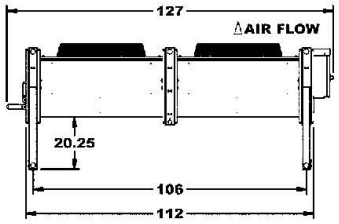

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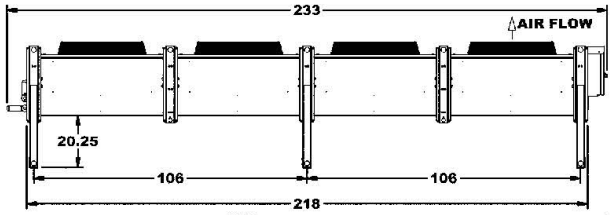

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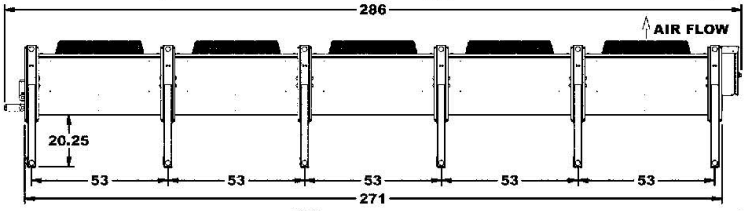

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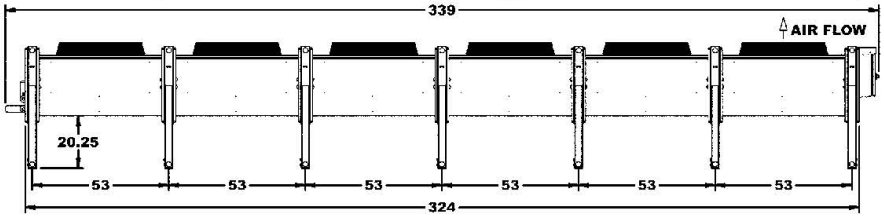

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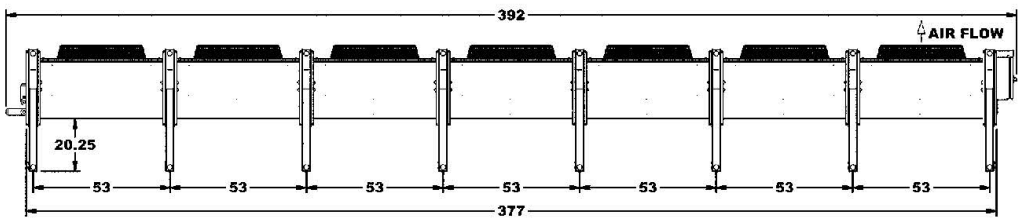


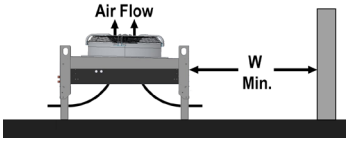
Location of Remote Condenser System

The equipment is designed for outdoor installation and may be mounted on a roof or concrete slab. The units should be mounted level on roofs, slabs and/or structural supports that are sufficiently strong to support the total equipment operating weight. Consult a professional engineer to determine safe mounting loads.

Sufficient space for uninhibited airflow should be provided when near: overhangs; walls; pits; fences; other equipment; and building air intakes, vents or exhaust fans. Locate the remote condenser far enough away from obstructions to provide adequate clearance for ambient air inlet and discharge to prevent 1) reducing the airflow through the condenser coil; and 2) causing air recirculation which heats the air entering the coil above ambient. See Figure 3 for recommendations. Do not attach ductwork to the coil inlet or outlet. Be sure to allow ample space for maintenance work.

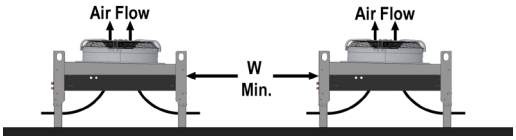
Locate equipment away from occupied spaces to reduce the transmission of objectionable sound and/or vibration. Use refrigerant piping flexible to prevent transmission of noise and vibration into the building. Use isolation hangers to support refrigerant lines. The unit must be secured in its final location. Holes are provided in the mounting legs for this purpose.

A



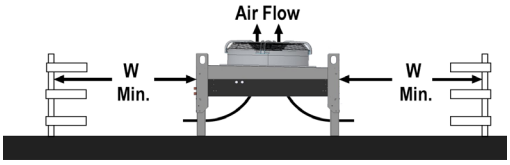
Walls or Obstructions: All sides of the unit should be a minimum of one overall unit width “W” away from any wall or barrier.

B



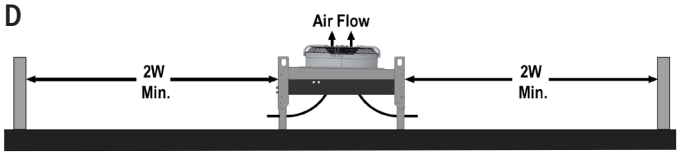
Multiple Units: For units placed side by side, the minimum distance between the units is the overall width “W” of largest unit.

C



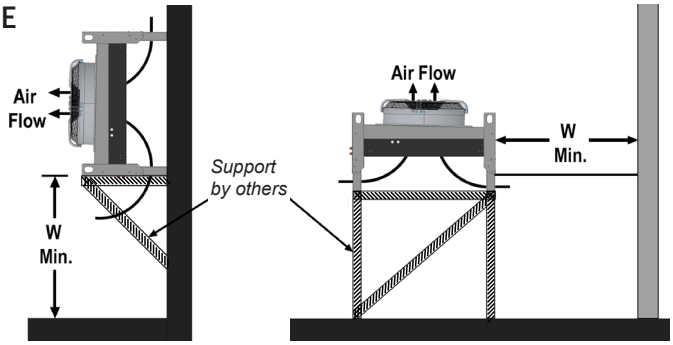
Decorative Fences: Fences must have 50% free area, with 1 foot of bottom clearance, and must not extend higher than the top of the unit. Units should be a minimum of one overall width “W” away from fence.

D



Units in Pits: The top of the unit must be level with, or higher than, the top of the pit. All sides of the unit should be a minimum of two overall unit widths “2W” away from any wall of the pit.

E



Horizontal Airflow Mount or Raised Platform Mount: The unit sides should be a minimum of one overall unit width “W” away from ground (Horizontal Airflow Mount) or wall (Raised Platform Mount). The support is provided by others and must allow airflow to access the coil.

Figure 4 - Space and Location Requirements