



RR / RM / RS

Vertical High Rise Fan Coils

Chilled Water Cooling with

Hot Water or Electric Heat

Vertical 300-1200 CFM

ECM motor



NOMENCLATURE

B F RR 10 E 246 B 10 C 40 R S G A A 88 LUNV 2 D R G 0 G 0 0 A 0 E M F B 1
S

UNIT & MODEL			
REVISION	BRAND	MODEL	SIZE
A	A	RR	03
B	F	RM	04
		RS	06
			08
			10
			12

STANDARD ELECTRICAL			
MOTOR	VOLTAGE	CONTROL VOLTAGE	ELECTRIC HEAT
E - ECM	126	A - 24V	00 - None
	246	B - 120V	01 - 1kW
	276		02 - 2kW
			03 - 3kW
			04 - 4kW
			05 - 5kW
			06 - 6kW
			08 - 8kW
			10 - 10kW

COOLING/HEATING COILS						
SYSTEM	COIL ROWS	HANDING	CONNECTIONS	COIL WRAPPER	FIN MATERIAL	PRESS. TEST
A	30 - 3Row (2P)	L - Left	S - Single Side (STD)	G - Galvanized Steel (STD)	A - Aluminum (STD)	A - 350 PSI
B	40 - 4Row (2P)	R - Right				
C	31 - 3/1Row (4P)					
D	32 - 3/2Row (4P)					
E	41 - 4/1Row (4P)					
F						

CABINET CONSTRUCTION						
HEIGHT	CONFIGURATION		INSULATION THICKNESS	INSULATION	INSTALLATION	
88 - 88" (STD)	RUNV - LH Universal	BTRX	LTRX	2 - 1/2"	D - Fiberglass	F - Furred In
65 - 65"	LUNV - RH Universal	BTXX	LTX	3 - 3/4"	F - Foil Faced	E - Exposed
76 - 76"	BFLX	LBXX	RBXX			R - ERV
80 - 80"	BFRX	LFBX	RFBX			
91 - 91"	BFXX	LFRX	RFLX			
	BLXX	LFXX	RFXX			
	BRLX	LRBX	RLBX			
	BRXX	LRXX	RLXX			
	BTFX	LTBX	RTBX			
	BTLX	LTFX	RTFX			
			RTLX			
			RTXX			

CABINET OPTIONS				
DRAIN PAN	FILTER FRAME	FILTER	OPTION 1	OPTION 2
G - Galvanized	0 - 1" Standard Frame	G - 1" MERV 10	0 - None	0 - None
S - Stainless Steel		0 - 1" MERV 3/4	S - Sound Barrier	L - Line of Sight Baffle

ELECTRICAL OPTIONS				
SERVICE SWITCH	FUSES	RELAY	TSTAT CONNECTION	OPTION 3
0 - None	0 - None	0 - None	0 - None	0 - None
A - 15A		E - Electro-mechanical	M - Multi-Pin Connector	F - Float Switch

CONTROLS/ T-STATS		
THERMOSTATS	TSTAT LOCATION	OPTION 4
0 - None	0 - None	0 - None
F - Fan Switch Only (T422)	1 - Unit Mount	
A - Non Programmable Manual (T420)	2 - Wall Mount	
B - Non Programmable Auto (T421)	3 - ADA Unit Mount	
C - Non Programmable w/ LCD Display (T426)		
D - Programmable with LCD Display (T427)		
E - Programmable w/ Large LCD Display (T428)		

NOMENCLATURE

A 2 S S 4 30 B 0 0 0 B T A 2 S S 4 30 B 0 0 0 B T R F 1 L 99 6 E E 6 118 60

CHILLED WATER / HOT WATER VALVES											
VALVE SIZE	VALVE TYPE	ACTUATOR STYLE	ACTUATOR PRESSURE	FLOW CONTROL	A.FLOW GPM	ISOLATION VALVE	PRESSURE PORTS	STRAINER	AQUASTAT	COIL CONNECTIONS	END CONNECTION
0	0	0	0	0	00	0	0	0	0	B	E
A	2	S	S	M	05	B	C	S	1	U	T
B	3	M	M	N	07		E	B	2		H
		P	H	4	10						U
				6	15						S
					20						M
					25						
					30						
					35						
					40						
					45						
					50						
					55						
					60						
					65						
					70						
					75						
					80						
					90						
					A1						
					A2						
					A3						
					A4						
					A5						
					A6						
					A7						
					A8						
					A9						
					B0						
					B1						
					B2						
					B3						
					B4						
					B5						

RISER TUBES										
KIT TYPE	FAMILY	MODEL	TYPE	SIZE	TAKE OFFS	TOP PIPE	BOTTOM PIPE	INSULATION	LENGTH	TOP FROM FLOOR
0	0	0	0	00	0	0	0	0	000	00
R	F	D	L	11	1	E	E	4	090	91
E	W	1	M	12	2	S	S	6	115	60
				21	4	C	C	7	116	
				22	5	H	H		118	
				23	6				119	
				32	7				120	
				33	8				110	
				34	9					
				43	A					
				44	B					
				45	C					
				54	D					
				55	E					
				56	F					
				65	G					
				66	H					
				67	I					
				76	J					
				77	K					
				79	L					
				97	M					
				99	N					
					P					
					Q					

NOMENCLATURE

UN 1 0 A F 0 0 W 1 A 2216 W

OUTSIDE AIR OPTIONS		
OA LOCATION	OA SIZE	OA ACCESSORIES
00 - None	0 - None	0 - None
UN - Universal Side KO	1 - 4" Round	

ACCESS/RETURN AIR PANELS				
PANEL TYPE	PANEL SIZE	INSULATION	IAQ OPTIONS	PANEL COLOR
0 - None	0 - None	0 - None	0 - None	0 - None
A - Surface (STD)	S - Small (Size 03 04)			W - White
B - Flush Mounted	M - Medium (Size 06, 08)			G - Grey
D - Surface ADA-H	L - Large (Size 10, 12)			
E - Surface ADA-V	F - Full Size Cabinet (88")			
F - Flush Mounted ADA-H				
G - Flush Mounted ADA-V				

DISCHARGE GRILLE			
GRILLE TYPE	GRILLE MATERIAL	GRILLE SIZE	GRILLE COLOR
0 - None	0 - None	0000 - None	0 - None
1 - One DD Grille	A - Aluminum	1406 - 14"x6"	W - White
2 - Two DD Grille	S - Steel	1408 - 14"x8"	G - Grey
3 - One DD / One OBD Grille		1412 - 14"x12"	
		1806 - 18"x6"	
		1810 - 18"x10"	
		1812 - 18"x12"	
		1816 - 18"x16"	
		2016 - 20"x16"	
		2208 - 22"x8"	

STANDARD FEATURES

Cabinet external and internal parts are fabricated from galvanized steel. Construction allows for large access panels to permit full access to internal components. The structural integrity of the cabinets remain unaffected by the removal of any or all access panels.

Insulation Insulation shall be 3/4 inch thick antimicrobial coated Tuf-skin RX providing effective acoustical and thermal control, fire safety, and resistance to air erosion. This insulation meets the requirements of ASTM C 1071, ASTM G 21, ASTM G22, NFPA 90A and UL-181.

Coils are 1/2 inch staggered tube type construction with seamless copper tubes and headers and deep corrugated aluminum fins with straight edges. Fins are manufactured with full depth collars, drawn in the fin stock to provide accurate control of fin spacing and completely cover the copper tubes to lengthen coil life. The tubes are to be expanded into the fins for a permanent primary to secondary surface bond, assuring maximum heat transfer efficiency. The coils are to be tested at 350 pounds air pressure for operation at 300 PSI gauge working pressure. Coils include a manual air vent.

Cooling/Heating options include 2-pipe, 4-pipe or 2-pipe with electric heat.

Drain pans are removable and formed from heavy gauge galvanized steel or optional stainless steel and is coated inside with insulation. The drain pan is factory piped to a removable "p-trap" for easy cleaning.

Fan Wheels are double width, double inlet (DWDI), forward curved, centrifugal type. They are statically and dynamically balanced for smooth, quiet operation. The housing is constructed of heavy gauge galvanized steel with die-formed inlet cones.

Motor is a 3-speed, with 115-V, 208/240-V and 277-V option, single phase, 60-Hz, electronically commutated motor type, factory mounted on the blower housing.

Filters are 1" disposable type. The filters are included in the units as an integral part of the cabinet with easy access.

Risers Can be factory installed or shipped loose. Typically 116" or 120" long with straight ends for pro-press fittings to join one riser to another or swaged ends. Standard risers are copper insulated with 1/2", 3/4" or 1" thick synthetic rubber options. Risers are made from either Type L or Type M copper.

Valve packages are factory assembled for installation inside cabinet. Power-heads include quick connect wiring harness.

24v controls include a quick connect plug for field-mounting of thermostat on the front of unit.

Fresh air opening available on either side of unit.

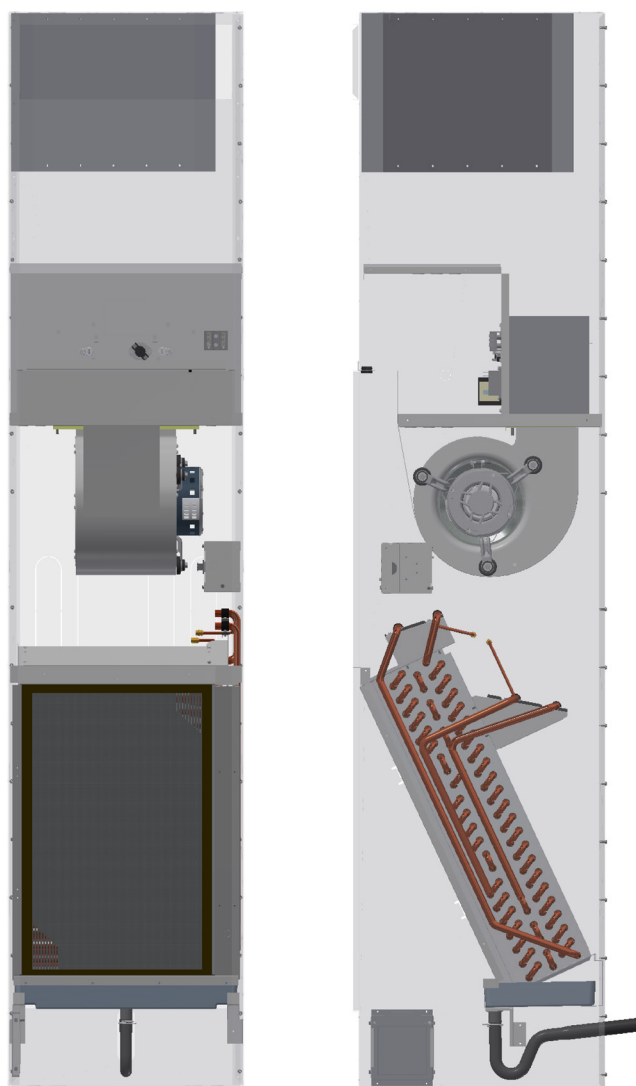
Electric heaters are equipped with open wound nichrome wire including automatic reset safety cutout switch and 24v control circuit.

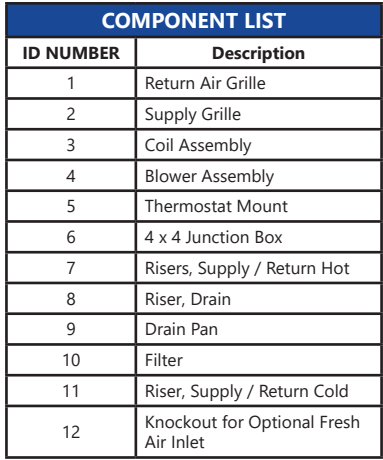
STANDARD FEATURES

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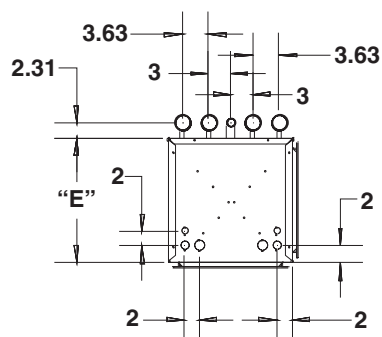
Return air/access panel is fabricated from heavy gauge galvanized steel with stamped louvers, powder coated and equipped with tamper proof fasteners.

Certifications include ETL for safety and rated in accordance with ARI standard 440 for capacity.

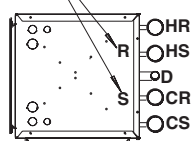




FIRST CO.

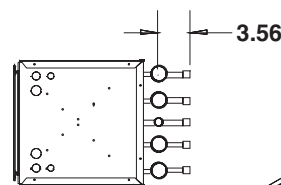


2 PIPE
OPTION

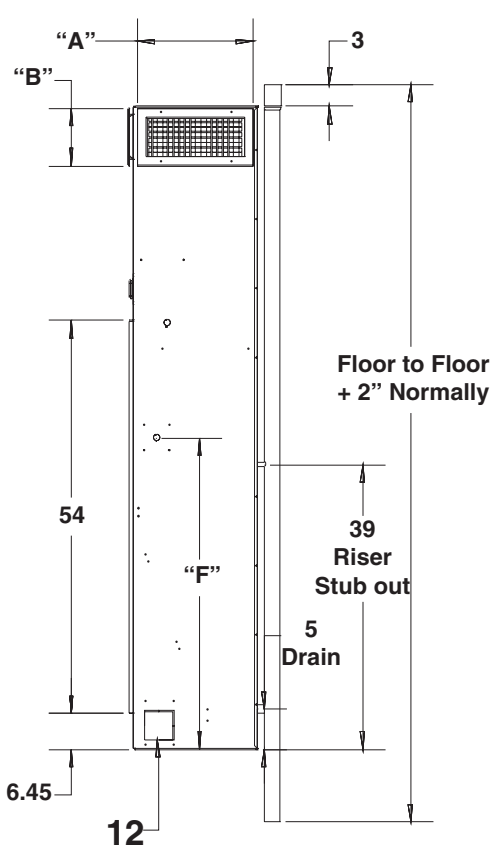
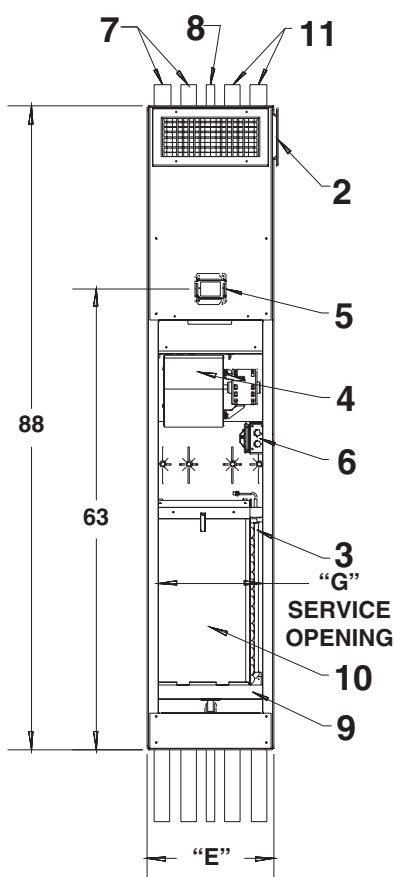


RR STANDARD
STAND ALONE

4 PIPE
SHOWN



RM PRIMARY WITH
SECONDARY
STUB OUTS



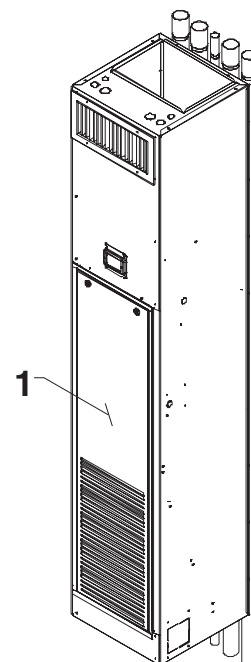
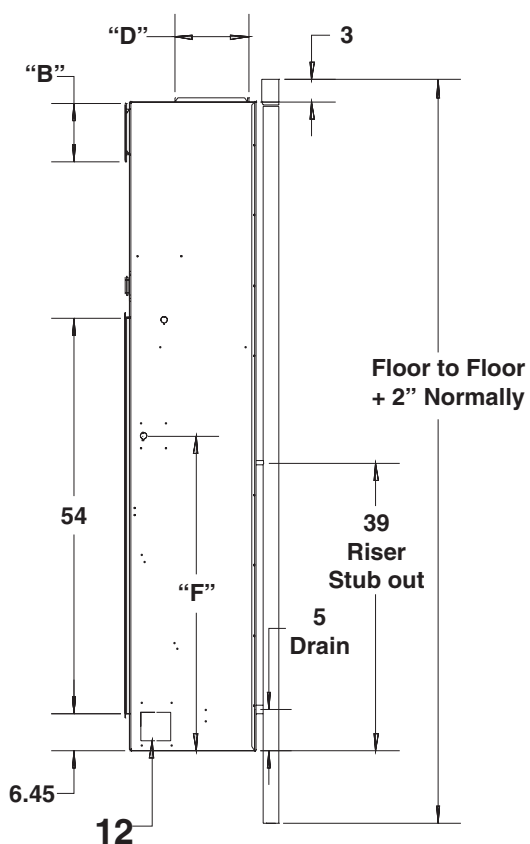
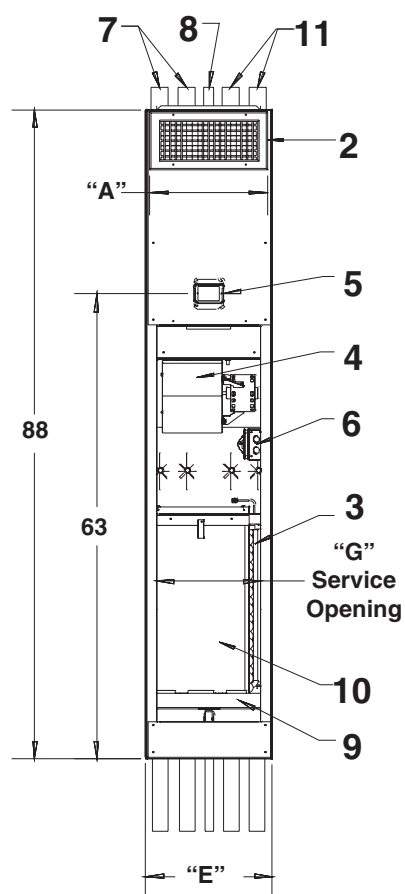
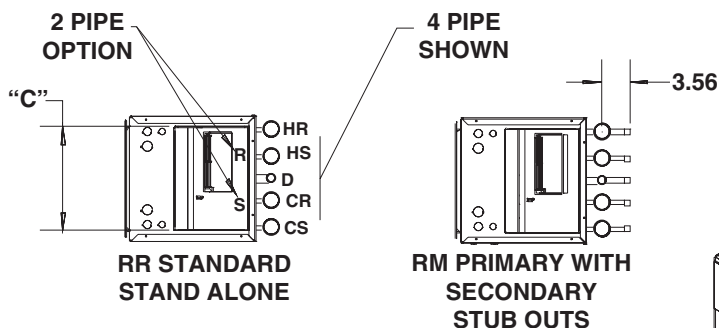
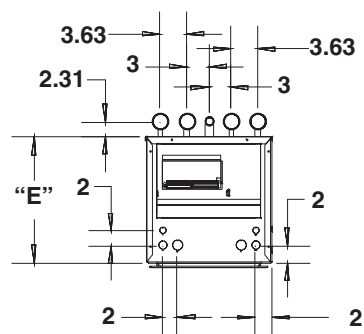
Floor to Floor
+ 2" Normally

1

COMPONENT LIST

ID NUMBER	Description
1	Return Air Grille
2	Supply Grille
3	Coil Assembly
4	Blower Assembly
5	Thermostat Mount
6	4 x 4 Junction Box
7	Risers, Supply / Return Hot
8	Riser, Drain
9	Drain Pan
10	Filter
11	Riser, Supply / Return Cold
12	Knockout for Optional Fresh Air Inlet

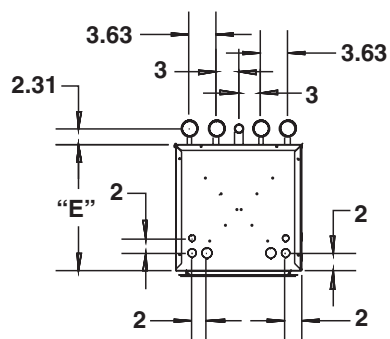
MODEL	SINGLE SUPPLY OPENING			DOUBLE SUPPLY OPENING (2)			TOP SUPPLY OPENING						
	A	B	SIZE	A	B	SIZE	C	D	SIZE	E	F	G	FILTER SIZE
3RR/RM				14	6	14 X 6				17	42.62	14.13	12.5 X 24.25 X 1
4RR/RM				14	6	14 X 6				17	42.62	14.13	12.5 X 24.25 X 1
6RR/RM				18	6	18 X 6				20	42.62	18.13	16.25 X 26.75 X 1
8RR/RM				18	6	18 X 6				20	42.62	18.13	16.25 X 26.75 X 1
10RR/RM				22	8	22 X 8				24	42.62	22.13	20.50 X 29.25 X 1
12RR/RM				22	8	22 X 8				24	42.62	22.13	20.50 X 29.25 X 1



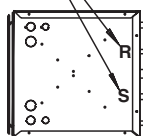
COMPONENT LIST

ID NUMBER	Description
1	Return Air Grille
2	Supply Grille
3	Coil Assembly
4	Blower Assembly
5	Thermostat Mount
6	4 x 4 Junction Box
7	Risers, Supply / Return Hot
8	Riser, Drain
9	Drain Pan
10	Filter
11	Riser, Supply / Return Cold
12	Knockout for Optional Fresh Air Inlet

MODEL	SINGLE SUPPLY OPENING			DOUBLE SUPPLY OPENING (2)			TOP SUPPLY OPENING						
	A	B	SIZE	A	B	SIZE	C	D	SIZE	E	F	G	FILTER SIZE
3RR/RM				14	6	14 X 6	14	10	14 X 10	17	42.62	14.13	12.5 X 24.25 X 1
4RR/RM				14	6	14 X 6	14	10	14 X 10	17	42.62	14.13	12.5 X 24.25 X 1
6RR/RM				18	6	18 X 6	16	12	16 X 12	20	42.62	18.13	16.25 X 26.75 X 1
8RR/RM				18	6	18 X 6	16	12	16 X 12	20	42.62	18.13	16.25 X 26.75 X 1
10RR/RM				22	8	22 X 8	18	16	18 X 16	24	42.62	22.13	20.50 X 29.25 X 1
12RR/RM				22	8	22 X 8	18	16	18 X 16	24	42.62	22.13	20.50 X 29.25 X 1

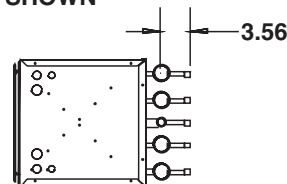


2 PIPE
OPTION

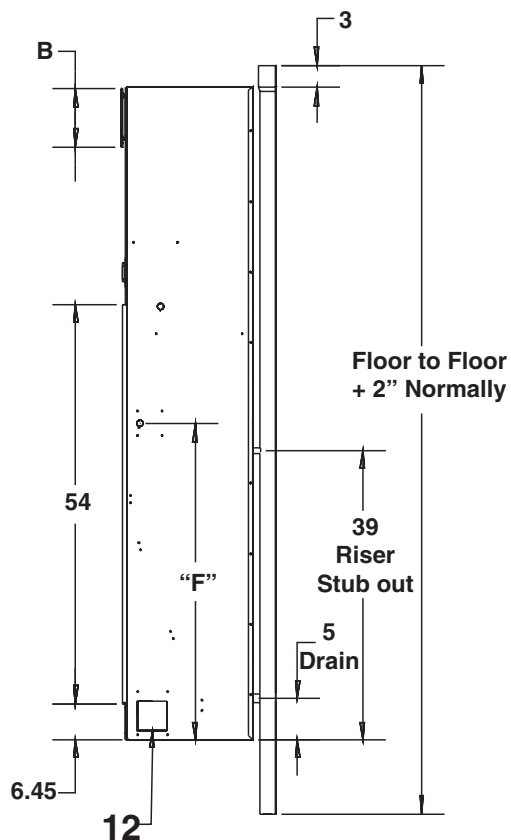
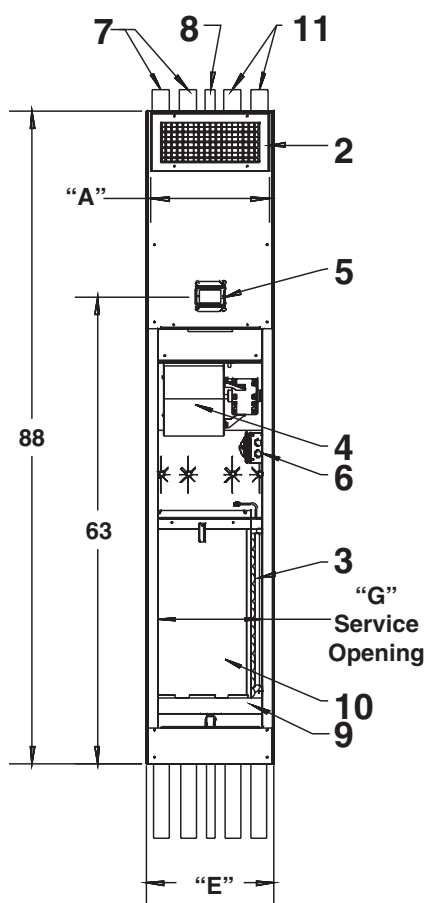
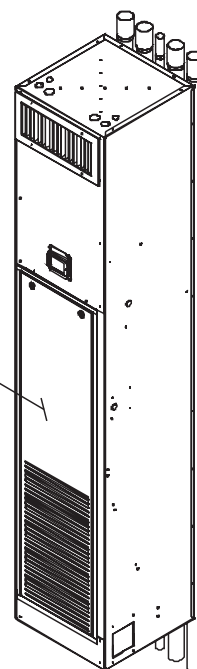


RR STANDARD
STAND ALONE

4 PIPE
SHOWN



RM PRIMARY WITH
SECONDARY
STUB OUTS

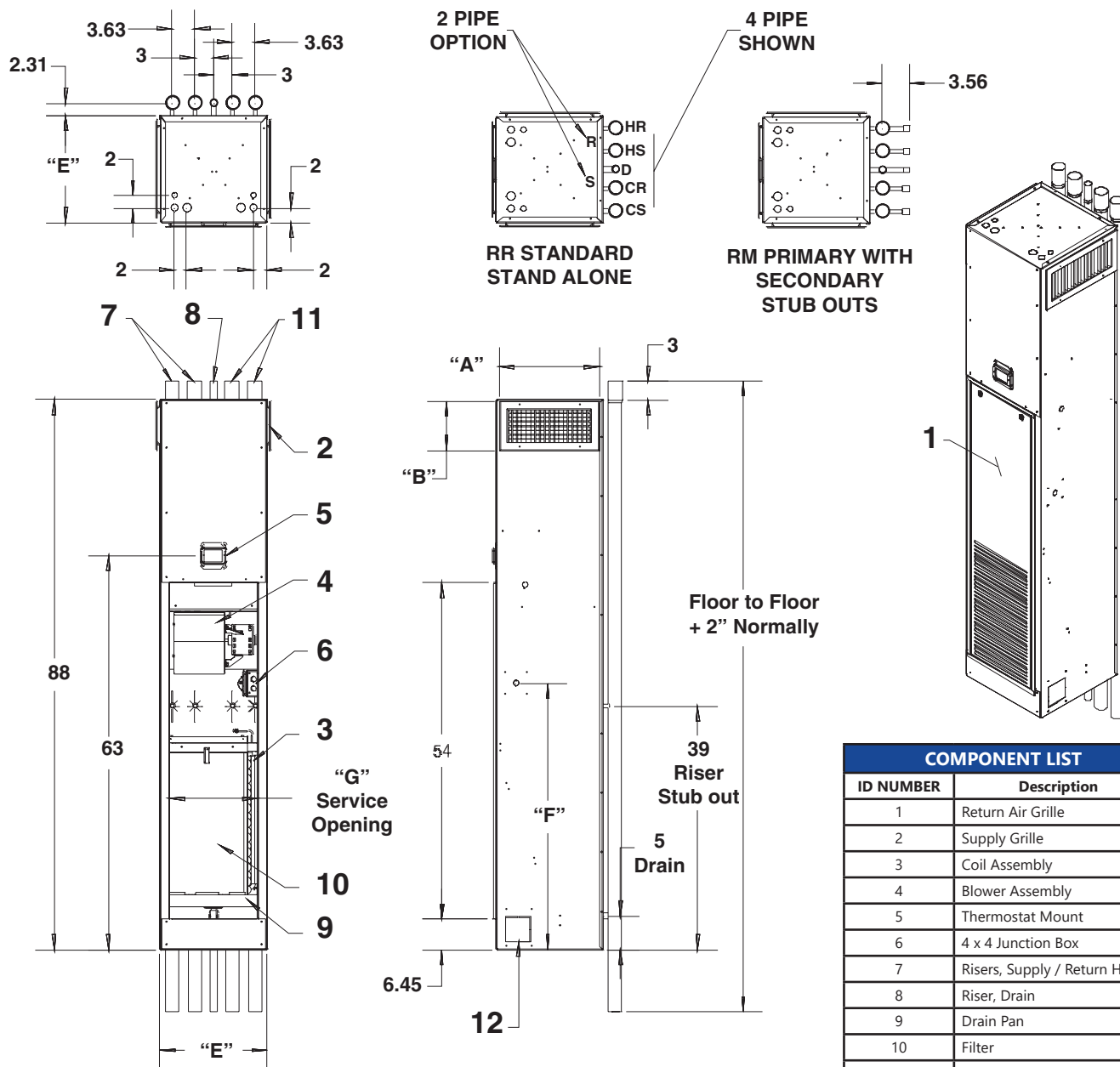


1

COMPONENT LIST

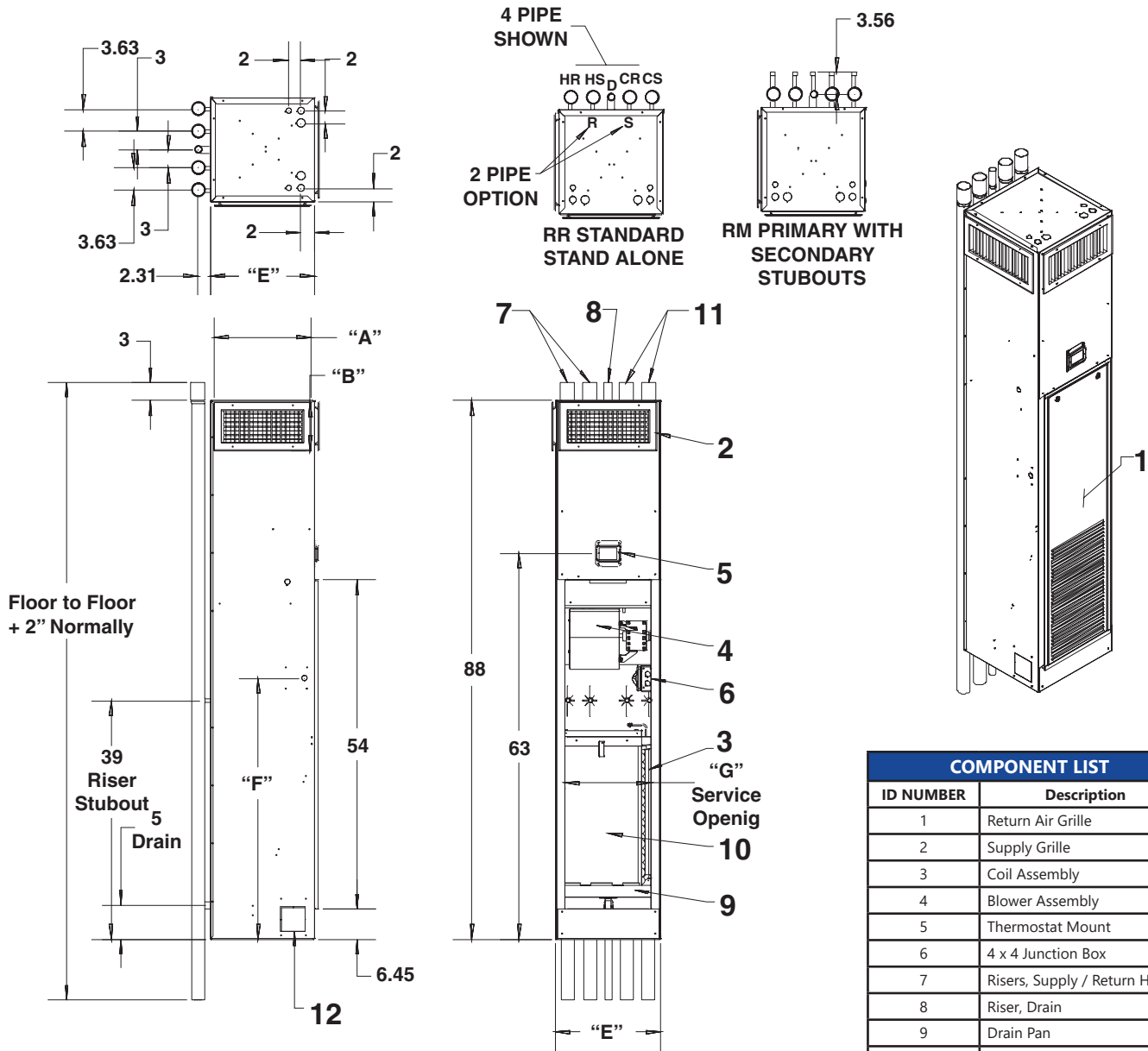
ID NUMBER	Description
1	Return Air Grille
2	Supply Grille
3	Coil Assembly
4	Blower Assembly
5	Thermostat Mount
6	4 x 4 Junction Box
7	Risers, Supply / Return Hot
8	Riser, Drain
9	Drain Pan
10	Filter
11	Riser, Supply / Return Cold
12	Knockout for Optional Fresh Air Inlet

MODEL	SINGLE SUPPLY OPENING			DOUBLE SUPPLY OPENING (2)			TOP SUPPLY OPENING						
	A	B	SIZE	A	B	SIZE	C	D	SIZE	E	F	G	FILTER SIZE
3RR/RM	14	8	14x8							17	42.62	14.13	12.5 X 24.25 X 1
4RR/RM	14	12	14x12							17	42.62	14.13	12.5 X 24.25 X 1
6RR/RM	18	10	18x10							20	42.62	18.13	16.25 X 26.75 X 1
8RR/RM	18	12	18x12							20	42.62	18.13	16.25 X 26.75 X 1



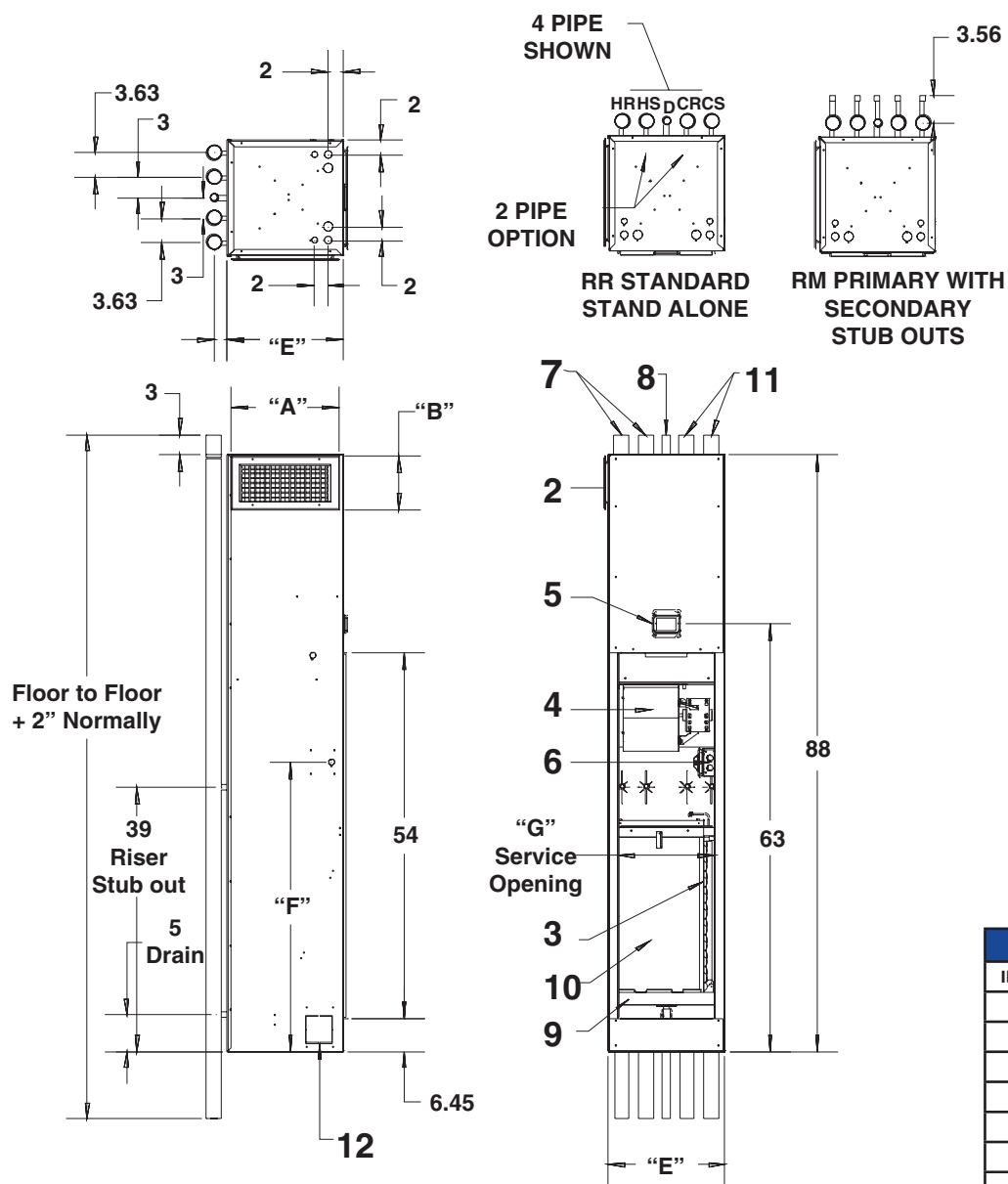
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ID NUMBER	Description
1	Return Air Grille
2	Supply Grille
3	Coil Assembly
4	Blower Assembly
5	Thermostat Mount
6	4 x 4 Junction Box
7	Risers, Supply / Return Hot
8	Riser, Drain
9	Drain Pan
10	Filter
11	Riser, Supply / Return Cold
12	Knockout for Optional Fresh Air Inlet

MODEL	SINGLE SUPPLY OPENING			DOUBLE SUPPLY OPENING (2)			TOP SUPPLY OPENING						
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6RR/RM				18	6	18 X 6				20	42.62	18.13	16.25 X 26.75 X 1
8RR/RM				18	6	18 X 6				20	42.62	18.13	16.25 X 26.75 X 1
10RR/RM				22	8	22 X 8				24	42.62	22.13	20.50 X 29.25 X 1
12RR/RM				22	8	22 X 8				24	42.62	22.13	20.50 X 29.25 X 1



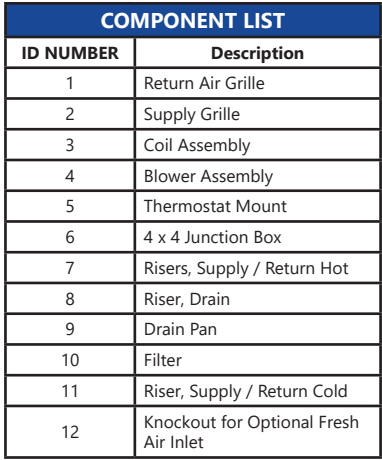
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3	Coil Assembly
4	Blower Assembly
5	Thermostat Mount
6	4 x 4 Junction Box
7	Risers, Supply / Return Hot
8	Riser, Drain
9	Drain Pan
10	Filter
11	Riser, Supply / Return Cold
12	Knockout for Optional Fresh Air Inlet

MODEL	SINGLE SUPPLY OPENING			DOUBLE SUPPLY OPENING (2)			TOP SUPPLY OPENING						
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6RR/RM				18	6	18 X 6				20	42.62	18.13	16.25 X 26.75 X 1
8RR/RM				18	6	18 X 6				20	42.62	18.13	16.25 X 26.75 X 1
10RR/RM				22	8	22 X 8				24	42.62	22.13	20.50 X 29.25 X 1
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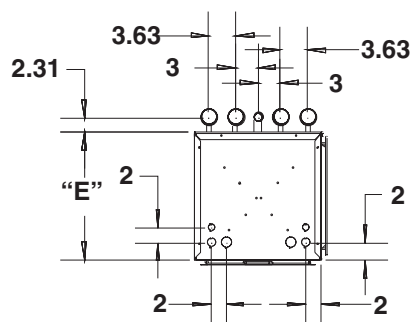


COMPONENT LIST	
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3	Coil Assembly
4	Blower Assembly
5	Thermostat Mount
6	4 x 4 Junction Box
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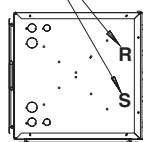
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6RR/RM	18	10	18x10							20	42.62	18.13	16.25 X 26.75 X 1
8RR/RM	18	12	18x12							20	42.62	18.13	16.25 X 26.75 X 1



FIRST CO.

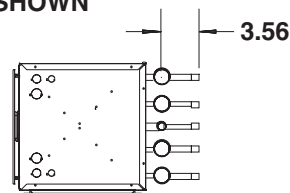


2 PIPE
OPTION

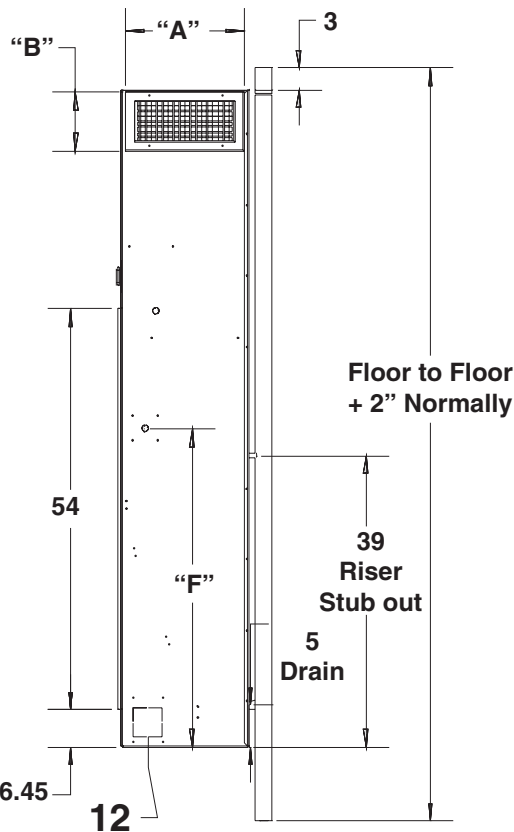
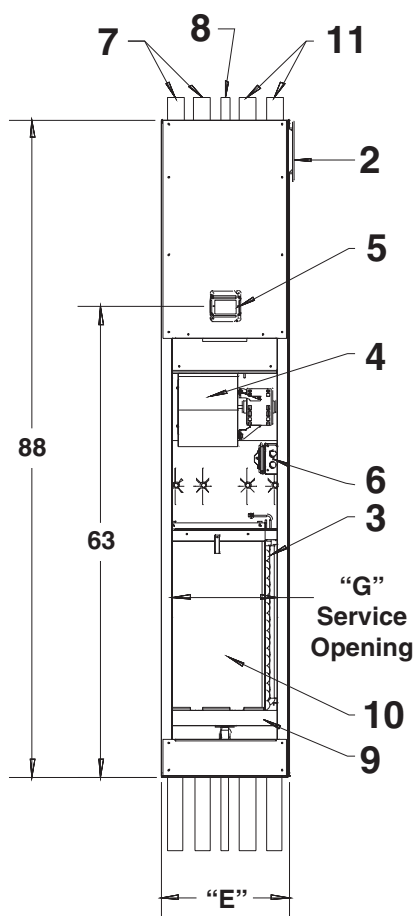
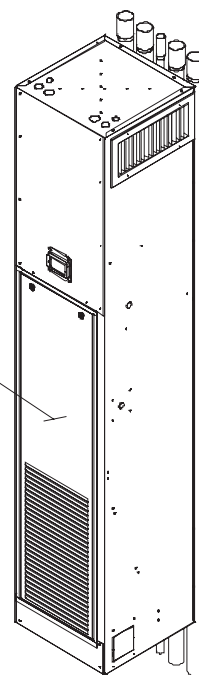


RR STANDARD
STAND ALONE

4 PIPE
SHOWN



RM MASTER WITH
SECONDARY
STUB OUTS

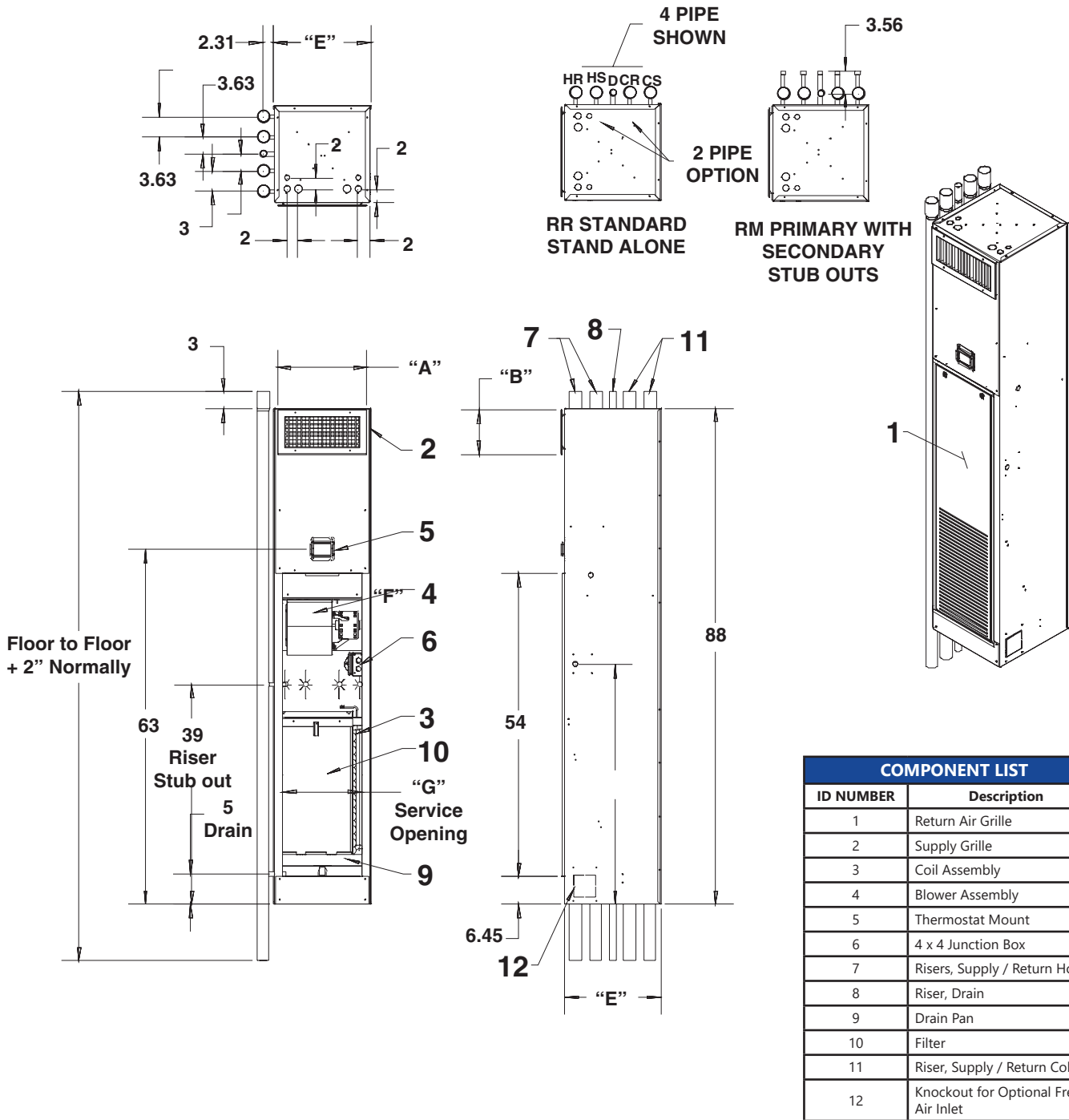


Floor to Floor
+ 2" Normally

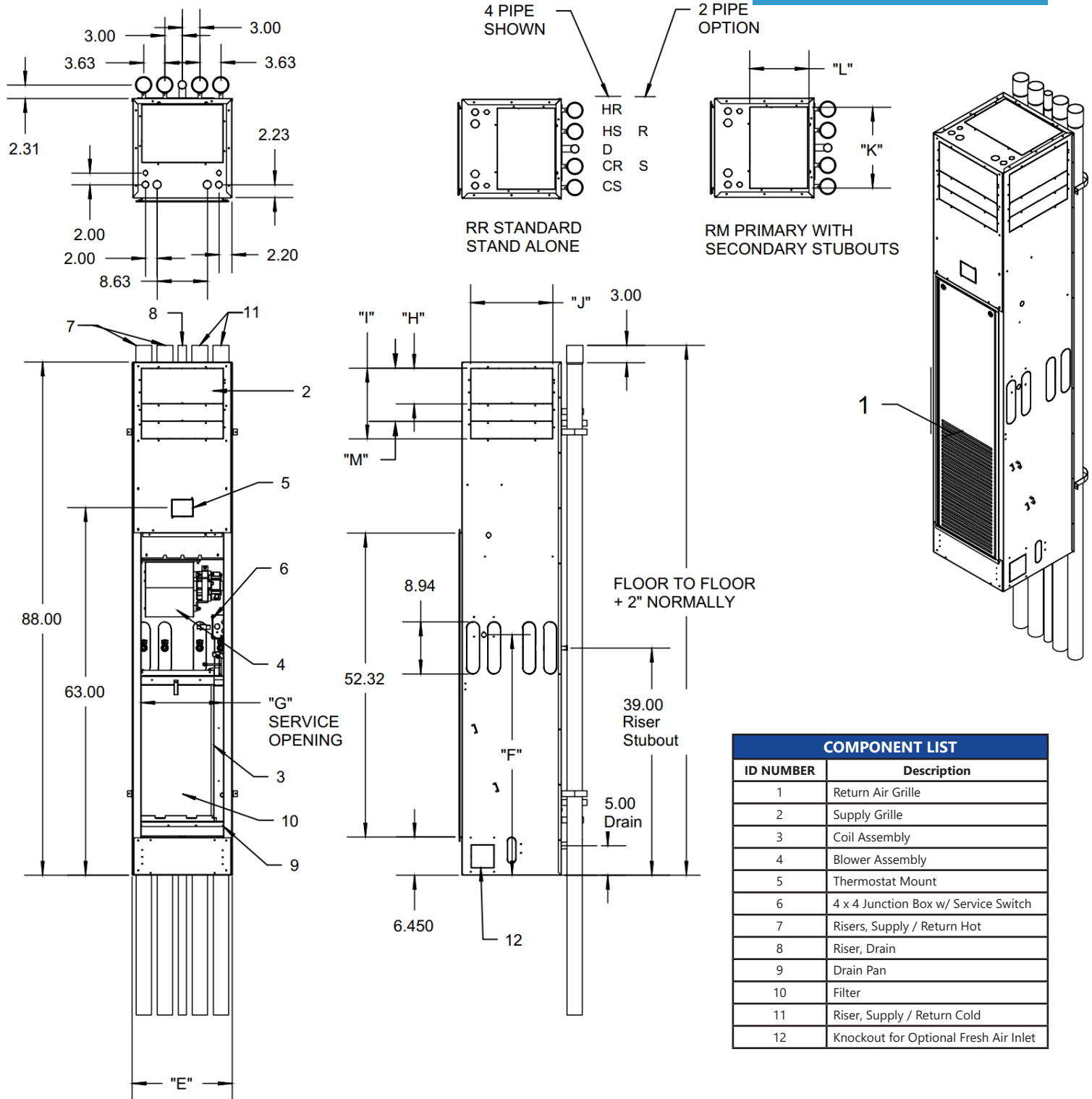
COMPONENT LIST

ID NUMBER	Description
1	Return Air Grille
2	Supply Grille
3	Coil Assembly
4	Blower Assembly
5	Thermostat Mount
6	4 x 4 Junction Box
7	Risers, Supply / Return Hot
8	Riser, Drain
9	Drain Pan
10	Filter
11	Riser, Supply / Return Cold
12	Knockout for Optional Fresh Air Inlet

MODEL	SINGLE SUPPLY OPENING			DOUBLE SUPPLY OPENING (2)			TOP SUPPLY OPENING						
	A	B	SIZE	A	B	SIZE	C	D	SIZE	E	F	G	FILTER SIZE
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4RR/RM	14	12	14x12							17	42.62	14.13	12.5 X 24.25 X 1
6RR/RM	18	10	18x10							20	42.62	18.13	16.25 X 26.75 X 1
8RR/RM	18	12	18x12							20	42.62	18.13	16.25 X 26.75 X 1

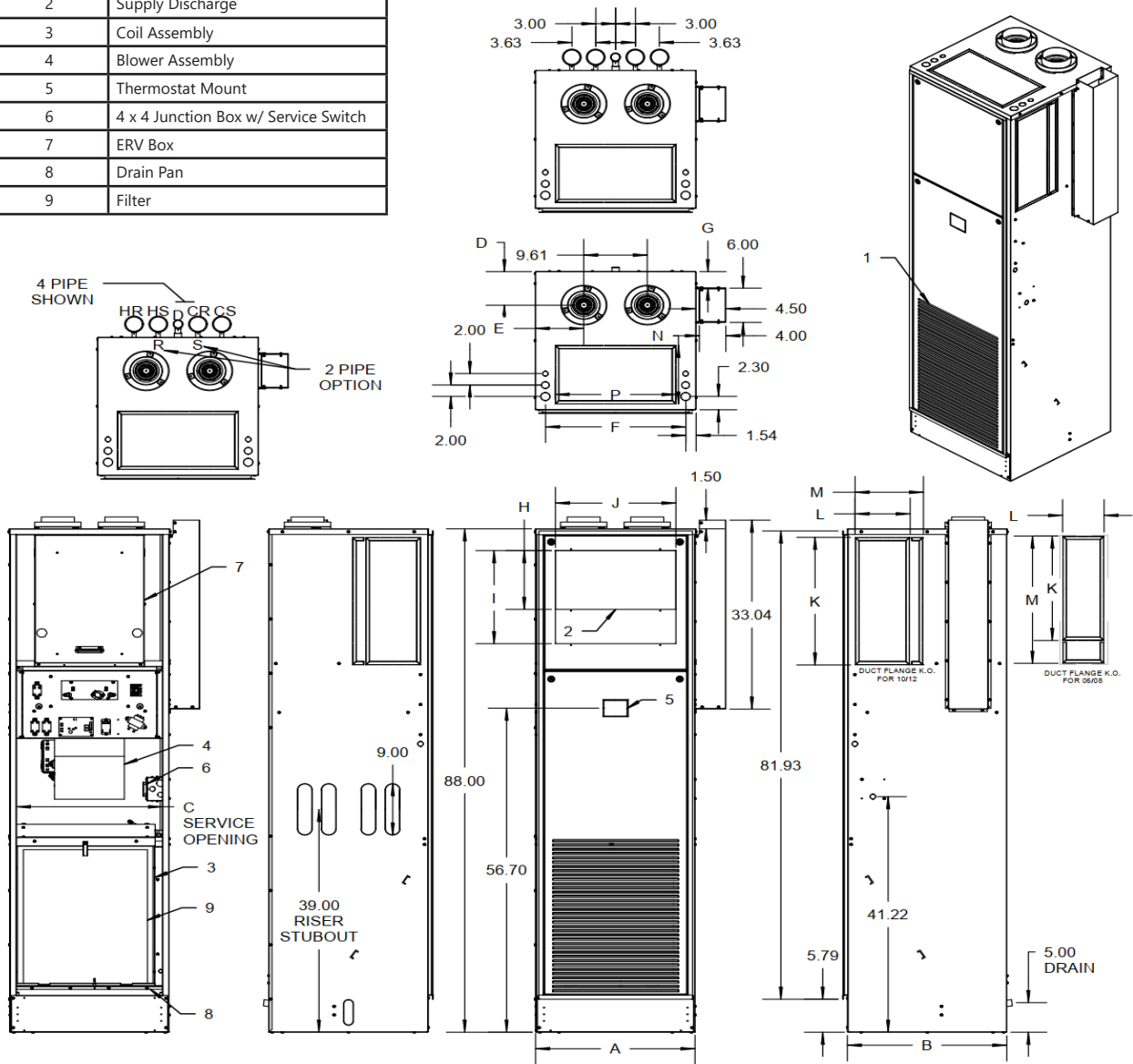


MODEL	SINGLE SUPPLY OPENING			DOUBLE SUPPLY OPENING (2)			TOP SUPPLY OPENING						
	A	B	SIZE	A	B	SIZE	C	D	SIZE	E	F	G	FILTER SIZE
3RR/RM	14	8	14x8							17	42.62	14.13	12.5 X 24.25 X 1
4RR/RM	14	12	14x12							17	42.62	14.13	12.5 X 24.25 X 1
6RR/RM	18	10	18x10							20	42.62	18.13	16.25 X 26.75 X 1
8RR/RM	18	12	18x12							20	42.62	18.13	16.25 X 26.75 X 1



UNIT	A	B	SIZE	C	D	E	F	G	H	I	J	K	L	M	FILTER SIZE
3/4 RR/RM	14	8	14x8	-	-	17	45.62	14.13	6	12	14	10	14	8	12.5 X 24.25 X 1
6/8 RR/RM	14	12	14x12	-	-	20	45.62	18.13	6	12	18	12	16	10	16.25 X 26.75 X 1
10/12 RR/RM	18	10	18x10	-	-	24	45.62	22.13	8	-	22	16	18	-	20.5 X 29.25

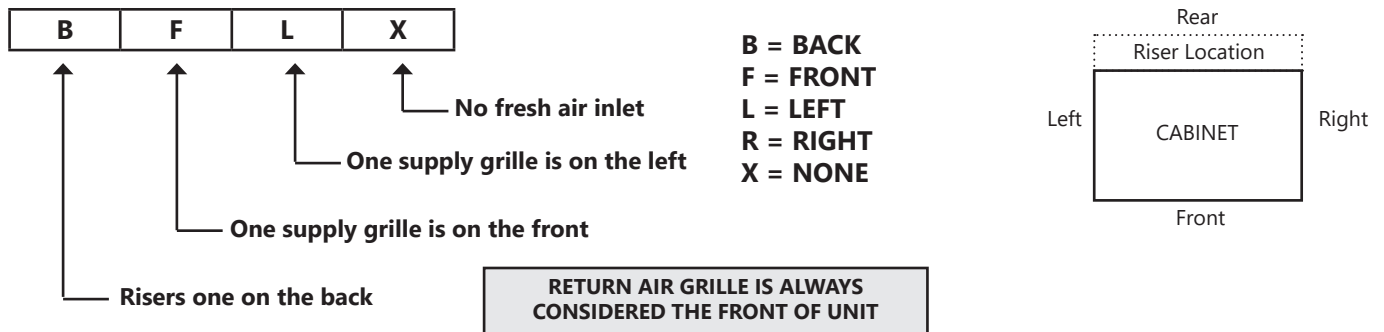
COMPONENT LIST	
ID NUMBER	Description
1	Return Air Grille
2	Supply Discharge
3	Coil Assembly
4	Blower Assembly
5	Thermostat Mount
6	4 x 4 Junction Box w/ Service Switch
7	ERV Box
8	Drain Pan
9	Filter



UNIT	A	B	C	D	E	F	G	SUPPLY DISCHARGE			SIDE DISCHARGE			TOP DISCHARGE		FILTER SIZE
								H	I	J	K	L	M	N	P	
03/04	20	20	18	6	5	17	3	6	8	14	14	6	-	6	14	12.5 X 24.5 X 1
06/08	20	20	18	6	5	17	3	8	12	14	18	6	22	6	14	16.25 X 26.75 X 1
10/12	24	24	22	6	7	21	3	10	16	18	22	8	10	10	18	10.5 X 29.25 X 1

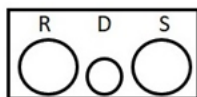
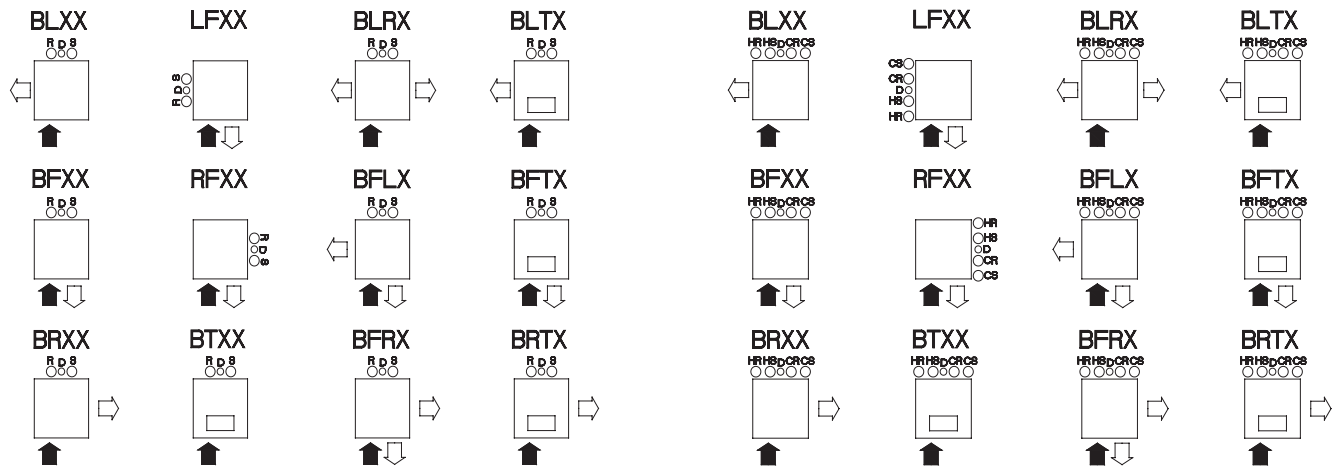
UNIT ARRANGEMENT

TYPICAL ARRANGEMENT

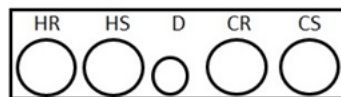


2-PIPE

4-PIPE



R = Return
D = Drain
S = Supply



HR = Hot Water Return
HS = Hot Water Supply
D = Drain
CR = Cold Water Supply
CS = Cold Water Supply

Legend:

➔ Return

⇒ Supply

BLOWER PERFORMANCE

FRR, FRM, FRS							
CFM							
UNIT MODEL	FAN SPEED	EXTERNAL STATIC PRESSURE					
		0	0.1	0.2	0.3	0.4	0.5
3	HIGH	340	260	220	180	140	70
	MED	320	230	190	145	100	---
	LOW	300	195	150	110	70	---
4	HIGH	400	345	305	270	230	170
	MED	350	280	240	200	160	90
	LOW	320	230	190	145	100	---
6	HIGH	620	580	550	520	500	470
	MED	520	470	440	410	380	340
	LOW	430	370	320	290	250	150
8	HIGH	800	765	715	680	625	570
	MED	690	660	630	600	560	530
	LOW	550	520	480	460	430	400
10	MED HIGH	1100	1060	1020	985	965	930
	MED LOW	1035	1000	960	930	910	885
	LOW	880	850	800	780	770	735
12	HIGH	1260	1190	1165	1130	1100	1050
	MED LOW	1000	910	860	840	830	800
	LOW	790	760	710	670	650	610

NOTES:

Based on maximum of 5 rows.
Deduct 10% for operation at 208V.

Data is subject to change. Please verify most current information on www.FirstCo.com or www.AE-Air.com websites.

ELECTRIC HEAT DATA

Unit Model	Nom CFM	KW				BTUH				FLA				MCA				MOP			
		120V	208V	240V	277V	120V	208V	240V	277V	120V	208V	240V	277V	120V	208V	240V	277V	120V	208V	240V	277V
3RR	300	0	0	0	0	0	0	0	0	4.42	2.76	2.76	2.76	6	4	4	4	15	15	15	15
3RM		1	0.75	1	1	3400	2550	3400	3400	12.75	6.37	6.92	6.37	16	8	9	8	20	15	15	15
3RS		2	1.5	2	2	6800	5100	6800	6800	21.08	9.97	11.08	9.98	27	13	14	13	30	15	15	15
3RC		-	2.25	3	3	-	7650	10200	10200	-	13.58	15.24	13.59	-	17	20	17	-	20	20	20
4RR	400	0	0	0	0	0	0	0	0	4.42	2.76	2.76	2.76	6	4	4	4	15	15	15	15
4RM		1	0.75	1	1	3400	2550	3400	3400	12.75	6.37	6.92	6.37	16	8	9	8	20	15	15	15
4RS		2	1.5	2	2	6800	5100	6800	6800	21.08	9.97	11.08	9.98	27	13	14	13	30	15	15	15
4RC		-	2.25	3	3	-	7650	10200	10200	-	13.58	15.24	13.59	-	17	20	17	-	20	20	20
		-	3	4	4	-	10200	13600	13600	-	17.18	19.4	17.2	-	22	25	22	-	25	25	25
6RR	600	0	0	0	0	0	0	0	0	5.72	3.26	3.26	3.06	8	5	5	4	15	15	15	15
6RM		1	1.5	2	2	3400	5100	6800	6800	14.05	10.47	11.58	10.28	18	14	15	13	25	15	20	15
		2	2.25	3	3	6800	7650	10200	10200	22.38	14.08	15.74	13.89	28	18	20	18	30	20	20	20
6RS		-	3	4	4	-	10200	13600	13600	-	17.68	19.9	17.5	-	23	25	22	-	25	25	25
6RC		-	3.75	5	5	-	12750	17000	17000	-	21.29	24.06	21.11	-	27	31	27	-	30	35	30
		-	4.5	6	6	-	15300	20400	20400	-	24.89	28.22	24.72	-	32	36	31	-	35	40	35
8RR	800	0	0	0	0	0	0	0	0	5.72	3.26	3.26	3.06	8	5	5	4	15	15	15	15
8RM		1	1.5	2	2	3400	5100	6800	6800	14.05	10.47	11.58	10.28	18	14	15	13	25	15	20	15
		2	2.25	3	3	6800	7650	10200	10200	22.38	14.08	15.74	13.89	28	18	20	18	30	20	20	20
8RS		-	3	4	4	-	10200	13600	13600	-	17.68	19.9	17.5	-	23	25	22	-	25	25	25
8RC		-	3.75	5	5	-	12750	17000	17000	-	21.29	24.06	21.11	-	27	31	27	-	30	35	30
		-	4.5	6	6	-	15300	20400	20400	-	24.89	28.22	24.72	-	32	36	31	-	35	40	35
		-	6	8	8	-	20400	27200	27200	-	32.11	36.54	31.94	-	41	46	40	-	50	50	40
10RR	1000	0	0	0	0	0	0	0	7.72	4.56	4.56	4.06	10	6	6	6	20	15	15	15	
10RM		1	2.25	3	3	3400	7650	10200	10200	16.05	15.38	17.04	14.89	21	20	22	19	30	20	25	20
		2	3	4	4	6800	10200	13600	13600	24.38	17.18	21.2	18.5	31	22	27	24	35	25	30	25
10RS		-	3.75	5	5	-	12750	17000	17000	-	20.79	25.36	22.11	-	26	32	28	-	30	35	30
10RC		-	4.5	6	6	-	15300	20400	20400	-	24.39	29.52	25.72	-	31	37	33	-	35	40	35
		-	6	8	8	-	20400	27200	27200	-	31.61	37.84	32.94	-	40	48	42	-	40	50	50
		-	7.5	10	10	-	25500	34000	34000	-	38.82	46.16	40.16	-	49	58	51	-	50	60	60
12RR	1200	0	0	0	0	0	0	0	7.72	4.56	4.56	4.06	10	6	6	6	20	15	15	15	
12RM		1	2.25	3	3	3400	7650	10200	10200	16.05	15.38	17.04	14.89	21	20	22	19	30	20	25	20
		2	3	4	4	6800	10200	13600	13600	24.38	18.98	21.2	18.5	31	24	27	24	35	25	30	25
12RS		-	3.75	5	5	-	12750	17000	17000	-	22.59	25.36	22.11	-	29	32	28	-	30	35	30
12RC		-	4.5	6	6	-	15300	20400	20400	-	26.19	29.52	25.72	-	33	37	33	-	35	40	35
		-	6	8	8	-	20400	27200	27200	-	33.41	37.84	32.94	-	42	48	42	-	50	50	50
		-	7.5	10	10	-	25500	34000	34000	-	40.62	46.16	40.16	-	51	58	51	-	60	60	60

Data is subject to change. Please verify most current information on www.FirstCo.com or www.AE-Air.com websites.

ELECTRIC HEAT DATA

Electrical Data for Riser (No Electric Heat)

Voltage	Fan Speed	3FRR				Voltage	Fan Speed	4FRR			
		HP	AMPS	MCA	MOCP			HP	AMPS	MCA	MOCP
		Blower	Blower					Blower	Blower		
120/1/60	HIGH	1/4	3.5	4.4	15	120/1/60	HIGH	1/4	3.5	4.4	15
208/1/60	HIGH	1/4	2.3	2.9	15	208/1/60	HIGH	1/4	2.3	2.9	15
240/1/60	HIGH	1/4	2.3	2.9	15	240/1/60	HIGH	1/4	2.3	2.9	15
277/1/60	HIGH	1/4	2.3	2.9	15	277/1/60	HIGH	1/4	2.3	2.9	15
Voltage	Fan Speed	6FRR				Voltage	Fan Speed	8FRR			
		HP	AMPS	MCA	MOCP			HP	AMPS	MCA	MOCP
		Blower	Blower					Blower	Blower		
120/1/60	HIGH	1/3	4.8	6	15	120/1/60	HIGH	1/3	4.8	6	15
208/1/60	HIGH	1/3	2.8	3.5	15	208/1/60	HIGH	1/3	2.8	3.5	15
240/1/60	HIGH	1/3	2.8	3.5	15	240/1/60	HIGH	1/3	2.8	3.5	15
277/1/60	HIGH	1/3	2.6	3.3	15	277/1/60	HIGH	1/3	2.6	3.3	15
Voltage	Fan Speed	10FRR				Voltage	Fan Speed	12FRR			
		HP	AMPS	MCA	MOCP			HP	AMPS	MCA	MOCP
		Blower	Blower					Blower	Blower		
120/1/60	HIGH	1/2	6.8	8.5	20	120/1/60	HIGH	1/2	6.8	8.5	20
208/1/60	HIGH	1/2	4.1	5.1	15	208/1/60	HIGH	1/2	4.1	5.1	15
240/1/60	HIGH	1/2	4.1	5.1	15	240/1/60	HIGH	1/2	4.1	5.1	15
277/1/60	HIGH	1/2	3.6	4.5	15	277/1/60	HIGH	1/2	3.6	4.5	15

Electrical Data for ERV Riser (No Electric Heat)

Voltage	Fan Speed	3FRR						Voltage	Fan Speed	4FRR					
		HP		Amps		MCA	MOCP			HP		Amps		MCA	MOCP
		ERV	Blower	ERV	Blower					ERV	Blower	ERV	Blower		
120/1/60	HIGH	1/30	1/4	0.92	3.5	5.3	15	120/1/60	HIGH	1/30	1/4	0.92	3.5	5.3	15
208/1/60	HIGH	1/30	1/4	0.46	2.3	3.3	15	208/1/60	HIGH	1/30	1/4	0.46	2.3	2.3	15
240/1/60	HIGH	1/30	1/4	0.46	2.3	3.3	15	240/1/60	HIGH	1/30	1/4	0.46	2.3	2.3	15
277/1/60	HIGH	1/30	1/4	0.46	2.3	3.3	15	277/1/60	HIGH	1/30	1/4	0.46	2.3	3.3	15
Voltage	Fan Speed	6FRR						Voltage	Fan Speed	8FRR					
		HP		Amps		MCA	MOCP			HP		Amps		MCA	MOCP
		ERV	Blower	ERV	Blower					ERV	Blower	ERV	Blower		
120/1/60	HIGH	1/30	1/3	0.92	4.8	6.9	15	120/1/60	HIGH	1/30	1/3	0.92	4.8	6.9	15
208/1/60	HIGH	1/30	1/3	0.46	2.8	4	15	208/1/60	HIGH	1/30	1/3	0.46	2.8	4	15
240/1/60	HIGH	1/30	1/3	0.46	2.8	4	15	240/1/60	HIGH	1/30	1/3	0.46	2.8	4	15
277/1/60	HIGH	1/30	1/3	0.46	2.6	3.7	15	277/1/60	HIGH	1/30	1/3	0.46	2.6	3.7	15
Voltage	Fan Speed	10FRR						Voltage	Fan Speed	12FRR					
		HP		Amps		MCA	MOCP			HP		Amps		MCA	MOCP
		ERV	Blower	ERV	Blower					ERV	Blower	ERV	Blower		
120/1/60	HIGH	1/30	1/2	0.92	6.8	9.4	20	120/1/60	HIGH	1/30	1/2	0.92	6.8	9.4	20
208/1/60	HIGH	1/30	1/2	0.46	4.1	5.6	15	208/1/60	HIGH	1/30	1/2	0.46	4.1	5.6	15
240/1/60	HIGH	1/30	1/2	0.46	4.1	5.6	15	240/1/60	HIGH	1/30	1/2	0.46	4.1	5.6	15
277/1/60	HIGH	1/30	1/2	0.46	3.6	5	15	277/1/60	HIGH	1/30	1/2	0.46	3.6	5	15

Data is subject to change. Please verify most current information on www.FirstCo.com or www.AE-Air.com websites.

COOLING CAPACITIES

COOLING CAPACITY (1000 BTUH) (3 ROW and 3/1)																					
MODEL	NOMINAL CFM	GPM	P.D. (FT. WTR.)	75°F DB / 63°F WB									80°F DB / 67°F WB								
				40°F EWT			45°F EWT			50°F EWT			40°F EWT			45°F EWT			50°F EWT		
				TH	SH	TR	TH	SH	TR	TH	SH	TR	TH	SH	TR	TH	SH	TR	TH	SH	TR
03	300	1.5	2.6	10	7.7	13.2	8.2	6.9	10.9	6.5	6.1	8.6	11.9	8.5	15.8	10	7.8	13.3	8.2	7	10.9
		2.5	6.9	12	8.6	9.5	9.7	7.6	7.7	7.5	6.7	6	14.5	9.6	11.5	12.2	8.6	9.7	9.8	7.7	7.8
		3.5	13.1	13.2	9.2	7.5	10.6	8	6	8.1	6.9	4.6	16	10.3	9.1	13.4	9.1	7.6	10.7	8	6.1
04	400	1.5	2.6	11.3	9.3	14.9	9.4	8.5	12.4	7.6	7.4	10.1	13.4	10.3	17.7	11.3	9.4	15.1	9.4	8.6	12.5
		2.5	6.9	13.9	10.5	11	11.4	9.4	9	8.9	8.3	7.1	16.7	11.7	13.3	14	10.6	11.1	11.4	9.5	9.1
		3.5	13.1	15.5	11.3	8.8	12.6	10	7.2	9.7	8.7	5.5	18.8	12.6	10.6	15.7	11.3	8.9	12.6	10	7.2
06	600	2.5	3.3	15.1	13.1	12.1	13.2	12.3	10.5	11.5	11.5	9.3	19.8	14.9	15.8	17.2	14.0	13.8	14.6	13.0	11.7
		3.5	6.1	17.6	14.4	10.0	15.3	13.1	8.7	13.0	12.3	7.4	23.0	16.2	13.1	20.0	15.0	11.4	17.0	13.9	9.7
		4.5	9.7	19.3	14.7	8.6	16.8	13.7	7.4	14.2	12.7	6.3	25.2	17.0	11.2	21.9	15.7	9.8	18.7	14.5	8.3
08	800	4.0	7.8	20.8	17.6	10.4	18.1	16.5	9.0	15.5	15.5	7.7	27.2	20.0	13.6	23.7	18.8	11.8	20.1	17.5	10.1
		5.0	11.8	22.7	18.3	9.1	19.7	17.1	7.9	16.8	16.0	6.7	29.7	21.0	11.9	25.8	19.5	10.3	21.9	18.1	8.8
		6.0	16.5	24.0	18.8	8.0	20.9	17.6	7.0	17.7	16.4	5.9	31.4	21.7	10.5	27.3	20.1	9.1	23.2	18.6	7.7
10	1000	4.0	9.7	24.2	21.2	12.1	21.0	20.0	10.5	18.9	18.9	9.4	31.6	24.2	15.8	27.5	22.7	13.8	23.4	21.2	11.7
		5.0	14.7	26.7	22.2	10.7	23.2	20.9	9.3	19.7	19.5	7.9	34.9	25.2	14.0	30.4	23.8	12.2	25.8	22.1	10.3
		6.0	20.6	28.5	23.0	9.5	24.8	21.5	8.3	21.1	20.1	7.0	37.4	26.4	12.5	32.5	24.5	10.8	27.6	22.7	9.2
12	1200	4.0	9.7	26.2	24.3	13.1	23.1	23.1	11.5	21.8	21.8	10.9	34.3	27.6	17.2	29.8	25.9	14.9	25.4	24.4	12.7
		5.0	14.7	29.3	25.5	11.7	25.5	24.1	10.2	22.6	22.6	9.1	38.4	29.1	15.4	33.4	27.3	13.4	28.4	25.4	11.4
		6.0	20.6	31.6	26.4	10.6	27.5	24.8	9.2	23.4	23.2	7.8	41.4	30.3	13.8	36.0	28.2	12.0	30.6	26.2	10.0

COOLING CAPACITY (1000 BTUH) (4 ROW)																					
MODEL	NOMINAL CFM	GPM	P.D. (FT. WTR.)	75°F DB / 63°F WB									80°F DB / 67°F WB								
				40°F EWT			45°F EWT			50°F EWT			40°F EWT			45°F EWT			50°F EWT		
				TH	SH	TR	TH	SH	TR	TH	SH	TR	TH	SH	TR	TH	SH	TR	TH	SH	TR
03	300	1.5	2.1	9.3	7.3	12.5	8.2	6.9	10.9	6.9	6.4	9.2	12.2	8.4	16.4	10.7	7.9	14.2	9.1	7.3	12.1
		2.5	5.6	11.3	8.1	9.1	9.9	7.6	7.9	8.4	7.0	6.7	14.9	9.5	11.9	13.0	8.7	10.4	11.0	8.0	8.8
		3.5	10.8	12.5	8.6	7.2	10.9	8.0	6.2	9.3	7.2	5.3	16.4	10.1	9.4	14.3	9.3	8.2	12.1	8.4	6.9
04	400	1.5	2.1	10.4	8.9	13.8	9.1	8.4	12.0	7.9	7.9	10.5	13.6	10.2	18.1	11.8	9.5	15.7	10.1	8.9	13.4
		2.5	5.6	13.1	10.0	10.5	11.4	9.3	9.1	9.7	8.7	7.7	17.1	11.6	13.7	14.9	10.7	11.9	12.7	9.9	10.1
		3.5	10.8	14.7	10.7	8.4	12.7	10.0	7.3	10.8	9.1	6.2	19.2	12.4	11.0	16.7	11.4	9.5	14.2	10.4	8.1
06	600	2.5	3.6	16.8	13.9	13.4	14.6	13.0	11.7	12.4	12.2	9.9	22.0	15.9	17.6	19.1	14.8	15.3	16.3	13.8	13.0
		3.5	6.8	19.5	15.0	11.2	17.0	14.0	9.7	14.4	13.0	8.3	25.6	17.3	14.6	22.2	16.0	12.7	18.9	14.7	10.8
		4.5	10.8	21.4	15.8	9.5	18.6	14.6	8.3	15.8	13.5	7.0	28.1	18.3	12.5	24.4	16.9	10.8	20.7	15.4	9.2
08	800	3.0	5.1	20.6	17.8	13.7	17.9	16.8	12.0	15.7	15.7	10.5	27.0	20.3	18.0	23.5	19.0	15.7	20.0	17.7	13.3
		4.5	10.8	24.7	19.4	11.0	21.5	18.2	9.6	18.3	16.9	8.1	32.4	22.4	14.4	28.2	20.8	12.5	23.9	19.2	10.6
		6.0	18.4	27.2	20.4	9.1	23.7	19.0	7.9	20.1	17.6	6.7	35.7	23.7	11.9	31.0	21.9	10.3	26.4	20.0	8.8
10	1000	4.0	7.9	26.7	22.6	13.3	23.2	21.2	11.6	19.9	19.9	10.0	34.9	25.8	17.5	30.4	24.1	15.2	25.8	22.5	12.9
		5.5	14.0	30.7	24.2	11.2	26.7	22.6	9.7	22.7	21.1	8.3	40.2	27.9	14.6	25.0	25.9	12.7	29.7	23.9	10.8
		7.0	21.6	33.5	25.3	9.6	29.1	23.6	8.3	24.7	21.9	7.1	4.8	29.3	12.5	38.1	27.1	10.9	32.4	25.0	9.3
12	1200	4.5	9.7	29.7	26.2	13.2	25.9	24.7	11.5	23.2	23.2	10.3	38.9	29.9	17.3	33.9	28.0	15.1	28.8	26.1	12.8
		5.5	14.0	32.8	27.4	11.9	28.5	25.7	10.4	24.2	24.0	8.8	42.8	31.4	15.6	37.3	29.3	13.6	31.7	27.2	11.5
		6.5	18.9	35.1	28.3	10.8	30.5	26.5	9.4	25.9	24.7	8.0	45.9	32.5	14.1	40.0	30.3	12.3	34.0	28.0	10.5

COOLING CAPACITY (1000 BTUH) (3 ROW and 3/2)																					
MODEL	NOMINAL CFM	GPM	P.D. (FT. WTR.)	75°F DB / 63°F WB									80°F DB / 67°F WB								
				40°F EWT			45°F EWT			50°F EWT			40°F EWT			45°F EWT			50°F EWT		
				TH	SH	TR	TH	SH	TR	TH	SH	TR	TH	SH	TR	TH	SH	TR	TH	SH	TR
03	300	1.5	2.6	9.6	7.5	12.8	7.9	6.7	10.5	6.3	5.9	8.3	11.5	8.3	15.3	9.7	7.6	12.9	7.9	6.8	10.5
		2.5	7	11.6	8.4	9.2	9.4	7.4	7.4	7.2	6.5	5.7	14	9.4	11.1	11.7	8.4	9.3	9.4	7.4	7.5
		3.5	13.3	12.7	8.9	7.2	10.2	7.8	5.8	7.8	6.7	4.4	15.5	10	8.8	12.9	8.9	7.3	10.3	7.8	5.9
04	400	1.5	2.7	10.9	9.1	14.4	9	8.2	12	7.3	7.2	9.7	12.9	10	17.1	11	9.2	14.5	9.1	8.3	12.1
		2.5	7	13.4	10.2	10.6	10.9	9.1	8.7	8.5	8	6.8	16.1	11.3	12.8	13.5	10.3	10.7	10.9	9.2	8.7
		3.5	13.3	14.9	10.9	8.5	12.1	9.6	6.9	9.3	8.4	5.3	18.1	12.2	10.2	15.1	10.9	8.6	12.1	9.7	6.9
06	600	2.5	3.3	14.5	12.3	11.6	12.6	11.6	10.1	10.9	10.9	8.7	18.9	14.1	15.1	16.5	13.2	13.2	14.0	12.3	11.2
		3.5	6.1	16.8	13.3	9.6	14.6	12.4	8.4	12.4	11.6	7.1	22.0	15.2	12.6	19.2	14.2	10.9	16.3	13.1	9.3
		4.5	9.7	18.4	13.9	8.2	16.0	13.0	7.1	13.6	12.0	6.1	24.2	16.1	10.7	21.0	14.9	9.3	17.9	13.7	7.9
08	800	4.0	7.8	19.7	16.4	9.8	17.1	15.4	8.6	14.5	14.5	7.3	25.7	18.7	12.9	23.7	17.0	11.9	19.0	16.2	9.5
		5.0	11.8	21.4	17.1	8.6	18.6	16.0	7.5	15.8	14.9	6.3	28.1	19.6	11.2	25.9	17.8	10.4	20.7	16.8	8.3
		6.0	16.5	22.7	17.6	7.6	19.7	16.4	6.6	16.8	15.2	5.6	29.7	20.2	9.9	27.4	18.3	9.1	21.9	17.3	7.3
10	1000	4.0	9.7	22.9	19.9	11.4	19.9	18.7	9.9	17.6	17.6	8.8	30.0	22.6	15.0	26.1	21.2	13.0	22.1	19.8	11.1
		5.0	14.7	25.3	20.8	10.1	22.0	19.5	8.8	18.7	18.2	7.5	33.1	23.8	13.2	28.8	22.2	11.5	24.5	20.6	9.8
		6.0	20.6	27.0	21.5	9.0	23.5	20.1	7.8	20.0	18.7	6.7	35.4	24.7	11.8	30.8	22.9	10.3	26.1	21.2	8.7
12	1200	4.0	9.7	24.7	22.5	12.3	21.5	21.3	1.7	20.1	20.1	10.1	32.3	25.5	16.2	28.1	24.0	14.1	23.9	22.5	11.9
		5.0	14.7	27.7	23.7	11.1	24.1	22.3	9.6	20.9	20.9	8.4	36.2	26.9	14.5	31.5	25.2	12.6	26.8	23.5	10.7
		6.0	20.6	29.8	24.5	9.9	25.9	23.0	8.6	22.1	21.5	7.4	39.1	28.0	13.0	34.0	26.1	11.3	28.9	24.2	9.6

HEATING CAPACITIES

HEATING CAPACITY (1000 BTUH) (3 ROW)							
MODEL	NOMINAL CFM	GPM	P.D. (FT. WTR.)	ENTERING WATER TEMPERATURE			
				180°F	160°F	140°F	120°F
03	300	1.0	1.1	25.5	20.8	16.2	11.5
		1.5	3.9	30.8	25.2	19.5	13.9
		2.0	8.4	32.6	26.7	20.7	14.7
04	400	1.0	1.1	29.4	24	18.6	13.2
		2.0	3.9	37.6	30.7	23.8	16.9
		3.0	8.4	40.7	33.3	25.8	18.4
06	600	3.0	4.6	56.3	46.1	35.8	25.6
		4.0	7.8	58.8	48.1	37.4	26.7
		5.0	11.8	60.5	49.5	38.5	27.5
08	800	4.0	7.8	72.0	58.9	45.8	32.7
		5.0	11.8	74.4	60.9	47.4	33.8
		6.0	16.5	76.2	62.3	48.5	34.6
10	1000	4.0	9.7	88.9	72.7	56.8	40.4
		5.0	14.7	92.3	75.5	58.7	42.0
		6.0	20.6	94.7	77.5	60.3	43.1
12	1200	4.0	9.7	100.2	82.0	63.7	45.6
		5.0	14.7	104.5	85.5	66.5	47.5
		6.0	20.6	107.6	88.0	68.4	48.9

HEATING CAPACITY (1000 BTUH) (3/1 ROW)							
MODEL	NOMINAL CFM	GPM	P.D. (FT. WTR.)	ENTERING WATER TEMPERATURE			
				180°F	160°F	140°F	120°F
03	300	1.0	1.4	17.7	14.5	11.2	8.0
		2.0	5.2	19.8	16.2	12.6	9.0
		3.0	11.1	20.5	16.8	13.1	9.3
04	400	1.0	1.4	19.1	15.7	12.2	8.7
		2.0	5.2	21.9	17.9	13.9	9.9
		3.0	11.1	22.9	18.7	14.6	10.4
06	600	1.0	2.1	26.4	21.6	16.8	12.0
		2.0	7.3	31.4	25.7	20.0	14.3
		3.0	15.2	33.2	27.2	21.2	15.1
08	800	1.0	2.1	28.2	23.1	18.0	12.8
		2.0	7.3	34.5	28.2	21.9	15.7
		3.0	15.2	37.0	30.3	23.6	16.8
10	1000	1.0	1.1	34.0	27.8	21.7	15.5
		2.0	5.4	42.3	34.6	26.9	19.2
		3.0	13.8	46.0	37.7	29.3	20.9
12	1200	1.5	2.8	40.8	33.4	26.0	18.5
		2.5	9.1	47.3	38.7	30.1	21.5
		3.4	19.6	50.4	41.2	32.1	22.9

HEATING CAPACITY (1000 BTUH) (4 ROW)							
MODEL	NOMINAL CFM	GPM	P.D. (FT. WTR.)	ENTERING WATER TEMPERATURE			
				180°F	160°F	140°F	120°F
03	300	2.0	3.6	32.0	26.2	20.4	14.5
		3.0	8.0	33.7	27.6	21.4	15.3
		4.0	17.3	34.7	28.6	22.1	15.8
04	400	2.0	3.6	40.4	33.0	25.7	18.3
		3.0	8.0	42.8	35.0	27.2	19.5
		4.0	14.0	44.2	36.2	28.2	20.1
06	600	3.0	5.1	60.5	49.5	38.5	27.5
		4.0	8.7	63.2	51.7	40.2	28.7
		5.0	13.1	65.0	53.2	41.4	29.6
08	800	4.0	8.7	79.2	64.8	50.4	36.0
		5.0	13.1	81.8	67.0	52.1	37.2
		6.0	18.4	83.7	68.5	53.3	38.1
10	1000	4.0	7.9	95.5	78.1	60.8	43.4
		5.0	11.8	99.2	81.2	63.1	45.1
		6.0	16.4	102.0	83.5	64.9	46.4
12	1200	4.0	7.9	108.8	89.1	69.3	49.5
		5.0	11.8	113.6	92.9	72.3	51.6
		6.0	16.4	117.1	95.8	74.5	53.2

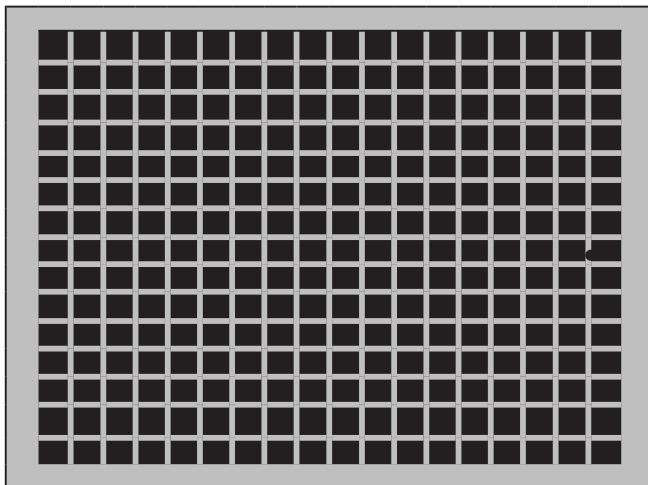
HEATING CAPACITY (1000 BTUH) (4/1 ROW)							
MODEL	NOMINAL CFM	GPM	P.D. (FT. WTR.)	ENTERING WATER TEMPERATURE			
				180°F	160°F	140°F	120°F
03	300	1.0	1.4	16.0	13.1	10.2	7.3
		2.0	5.2	17.9	14.6	11.4	8.1
		3.0	11.1	18.5	15.2	11.8	8.4
04	400	1.0	1.4	17.3	14.2	11.0	7.9
		2.0	5.2	19.8	16.2	12.6	9.0
		3.0	11.1	20.7	16.9	13.2	9.4
06	600	1.0	2.1	23.9	19.6	15.2	10.9
		2.0	7.3	28.4	23.2	18.1	12.9
		3.0	15.2	30.1	24.6	19.2	13.7
08	800	1.0	2.1	25.6	20.9	16.3	11.6
		2.0	7.3	31.3	25.6	19.9	14.2
		3.0	15.2	33.6	27.5	21.4	15.3
10	1000	1.0	1.1	30.9	25.2	19.6	14.0
		2.0	5.4	38.4	31.4	24.4	17.4
		3.0	13.8	41.7	34.2	26.6	19.0
12	1200	1.5	2.8	37.0	30.3	23.6	16.8
		2.5	9.1	42.9	35.1	27.3	19.5
		3.5	19.6	45.7	37.4	29.1	20.8

HEATING CAPACITY (1000 BTUH) (3/2 ROW)							
MODEL	NOMINAL CFM	GPM	P.D. (FT. WTR.)	ENTERING WATER TEMPERATURE			
				180°F	160°F	140°F	120°F
03	300	1.0	0.8	21.9	17.8	13.8	9.8
		1.5	3.1	26.1	21.3	16.5	11.7
		2.0	6.7	27.8	22.7	17.6	12.5
04	400	1.0	0.8	25.2	20.5	15.8	11.2
		2.0	3.1	31.3	25.5	19.7	14
		3.0	6.7	33.9	27.6	21.4	15.2
06	600	1.0	0.7	27	21.9	16.9	11.9
		2.0	2.6	35.5	28.8	22.2	15.7
		3.0	5.6	39.5	32.1	24.8	17.5
08	800	1.0	0.7	29.3	23.7	18.3	12.9
		2.0	2.6	39.8	32.3	24.9	17.5
		3.0	5.6	45.1	36.6	28.2	19.9
10	1000	3.0	5.8	66.6	54.5	42.4	30.3
		4.0	10.3	70.4	57.6	44.8	32.0
		5.0	15.9	72.6	59.4	46.2	33.0
12	1200	3.0	5.8	73.7	60.3	46.9	33.5
		4.0	10.3	78.3	64.1	49.8	35.6
		5.0	15.9	81.2	66.4	51.7	36.9

Data is subject to change. Please verify most current information on www.FirstCo.com or www.AE-Air.com websites.

SUPPLY AIR LOUVERS

								TOP SUPPLY OPENING	
Standard 88” cabinet		Louver sizes available with single discharge units			Louver Sizes available with double discharge units			Top single supply opening	
FRRA Series									
UNIT SIZE	NOMINAL CFM	QTY	NOMINAL GRILLE SIZE	CORE AREA (SG. FT.)	QTY	NOMINAL GRILLE SIZE	CORE AREA (SQ. FT.)	QTY	NOMINAL GRILLE SIZE
3	300	1	14 X 8	0.65	2	14 X 6	1	1	14 X 10
4	400	1	14 X 12	1	2	14 X 6	1	1	14 X 10
6	600	1	18 X 10	1.13	2	18 X 6	1.3	1	16 X 12
8	800	1	18 X 12	1.37	2	18 X 6	1.3	1	16 X 12
10	1000	1	18 X 16	1.85	2	22 X 8	2.2	1	18 X 16
12	1200	1	18 X 16	1.85	2	22 X 8	2.2	1	18 X 16

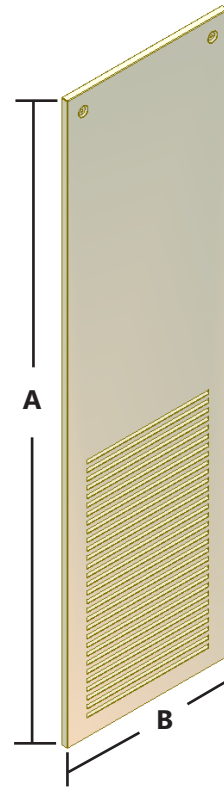
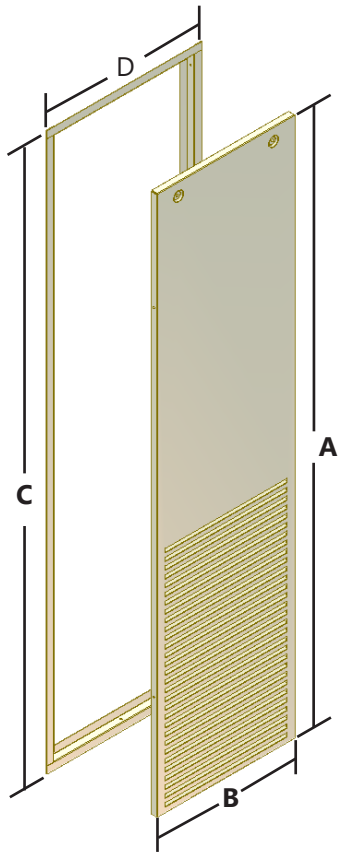


Standard louver is a double deflection type with streamlined shaped roll-formed blades on 3/4" centers. 1 1/4" wide face border with a 1" overlap margin standard, furnished with countersunk screw holes. Rigid, roll-formed frames with reinforced mitered corners.

Vertical and horizontal blades are friction pivoted and easily adjusted to provide desired spread or deflection.

Blades maintain adjustable deflection setting during all conditions to velocity and pressure.

Standard louver finish is an appliance white baked enamel.



FLUSH MOUNT DIMENSIONS

UNIT MODEL	PART NUMBER	A	B	C	D
03/04	9PWRF01	53.4	13.6	55.0	15.2
06/08	9PWRF02	53.4	17.6	55.0	19.2
10/12	9PWRF03	53.4	21.6	55.0	23.2

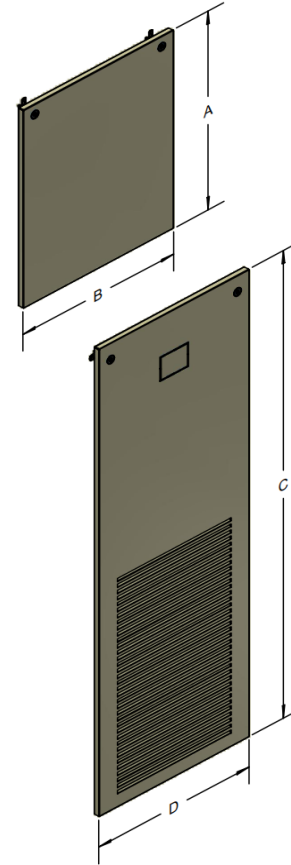
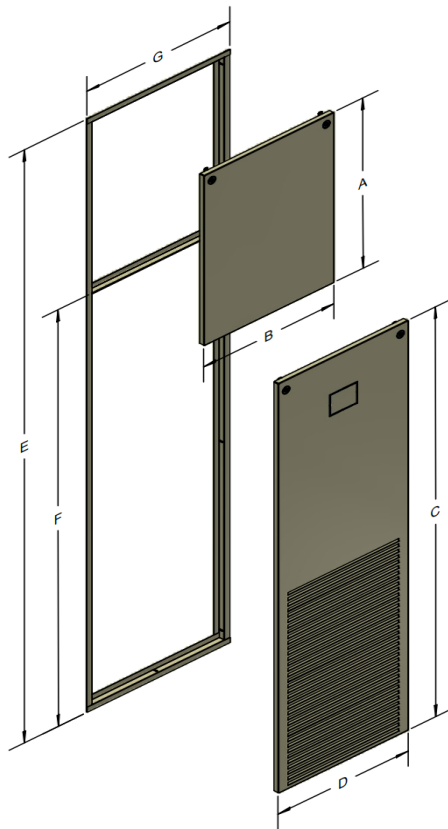
SURFACE MOUNT DIMENSIONS

UNIT MODEL	PART NUMBER	A	B
03/04	9PWRS01	55.5	15.8
06/08	9PWRS02	55.5	19.8
10/12	9PWRS03	55.5	23.8

ACCESS PANEL SPECIFICATION

- Optional panels include flush mount or frame type
- Constructed from 18 gauge galvanized steel and coated with white epoxy powder finish
- Panel is insulated with 1/2" heavy density fiberglass insulation
- Panel mounted with tamper-proof fasteners
- Integral stamped steel return air louvers
- Panel provides access to all internal components
- Framed panels require field installation of frame

ACCESS PANEL / RETURN GRILLE FOR ERV



FLUSH MOUNT DIMENSIONS

UNIT MODEL	PART NUMBER	A	B	C	D	E	F	G
03/04	9PFWREF01	23.5	17.5	56.5	17.5	81.9	57.5	19.3
06/08	9PFWREF01	23.5	17.5	56.5	17.5	81.9	57.5	19.3
10/12	9PFWREF13	23.5	21.5	56.5	21.5	81.9	57.5	23.3

SURFACE MOUNT DIMENSIONS

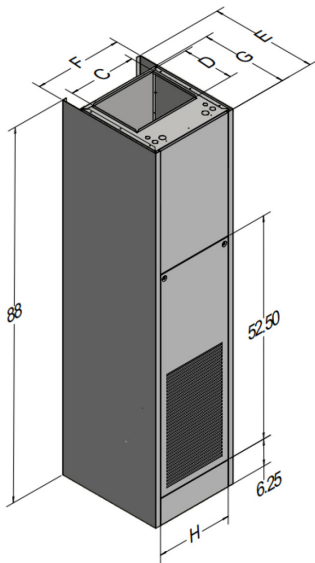
UNIT MODEL	PART NUMBER	A	B	C	D
03/04	9PFWRES01	24.6	19.9	57.8	19.9
06/08	9PFWRES01	24.6	19.9	57.8	19.9
10/12	9PFWRES13	24.6	23.9	57.8	23.9

ACCESS PANEL SPECIFICATION

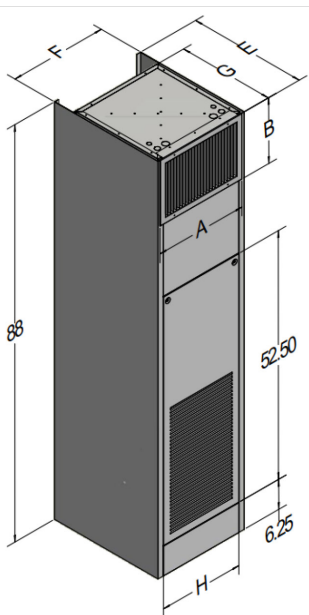
- Optional panels include flush mount or frame type
- Constructed from 18 gauge galvanized steel and coated with white epoxy powder finish
- Panel is insulated with 1/2" heavy density fiberglass insulation
- Panel mounted with tamper-proof fasteners
- Integral stamped steel return air louvers
- Panel provides access to all internal components
- Framed panels require field installation of frame

EXPOSED CABINET SPECIFICATION

- Clean, fastener free exterior
- Exterior panels constructed from 18 gauge galvanized steel and coated with white epoxy powder finish
- Insulated steel Return Air/ Access Panel included with 1/4 turn tamper proof fasteners
- Flush stamped Return Air Louvers
- Rear pipe chase to facilitate hydronic and electric connections
- Optional aluminum single front discharge double deflection Supply Air Grille painted white (not applicable to top discharge units)
- Framed panels require field installation of frame



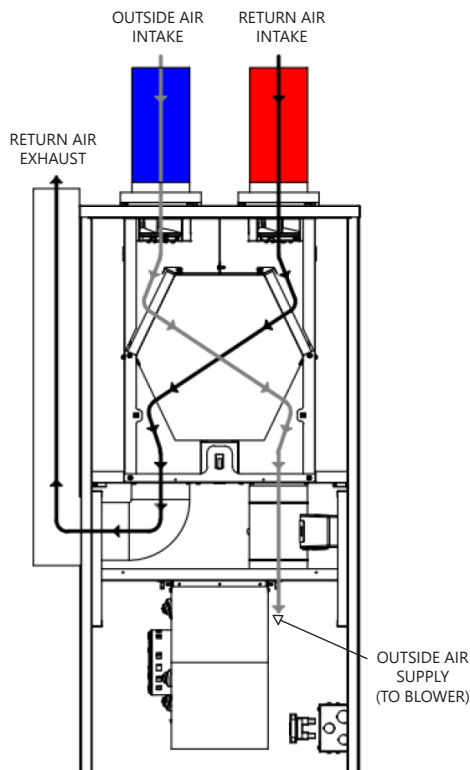
MODEL	TOP SUPPLY OPENING							
	C	D	SIZE	E	F	G	H	FILTER SIZE
3FRR	14	10	14x10	22.20	18.00	17.00	14.13	12.5 X 24.25 X 1
4FRR								
6FRR	16	12	16x12	25.20	21.00	20.00	18.13	16.25 X 26.75 X 1
8FRR								
10FRR	18	16	18x16	29.20	25.00	24.00	22.13	20.50 X 29.25 X 1
12FRR								



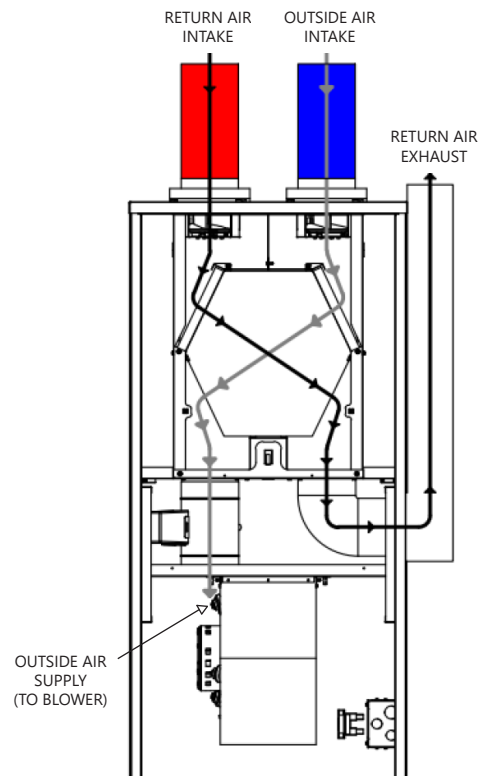
MODEL	SINGLE SUPPLY OPENING			DOUBLE SUPPLY OPENING (2)							
	A	B	SIZE	A	B	SIZE	E	F	G	H	FILTER SIZE
3FRR	14	12	12X14	14	6	14X6	22.20	18.00	17.00	14.13	12.5 X 24.25 X 1
4FRR											
6FRR	18	12	18X12	18	6	18X6	25.20	21.00	20.00	18.13	16.25 X 26.75 X 1
8FRR											
10FRR	20	16	20x16	22	8	22X8	29.20	25.00	24.00	22.13	20.50 X 29.25 X 1
12FRR											

ERV CABINET SPECIFICATION

- Fully integrated, higher efficiency counter-flow ERV module with washable core
- Multi-function microprocessor control board for ERV control and integrated defrost
- Push button adjustable ERV fan speed set points using 0-10V control signal
- Universal cabinet design for flexible installation requirements
- Factory installed 120V relay for wall timer/switch activation
- Segmented Access panel for easy maintenance access
- Framed panels require field installation of frame



LEFT SIDE EXHAUST



RIGHT SIDE EXHAUST

The exhaust air is ducted via a factory installed chimney to the top of the cabinet so that connections can be made at the same location for the Outside Air supply (5" Duct Collar), Return Air Intake (5" Duct Collar), and Return Air Exhaust (6"X4" Duct). While the Outside Air Supply is ducted through a motorized damper, internally controlled, into the supply of the unit blower. The blower operates so that the blower will not pull air through the ERV, should the ERV be in an inactive state.

DEFROST OUTSIDE AIR

KW	EAT (°F)	FRESH AIR CFM														
		30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
1	-10	95.3	80.3	69.0	60.2	53.2	47.5	42.7	38.6	35.1	32.1	29.5	27.2	25.1	23.3	21.6
	-20	85.3	70.3	59.0	50.2	43.2	37.5	32.7	28.6	25.1	22.1	19.5	17.2	15.1	13.3	11.6
	-30	75.3	60.3	49.0	40.2	33.2	27.5	22.7	18.6	15.1	12.1	9.5	7.2	5.1	3.3	1.6
	-40	65.3	50.3	39.0	30.2	23.2	17.5	12.7	8.6	5.1	2.1	-0.5	-2.8	-4.9	-6.7	-8.4
	-50	55.3	40.3	29.0	20.2	13.2	7.5	2.7	-1.4	-4.9	-7.9	-10.5	-12.8	-14.9	-16.7	-18.4
1.5	-10	148.0	125.4	108.5	95.3	84.8	76.2	69.0	62.9	57.7	53.2	49.3	45.8	42.7	39.9	37.4
	-20	138.0	115.4	98.5	85.3	74.8	66.2	59.0	52.9	47.7	43.2	39.3	35.8	32.7	29.9	27.4
	-30	128.0	105.4	88.5	75.3	64.8	56.2	49.0	42.9	37.7	33.2	29.3	25.8	22.7	19.9	17.4
	-40	118.0	95.4	78.5	65.3	54.8	46.2	39.0	32.9	27.7	23.2	19.3	15.8	12.7	9.9	7.4
	-50	108.0	85.4	68.5	55.3	44.8	36.2	29.0	22.9	17.7	13.2	9.3	5.8	2.7	-0.1	-2.6
2	-10	200.7	170.6	148.0	130.4	116.4	104.9	95.3	87.2	80.3	74.3	69.0	64.4	60.2	56.5	53.2
	-20	190.7	160.6	138.0	120.4	106.4	94.9	85.3	77.2	70.3	64.3	59.0	54.4	50.2	46.5	43.2
	-30	180.7	150.6	128.0	110.4	96.4	84.9	75.3	67.2	60.3	54.3	49.0	44.4	40.2	36.5	33.2
	-40	170.7	140.6	118.0	100.4	86.4	74.9	65.3	57.2	50.3	44.3	39.0	34.4	30.2	26.5	23.2
	-50	160.7	130.6	108.0	90.4	76.4	64.9	55.3	47.2	40.3	34.3	29.0	24.4	20.2	16.5	13.2
3	-10	306.0	260.9	227.0	200.7	179.6	162.4	148.0	135.8	125.4	116.4	108.5	101.5	95.3	89.8	84.8
	-20	296.0	250.9	217.0	190.7	169.6	152.4	138.0	125.8	115.4	106.4	98.5	91.5	85.3	79.8	74.8
	-30	286.0	240.9	207.0	180.7	159.6	142.4	128.0	115.8	105.4	96.4	88.5	81.5	75.3	69.8	64.8
	-40	276.0	230.9	197.0	170.7	149.6	132.4	118.0	105.8	95.4	86.4	78.5	71.5	65.3	59.8	54.8
	-50	266.0	220.9	187.0	160.7	139.6	122.4	108.0	95.8	85.4	76.4	68.5	61.5	55.3	49.8	44.8

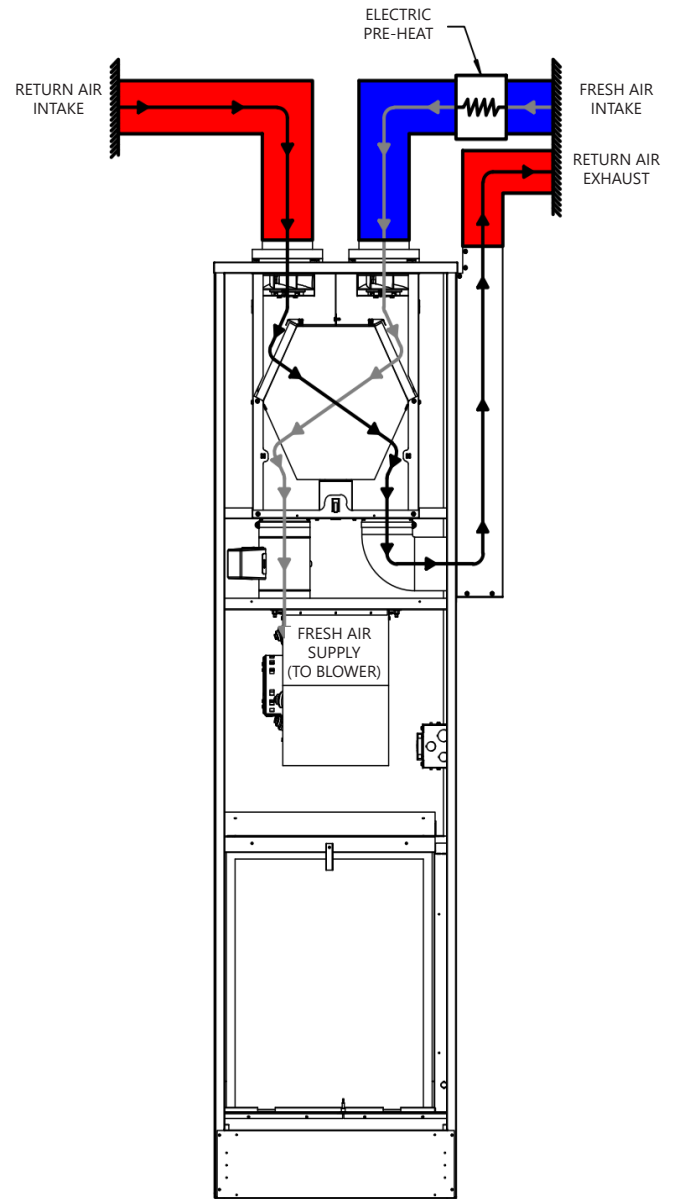
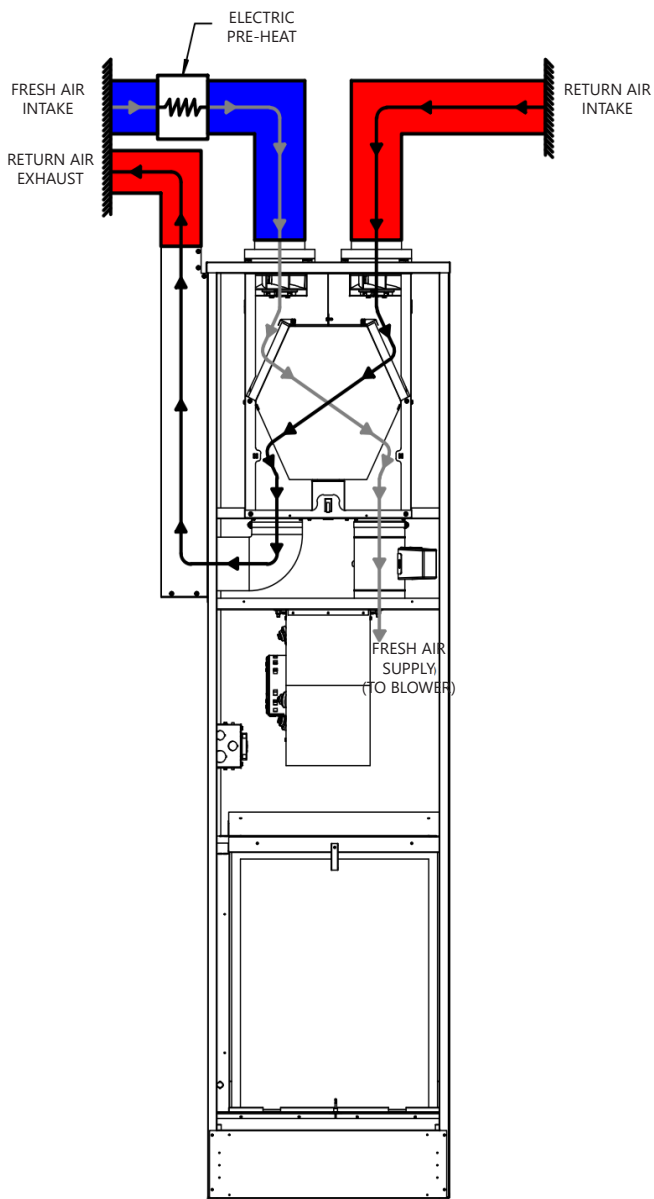
Data is subject to change. Please verify most current information on www.FirstCo.com or www.AE-Air.com websites.

For installations in cold climates, the ERV unit is designed to operate with a field installed, electric pre-heat device to provide a constant outside air supply, without the need for recirculation air to interrupt the fresh air supply. Care should be taken to ensure that the correctly sized electric heating device is paired with the winter design temperature and fresh air CFM range during normal operation so that frosting does not occur on the energy recovery core. The Defrost Outside Air Temperature table can be used as a guide to determine the correct sized heater (in KW) based on the expected entering air temperature (°F) during the winter condition, and the design CFM.

In the event of the Outside Air temperature falling below 30°F (-1°C) the ERV control will temporarily reduce both the Outside Air and Return air fan speeds to increase the temperature of the Outside Air into the unit, without creating a negative pressure environment inside the occupied space.

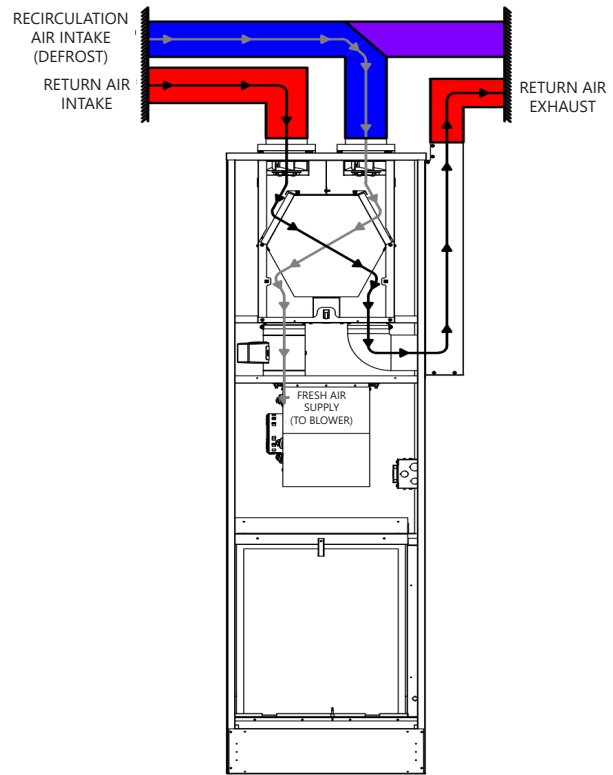
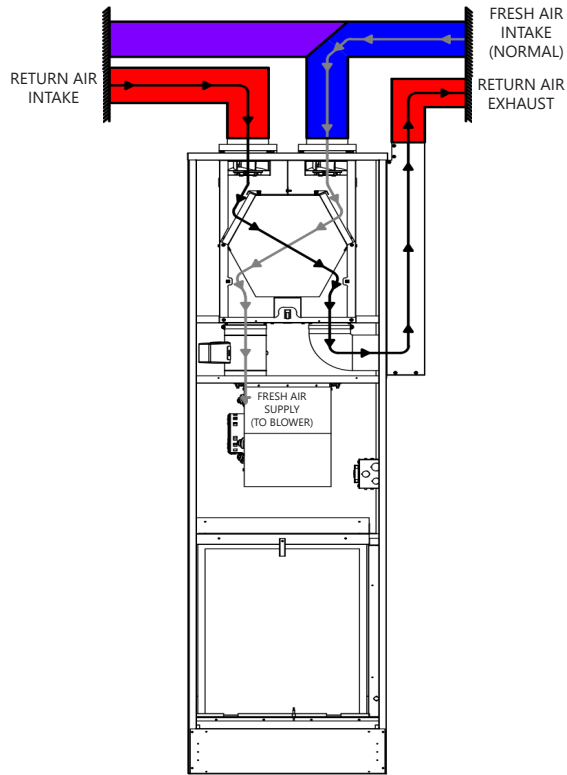
For Installations without pre-heating devices, a recirculation damper can be installed that allows the recirculation of air from the occupied space into the Fresh Air supply of the ERV. Special care should be taken to ensure that class II air is not recirculated with Class I air in installations where the ERV return is ducted from areas such as a kitchen fan hood or bathroom fan.

ERV RISER CABINET

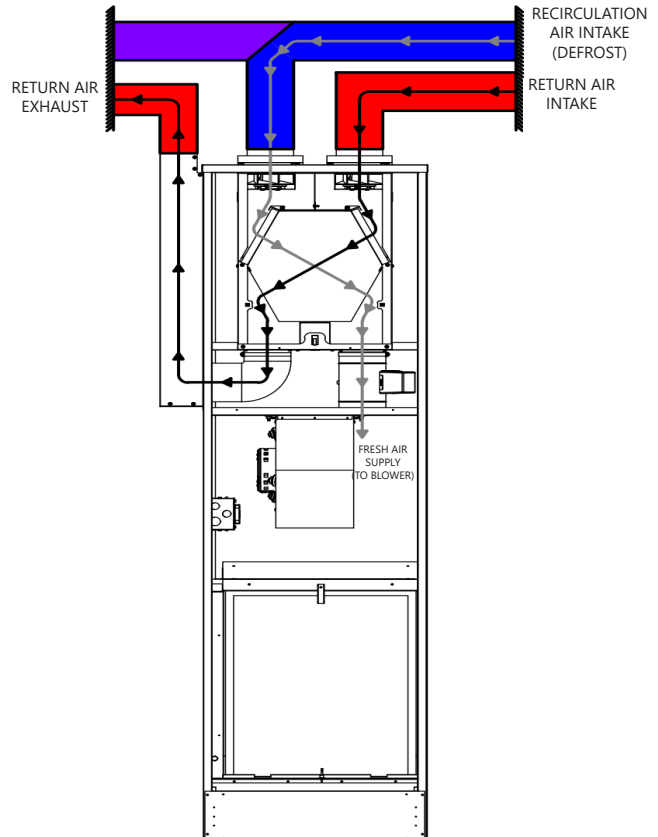
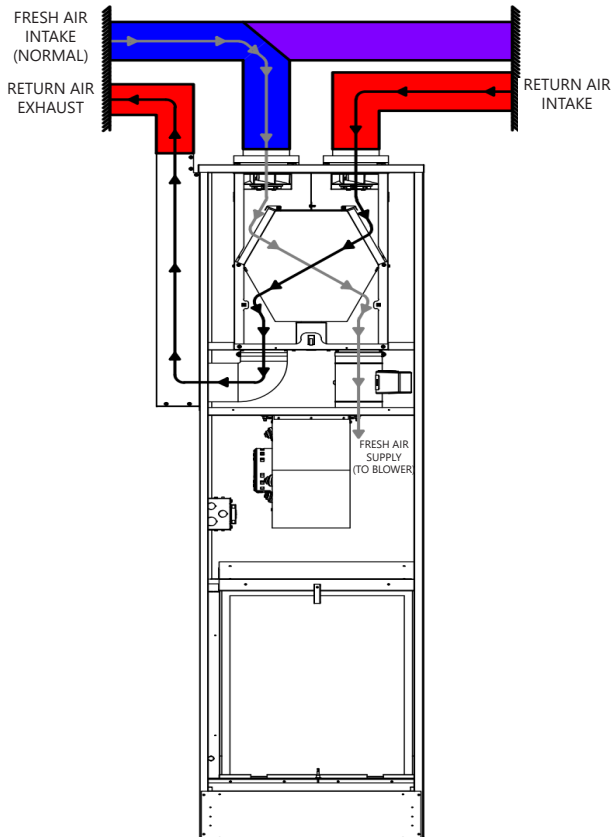


LEFT AND RIGHT HAND ELECTRIC PRE-HEAT DUCT WORK

ERV RISER CABINET



RIGHT HAND RECIRCULATION DUCT WORK

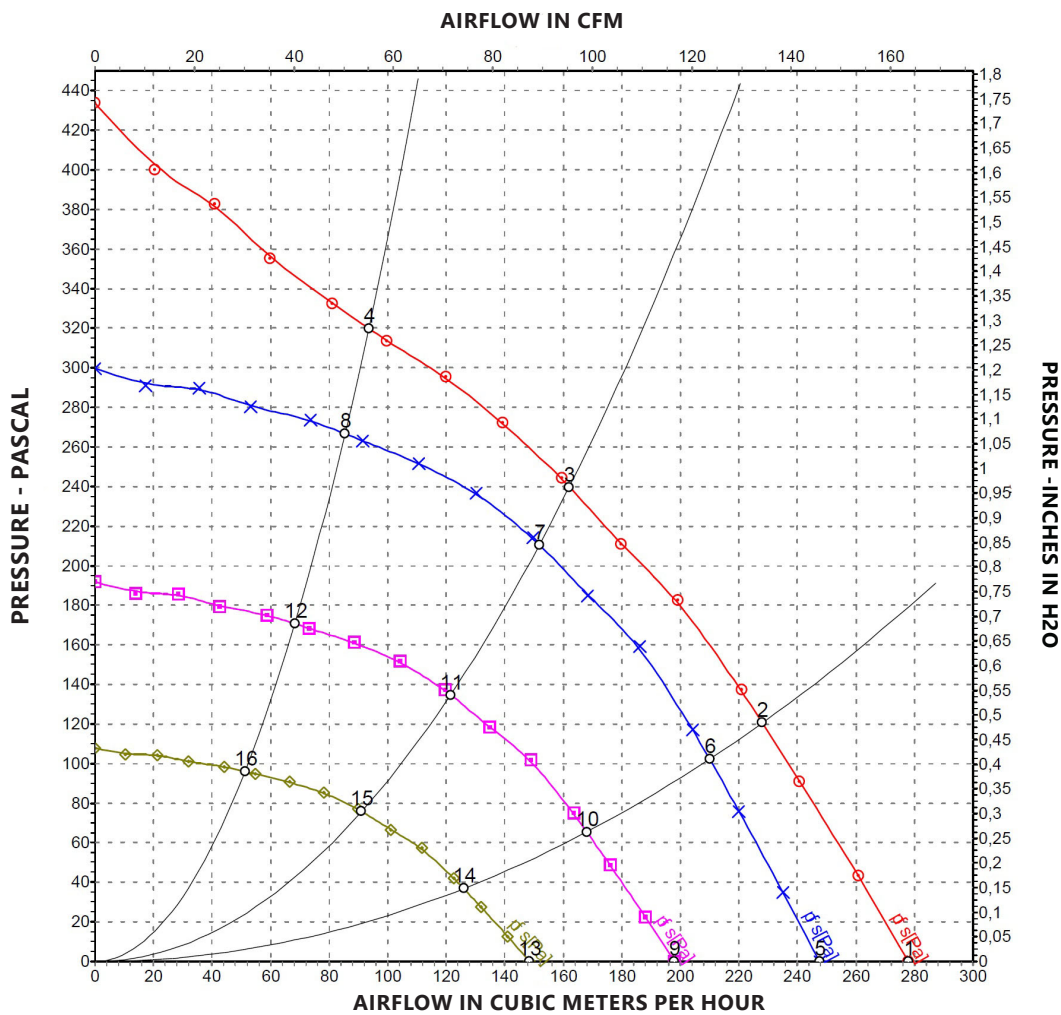


LEFT HAND RECIRCULATION DUCT WORK

ERV FAN PERFORMANCE

ERV FAN CURVE

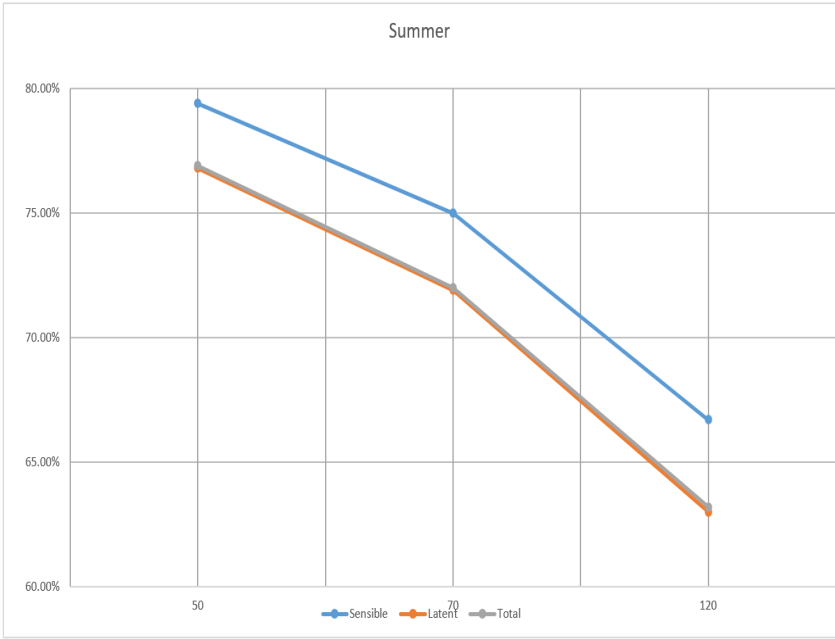
AIR FLOW AT 60HZ



	Voltage	Frequency Hz	Speed (Rev/min)	Power (Watts)	Current (Amps)	Airflow (m^3/h)	Pressure (Pa)	Airflow (CFM)	Pressure (IN H2O)
1	230	60	3930	24	0.23	280	0	165	0.00
2	230	60	3800	26	0.26	230	120	136	0.48
3	230	60	3770	27	0.27	160	240	95	0.96
4	230	60	3835	26	0.25	95	320	56	1.28
5	230	60	3500	17	0.16	250	0	148	0.00
6	230	60	3500	20	0.2	210	102	124	0.41
7	230	60	3500	22	0.22	150	211	89	0.85
8	230	60	3500	19	0.19	85	267	51	1.07
9	230	60	2800	8.5	0.08	200	0	118	0.00
10	230	60	2800	10	0.1	170	66	101	0.26
11	230	60	2800	11	0.11	120	135	71	0.54
12	230	60	2800	9.9	0.1	70	171	42	0.69
13	230	60	2100	3.6	0.04	150	0	89	0.00
14	230	60	2100	4.4	0.04	125	37	74	0.15
15	230	60	2100	4.8	0.05	90	76	53	0.31
16	230	60	2100	4.2	0.04	50	96	30	0.39

ERV PERFORMANCE

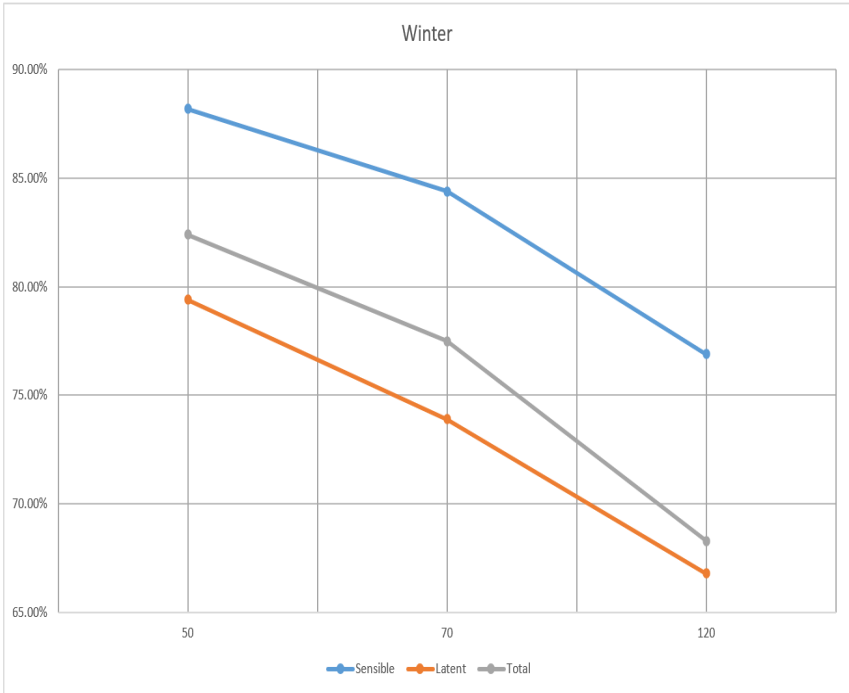
SUMMER



Outdoor		Return	
DB °F (°C)	RH %	DB °F (°C)	RH %
81 (27)	63	78 (25.5)	65

CFM	Sensible %	Latent %	Total %
50	79.40%	76.80%	76.90%
70	75%	71.90%	72%
120	66.70%	63%	63.20%

WINTER

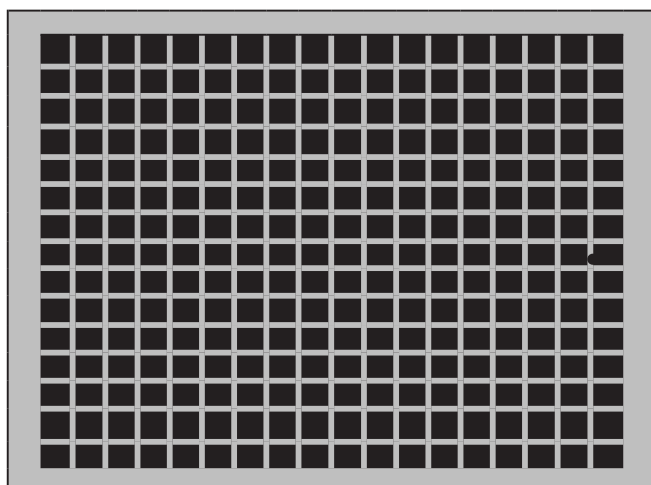


Outdoor		Return	
DB °F (°C)	RH %	DB °F (°C)	RH %
27 (-3)	26	68 (20)	20

CFM	Sensible %	Latent %	Total %
50	88.20%	79.40%	82.40%
70	84.40%	73.90%	77.50%
120	76.90%	66.80%	68.30%

SUPPLY AIR LOUVER ERV

FRRA Series		Top Duct (Requires Side/Front Double Duct)	Front Duct (Single)		Front Duct (Double)		Side Duct (Single)		Side Duct (Double)	
Unit Size	CFM	Nominal Louver Size	Nominal Louver Size	Core Area (SQ. FT.)	Nominal Louver Size	Core Area (SQ. FT.)	Nominal Louver Size	Core Area (SQ. FT.)	Nominal Louver Size	Core Area (SQ. FT.)
3	300	14 X 6	14 X 8	0.65	14 X 6	0.5	14 X 6	0.5	14 X 6	0.5
4	400	14 X 6	14 X 8	0.65	14 X 6	0.5	14 X 6	0.5	14 X 6	0.5
6	600	14 X 6	14 X 12	1	14 X 8	0.65	22 X 6	0.8	18 X 6	0.65
8	800	14 X 6	14 X 12	1	14 X 8	0.65	22 X 6	0.8	18 X 6	0.65
10	1000	18 X 10	18 X 16	1.85	18 X 10	1.13	22 X 10	1.37	22 X 8	1.2
12	1200	18 X 10	18 X 16	1.85	18 X 10	1.13	22 X 10	1.37	22 X 8	1.2



Standard grille finish is an appliance-white baked enamel.

Standard louver is a double deflection type with streamlined shaped roll-formed blades on 3/4" centers. 1 1/4" wide face border with a 1" overlap margin standard, furnished with countersunk screw holes. Rigid, roll-formed frames with reinforced mitered corners.

Vertical and horizontal blades are friction pivoted and easily adjusted to provide desired spread or deflection.

Blades maintain adjustable deflection setting during all conditions to velocity and pressure.

ERV Riser louver configurations come with either one single discharge, or any combination of two double discharge duct sizes. Top ducted units without a double duct configuration may cause excess noise depending on the CFM requirements.

GUIDE SPECIFICATIONS

HVAC Guide Specifications — AR

Fan Coil Unit — Vertical High Rise

Size Range:

300 to 1200 Nominal Cfm

Model Numbers:

FRR (Furred-in) Stand Alone

FRM (Furred-in, Primary with Secondary Stub outs)

FRS Secondary Unit

Part 1 — General

1.01 SYSTEM DESCRIPTION

Stack fan coil units, 2-pipe, 4-pipe or electric heat for furred-in cabinets that are floor mounted in multi-story buildings.

1.02 QUALITY ASSURANCE

Units shall be tested in accordance with AHRI standard 440. All units shall be ETL approved. Each coil shall be factory tested for leakage at 300 psig air pressure with coil submerged in water. Insulation and adhesive shall meet NFPA-90A requirements for flame spread and smoke generation. All equipment wiring shall comply with NEC requirements.

1.03 DELIVERY, STORAGE AND HANDLING

Unit shall be handled and stored in accordance with the manufacturer's instructions.

Part 2 — Products

2.01 EQUIPMENT

A. General: Standard Features

Factory assembled, stack fan coil units. Units are complete with water coil, fan, motor, drain pan, and all required wiring, piping, controls, and special features.

B. Furred-In Stack Unit (FRR):

The unit shall be constructed of 20-gage galvanized steel frame and 20-gage galvanized steel back panel. The fan coil is open or enclosed for furred-in installation. These units are designed to have the wallboard applied directly to the unit surface and all openings have standard 3/4-in. thick antimicrobial coated Tuf-skin RX fiberglass insulation. Units have double deflection aluminum discharge grille(s) and painted, stamped (standard) return-air grille panel. Removable return-air grille provides access to all internal piping and wiring. Controls are provided with a quick disconnect plug for field-mounting on front of unit.

C. Back-To-Back Furred-In Stack Units (FRS) Primary/Secondary:

The open unit shall be constructed of 20-gage galvanized steel frame and 20-gage galvanized steel back panel. These units are similar to the FRR but are actually two completely separate units that share a common set of risers. These units are designed to have the wallboard directly applied to the unit surface and openings have standard 1/2-in. drywall flanges. The interior surfaces shall be lined with 3/4-in. thick antimicrobial coated Tuf-skin RX fiberglass insulation. Units have double deflection aluminum supply grille(s) and painted, stamped return-air grille panel. Removable return-air grille provides access to all internal piping and wiring. Controls are provided with a quick disconnect plug for field-mounting on front of unit.

D. Drain Pan:

Removable drain pan shall be formed of heavy gauge galvanized steel and shall be coated inside with insulation. The drain is factory piped to the drain riser that has a removable "P-trap" allowing easy cleaning.

E. Filter:

A filter track complete with 1-in. fiberglass throwaway filter shall be installed in the unit.

F. Fan:

1. Centrifugal fan shall be directly-driven by an electric motor.
2. Fan wheel shall be double-width type with forward-curved blades and shall be statically and dynamically balanced.
3. Fan wheel and scroll shall be constructed of galvanized steel.

GUIDE SPECIFICATIONS (CONT.)

G. Coil:

1. Standard base unit shall be equipped with a 3-row for installation in a 2-pipe system. Additional coil depth and circuiting shall be provided for installation in a 4-pipe system as described in the Special Features section.
2. All coils shall have 1/2-in. copper tubes and aluminum fins spacing; coil fins are mechanically bonded to tube joints. The copper tubes comply with the ASTM B-75. The fin thickness is 0.06-in. and tube thickness is 0.016-inches. All coils are tested with air under water and are suitable for design working pressures of 300 psig.
3. Coil shall be equipped with a manual air vent and shall be piped to supply and return risers with valves as specified on the equipment drawings.
4. Piping between coil and risers shall compensate for maximum riser expansion and contraction of 1 1/2 inches.

H. Risers:

1. Can be factory installed or shipped loose, typically in 116" or 120" lengths with straight ends for pro-press fittings.
2. Risers shall be either Type L or Type M copper insulated with either 1/2", 3/4" or 1" thick synthetic rubber.
3. Supply and return risers shall be as shown on equipment drawings, drain riser shall be 1 in. diameter.

I. Valves:

Optional factory furnished and installed piping shall include two ball valves and one 2-way motorized valve.
The ball valves shall be rated at 150 psig.

J. Controls and Safeties:

1. Controls:
Standard controls for a 2-pipe system shall consist of a heating/cooling thermostat (SPDT) with 3-speed fan control.
2. Safeties
Unit fan motor shall be equipped with integral motor protection.

K. Operating Characteristics:

1. A unit with a conventional coil, installed in a 2-pipe system, shall be capable of providing heating or cooling as determined by the operating mode of the central water supply system.
2. A unit with a row-split coil, installed in a 4-pipe system, shall be capable of providing sequenced heating and cooling.

L. Electrical Requirements

Supply voltage options for 115V, 208/240V or 277V single phase, 60-Hz electrical power supply.

M. Motor:

1. Fan motors are 3-speed, with 115V, 208/240V and 277V options, single phase, 60-Hz electronically commutated motor type, factory mounted on the blower housing.
2. Bearings shall be of the sealed sleeve type.

GUIDE SPECIFICATIONS (CONT.)

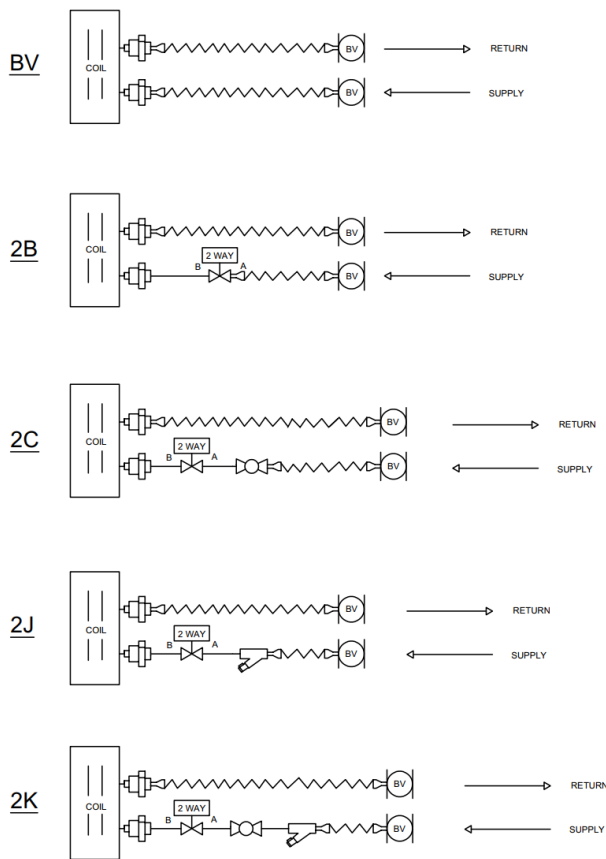
N. Add Options:

Riser Valve Package Components – OPTIONAL Valve Packages are available and can be configured with the following components to meet specific specifications:

- **FH - Flexible Hoses (STANDARD)** - enable the Supply and Return water connections between the Unit and the water Loop Risers. The two stainless steel FH are made of a stainless-steel outer braid with an inner core of tube made of a nontoxic synthetic polymer material. Fire rated materials per ASTM E84-00 (NFPA 255, ANSI/UL 723 & UBC 8-1). The FH terminations are swivel MPT (Male Pipe Thread) fitting at one end and at the opposite end with a MPT connector sealed with a fiber or EPDM washer, shipped inside the connection. Swivel connection provides union between chassis and risers. The FH have a max working pressure of 400 PSI, temperature-operating range of 15°F to 180°F however, operation below 32°F requires antifreeze.
- **AWBV - Automatic Water Balancing Valve (OPTIONAL)** - regulates the amount of water into each unit to enable a proper Water System balance. The AWBV is provided from the factory at specific selectable flow rates and automatically controls the water flow to within 10% of the rated value over a 40 to 1 differential pressure, and operating range (2 to 80 PSID). The AWBV has an operating pressure rate of XX psi with a temperature range of 32 to 225°F, and a pressure differential range of 2 to 80 PSID. The AWBV is manufacture with precision sculptured brass and a polyphenylsulfone orifice with an elastomeric diaphragm. The valve body shall be construct from hot forged brass UNS C37700 per ASTM B-283 latest revision.
- **ST - Strainer (OPTIONAL)** - The ST valve body is constructed from dezincification resistant brass with a 600 PSI and a max working temperature of 325°F. The ST filter screen is made of a 20-mesh screen constructed of 304 stainless steel and removable via a cap with an FKM sealing O-Ring. The ST cap has a ¼" or ½" FNPT Port to which a blowdown ball valve is attach including a hose bib threaded connection and cap.
- **IBV - Isolation Valves (OPTIONAL)** - Isolation ball valves mounted between the unit and the supply and return lines of the loop to isolate the water flow to the unit in a maintenance or service situation. The IBV are rated to 600 psi non-shock cold working pressure. Full port, two-piece body with blowout-proof stem and PTFE Seats. ASME B16.33: 125 psig (maximum) and operating temperature of -4°F to 194°F.
- **MCV - Motorized Control Valves (OPTIONAL)** - The MCV actuator is easily removed, ON/OFF type, 2-way, normally close with a spring close actuation and actuates with a 24VAC control signal. The MCV valve body comes in two options. Option 1 can operate at a maximum operating pressure of 300 psi, a maximum pressure differential of 30 PSI, operating with fluid temperatures between 32°F to 240°F and a max glycol percentage allowable of 50%. Option 2 can operate at a maximum operating pressure of 360 psi, a maximum pressure differential of 75 PSI, operating with fluid temperatures between 36°F to 212°F and a max glycol percentage allowable of 60%.

- * 1. Unit shall be equipped with a 4-row coil for installation in a 2-pipe system.
- * 2. For installation in a 4-pipe system, unit shall be equipped with:
 - a. A 3/1, 3/2 or 4/1 row-split coil, as shown on equipment drawings for cooling and heating.
 - b. Two each supply and return risers as shown on equipment drawings and one 1 in. diameter drain riser.
 - c. Two ball valves, and two 2-way motorized valves.
 - d. Heating and cooling thermostat with 3-speed fan controls.
- * 3. Unit shall be equipped with 3-way motorized valves.
- * 4. Supply and return risers shall be 3/4- in., 1-in., 1-1/4-in., 1-1/2-in., 2-in., 2-1/2in., 3-in., or 4-in. in diameter as shown on the equipment drawings.
- * 5. Floor-to-floor height of risers shall be as specified on the equipment drawings.
- * 6. Supply and return risers shall be either Type L or Type M copper.
- * 7. Insulation on risers shall be 1/2", 3/4" or 1" in. thick synthetic rubber.
- * 8. Unit shall be equipped with a separate reverse return riser with size as shown on the equipment drawings.
- * 9. Motor shall be 3-speed, single phase, 60 Hz electronically commutated motor type for 115, 208/240 or 277 volts.
- *10. Double-deflection steel supply grille(s) shall be finished with paint. Additional double-deflection supply grille(s) shall be furnished for field installation.
- 11. A fresh-air opening shall be provided as shown on the equipment drawings.
- *12. 1-in. thick TA filters shall be installed in the filter rack.
- 13. Unit shall be equipped with nichrome wire electric strip heaters for total or auxiliary electric heat as specified on the equipment schedule.
 - a. Heaters shall be protected by an automatic reset safety cutout switch.
 - b. Heater capacity shall be as specified on the equipment schedule.
 - c. Heaters shall be single phase, 60 Hz for 120, 208, 240 or 277 volts as specified on the equipment schedule.
 - *d. For total electric heat, unit controls may include a sequenced heating and cooling thermostat.
 - e. For auxiliary electric heat or twilight heat, unit controls shall include 2 additional automatic changeover devices.
- 14. Tamper-proof fasteners shall be installed on the access panels.
- 15. A plastic or stainless steel drain pan shall be available for factory installation.
- 16. Factory-installed insulation options shall include antimicrobial coated, dual density fiberglass (Tuf-Skin Rx™) or foil faced fiberglass or Closed Cell insulation.
- 17. Return Air Panels
 - a. Short surface mount.
 - b. Short flush mount (framed)

VALVE PACKAGES

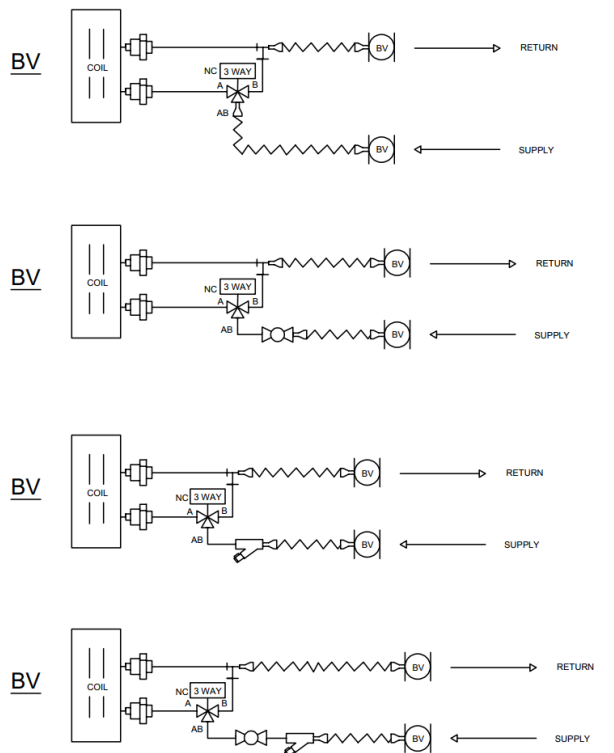


LEGEND

- UNION W/1/8", 1/4" PORTS (CAPPED FOR FUTURE USE)
- HOSE W/ DBL SWIVEL
- BV BALL VALVE CP9
- STRAINER WITH BLOW DOWN
- FLOW SETTER
- 2 WAY TWO WAY MTR VALVE
- FEMALE ADAPTER CP1413

OPTIONAL

- (A) P & T
- (B) AUTO AIRVENT
- (C) BLOW DOWN



LEGEND

- UNION W/1/8", 1/4" PORTS (CAPPED FOR FUTURE USE)
- HOSE W/ DBL SWIVEL
- BV BALL VALVE CP9
- STRAINER WITH BLOW DOWN
- FLOW SETTER
- 3 WAY TWO WAY MTR VALVE
- FEMALE ADAPTER CP1413
- COPPER TEE CP2507
- A AQUASTAT

OPTIONAL

- (A) P & T
- (B) AUTO AIRVENT
- (C) BLOW DOWN



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