



MODEL: RHCYA Air Handler

FORM NO. HSC-595

Sure Comfort® Commercial Split Air Handler



RHCYA Series

- Nominal Sizes: 7.5, 10 Small, 10 Large, 12.5, 15 & 20 Tons [26.4, 35.2, 35.2, 44.0, 52.8 & 70.3 kW]
- Cooling Capacities: 72.2k Btu/h to 240.0k Btu/h [21.2 kW to 70.3 kW]
- Refrigerant Type: R-454B
- Designed for use with matching RACY models



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RHCYA STANDARD FEATURES INCLUDE:

- Designed for R-454B refrigerant
- Wired and run tested
- Convertible airflow – vertical up flow or horizontal sideflow
- Cooling operation up to 125°F ambient
- TXV refrigerant metering system
- Field-adjustable TXVs
- Solid-core liquid line filter drier
- Insulation encapsulated throughout entire unit
- Galvanized steel drain pan
- Standard Variable Frequency Drives (VFDs)
- Unit cabinet design shall be separable to facilitate mobilization during installation
- MERV 8 & MERV 13 filters are available as an accessory

ACCESSORIES

ACCESSORY DESCRIPTION	MODEL NUMBER	SIZE USED ON	DIMENSIONS D x L x W (INCHES)
Electric Heater Kit	RXHE-DE020CA	090, 120	N/A
	RXHE-DE030CA	090, 120	N/A
	RXHE-DE020DA	090, 120	N/A
	RXHE-DE030DA	090, 120	N/A
	RXHE-CE030CC	121, 150, 180, 240	N/A
	RXHE-CE040CC	121, 150, 180, 240	N/A
	RXHE-CE030DC	121, 150, 180, 240	N/A
	RXHE-CE040DC	121, 150, 180, 240	N/A
Low Ambient Control	RXAD-A08	ALL	NA
MERV 13 Filter	RXMF-M13A11625	90, 120	1 x 16 x 25
	RXMF-M13A12025	150, 180, 240	1 x 20 x 25
	RXMF-M13A21625	90, 120	2 x 16 x 25
	RXMF-M13A22520	150, 180, 240	2 x 20 x 25
MERV 8 Filter	RXMF-M08A11625	90, 120	1 x 16 x 25
	RXMF-M08A12025	150, 180, 240	1 x 20 x 25
	RXMF-M08A21625	90, 120	2 x 16 x 25
	RXMF-M08A22520	150, 180, 240	2 x 20 x 25



Designing for Sustainability with Low GWP: For 2025, the Environmental Protection Agency (EPA) has set a global warming potential (GWP) limit of 700 for refrigerant used in heating and cooling systems. This new requirement will result in a 78%¹ lower GWP than previous-generation refrigerants - with only minimal changes to system installation. For us, this is another step toward our continued sustainability goal of reducing greenhouse gas emissions, while still delivering an exceptional level of energy efficient, dependable comfort.

¹When comparing the GWP of R-454B to R-410A refrigerant.

R
1

H
2

C
3

Y
4

A
5

2
6

090
789

C
10

A
11

R
12

1—Brand

R = Sure Comfort

2—Unit Type

H = Air Handler

3—Cabinet Type

C = Commercial

4—Refrigerant

Y = R-454B

5—Heat Type

A = Air Conditioner

6—Airflow Configuration

2 = 2-stage

7,8,9—Capacity

090 = 7.5 Ton

120 = 10 Ton (Small)

121 = 10 Ton (Large)

150 = 12.5 Ton

180 = 15 Ton

240 = 20 Ton

10—Electrical Designation

C = 208/230 V, 3 PH, 60 Hz

D = 460 V, 3 PH, 60 Hz

Y = 575 V, 3 PH, 60 Hz

11—Minor Series

A = 1st Design

12—Drive

R = Belt Drive—VFD Low Static

S = Belt Drive—VFD Medium Static

T = Belt Drive—VFD High Static

COMMERCIAL SPLIT HEAT PUMP MODEL MATCH-UPS

OUTDOOR UNIT MODEL NUMBER	INDOOR AIR HANDLER MODEL NUMBER
RACY2078	RHCYA2090
RACY2090	RHCYA2090
RACY2119	RHCYA2121
RACY2120	RHCYA2120
RACY2150	RHCYA2150
RACY2180	RHCYA2180
RACY2240	RHCYA2240

GENERAL DATA

Model RHCYA2 Series	090C	090D	090Y
			CONTINUED →
Indoor Coil—Fin Type	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	10.2 [0.9]	10.2 [0.9]	10.2 [0.9]
Rows / FPI [FPcm]	4 / 15 [10 / 38]	4 / 15 [10 / 38]	4 / 15 [10 / 38]
Refrigerant Control	TX Valves	TX Valves	TX Valves
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal
Diameter in. [mm]	12x12 [305 x 305]	12x12 [305 x 305]	12x12 [305 x 305]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds (Standard / VFD)	Single / Multiple	Single / Multiple	Single / Multiple
No. Motors	1	1	1
Motor HP			
R - Low Static Drive	2	2	2
S - Medium Static Drive	2	2	2
T - High Static Drive	3	3	3
Motor RPM	1725	1725	1725
Weights			
Net Weight lbs. [kg]			
R - Low Static Drive	409 [186]	409 [186]	409 [186]
S - Medium Static Drive	409 [186]	409 [186]	409 [186]
T - High Static Drive	419 [190]	419 [190]	419 [190]
Shipping Weight lbs. [kg]			
R - Low Static Drive	429 [195]	429 [195]	429 [195]
S - Medium Static Drive	429 [195]	429 [195]	429 [195]
T - High Static Drive	439 [199]	439 [199]	439 [199]

GENERAL DATA (CONTINUED)

Model RHCYA2 Series	120C	120D	120Y
			CONTINUED →
Indoor Coil—Fin Type	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	10.2 [0.9]	10.2 [0.9]	10.2 [0.9]
Rows / FPI [FPcm]	4 / 15 [10 / 38]	4 / 15 [10 / 38]	4 / 15 [10 / 38]
Refrigerant Control	TX Valves	TX Valves	TX Valves
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal
Diameter in. [mm]	12x12 [305 x 305]	12x12 [305 x 305]	12x12 [305 x 305]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds (Standard / VFD)	Single / Multiple	Single / Multiple	Single / Multiple
No. Motors	1	1	1
Motor HP			
R - Low Static Drive	2	2	2
S - Medium Static Drive	2	2	2
T - High Static Drive	3	3	3
Motor RPM	1725	1725	1725
Weights			
Net Weight lbs. [kg]			
R - Low Static Drive	409 [186]	409 [186]	409 [186]
S - Medium Static Drive	409 [186]	409 [186]	409 [186]
T - High Static Drive	419 [190]	419 [190]	419 [190]
Shipping Weight lbs. [kg]			
R - Low Static Drive	429 [195]	429 [195]	429 [195]
S - Medium Static Drive	429 [195]	429 [195]	429 [195]
T - High Static Drive	439 [199]	439 [199]	439 [199]

GENERAL DATA (CONTINUED)

Model RHCYA2 Series	121C	121D	CONTINUED →
Indoor Coil—Fin Type	Louvered	Louvered	
Tube Type	Rifled	Rifled	
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	
Face Area sq. ft. [sq. m]	16.5 [1.5]	16.5 [1.5]	
Rows / FPI [FPcm]	3 / 15 [8 / 46]	3 / 15 [8 / 46]	
Refrigerant Control	TX Valves	TX Valves	
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	
Diameter in. [mm]	18x15 [457x381]	18x15 [457x381]	
Drive Type	Belt (Adjustable)	Belt (Adjustable)	
No. Speeds (Standard / VFD)	Single / Multiple	Single / Multiple	
No. Motors	1	1	
Motor HP			
R - Low Static Drive	2	2	
S - Medium Static Drive	2	2	
T - High Static Drive	3	3	
Motor RPM	1725	1725	
Weights			
Net Weight lbs. [kg]			
R - Low Static Drive	575 [261]	575 [261]	
S - Medium Static Drive	585 [265]	585 [265]	
T - High Static Drive	595 [270]	595 [270]	
Shipping Weight lbs. [kg]			
R - Low Static Drive	595 [270]	595 [270]	
S - Medium Static Drive	605 [274]	605 [274]	
T - High Static Drive	615 [279]	615 [279]	

GENERAL DATA (CONTINUED)

Model RHCYA2 Series	150C	150D	150Y
			CONTINUED →
Indoor Coil—Fin Type	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	16.5 [1.5]	16.5 [1.5]	16.5 [1.5]
Rows / FPI [FPcm]	3 / 15 [8 / 38]	3 / 15 [8 / 38]	3 / 15 [8 / 38]
Refrigerant Control	TX Valves	TX Valves	TX Valves
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal
Diameter in. [mm]	18x15 [457x381]	18x15 [457x381]	18x15 [457x381]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds (Standard / VFD)	Single / Multiple	Single / Multiple	Single / Multiple
No. Motors	1	1	1
Motor HP			
R - Low Static Drive	2	2	2
S - Medium Static Drive	3	3	3
T - High Static Drive	5	5	5
Motor RPM	1725	1725	1725
Weights			
Net Weight lbs. [kg]			
R - Low Static Drive	575 [261]	575 [261]	575 [261]
S - Medium Static Drive	585 [265]	585 [265]	585 [265]
T - High Static Drive	595 [270]	595 [270]	595 [270]
Shipping Weight lbs. [kg]			
R - Low Static Drive	595 [270]	595 [270]	595 [270]
S - Medium Static Drive	605 [274]	605 [274]	605 [274]
T - High Static Drive	615 [279]	615 [279]	615 [279]

GENERAL DATA (CONTINUED)

Model RHCYA2 Series	180C	180D	180Y
			CONTINUED →
Indoor Coil—Fin Type	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	16.5 [1.5]	16.5 [1.5]	16.5 [1.5]
Rows / FPI [FPcm]	4 / 15 [10 / 38]	4 / 15 [10 / 38]	4 / 15 [10 / 38]
Refrigerant Control	TX Valves	TX Valves	TX Valves
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal
Diameter in. [mm]	18x15 [457x381]	18x15 [457x381]	18x15 [457x381]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds (Standard / VFD)	Single / Multiple	Single / Multiple	Single / Multiple
No. Motors	1	1	1
Motor HP			
R - Low Static Drive	2	2	2
S - Medium Static Drive	3	3	3
T - High Static Drive	5	5	5
Motor RPM	1725	1725	1725
Weights			
Net Weight lbs. [kg]			
R - Low Static Drive	690 [313]	690 [313]	690 [313]
S - Medium Static Drive	700 [318]	700 [318]	700 [318]
T - High Static Drive	710 [322]	710 [322]	710 [322]
Shipping Weight lbs. [kg]			
R - Low Static Drive	710 [322]	710 [322]	710 [322]
S - Medium Static Drive	720 [327]	720 [327]	720 [327]
T - High Static Drive	730 [331]	730 [331]	730 [331]

GENERAL DATA (CONTINUED)

Model RHCYA2 Series	240C	240D	240Y
Indoor Coil—Fin Type	Louvered	Louvered	Louvered
Tube Type	Rifled	Rifled	Rifled
Tube Size in. [mm]	0.375 [9.5]	0.375 [9.5]	0.375 [9.5]
Face Area sq. ft. [sq. m]	16.5 [1.5]	16.5 [1.5]	16.5 [1.5]
Rows / FPI [FPcm]	4 / 15 [10 / 38]	4 / 15 [10 / 38]	4 / 15 [10 / 38]
Refrigerant Control	TX Valves	TX Valves	TX Valves
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal
Diameter in. [mm]	18x18 [457x457]	18x18 [457x457]	18x18 [457x457]
Drive Type	Belt (Adjustable)	Belt (Adjustable)	Belt (Adjustable)
No. Speeds (Standard / VFD)	Single / Multiple	Single / Multiple	Single / Multiple
No. Motors	1	1	1
Motor HP			
R - Low Static Drive	5	5	5
S - Medium Static Drive	7.5	7.5	7.5
T - High Static Drive	7.5	7.5	7.5
Motor RPM	1725	1725	1725
Weights			
Net Weight lbs. [kg]			
R - Low Static Drive	700 [318]	700 [318]	700 [318]
S - Medium Static Drive	710 [322]	710 [322]	710 [322]
T - High Static Drive	710 [322]	710 [322]	710 [322]
Shipping Weight lbs. [kg]			
R - Low Static Drive	720 [327]	720 [327]	720 [327]
S - Medium Static Drive	730 [331]	730 [331]	730 [331]
T - High Static Drive	730 [331]	730 [331]	730 [331]

UNIT DIMENSIONS

Model Number	CONNECTIONS				UNIT					
	Liquid		Vapor		W (Width)		H (Height)		L (Length)	
	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
RHCYA2090	1/2	12.70	1-1/8	28.58	52.89	1343.36	27.86	707.52	57.83	1468.88
RHCYA2120	5/8	15.88	1-3/8	34.93	52.89	1343.36	27.86	707.52	57.83	1468.88
RHCYA2121	5/8	15.88	1-3/8	34.93	60.37	1533.32	35.10	891.54	78.33	1989.51
RHCYA2150	5/8	15.88	1-3/8	34.93	60.37	1533.32	35.10	891.54	78.33	1989.51
RHCYA2180	7/8	22.22	1-5/8	41.27	60.37	1533.32	35.10	891.54	78.33	1989.51
RHCYA2240	7/8	22.22	1-5/8	41.27	60.37	1533.32	35.10	891.54	78.33	1989.51

ELECTRICAL DATA – RHCYA2 SERIES

		090C	090D	090Y
Unit Information	Unit Operating Voltage Range	187-253	414-506	541-610
	Volts	208/230	460	575
	Minimum Circuit Ampacity			
	R - Low Static Drive	8	4	3
	S - Medium Static Drive	8	4	3
	T - High Static Drive	12	6	5
	Maximum Overcurrent Protection Device Size			
	R - Low Static Drive	15/15	15/15	15/15
	S - Medium Static Drive	15/15	15/15	15/15
	T - High Static Drive	15/20	15/15	15/15
Motor Information	No.	1	1	1
	Volts	208/230	460	575
	Phase	3	3	3
	Rating Plate Amps			
	R - Low Static Drive	6.2	3	2.4
	S - Medium Static Drive	6.2	3	2.4
	T - High Static Drive	9.2	4.6	3.5
	LRA (Amps)			
	R - Low Static Drive	47	24	22.72
	S - Medium Static Drive	47	24	22.72
	T - High Static Drive	74.5	38.1	30

ELECTRICAL DATA – RHCYA2 SERIES

		120C	120D	120Y	121C	121D
Unit Information	Unit Operating Voltage Range	187-253	414-506	541-610	187-253	414-506
	Volts	208/230	460	575	208/230	460
	Minimum Circuit Ampacity					
	R - Low Static Drive	8	4	3	8	4
	S - Medium Static Drive	8	4	3	8	4
	T - High Static Drive	12	6	5	12	6
	Maximum Overcurrent Protection Device Size					
	R - Low Static Drive	15/15	15/15	15/15	15/15	15/15
	S - Medium Static Drive	15/15	15/15	15/15	15/15	15/15
	T - High Static Drive	15/20	15/15	15/15	15/15	15/15
Motor Information	No.	1	1	1	1	1
	Volts	208/230	460	575	208/230	460
	Phase	3	3	3	3	3
	Rating Plate Amps					
	R - Low Static Drive	6.2	3	2.4	6.2	3
	S - Medium Static Drive	6.2	3	2.4	6.2	3
	T - High Static Drive	9.2	4.6	3.5	9.2	4.6
	LRA (Amps)					
	R - Low Static Drive	47	24	22.72	47	24
	S - Medium Static Drive	47	24	22.72	47	24
	T - High Static Drive	74.5	38.1	30	74.5	38.1

ELECTRICAL DATA – RHCYA2 SERIES

		150C	150D	150Y
Unit Information	Unit Operating Voltage Range	187-253	414-506	541-610
	Volts	208/230	460	575
	Minimum Circuit Ampacity			
	R - Low Static Drive	8	4	3
	S - Medium Static Drive	12	6	5
	T - High Static Drive	16	8	7
	Maximum Overcurrent Protection Device Size			
	R - Low Static Drive	15/15	15/15	15/15
	S - Medium Static Drive	15/15	15/15	15/15
	T - High Static Drive	20/25	15/15	15/15
Motor Information	No.	1	1	1
	Volts	208/230	460	575
	Phase	3	3	3
	Rating Plate Amps			
	R - Low Static Drive	6.2	3	2.4
	S - Medium Static Drive	9.2	4.6	3.5
	T - High Static Drive	12.6	6.3	5.1
	LRA (Amps)			
	R - Low Static Drive	47	24	22.72
	S - Medium Static Drive	74.5	38.1	30
	T - High Static Drive	95	47.5	38

ELECTRICAL DATA – RHCYA2 SERIES

		180C	180D	180Y
Unit Information	Unit Operating Voltage Range	187-253	414-506	541-610
	Volts	208/230	460	575
	Minimum Circuit Ampacity			
	R - Low Static Drive	8	4	3
	S - Medium Static Drive	12	6	5
	T - High Static Drive	16	8	7
	Maximum Overcurrent Protection Device Size			
	R - Low Static Drive	15/15	15/15	15/15
	S - Medium Static Drive	15/15	15/15	15/15
	T - High Static Drive	20/25	15/15	15/15
Motor Information	No.	1	1	1
	Volts	208/230	460	575
	Phase	3	3	3
	Rating Plate Amps			
	R - Low Static Drive	6.2	3	2.4
	S - Medium Static Drive	9.2	4.6	3.5
	T - High Static Drive	12.6	6.3	5.1
	LRA (Amps)			
	R - Low Static Drive	47	24	22.72
	S - Medium Static Drive	74.5	38.1	30
	T - High Static Drive	95	47.5	38

ELECTRICAL DATA – RHCYA2 SERIES

		240C	240D	240Y
Unit Information	Unit Operating Voltage Range	187-253	414-506	541-610
	Volts	208/230	460	575
	Minimum Circuit Ampacity			
	R - Low Static Drive	16	8	7
	S - Medium Static Drive	24	12	10
	T - High Static Drive	24	12	10
	Maximum Overcurrent Protection Device Size			
	R - Low Static Drive	20/25	15/15	15/15
	S - Medium Static Drive	30/40	15/20	15/15
	T - High Static Drive	30/40	15/20	15/15
Motor Information	No.	1	1	1
	Volts	208/230	460	575
	Phase	3	3	3
	Rating Plate Amps			
	R - Low Static Drive	12.6	6.3	5.1
	S - Medium Static Drive	19.2	9.6	7.7
	T - High Static Drive	19.2	9.6	7.7
	LRA (Amps)			
	R - Low Static Drive	95	47.5	38
	S - Medium Static Drive	127	63.5	58
	T - High Static Drive	127	63.5	58

208/230V THREE PHASE, 60 HZ, AUXILIARY ELECTRIC HEATER KIT CHARACTERISTICS AND APPLICATION

MODEL NUMBER RHCYA2	HEATER KIT MODEL RXHE-	RATED HEATER kW @208/230V, 3PH, 60HZ	HEAT KIT AMPS (FLA) ONLY	HEATER KIT	
				HEATER KIT MIN. CKT. AMPACITY	HEATER KIT MAX FUSE OR CKT. BKR. SIZE
090CAR 090CAS 090CAT	DE020CA	15.6/20.2	43.1/48.9	67/73	70/80
	DE030CA	22.0/29.6	60.8/70.2	89/100	90/100
120CAR 120CAS 120CAT	DE020CA	15.6/20.2	43.1/48.9	67/73	70/80
	DE030CA	22.0/29.6	60.8/70.2	89/100	90/100
121CAR 121CAS 121CAT	CE030CC	60/70	21.6/28.8	105/115	110/125
	CE040CC	83/96	30/40	134/148	150/150
150CAR 150CAS 150CAC	CE030CC	60/70	21.6/28.8	105/115	110/125
	CE040CC	83/96	30/40	134/148	150/150
180CAR 180CAS 180CAT	CE030CC	60/70	21.6/28.8	105/115	110/125
	CE040CC	83/96	30/40	134/148	150/150
240CAR 240CAS 240CAT	CE030CC	60/70	21.6/28.8	105/115	110/125
	CE040CC	83/96	30/40	134/148	150/150

460V THREE PHASE, 60 HZ, AUXILIARY ELECTRIC HEATER KIT CHARACTERISTICS AND APPLICATION

MODEL NUMBER RHCYA2	HEATER KIT MODEL RXHE-	RATED HEATER kW @460V, 3PH, 60HZ	HEAT KIT AMPS (FLA) ONLY	HEATER KIT	
				HEATER KIT MIN. CKT. AMPACITY	HEATER KIT MAX FUSE OR CKT. BKR. SIZE
090DAR 090DAS 090DAT	DE020DA	24.7	20.2	37	40
	DE030DA	35.0	29.7	50	50
120DAR 120DAS 120DAT	DE020DA	24.7	20.2	37	40
	DE030DA	35.0	29.7	50	50
121DAR 121DAS 121DAT	CE030DC	35.0	28.8	58	60
	CE040DC	48.0	40.0	74	80
150DAR 150DAS 150DAT	CE030DC	35.0	28.8	58	60
	CE040DC	48.0	40.0	74	80
180DAR 180DAS 180DAT	CE030DC	35.0	28.8	58	60
	CE040DC	48.0	40.0	74	80
240DAR 240DAS 240DAT	CE030DC	35.0	28.8	58	60
	CE040DC	48.0	40.0	74	80

A2L REFRIGERANT INSTALLATION SAFETY DATA

Qmin at Rating Plate Charge Weight [0'-200' Line Set]						
RHCYA2		090 [0']	090 [50']	090 [100']	090 [150']	090 [200']
Refrigerant Charge weight (oz)		338.0	388.0	438.0	488.0	538.0
Minimum Total Room Area, TAmin (ft²)		317.0	364.0	410.0	457.0	504.0
Minimum circulation airflow, Qmin (cfm)		572.0	614.0	698.0	783.0	868.0
Installed Altitude (ft above sea level)	Altitude Adjustment Factor	Minimum Total Conditioned Room Area, TAmin (sq ft)				
0	1.000	317	364	410	457	504
1000	1.025	325	373	421	469	517
2000	1.051	333	382	431	481	530
3000	1.078	342	392	443	493	544
4000	1.107	351	403	454	506	558
5000	1.138	360	414	467	520	574
6000	1.170	371	425	480	535	590
6500	1.187	376	432	487	543	598

Qmin at Rating Plate Charge Weight [0'-200' Line Set]						
RHCYA2		120 [0']	120 [50']	120 [100']	120 [150']	120 [200']
Refrigerant Charge weight (oz)		373.5	411.0	486.0	561.0	636.0
Minimum Total Room Area, TAmin (ft²)		350.0	397.0	444.0	491.0	537.0
Minimum circulation airflow, Qmin (cfm)		632.0	716.0	801.0	885.0	970.0
Installed Altitude (ft above sea level)	Altitude Adjustment Factor	Minimum Total Conditioned Room Area, TAmin (sq ft)				
0	1.000	350	385	455	526	596
1000	1.025	359	395	467	539	611
2000	1.051	368	405	479	553	626
3000	1.078	377	415	491	567	643
4000	1.107	388	426	504	582	660
5000	1.138	398	438	518	598	678
6000	1.170	410	451	533	615	697
6500	1.187	415	457	540	624	707

A2L REFRIGERANT INSTALLATION SAFETY DATA

Qmin at Rating Plate Charge Weight [0'–200' Line Set]						
RHCYA2		121 [0']	121 [50']	121 [100']	121 [150']	121 [200']
Refrigerant Charge weight (oz)		328.0	378.0	428.0	478.0	528.0
Minimum Total Room Area, TAmin (ft²)		307.0	354.0	401.0	448.0	495.0
Minimum circulation airflow, Qmin (cfm)		555.0	639.0	724.0	808.0	893.0
Installed Altitude (ft above sea level)	Altitude Adjustment Factor	Minimum Total Conditioned Room Area, TAmin (sq ft)				
0	1.000	307	354	401	448	495
1000	1.025	315	363	411	459	507
2000	1.051	323	372	422	471	520
3000	1.078	331	382	433	483	534
4000	1.107	340	392	444	496	548
5000	1.138	350	403	456	510	563
6000	1.170	360	414	469	524	579
6500	1.187	365	420	476	532	587

Qmin at Rating Plate Charge Weight [0'–200' Line Set]						
RHCYA2		150 [0']	150 [50']	150 [100']	150 [150']	150 [200']
Refrigerant Charge weight (oz)		381.5	456.5	531.5	606.5	681.5
Minimum Total Room Area, TAmin (ft²)		358.0	404.0	451.0	498.0	545.0
Minimum circulation airflow, Qmin (cfm)		645.0	730.0	814.0	899.0	983.0
Installed Altitude (ft above sea level)	Altitude Adjustment Factor	Minimum Total Conditioned Room Area, TAmin (sq ft)				
0	1.000	358	428	498	568	639
1000	1.025	366	438	510	583	655
2000	1.051	376	450	523	597	671
3000	1.078	386	461	537	613	689
4000	1.107	396	474	552	629	707
5000	1.138	407	487	567	647	727
6000	1.170	418	501	583	665	747
6500	1.187	424	508	591	675	758

A2L REFRIGERANT INSTALLATION SAFETY DATA

Qmin at Rating Plate Charge Weight [0'-200' Line Set]						
RHCYA2		180 [0']	180 [50']	180 [100']	180 [150']	180 [200']
Refrigerant Charge weight (oz)		681.5	756.5	831.5	906.5	981.5
Minimum Total Room Area, TAmin (ft²)		639.0	686.0	732.0	779.0	829.0
Minimum circulation airflow, Qmin (cfm)		1153.0	1237.0	1322.0	1406.0	1491.0
Installed Altitude (ft above sea level)	Altitude Adjustment Factor	Minimum Total Conditioned Room Area, TAmin (sq ft)				
0	1.000	639	709	779	850	920
1000	1.025	655	727	799	871	943
2000	1.051	671	745	819	893	967
3000	1.078	689	764	840	916	992
4000	1.107	707	785	863	941	1018
5000	1.138	727	807	887	967	1046
6000	1.170	747	829	912	994	1076
6500	1.187	758	841	925	1008	1092

Qmin at Rating Plate Charge Weight [0'-200' Line Set]						
RHCYA2		240 [0']	240 [50']	240 [100']	240 [150']	240 [200']
Refrigerant Charge weight (oz)		537.5	692.5	847.5	1002.5	1157.5
Minimum Total Room Area, TAmin (ft²)		504.0	551.0	597.0	644.0	691.0
Minimum circulation airflow, Qmin (cfm)		909.0	994.0	1078.0	1163.0	1247.0
Installed Altitude (ft above sea level)	Altitude Adjustment Factor	Minimum Total Conditioned Room Area, TAmin (sq ft)				
0	1.000	504	649	794	940	1085
1000	1.025	516	665	814	963	1112
2000	1.051	529	682	835	987	1140
3000	1.078	543	700	856	1013	1170
4000	1.107	558	719	879	1040	1201
5000	1.138	573	738	904	1069	1234
6000	1.170	589	759	929	1099	1269
6500	1.187	598	770	943	1115	1287

AIRFLOW PERFORMANCE RH CYA2090 — 7.5 TON [26.4 kW] — 60 Hz — SIDEFLOW

RH CYA2090		Voltage 208/230, 460, 575 — 3 phase 60 Hz																			
Air Flow CFM [L/s]	RPM	External Static Pressure—Inches of Water [kPa]																			
		0.1 [0.02]		0.2 [0.05]		0.3 [0.07]		0.4 [0.10]		0.5 [0.12]		0.6 [0.15]		0.7 [0.17]		0.8 [0.20]		0.9 [0.22]		1.0 [0.25]	
		W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM
2400 [1133]	526	487	581	537	631	581	678	619	720	650	750	683	788	844	849	884	909	922	967	1033	1135
2450 [1156]	533	505	587	555	637	599	683	637	724	668	768	699	810	850	871	889	932	927	991	1066	1162
2500 [1180]	540	523	594	574	643	618	688	656	728	688	768	708	816	833	855	894	957	932	1017	1089	1189
2550 [1203]	547	542	600	593	649	637	693	675	732	707	768	728	828	857	861	899	983	937	1043	1113	1213
2600 [1227]	555	561	607	612	654	657	698	695	737	728	768	737	837	867	871	905	1010	942	1071	1131	1231
2650 [1250]	562	581	613	632	660	677	703	716	741	748	788	757	857	887	891	910	1038	947	1100	1161	1261
2700 [1274]	569	601	620	653	666	698	708	737	746	770	800	840	938	968	972	916	1068	952	1131	1192	1292
2750 [1298]	577	622	627	674	672	719	714	759	808	800	847	847	967	984	1034	921	1099	957	1162	1225	1325
2800 [1321]	584	634	634	695	678	741	719	781	815	899	853	998	988	1065	1098	927	1195	997	1258	1321	1421
2850 [1345]	592	665	640	718	684	764	724	804	822	961	859	1030	996	1098	1164	967	1229	1001	1293	1356	1456
2900 [1368]	600	687	647	740	691	787	730	827	828	994	866	1063	902	1132	1199	973	1265	1006	1329	1393	1493
2950 [1392]	607	710	654	763	697	810	735	850	835	1027	872	1098	909	1167	1241	944	1235	978	1301	1415	1515
3000 [1416]	615	734	661	787	703	834	741	875	842	1062	879	1133	915	1203	1241	955	1310	989	1378	1445	1545
3050 [1439]	623	758	668	811	710	859	746	899	849	1098	886	1170	921	1241	1241	955	1310	989	1378	1445	1545
3100 [1463]	631	782	675	836	716	884	820	1062	856	1136	892	1208	927	1280	927	961	1350	994	1419	1486	1586
3150 [1486]	638	807	683	861	722	909	827	1100	864	1174	899	1248	933	1320	961	991	1460	1031	1528	1595	1695
3200 [1510]	646	833	690	887	729	935	835	1139	871	1214	906	1288	940	1361	973	1433	1505	1503	1637	1704	1804
3250 [1534]	654	859	697	914	735	962	842	1179	878	1255	913	1330	946	1404	979	1476	1547	1547	1681	1748	1848
3300 [1557]	662	886	704	941	742	989	850	1221	885	1298	919	1373	953	1448	985	1521	1616	1592	1720	1787	1887
3350 [1581]	671	913	712	968	749	1017	858	1264	892	1341	926	1418	959	1493	991	1566	1639	1639	1768	1835	1935
3400 [1604]	679	940	719	996	830	1229	866	1308	900	1386	933	1463	966	1539	997	1614	1687	1687	1817	1884	1984

Drive Package	R					S					T				
	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2
Motor H.P. [W]	696	661	627	593	558	523	998	939	874	806	748	680	612	544	476
Blower Sheave	AK104-3/4					AK71H					AK59				
Motor Sheave	IVL44					IVL44					IVL44				
Belt	A50					A44					A42				
Turns Open	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2
RPM	696	661	627	593	558	523	998	939	874	806	748	680	612	544	476

NOTES: 1. Factory sheave settings are shown in bold type.
2. Do not set motor sheave below minimum or maximum turns open shown.
3. Re-adjustment of sheave required to achieve rated airflow at AHR minimum External Static Pressure.
4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE RHCYA2090 — 7.5 TON [26.4 kW] — 60 Hz — SIDEFLOW (CONTINUED)

Airflow CFM [L/s]	AIRFLOW CORRECTION FACTORS *		COMPONENT AIRFLOW RESISTANCE			
	Total kBtu/h	Sensible kBtu/h	Power kW	Wet Coil Resistance Inches of Water [kPa]	MERV 8 Filter Resistance Inches of Water	MERV 13 Filter Resistance Inches of Water
2400 [1133]	0.93	0.73	0.96	0.04 [.01]	0.153	0.157
2500 [1180]	0.93	0.74	0.96	0.05 [.01]	0.164	0.168
2600 [1227]	0.94	0.76	0.97	0.05 [.01]	0.175	0.179
2700 [1274]	0.94	0.78	0.97	0.05 [.01]	0.186	0.189
2800 [1321]	0.95	0.80	0.97	0.05 [.01]	0.198	0.200
2900 [1368]	0.95	0.81	0.97	0.06 [.01]	0.209	0.211
3000 [1416]	0.95	0.83	0.98	0.06 [.01]	0.220	0.221
3100 [1463]	0.96	0.85	0.98	0.06 [.01]	0.231	0.232
3200 [1510]	0.96	0.87	0.98	0.06 [.01]	0.242	0.243
3300 [1557]	0.97	0.88	0.99	0.07 [.02]	0.253	0.254
3400 [1604]	0.97	0.90	0.99	0.07 [.02]	0.264	0.264
3500 [1652]	0.98	0.92	0.99	0.07 [.02]	0.276	0.275
3600 [1711]	0.98	0.93	0.99	0.08 [.02]	0.287	0.286
3700 [1746]	0.99	0.95	1.00	0.08 [.02]	0.298	0.296
3800 [1793]	0.99	0.97	1.00	0.08 [.02]	0.309	0.307
3900 [1840]	1.00	0.99	1.00	0.08 [.02]	0.320	0.318
4000 [1888]	1.00	1.00	1.01	0.09 [.02]	0.331	0.329

*Multiply correction factor times gross performance data — resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE RHCYA2120 – 10 TON [26.4 kW] – 60 Hz – SIDEFLOW

[illegible]

Drive Package	R					S					T							
Motor H.P. [W]	2 [1491.4]					2 [1491.4]					3 [2237.1]							
Blower Sheave	AK104x3/4					AK84x3/4					AK94x3/4							
Motor Sheave	1VP65x7/8					1VP65x7/8					1VP75x7/8							
Belt	A52					A49					A52							
Turns Open	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5
RPM	894	862	829	797	765	732	1159	1206	1163	1124	1082	998	1254	1267	1230	1194	1158	1120

NOTES: 1. Factory sheave settings are shown in bold type.
2. Do not set motor sheave below minimum or maximum turns open shown.
3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure
4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

1] Designates Metric Conversions

AIRFLOW PERFORMANCE RHCYA2120 — 10 TON [26.4 kW] — 60 Hz — SIDEFLOW (CONTINUED)

Airflow CFM [L/s]	AIRFLOW CORRECTION FACTORS *		COMPONENT AIRFLOW RESISTANCE			
	Total k8tu/h	Sensible k8tu/h	Power kW	Wet Coil Resistance Inches of Water [kPa]	MERV 8 Filter Resistance Inches of Water	MERV 13 Filter Resistance Inches of Water
3500 [1652]	0.98	0.92	0.99	0.07 [.02]	0.091	0.098
3600 [1699]	0.98	0.93	0.99	0.08 [.02]	0.097	0.103
3700 [1746]	0.99	0.95	1.00	0.08 [.02]	0.103	0.109
3800 [1793]	0.99	0.97	1.00	0.08 [.02]	0.109	0.115
3900 [1840]	1.00	0.99	1.00	0.08 [.02]	0.115	0.121
4000 [1888]	1.00	1.00	1.01	0.09 [.02]	0.121	0.127
4100 [1935]	1.00	1.02	1.01	0.09 [.02]	0.127	0.132
4200 [1982]	1.01	1.04	1.01	0.09 [.02]	0.133	0.138
4300 [2029]	1.01	1.06	1.01	0.10 [.02]	0.139	0.144
4400 [2076]	1.02	1.07	1.02	0.10 [.02]	0.145	0.150
4500 [2123]	1.02	1.09	1.02	0.10 [.02]	0.151	0.156
4600 [2171]	1.03	1.11	1.02	0.10 [.02]	0.157	0.161
4700 [2218]	1.03	1.12	1.03	0.11 [.03]	0.163	0.167
4800 [2265]	1.04	1.14	1.03	0.11 [.03]	0.169	0.173
4900 [2312]	1.04	1.16	1.03	0.11 [.03]	0.175	0.179
5000 [2359]	1.05	1.18	1.03	0.12 [.03]	0.181	0.185
5100 [2407]	1.05	1.19	1.04	0.12 [.03]	0.188	0.190

*Multiply correction factor times gross performance data — resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE RHCYA2121 – 10 TON [26.4 kW] – 60 Hz – SIDEFLOW

Air Flow CFM [L/s]		RHCYA21210 Voltage 208/230, 460 — 3 phase 60 Hz																																								
		External Static Pressure—Inches of Water [kPa]																																								
		0.1 [.02]	0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	0.6 [.15]	0.7 [.17]	0.8 [.20]	0.9 [.22]	1.0 [.25]	1.1 [.27]	1.2 [.30]	1.3 [.32]	1.4 [.35]	1.5 [.37]	1.6 [.40]	1.7 [.42]	1.8 [.45]	1.9 [.47]	2.0 [.50]																					
RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W																					
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—																					
3200	[1510]	—	—	—	425	596	459	668	494	738	528	805	561	870	589	2285	618	2458	646	2700	673	3009	699	3386	724	3832	748	4345	766	4086	788	4450	810	4917	832	5487	853	6160	873	6936		
3300	[1557]	—	—	—	—	429	622	463	695	497	766	531	835	564	902	592	2317	621	2503	649	2757	676	3079	701	3469	726	3927	750	4453	768	4172	790	4554	812	5040	834	5628	854	6319	875	7114	
3400	[1604]	—	—	—	—	433	649	467	724	501	796	535	867	568	935	595	2355	624	2554	651	2820	678	3155	704	3557	728	4028	752	4566	770	4262	792	4662	814	5166	836	5772	856	6482	876	7295	
3500	[1652]	—	—	—	—	437	678	471	754	505	828	538	899	571	969	598	2397	627	2608	654	2887	680	3235	706	3650	730	4133	749	4039	772	4355	795	4773	816	5295	837	5920	858	6649	878	7480	
3600	[1699]	—	—	—	407	628	442	707	476	785	509	860	542	933	575	1004	601	2444	630	2668	657	2960	683	3319	708	3747	732	4242	752	4117	775	4451	797	4888	818	5429	839	6072	860	6819	880	7668
3700	[1746]	—	—	—	412	657	446	738	480	817	513	893	546	968	578	1040	605	2496	633	2732	660	3036	686	3409	711	3849	735	4357	754	4199	777	4551	799	5007	821	5566	841	6227	862	6992	882	7860
3800	[1793]	—	—	—	417	688	451	770	484	850	517	928	550	1004	582	1077	608	2553	636	2801	662	3118	688	3503	713	3955	737	4476	757	4285	779	4655	801	5129	823	5706	844	6386	864	7169	884	8056
3900	[1840]	—	—	—	422	720	455	803	489	885	521	964	554	1041	583	1114	611	2614	639	2875	665	3204	687	3602	716	4067	739	4600	759	4374	762	4763	804	5255	825	5850	846	6548	866	7350	886	8255
4000	[1888]	—	—	—	427	753	460	838	493	920	526	1001	558	1079	586	1154	615	2680	642	2954	668	3296	694	3705	718	4183	741	4729	762	4466	784	4873	806	5384	828	5998	848	6714	868	7534	888	8458
4100	[1935]	—	—	—	432	787	465	873	498	957	530	1039	562	1119	590	1233	618	2751	645	3037	671	3391	697	3814	721	4304	744	4862	765	4562	787	4988	809	5517	830	6149	851	6884	870	7722	890	8664
4200	[1982]	—	—	—	437	822	470	910	503	995	535	1079	566	1160	594	1256	622	2827	649	3125	675	3492	700	3927	724	4430	746	5000	768	4692	790	5106	812	5653	833	6304	853	7057	873	7914		
4300	[2029]	409	767	442	859	475	948	507	1034	539	1119	571	1201	598	2664	625	2907	652	3218	678	3597	703	4165	726	4650	749	5143	771	4765	793	5228	814	5793	835	6462	856	7234	875	8109	—	—	
4400	[2076]	415	804	448	896	480	987	512	1075	544	1161	575	1244	601	2736	629	2992	656	3316	681	3707	706	4657	730	4695	752	5291	774	4872	796	5353	817	5937	838	6624	858	7434	878	8308	—	—	
4500	[2123]	421	841	453	935	486	1027	517	1116	549	1204	580	1289	605	2813	633	3082	659	3418	685	3822	709	4295	732	4835	754	4587	777	4983	799	5482	820	6084	841	6790	861	7598	880	8510	—	—	

Drive Package	R						S						T					
Motor H.P. [W]	2 [3728.5]						2 [3728.5]						3 [3728.5]					
Blower Sheave	BK130H						BK120H						BK105H					
Motor Sheave	1VL40 7/8"						1VP50 7/8"						1VP50 7/8"					
Belt	B52						B52						B50					
Turns Open	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5
RPM	563	541	517	490	463	646	746	939	906	874	840	806	866	1032	997	963	927	892

NOTES: 1. Factory sheave settings are shown in bold type.

2. Do not set motor sheave below minimum or maximum turns open shown.

3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure

4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE RHCYA2121 — 10 TON [26.4 kW] — 60 Hz — SIDEFLOW (CONTINUED)

Airflow CFM [L/s]	AIRFLOW CORRECTION FACTORS *		COMPONENT AIRFLOW RESISTANCE			
	Total k8tu/h	Sensible k8tu/h	Power kW	Wet Coil Resistance Inches of Water [kPa]	MERV 8 Filter Resistance Inches of Water	MERV 13 Filter Resistance Inches of Water
3500 [1652]	0.98	0.92	0.99	0.07 [.02]	0.091	0.098
3600 [1699]	0.98	0.93	0.99	0.08 [.02]	0.097	0.103
3700 [1746]	0.99	0.95	1.00	0.08 [.02]	0.103	0.109
3800 [1793]	0.99	0.97	1.00	0.08 [.02]	0.109	0.115
3900 [1840]	1.00	0.99	1.00	0.08 [.02]	0.115	0.121
4000 [1888]	1.00	1.00	1.01	0.09 [.02]	0.121	0.127
4100 [1935]	1.00	1.02	1.01	0.09 [.02]	0.127	0.132
4200 [1982]	1.01	1.04	1.01	0.09 [.02]	0.133	0.138
4300 [2029]	1.01	1.06	1.01	0.10 [.02]	0.139	0.144
4400 [2076]	1.02	1.07	1.02	0.10 [.02]	0.145	0.150
4500 [2123]	1.02	1.09	1.02	0.10 [.02]	0.151	0.156
4600 [2171]	1.03	1.11	1.02	0.10 [.02]	0.157	0.161
4700 [2218]	1.03	1.12	1.03	0.11 [.03]	0.163	0.167
4800 [2265]	1.04	1.14	1.03	0.11 [.03]	0.169	0.173
4900 [2312]	1.04	1.16	1.03	0.11 [.03]	0.175	0.179
5000 [2359]	1.05	1.18	1.03	0.12 [.03]	0.181	0.185
5100 [2407]	1.05	1.19	1.04	0.12 [.03]	0.188	0.190

*Multiply correction factor times gross performance data — resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE RHCYA2150 – 12.5 TON [44 kW] – 60 Hz – SIDEFLOW

[illegible]

Drive Package	R					S					T							
Motor H.P. [W]	2 [1491.4]					3 [2237.1]					5 [2237.1]							
Blower Sheave	BK120SP 1.0"					BK120SP 1.0"					BK100SP							
Motor Sheave	1VL44 7/8					1VL50 7/8					1VP50 1 1/8							
Belt	B52					B52					B46							
Turns Open	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5
RPM	650	630	606	579	551	522	746	723	699	644	617	597	877	840	803	766	730	694

NOTES: 1. Factory sheave settings are shown in bold type.

1. Re-adjust sheave settings and shown in bold type.
2. Do not set motor sheave below minimum or maximum turns open shown.
3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure
4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE RHCYA2150 — 12.5 TON [44 kW] — 60 Hz — SIDEFLOW (CONTINUED)

Airflow CFM [L/s]	AIRFLOW CORRECTION FACTORS *		COMPONENT AIRFLOW RESISTANCE			
	Total k8tu/h	Sensible k8tu/h	Power kW	Wet Coil Resistance Inches of Water [kPa]	MERV 8 Filter Resistance Inches of Water	MERV 13 Filter Resistance Inches of Water
3500 [1652]	0.98	0.92	0.99	0.07 [.02]	0.091	0.098
3600 [1699]	0.98	0.93	0.99	0.08 [.02]	0.097	0.103
3700 [1746]	0.99	0.95	1.00	0.08 [.02]	0.103	0.109
3800 [1793]	0.99	0.97	1.00	0.08 [.02]	0.109	0.115
3900 [1840]	1.00	0.99	1.00	0.08 [.02]	0.115	0.121
4000 [1888]	1.00	1.00	1.01	0.09 [.02]	0.121	0.127
4100 [1935]	1.00	1.02	1.01	0.09 [.02]	0.127	0.132
4200 [1982]	1.01	1.04	1.01	0.09 [.02]	0.133	0.138
4300 [2029]	1.01	1.06	1.01	0.10 [.02]	0.139	0.144
4400 [2076]	1.02	1.07	1.02	0.10 [.02]	0.145	0.150
4500 [2123]	1.02	1.09	1.02	0.10 [.02]	0.151	0.156
4600 [2171]	1.03	1.11	1.02	0.10 [.02]	0.157	0.161
4700 [2218]	1.03	1.12	1.03	0.11 [.03]	0.163	0.167
4800 [2265]	1.04	1.14	1.03	0.11 [.03]	0.169	0.173
4900 [2312]	1.04	1.16	1.03	0.11 [.03]	0.175	0.179
5000 [2359]	1.05	1.18	1.03	0.12 [.03]	0.181	0.185
5100 [2407]	1.05	1.19	1.04	0.12 [.03]	0.188	0.190

*Multiply correction factor times gross performance data — resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE RHCYA2180 — 15 TON [52.7 kW] — 60 Hz — SIDEFLOW

Air Flow CFM [L/s]		RHCYA2180 Voltage 208/230, 460, 575 — 3 phase 60 Hz																																							
		External Static Pressure—Inches of Water [kPa]																																							
		0.1 [0.02]		0.2 [0.05]		0.3 [0.07]		0.4 [0.10]		0.5 [0.12]		0.6 [0.15]		0.7 [0.17]		0.8 [0.20]		0.9 [0.22]		1.0 [0.25]		1.1 [0.27]		1.2 [0.30]		1.3 [0.32]		1.4 [0.35]		1.5 [0.37]		1.6 [0.40]		1.7 [0.42]		1.8 [0.45]		1.9 [0.47]		2.0 [0.50]	
RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W		
4750 [2241]	—	—	—	—	—	—	—	537	1312	561	1382	585	1465	610	1559	636	1665	662	1782	681	1823	703	1910	724	2003	744	2101	770	2148	791	2231	812	2316	833	2402	853	2488	872	2576	892	2664
4850 [2289]	—	—	—	—	—	—	—	542	1362	566	1436	590	1522	615	1620	640	1730	663	1797	685	1883	706	1973	727	2069	747	2169	774	2207	795	2292	815	2379	835	2466	855	2554	874	2643	894	2734
4950 [2336]	—	—	—	—	—	525	1348	548	1414	572	1492	596	1582	620	1683	645	1797	667	1857	688	1945	710	2038	730	2136	751	2239	777	2268	798	2356	818	2444	838	2533	858	2623	877	2714	896	2806
5050 [2383]	—	—	—	—	—	531	1399	554	1469	577	1551	601	1644	625	1749	650	1866	671	1919	692	2010	713	2105	734	2205	754	2311	781	2333	801	2422	821	2512	841	2603	860	2694	879	2787	898	2881
5150 [2430]	—	—	—	—	—	537	1452	559	1526	583	1611	606	1708	631	1817	655	1938	675	1983	696	2076	717	2174	738	2277	764	2310	784	2399	804	2490	824	2582	844	2675	863	2768	882	2863	900	2958
5250 [2477]	—	—	—	—	—	543	1508	565	1585	588	1674	612	1775	636	1887	661	2011	679	2049	700	2145	721	2245	741	2351	767	2377	788	2469	808	2561	827	2655	847	2749	866	2845	884	2941	902	3038
5350 [2525]	—	527	1497	549	1566	571	1647	594	1740	618	1844	642	1960	662	2024	684	2117	705	2215	725	2318	745	2426	771	2447	791	2515	811	2635	831	2730	850	2827	868	2924	887	3022	905	3121		
5450 [2572]	—	534	1553	555	1626	578	1711	600	1807	624	1915	647	2035	667	2091	688	2187	709	2288	729	2394	749	2504	775	2520	795	2615	815	2711	834	2809	851	2906	871	3005	889	3105	907	3206		
5550 [2619]	—	540	1612	562	1689	584	1777	607	1877	630	1988	653	2112	672	2161	693	2260	713	2363	733	2471	753	2584	779	2595	799	2692	818	2790	837	2889	856	2989	874	3089	892	3191	—	—		
5650 [2666]	526	1605	547	1673	569	1753	590	1845	613	1949	636	2064	659	2191	677	2233	697	2334	718	2440	737	2550	763	2576	783	2673	803	2772	822	2872	841	2972	859	3074	877	3176	895	3279	—	—	
5750 [2713]	533	1664	554	1736	575	1820	597	1916	619	2023	642	2142	661	2208	682	2307	702	2410	722	2519	742	2632	768	2654	787	2754	807	2854	825	2956	844	3058	862	3161	880	3266	898	3371	—	—	
5850 [2760]	541	1726	561	1802	582	1890	604	1989	626	2100	648	2222	666	2282	687	2383	707	2489	727	2600	746	2715	772	2736	791	2837	810	2939	829	3042	847	3147	865	3252	883	3357	901	3464	—	—	
5950 [2808]	548	1791	568	1870	589	1961	611	2064	633	2179	655	2305	671	2357	692	2461	712	2569	732	2683	751	2801	776	2819	796	2923	814	3027	833	3132	851	3237	869	3344	886	3452	903	3560	—	—	
6050 [2855]	556	1857	576	1940	596	2035	618	2142	639	2260	662	2390	677	2435	697	2541	717	2652	736	2768	755	2889	781	2906	800	3011	818	3117	837	3223	855	3331	872	3440	890	3549	906	3659	—	—	
6150 [2902]	563	1926	583	2013	604	2111	625	2221	646	2343	661	2471	682	2514	702	2623	722	2737	741	2855	766	2889	785	2995	804	3102	823	3209	841	3318	858	3427	876	3537	893	3649	—	—			
6250 [2949]	571	1997	591	2088	611	2190	632	2303	653	2429	667	2490	688	2596	708	2707	727	2823	746	2944	771	2979	790	3087	809	3195	827	3304	845	3415	862	3526	879	3638	896	3751	—	—			
6350 [2996]	579	2070	599	2165	619	2270	639	2388	661	2517	673	2571	693	2680	713	2794	732	2912	751	3036	776	3071	795	3181	813	3291	831	3402	849	3514	866	3627	883	3741	900	3856	—	—			

Drive Package	R						S						T					
Motor H.P. [W]	2 [1491.4]						3 [2237.1]						5 [2237.1]					
Blower Sheave	BK120SP 1.0"						BK120SP 1.0"						BK100SP					
Motor Sheave	1VL44 7/8"						1VL50 7/8"						1VP50 1-1/8"					
Belt	B52						B52						B45					
Turns Open	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5
RPM	654	632	609	581	555	527	751	729	705	678	650	622	903	874	840	804	768	731

NOTES: 1. Factory sheave settings are shown in bold type.
2. Do not set motor sheave below minimum or maximum turns open shown.
3. Re-adjustment of sheave required to achieve rated airflow at AHRI minimum External Static Pressure
4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE RHCYA2180 — 15 TON [52.7 kW] — 60 Hz — SIDEFLOW (CONTINUED)

Airflow CFM [L/s]	AIRFLOW CORRECTION FACTORS *		COMPONENT AIRFLOW RESISTANCE			
	Total k8tu/h	Sensible k8tu/h	Power kW	Wet Coil Resistance Inches of Water [kPa]	MERV 8 Filter Resistance Inches of Water	MERV 13 Filter Resistance Inches of Water
4750 [2241]	1.03	1.13	1.03	0.11 [.03]	0.166	0.170
4850 [2289]	1.04	1.15	1.03	0.11 [.03]	0.172	0.176
4950 [2336]	1.04	1.17	1.03	0.11 [.03]	0.178	0.182
5050 [2383]	1.05	1.19	1.03	0.12 [.03]	0.185	0.188
5150 [2430]	1.05	1.20	1.04	0.12 [.03]	0.191	0.193
5250 [2477]	1.06	1.22	1.04	0.12 [.03]	0.197	0.199
5350 [2525]	1.06	1.24	1.04	0.13 [.03]	0.203	0.205
5450 [2572]	1.07	1.25	1.05	0.13 [.03]	0.209	0.211
5550 [2619]	1.07	1.27	1.05	0.13 [.03]	0.215	0.217
5650 [2666]	1.08	1.29	1.05	0.13 [.03]	0.221	0.222
5750 [2713]	1.08	1.31	1.05	0.14 [.03]	0.227	0.228
5850 [2760]	1.08	1.32	1.06	0.14 [.03]	0.233	0.234
5950 [2808]	1.09	1.34	1.06	0.14 [.03]	0.239	0.240
6050 [2855]	1.09	1.36	1.06	0.15 [.04]	0.245	0.246
6150 [2902]	1.10	1.38	1.07	0.15 [.04]	0.251	0.251
6250 [2949]	1.10	1.39	1.07	0.15 [.04]	0.257	0.257
6350 [2996]	1.11	1.41	1.07	0.15 [.04]	0.263	0.263

*Multiply correction factor times gross performance data — resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

AIRFLOW PERFORMANCE RHCYA2240 — 20 TON [52.7 kW] — 60 Hz — SIDEFLOW

RHCYA2090		Voltage 208/230, 460, 575 — 3 phase 60 Hz																			
Air Flow CFM [L/s]		External Static Pressure—Inches of Water [kPa]																			
		0.1 [0.02]		0.2 [0.05]		0.3 [0.07]		0.4 [0.10]		0.5 [0.12]		0.6 [0.15]		0.7 [0.17]		0.8 [0.20]		0.9 [0.22]		1.0 [0.25]	
		RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W
6400 [3020]	575	1734	602	1845	628	1960	653	2078	677	2199	700	2325	722	2453	744	2585	764	2721	783	2860	783
6550 [3091]	585	1834	611	1950	637	2068	662	2190	686	2316	708	2445	730	2578	751	2714	770	2854	789	2997	790
6700 [3162]	595	1941	621	2060	646	2182	671	2309	694	2438	716	2571	737	2708	758	2848	777	2992	795	3139	797
6850 [3232]	605	2052	631	2175	656	2302	679	2432	702	2566	724	2703	745	2844	765	2988	784	3136	788	3289	804
7000 [3303]	615	2169	640	2296	665	2427	688	2561	711	2699	732	2840	752	2985	772	3133	790	3285	795	3441	811
7150 [3374]	625	2291	650	2422	674	2557	697	2695	719	2837	740	2982	760	3131	779	3283	797	3439	803	3600	819
7300 [3445]	635	2419	660	2554	683	2693	706	2835	727	2981	748	3130	767	3283	786	3439	795	3597	811	3763	827
7450 [3515]	645	2552	669	2691	692	2834	715	2980	736	3130	756	3284	775	3440	793	3601	803	3755	819	4080	835
7600 [3586]	655	2691	679	2834	702	2981	723	3131	744	3285	764	3442	783	3603	797	4038	812	4138	827	4450	844
7750 [3657]	665	2835	688	2982	711	3133	732	3287	752	3445	772	3606	790	3771	805	4201	820	4308	836	4628	853
7900 [3728]	675	2984	698	3135	720	3290	741	3449	761	3610	780	3776	798	3945	814	4371	829	4487	845	4814	862
8050 [3799]	685	3139	708	3294	729	3453	750	3615	769	3781	788	3951	809	4139	823	4550	838	4673	855	5009	872
8200 [3869]	695	3299	717	3458	739	3621	759	3788	778	3958	796	4131	818	4618	832	4737	848	4868	864	5011	882
8350 [3940]	705	3465	727	3628	748	3795	767	3965	786	4139	813	4691	827	4805	842	4932	858	5070	874	5221	892
8500 [4011]	716	3636	737	3803	757	3974	776	4149	794	4326	823	4878	837	5000	852	5135	868	5281	885	5440	903
8650 [4082]	726	3812	747	3984	766	4159	785	4337	819	4956	833	5074	847	5204	863	5346	879	5500	896	5666	913
8800 [4153]	736	3994	756	4169	776	4348	794	4531	830	5151	843	5277	858	5415	873	5564	890	5726	907	5900	925
8950 [4223]	746	4181	766	4361	785	4544	827	5234	840	5355	854	5488	869	5634	884	5791	901	5961	918	6143	936
9100 [4294]	756	4374	776	4558	794	4745	838	5438	851	5567	865	5708	880	5861	896	6026	912	6204	930	6393	948
9250 [4365]	766	4572	785	4760	836	5525	848	5650	862	5786	876	5935	891	6096	907	6269	924	6454	942	6652	960
9400 [4436]	776	4776	795	4967	847	5738	860	5870	873	6014	888	6171	903	6339	919	6520	936	6713	954	6918	978

Drive Package	R					S					T							
Motor H.P. [W]	5 [3728.5]					7.5 [2237.1]					7.5 [2237.1]							
Blower Sheave	BK130H					2BK110 2SS 1.0"					2BK100 2SS 1.0"							
Motor Sheave	1VP56-1 1/8					2VL60 1-3/8					2VL60 1-3/8							
Belt	B51					B48					B46							
Turns Open	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5
RPM	563	541	517	699	673	646	970	939	906	874	840	806	1063	1032	997	963	927	892

NOTES: 1. Factory shroud settings are shown in bold type.
 2. Do not set motor shroud below minimum or maximum turns open shown.
 3. Re-adjustment of shroud required to achieve rated airflow at AHR minimum External Static Pressure
 4. Drive data shown is for horizontal airflow with dry coil. Add component resistance (below) to duct resistance to determine total External Static Pressure.

[] Designates Metric Conversions

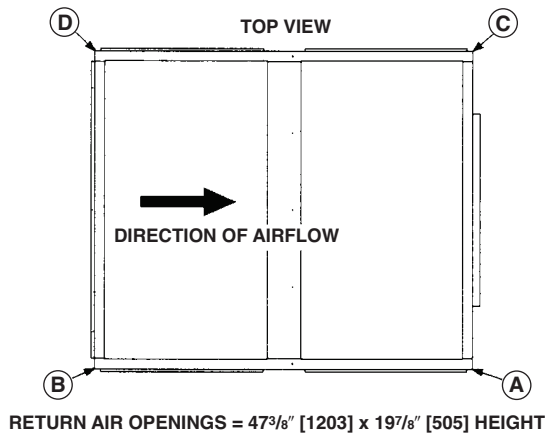
AIRFLOW PERFORMANCE RHCYA2240 — 20 TON [52.7 kW] — 60 Hz — SIDEFLOW (CONTINUED)

Airflow CFM [L/s]	AIRFLOW CORRECTION FACTORS *		COMPONENT AIRFLOW RESISTANCE			
	Total kbtu/h	Sensible kbtu/h	Power kW	Wet Coil Resistance Inches of Water [kPa]	MERV 8 Filter Resistance Inches of Water	MERV 13 Filter Resistance Inches of Water
6200 [2926]	1.10	1.38	1.07	0.15 [.04]	0.254	0.254
6300 [2973]	1.11	1.40	1.07	0.15 [.04]	0.260	0.260
6400 [3020]	1.11	1.42	1.07	0.16 [.04]	0.266	0.266
6500 [3067]	1.11	1.44	1.08	0.16 [.04]	0.272	0.272
6600 [3114]	1.12	1.45	1.08	0.16 [.04]	0.278	0.277
6700 [3162]	1.12	1.47	1.08	0.16 [.04]	0.284	0.283
6800 [3209]	1.13	1.49	1.08	0.17 [.04]	0.290	0.289
6900 [3256]	1.13	1.51	1.09	0.17 [.04]	0.296	0.295
7000 [3303]	1.14	1.52	1.09	0.17 [.04]	0.302	0.301
7100 [3350]	1.14	1.54	1.09	0.18 [.04]	0.308	0.306
7200 [3398]	1.15	1.56	1.10	0.18 [.04]	0.314	0.312
7300 [3445]	1.15	1.57	1.10	0.18 [.04]	0.320	0.318
7400 [3492]	1.16	1.59	1.10	0.18 [.04]	0.326	0.324
7500 [3539]	1.16	1.61	1.10	0.19 [.05]	0.332	0.330
7600 [3586]	1.16	1.63	1.11	0.19 [.05]	0.339	0.335
7700 [3633]	1.17	1.64	1.11	0.19 [.05]	0.345	0.341
7800 [3681]	1.17	1.66	1.11	0.19 [.05]	0.351	0.347

* Multiply correction factor times gross performance data — resulting sensible capacity cannot exceed total capacity.

[] Designates Metric Conversions

RHCYA2 DIMENSIONAL DATA 7.5 AND 10 NOMINAL TONS [26.4 AND 35.2 kW]

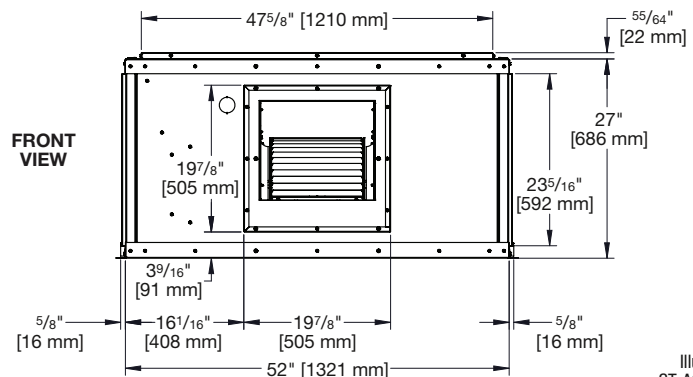
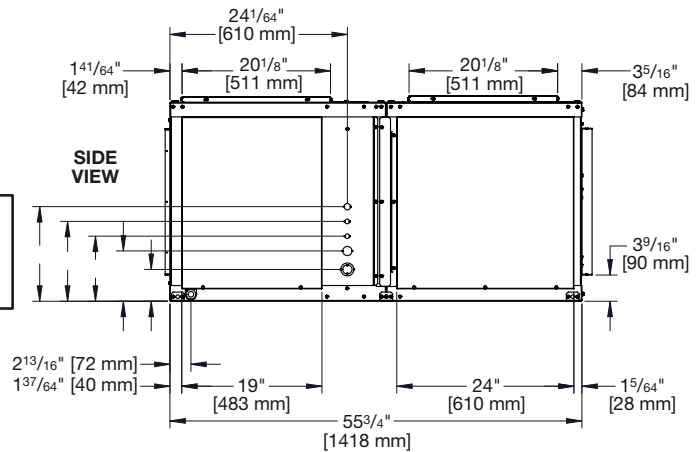


REFRIGERANT STUB SIZES, IN. [mm]				
MODEL	DUAL LIQ.	DUAL SUC.	SINGLE LIQ.	SINGLE SUC.
090	1/2, 1/2 [13, 13]	7/8, 7/8 [22, 22]	1/2 [13]	1 1/8 [29]
120	1/2, 1/2 [13, 13]	7/8, 7/8 [22, 22]	5/8 [16]	1 3/8 [35]

MODEL	CORNER WEIGHTS LBS. [kg]				OPERATING WEIGHT	SHIPPING WEIGHT
	A	B	C	D		
90	75.75 [34.36]	133.31 [60.49]	106.04 [48.10]	93.92 [42.60]	409 [185.52]	429 [194.60]
120	75.75 [34.36]	133.31 [60.49]	106.04 [48.10]	93.92 [42.60]	409 [185.52]	429 [194.60]

RETURN AIR OPENINGS = 47⁵/₈" [1203 mm] WIDTH X 18⁷/₈" [505 mm] HEIGHT

KNOCK-OUTS BOTH SIDES	
7/8" [22 mm]	12 ¹³ / ₁₆ " [325 mm]
5/8" [16 mm]	10 ¹³ / ₁₆ " [275 mm]
5/8" [16 mm]	8 ¹³ / ₁₆ " [224 mm]
1 1/4" [32 mm]	6 ¹³ / ₁₆ " [173 mm]
1 1/4" x 1 3/4" [32 x 44 mm]	4 ⁵ / ₁₆ " [110 mm]

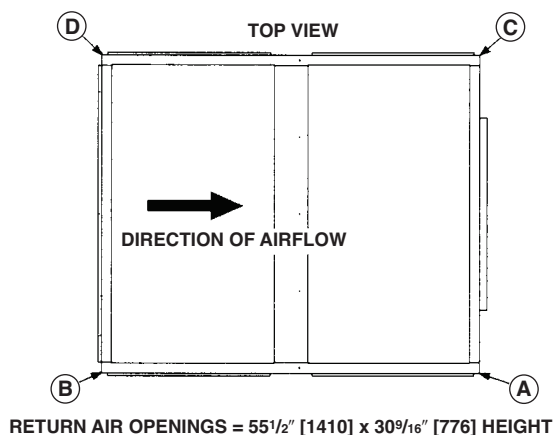


*Drain connections are provided on both sides of the drain pan. The drain can be connected to either side of the drain pan, but not both. The drain must be trapped.

[] Designates Metric Conversions

Illustration
ST-A1372-16

RHCYA2 DIMENSIONAL DATA 10, 12.5, 15 & 20 NOMINAL TONS [35.2, 44.0, 52.8 & 70.3 KW]



REFRIGERANT STUB SIZES, IN. [mm]				
MODEL	DUAL LIQ.	DUAL SUC.	SINGLE LIQ.	SINGLE SUC.
121	1/2, 1/2 [13, 13]	1 1/8, 1 1/8 [29, 29]	5/8 [16]	1 5/8 [41]
150	1/2, 1/2 [13, 13]	1 1/8, 1 1/8 [29, 29]	5/8 [16]	1 5/8 [41]
180	5/8, 5/8 [16, 16]	1 3/8, 1 3/8 [35, 35]	7/8 [22]	1 5/8 [41]
240	5/8, 5/8 [16, 16]	1 3/8, 1 3/8 [35, 35]	7/8 [22]	1 5/8 [41]

MODEL	CORNER WEIGHTS LBS. [kg]				OPERATING WEIGHT	SHIPPING WEIGHT
	A	B	C	D		
121	139.42 [63.24]	184.62 [83.74]	79.81 [36.20]	171.15 [77.63]	575 [260.82]	585 [265.35]
150	139.42 [63.24]	184.62 [83.74]	79.81 [36.20]	171.15 [77.63]	575 [260.82]	595 [269.89]
180	227.08 [103.0]	155.93 [70.73]	159.83 [72.50]	147.16 [66.75]	690 [312.98]	710 [322.05]
240	230.37 [104.49]	158.19 [71.75]	162.15 [73.55]	149.29 [67.72]	700 [317.52]	720 [326.59]

KNOCK-OUTS BOTH SIDES	
7/8" [22 mm]	18" [457 mm]
7/8" [22 mm]	15" [381 mm]
1 1/4" x 7/8" [32 x 22 mm]	12" [305 mm]
1 3/4" [44 mm]	9" [229 mm]
2" x 1 3/4" [51 x 44 mm]	5 1/2" [140 mm]

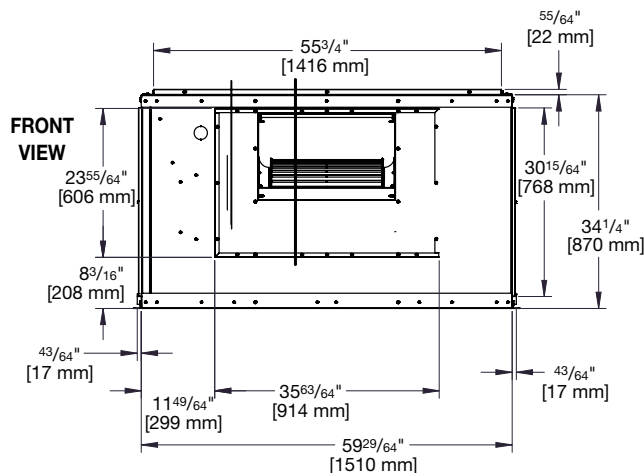
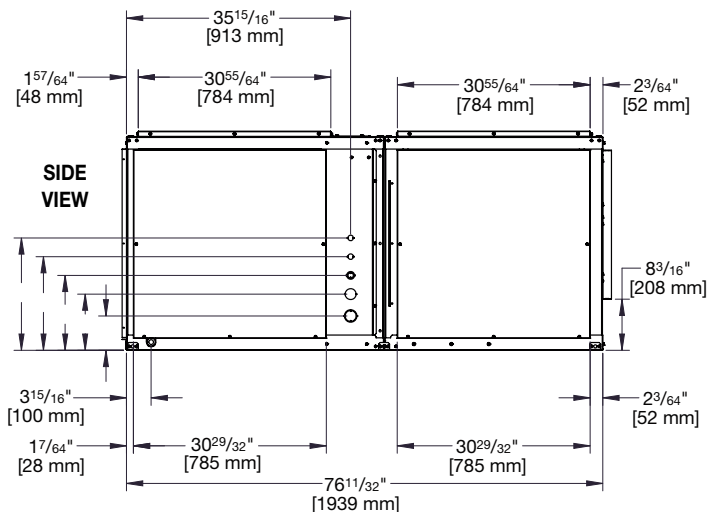


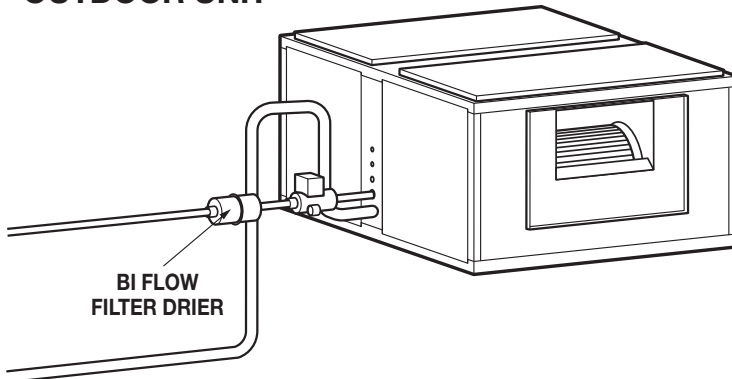
Illustration
ST-A1372-41

*Drain connections are provided on both sides of the drain pan. The drain can be connected to either side of the drain pan, but not both. The drain must be trapped.

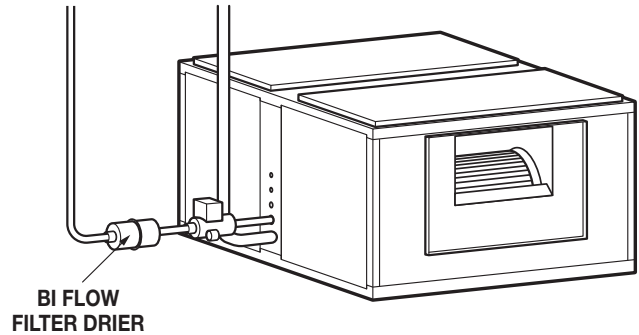
[] Designates Metric Conversions

TYPICAL PIPING RECOMMENDATIONS

INDOOR COIL ABOVE OUTDOOR UNIT



INDOOR COIL BELOW OUTDOOR UNIT



NOTE: PIPING ACCESSORIES SHOWN SHOULD BE MOUNTED AS CLOSE TO AIR HANDLER UNIT AS POSSIBLE

REFRIGERANT PIPING

1. Size liquid line for no more than 50 PSIG pressure drop.
2. Size suction lines for no more than 2°F loss, which corresponds to approximately 5 PSIG pressure drop.
3. When evaporator is installed below condensing unit, do not exceed the recommended suction line O.D. This will insure adequate velocities for proper oil return.
4. Install strainer-drier and sight glass in liquid line.
5. Pitch all horizontal suction lines downward in the direction of flow.
6. When making up refrigerant piping, take every precaution to prevent dirt and moisture from entering the piping.
7. Locate the condensing unit and evaporator(s) as close together as possible to minimize piping runs.
8. A liquid line solenoid installed just ahead of the expansion valve is recommended.
9. See tables below for general refrigerant line sizing and equivalent length of valves and fittings.
10. Refer to the vapor and liquid line selection procedure and charts in the outdoor unit installation manual or literature for more specific refrigerant line sizing information. When dual outdoor units are matched with the air-handler using dual circuits, size the refrigerant lines for each system independently.

CONDENSATE DRAIN PIPING

- Consult local codes or ordinances for specific requirements regarding condensate drain.
- Condensate drain is open to atmosphere and must be trapped. Trap must be at least 3 inches [76 mm] deep and made of flexible material or fabricated to prevent freeze-up.
- Pitch the drain line at least 1/4 inch [6 mm] per foot away from the drain pan.
- Do not reduce the drain line size from the connection size provided on the unit.
- Do not connect the drain line to a closed sewer line.

**RECOMMENDED VAPOR AND LIQUID LINE
SIZES FOR VARIOUS LENGTHS OF RUN**

LINEAR LENGTH (FT.) [m]	LIQUID LINE O.D. SIZES (IN.) [mm]		VAPOR LINE O.D. SIZES (IN.) [mm]	
	090	120	090	120
0-40 [0-12.19]	1/2 [12.7]	5/8 [15.88]	1 1/8 [28.58]	1 3/8 [34.93]
41-90 [12.5-27.43]	1/2 [12.7]	5/8 [15.88]	1 3/8 [34.93]*	1 3/8 [34.93]*

***NOTE:** With the outdoor unit located below the indoor air handler, all vertical vapor lines must not exceed 1 1/8" [28.58 mm] O.D.

[] Designates Metric Conversions

TYPICAL PIPING RECOMMENDATIONS

All models are provided with dual circuit coil manifolds that can be configured for dual condensing unit applications. The coil is circuited to provide full face coil operation for each system. Knock-outs are provided on both sides of the unit to allow the refrigerant tubing to enter from either side. Remove the rubber grommets from the parts bag and install them in the appropriate

holes prior to running the line set tubing into the cabinet to seal around and protect the tubing. Copper fittings are provided in the parts bag to allow the two refrigerant circuits to be tied together for single condensing unit applications. The fittings may be installed to allow the tubing to enter the unit from either side.

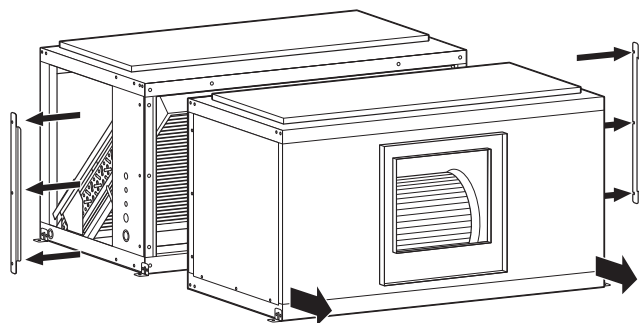
REQUIRED OUNCES OF R-454B CHARGE PER FOOT OF TUBING									
Tube Size		Liquid Tube		Vapor Tube		Total		Internal Volume	
OD (in)	OD (mm)	oz/ft	kg/m	oz/ft	kg/m	oz/ft	kg/m	ft ³ /ft	m ³ /m
3/8	9.5	0.5	0.05	0.0	0.00	0.5	0.05	0.000555	0.000048
1/2	12.7	1.0	0.09	0.0	0.00	1.0	0.09	0.001080	0.000093
5/8	15.9	1.5	0.14	0.1	0.00	1.6	0.15	0.001730	0.000149
3/4	19.1	2.2	0.21	0.1	0.01	2.3	0.21	0.002480	0.000214
7/8	22.2	3.1	0.29	0.1	0.01	3.2	0.30	0.003430	0.000296
1	25.4	4.0	0.37	0.1	0.01	4.2	0.39	0.004500	0.000389
1 1/8	28.6	5.2	0.49	0.2	0.02	5.4	0.50	0.005850	0.000503
1 1/4	31.8	6.5	0.60	0.2	0.02	6.7	0.62	0.007210	0.000623
1 3/8	34.9	7.3	0.68	0.2	0.02	7.6	0.70	0.008165	0.000759
1 1/2	38.1	9.4	0.87	0.3	0.03	9.7	0.90	0.010500	0.000910
1 5/8	41.3	11.2	1.04	0.4	0.03	11.6	1.08	0.012500	0.001080
2 1/8	54.0	19.5	1.82	0.6	0.06	20.2	1.88	0.021800	0.001880

SEPARABLE CABINET

For ease of installation into the indoor space, the air handler unit is separable. If required to move into the space, follow the steps below to separate and reconnect the two halves of the air handler.

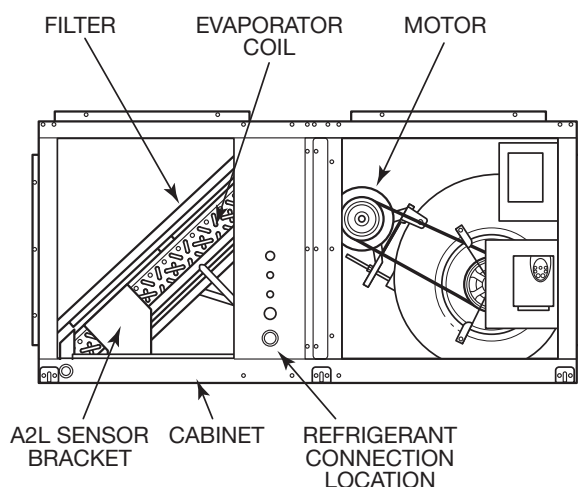
NOTE: Separation and reconnection should be completed on a flat, stable surface. Do not attempt while unit is suspended from the ceiling.

1. Unscrew and remove the two metal brackets on each side of the air handler.
2. Remove access panels.
3. Remove the 3/8 inch bolts from the frame. The unit can now be pulled apart.
4. Move the air handler into place.
5. If gasketing is damaged, use included replacement gasketing to repair the unit.
6. Align the two sides. Reattach the metal brackets and access panels—these brackets should help align the connecting holes—then insert and fasten the 3/8 inch bolts. The unit can now be reconnected and installation and set-up can commence.



REFRIGERANT LEAK DETECTION

In the event of a detected refrigerant leak, the refrigerant leak detection sensor will trigger a mitigation procedure that shuts off the compressor(s) and turns on the indoor blower motor.



UNIT SHOWN WITH SIDE PANELS REMOVED FOR COIL CONNECTIONS AND AIR FILTER ACCESS.

Guide Specifications RHCYA-090-240

You may copy this document directly into your building specification. This specification is written to comply with the 2016 version of the "master format" as published by the Construction Specification Institute. www.csinet.org.

AC AIR HANDLER UNIT

HVAC Guide Specifications

Size Range: 7.5 to 20 Nominal Tons

- 1.01 Quality Assurance
 - A. Unit shall be rated in accordance with AHRI Standard 340/360.
 - B. Unit construction shall comply with ANSI/ASHRAE 15 safety code latest revision and comply with NEC.
 - C. Unit shall be constructed in accordance with UL 60335-2-40 standard and shall carry the UL label.
 - D. Unit cabinet shall be capable of withstanding 500 hour salt spray exposure per ASTM B117 (scribed specimen).
 - E. Unit shall be subjected to run test on the assembly line.
 - F. Unit meets ASHRAE 90.1 2022 minimum efficiency requirements.
 - G. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
 - H. Unit shall be subjected to a completely automated run test on the assembly line. The data for each unit will be stored at the factory and must be available upon request.
- 1.02 Manufacturer Qualifications
 - A. Unit shall be manufactured in a facility registered to ISO 9001:2015 manufacturing quality standard.
- 1.03 Installer Qualifications
 - A. The installer shall be trained to install and service equipment with A2L refrigerants.
- 1.04 Delivery, Storage, and Handling
 - Unit shall be shipped as single package only, and shall be stored and handled according to unit manufacturer's recommendations.
 - A. Unit shall be stored and handled per manufacturer's recommendations.
 - B. Refer to the manufacturer's installation and operation manual for guidance on how to properly lift the unit.
 - C. Unit shall only be stored or positioned in the upright position.
- 1.05 Unit Cabinet
 - A. Unit cabinet shall be constructed of galvanized steel and coated with a pre-painted baked enamel finish.
 - B. Cabinets shall be insulated with 1/2" [13 mm] by 1-1/2 lbs. [.68 kg] density fiberglass insulation coated with neoprene and bonded to the cabinet surface with a U.L. approved adhesive. Insulation shall have fire retarding characteristics in accordance with smoke developed rating not to exceed 50 and flame spread rating of 25 per UL testing procedures.
 - C. Unit cabinet exterior paint shall be: pre-painted steel.
 - D. Insulation:
 - i. Interior cabinet surfaces shall be insulated with a minimum of 1/2-in. thick, minimum 1.6 lbs. density, flexible fiberglass insulation bonded with foil face on the air side.
 - ii. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
 - iii. Insulation shall also be mechanically fastened with welded pin and retainer washer.
 - E. Condensate pan and connections:
 - i. Shall be a sloped condensate drain pan made of a non-corrosive material and be removable for cleaning.
 - ii. Shall comply with ASHRAE Standard 62.
 - iii. Shall use a 3/4" NPT drain connection through either side of the drain pan. The connection shall be made per the manufacturer's recommendations.
 - iv. Shall have drain connections on each side of the unit in either horizontal or vertical type applications.
 - F. Side panel:
 - i. The separable unit shall have removable side panels on each side of the unit. Each side has two removable panels: four panels total.
 - G. Electrical Connections:
 - i. All unit power wiring shall enter the unit cabinet through factory-prepared knockouts next to the unit access panels.
 - H. Component access panels (standard)
 - i. Cabinet panels shall be easily opened for servicing.
 - I. Unit cabinet design shall be separable to facilitate mobilization during installation.

- 1.06 Refrigerant Components
 - A. The refrigerant circuit shall include the following control, safety, and maintenance features:
 - i. Refrigerant filter drier.
 - ii. Service gauge connections on suction and discharge lines.
 - iii. External pressure gauge ports allows pressures to be checked on the side, without removing access panel.
- 1.07 Evaporator Coils
 - A. The evaporator coil shall consist of copper tubes with aluminum fins bonded to the tubes by mechanical expansion. Suction and liquid line connections or supply and discharge connections shall be field-configurable to either side of the coil.
 - B. Evaporator coil in 12.5 ton units shall be 3-row.
 - C. Evaporator coil in 6.5, 7.5, 10, 15, and 20 ton units shall be 4-row.
 - D. Direct expansion coils shall feature factory-installed thermostatic expansion valves (TXVs) for refrigerant control. The TXVs shall be R-454B compatible and capable of external adjustment.
- 1.08 Controls and Safeties
 - A. Components are not compatible between different refrigerants. Do not use R-410A service equipment or components on R-454B equipment. System or part failure could occur.
- 1.09 Operating Characteristics
 - A. When combined with matching RACY condensing unit, the system shall be capable of starting and running at ambient outdoor temperatures up to 125.6°F (52°C) in cooling mode.
 - B. Unit shall be factory configured for horizontal supply & return configurations.
 - C. Unit shall be field convertible from vertical to horizontal configuration.
- 1.10 Electrical Requirements
 - A. Unit shall operate at $\pm 10\%$ from rated voltage.
 - B. Unit electrical power shall be single-point connection.
 - C. Main power supply voltage, phase, and frequency must match those required by the manufacturer.
- 1.11 Thermostats
 - A. Thermostat shall:
 - i. Have the capability to energize 2 stages of cooling.
 - ii. The variable speed drive (VFD) must be powered continuously and controlled by the thermostat signals.
 - iii. Use a 3/4" NPT drain connection through either side of the drain pan.
 - B. Thermostat Controls:
 - i. The appropriate thermostat control wires (C, G, Y2, W and R) must also be connected to the low voltage terminal block (TB2) located on the outside of the air-handler control box (No heat application).
 - ii. Electric Heat Application - The appropriate thermostat control wires must be connected to the thermostat pigtails on the heater kit and to the C, G, Y2, and W1 terminals on the low voltage terminal block located on the outside of the air handler control box.
 - iii. Low voltage terminal block (TB3) to be used for A2L sensor. Red wire to "24V VAC/VDC. Brown wire to "24V COM.
- 1.12 Motor
 - A. Fan motor of the size and electrical characteristics specified on the equipment schedule shall be factory supplied and installed.
 - B. Motors shall have inherent thermal overload protection.
 - C. Alternate Motor and Drive:
 - i. An alternate motor and/or medium-static or high-static drive shall be available to meet the airflow and external static pressure requirements specified on the equipment schedule.
 - D. Variable Frequency Drive (VFD) Standard:
 - i. Unit shall be supplied with an electronic variable frequency drive for the supply air fan.
 - ii. Drive shall be factory installed in an enclosed cabinet.
 - iii. Drive shall meet UL Standard 95-5V.
 - iv. The completed unit assembly shall be UL listed.
 - v. Drives are to be accessible through a tooled access hinged door assembly.
 - vi. The unit manufacturer shall install all power and control wiring.
 - vii. The supply air fan drive output shall be controlled by the factory installed main unit control system and drive status and operating speed shall be monitored and displayed at the main unit control panel.
 - viii. Drive shall be programmed and factory run tested in the unit.

1.13 Special Features

A. Electric Heaters:

- i. Heaters for nominal 240V, 480V, or 575V, 3-Phase, 60Hz shall be field-installed as shown on the equipment drawings. Electric heat assembly shall be UL agency approved and shall have single-point power wiring.

B. A2L Sensor:

- i. Sensor shall provide the ability to signal the blower, compressor, and electric heat to comply with the UL 60335-2-40 mitigation when a refrigerant leak is detected.
- ii. Sensor shall be operable when the unit is installed in either vertical or horizontal configurations.

GENERAL TERMS OF LIMITED PARTS WARRANTY*

Sure Comfort® will furnish a replacement for any part of this product which fails in normal use and service within the applicable periods stated, in accordance with the terms of the limited warranty.

Parts
Commercial ApplicationsOne (1) Year

*For Complete Details of the Limited Warranty, Including Applicable Terms and Conditions, See Your Local Installer or Contact the Manufacturer for a Copy.

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In keeping with its policy of continuous progress and product improvement, Sure Comfort reserves the right to make changes without notice.



5600 Old Greenwood Road, Fort Smith, AR 72908

Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all Federal, State, Provincial, and Local codes, regulations, and practices.