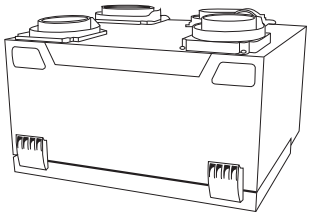
HRVCR
Heat Recovery Ventilators
ERVCR
Energy Recovery Ventilators

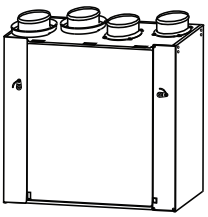
Carrier
turn to the experts

Product Data



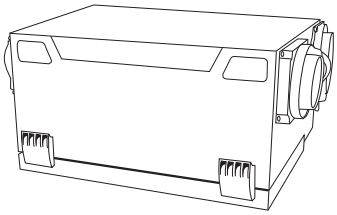
A05229

ERVCRSVB1100, HRVCRSVB1100



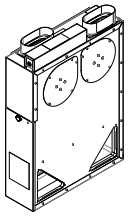
A12338

HRVCRSVU1157



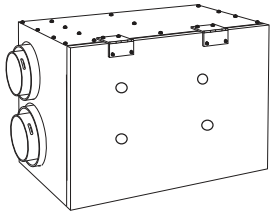
A05330

ERVCRSHB1100, HRVCRSHB1100



A13212

ERVCRNVA



A10299

ERVCRLHB1200, HRVCRLHB1150, HRVCRLHB1250

The Carrier Heat Recovery Ventilation (HRV) and Energy Recovery Ventilator (ERV) systems are the finest on the market today. These units provide efficient and cost effective heat recovery during the heating season when needed most.

As temperatures drop below 23°F (−5°C), indoor air is recirculated periodically through the heat exchanger core to prevent frost from forming.* Competitors' methods of supplementary electric defrost waste energy. Unlike rotary wheel heat exchangers which mix air streams, these cross−flow or counterflow heat exchangers ensure that there is no mixing of the stale air stream with the fresh outdoor air stream.

A filter installed on the incoming outdoor air stream removes large airborne particles from the intake air stream before they enter the heat exchanger and reduces the maintenance required. The units' acoustically engineered design make Carrier ventilators the quietest on the market and ensures that comfort is felt, not heard.

Unlatching two (2) suitcase style latches allows easy removal of the filters and core for cleaning on most units.

NOTE: The unit should not be installed in an attic or unconditioned space unless provisions are made for drain line freezing and condensation.

STANDARD FEATURES

HRV

- Energy saving defrost cycle
- Cross−flow, counterflow heat exchangers
- One filter on incoming air; one filter on outgoing air to protect core
- Acoustical design
- Polypropylene heat exchanger core

ERV

- Integrated airflow balancing points*
- Integrated furnace interlock*
- High pressure blowers
- Onboard control for continuous high/low ventilator operation
- Energy saving defrost cycle*
- Cross−flow, counterflow heat exchangers
- One filter incoming air; one filter outgoing to protect core
- No−tools maintenance
- Enthalpic heat exchanger core
- ERVCRNVA model uses EAC terminals to interlock with furnace blower for constant ventilation

*Except ERVCRNVA

MODEL NUMBER NOMENCLATURE

ERV CR LHB 1 150

PRODUCT TYPE
ERV — Energy Recovery Ventilator
HRV — Heat Recovery Ventilator

BRAND — Carrier

CFM

VOLTAGE
1 — 115/60/1

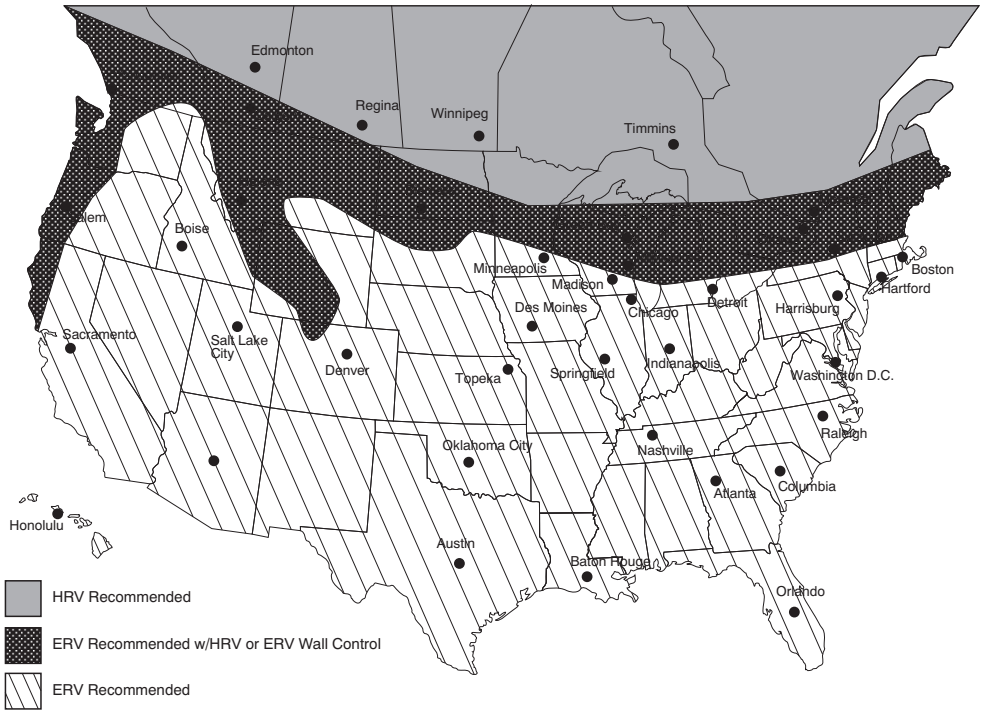
STYLE
LHB — Large Horizontal, End Ports
HRV — 150, 250 cfm
ERV — 200 cfm
SVB — Small Horizontal, Top Vertical Ports
HRV & ERV — 100 cfm
SHB — Small Horizontal, End Ports
HRV & ERV — 100 cfm
SVU — Vertical, Top Ports
HRV — 157 cfm
NVA — Narrow Vertical, Top & Side Ports
ERV — 90 cfm

Energy Star Canada:
All units in this document meet Energy Star Tier 2 requirements in Canada except HRVCRLVU1330, ERVCRLHB1200 and ERVCRNVA1090.

These products earned the ENERGY STAR® by meeting strict energy efficiency guidelines set by Natural Resources Canada and the US EPA. They meet ENERGY STAR requirements only when used in Canada.

TESTED/CERTIFIED
HOME VENTILATING INSTITUTE® DIVISION OF AMCA

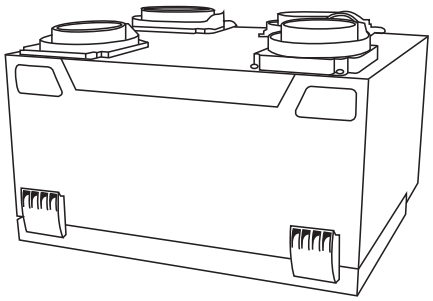
Climate Map for Energy and Heat Recovery Ventilators

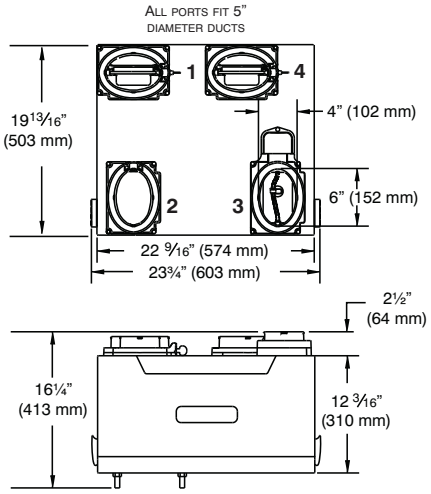


A00099

NOTE: ERVCRNVA model can only be used in Climate Zones 1 through 5. Refer to IECC Climate Zone map on Pg. 11 for use of this model.

ERVCRSVB1100, HRVCRSVB1100





1: FRESH AIR TO BUILDING PORT
2: EXHAUST AIR FROM BUILDING PORT
3: FRESH AIR FROM OUTSIDE PORT
4: EXHAUST AIR TO OUTSIDE PORT

A12327

PHYSICAL & ELECTRICAL DATA

MODEL	CAPACITY (LO–HI)		PORT LOC.	CORE		WEIGHT LBS. [KG]	VOLTAGE	MAX POWER WATTS	MAX AMPS
	CFM	L/S		TYPE	AIR FLOW				
ERVCRSVB1100	35 – 105	17 – 50	Top	Enthalpic transfer media	Cross Flow	45 [20]	120/60/1	120	1.0
HRVCRSVB1100	35 – 105	17 – 50	Top	Polypropylene	Cross Flow	42 [19]	120/60/1	120	0.85

DEFROST OPERATION

MODEL	OUTSIDE TEMPERATURE		DEFROST CYCLE (MIN.)	
	°C	°F	Defrosting	Operation Time Between Each Defrost Cycle
ERVCRSVB1100	–5 to –27	23 to –17	9	28
	Below –27	Below –17	10	22
HRVCRSVB1100	–5 to –27	23 to –17	8	25
	Below –27	Below –17	10	22

HVI RATED ENERGY PERFORMANCE

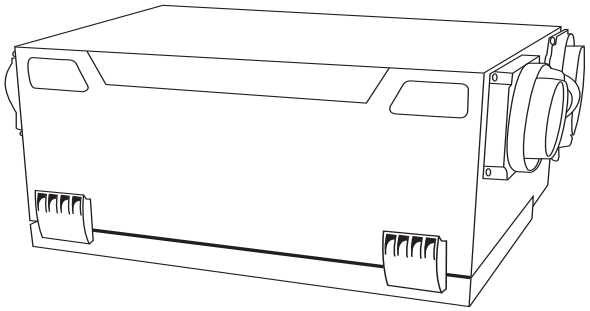
MODEL	MODE	SUPPLY TEMP		NET AIR FLOW		POWER CONSUMED (WATTS)	SENSIBLE RECOVERY EFFICIENCY	APPARENT SENSIBLE EFFECTIVENESS	LATENT RECOVERY MOISTURE TRANSFER	TOTAL RECOVERY EFFICIENCY
		°C	°F	L/S	CFM					
ERVCRSVB1100	Heat	0	32	23	49	42	67	79	0.61	
		0	32	30	64	60	65	75	0.55	
		0	32	40	84	72	63	71	0.48	
		–25	–13	21	45	58	60	75	0.60	
		–25	–13	30	64	71	55	71	0.57	
ERVCRSVB1100	Cool	35	95	21	44	42				50
HRVCRSVB1100	Heat	0	32	23	50	43	65	74	0.01	
		0	32	30	64	58	62	70	0.01	
		0	32	39	83	70	59	66	0.01	
		–25	–13	21	45	56	60	78	0.01	
		–25	–13	30	64	64	55	72	0.00	
HRVCRSVB1100	Cool	35	95							

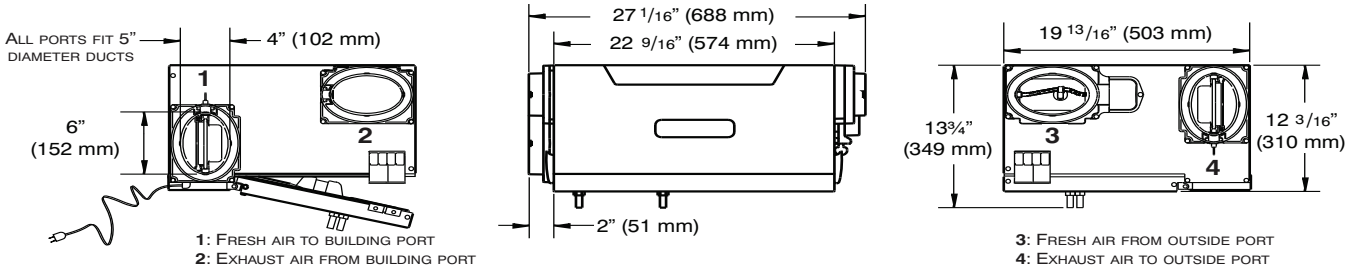
VENTILATION PERFORMANCE

MODEL	EXT. STATIC PRESSURE		NET SUPPLY AIR FLOW		GROSS AIR FLOW			
					SUPPLY		EXHAUST	
	Pa	In w.g.	L/S	CFM	L/S	CFM	L/S	CFM
ERVCRSVB1100	25	0.1	54	115	55	117	55	117
	50	0.2	53	112	54	115	54	114
	100	0.4	49	105	50	106	50	106
	200	0.8	42	89	43	92	42	88
	250	1.0	38	81	39	82	38	81
HRVCRSVB1100	25	0.1	53	111	53	112	57	120
	50	0.2	51	107	51	108	54	114
	100	0.4	46	98	47	99	49	105
	200	0.8	37	79	38	80	40	85
	250	1.0	34	71	34	72	36	76

NOTE: For additional data points, refer to HVI Directory at www.hvi.org

ERVCRSHB1100, HRVCRSHB1100





A12328

PHYSICAL & ELECTRICAL DATA

MODEL	CAPACITY (LO–HI)		PORT LOC.	CORE		WEIGHT LBS. [KG]	VOLTAGE	MAX POWER WATTS	MAX AMPS
	CFM	L/S		TYPE	AIR FLOW				
ERVCRSHB1100	35 – 105	17 – 50	Ends	Enthalpic transfer media	Cross Flow	45 [20]	120/60/1	120	1.0
HRVCRSHB1100	35 – 105	17 – 50	Ends	Polypropylene	Cross Flow	42 [19]	120/60/1	120	0.85

DEFROST OPERATION

MODEL	OUTSIDE TEMPERATURE		DEFROST CYCLE (MINUTES)	
	°C	°F	Defrosting	Operation Time Between Each Defrost Cycle
ERVCRSHB1100	–5 to –27	23 to –17	9	28
	Below –27	Below –17	10	22
HRVCRSHB1100	–5 to –27	23 to –17	8	25
	Below –27	Below –17	10	22

HVI RATED ENERGY PERFORMANCE

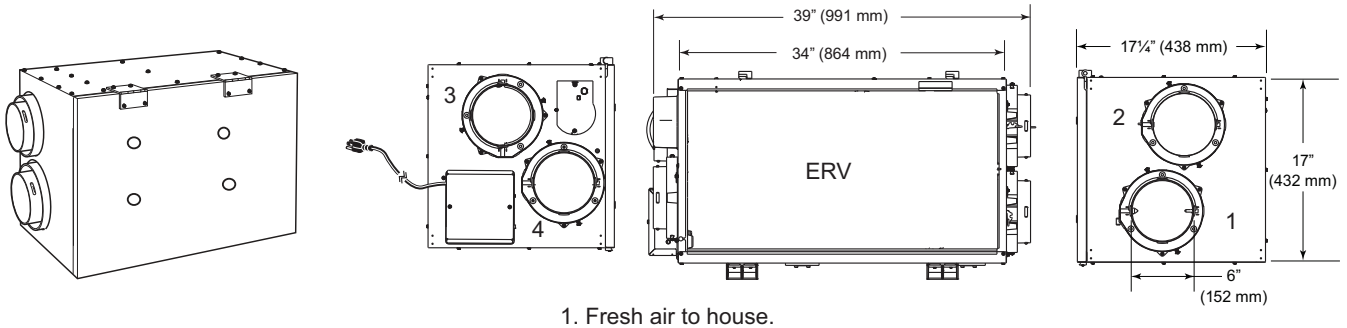
MODEL	MODE	SUPPLY TEMP		NET AIR FLOW		POWER CONSUMED (WATTS)	SENSIBLE RECOVERY EFFICIENCY	APPARENT SENSIBLE EFFECTIVENESS	LATENT RECOVERY MOISTURE TRANSFER	TOTAL RECOVERY EFFICIENCY
		°C	°F	L/S	CFM					
ERVCRCSHB1100	Heat	0	32	23	49	42	67	79	0.61	
		0	32	30	64	60	65	75	0.55	
		0	32	40	84	72	63	71	0.48	
		–25	–13	21	45	58	60	75	0.60	
		–25	–13	30	64	71	55	71	0.57	
ERVCRCSHB1100	Cool	35	95	21	44	42				50
HRVCRSHB1100	Heat	0	32	23	50	43	65	74	0.01	
		0	32	30	64	58	62	70	0.01	
		0	32	39	83	70	59	66	0.01	
		–25	–13	21	45	56	60	78	0.01	
		–25	–13	30	64	64	55	72	0.00	
HRVCRSHB1100	Cool	35	95							

VENTILATION PERFORMANCE

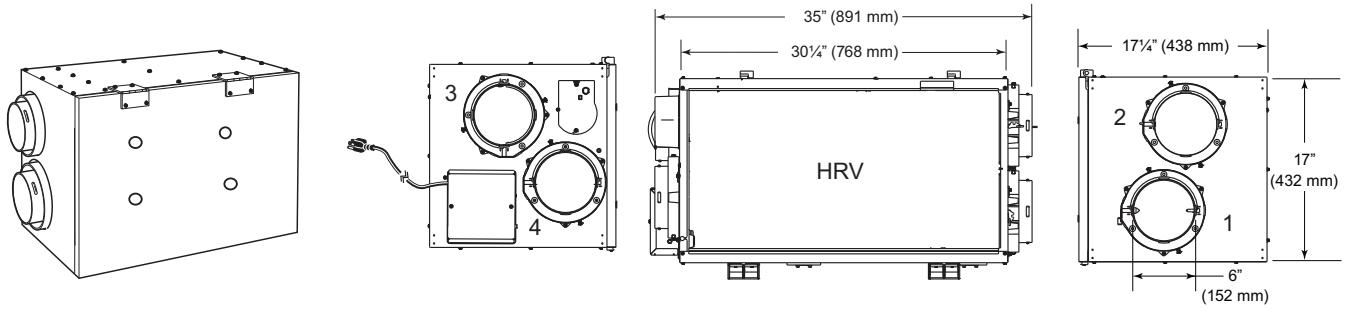
MODEL	EXT. STATIC PRESSURE		NET SUPPLY AIR FLOW		GROSS AIR FLOW			
					SUPPLY		EXHAUST	
	Pa	In w.g.	L/S	CFM	L/S	CFM	L/S	CFM
ERVCRSHB1100	25	0.1	54	115	55	117	55	117
	50	0.2	53	112	54	115	54	114
	100	0.4	49	105	50	106	50	106
	200	0.8	42	89	43	92	42	88
	250	1.0	38	81	39	82	38	81
HRVCRSHB1100	25	0.1	53	111	53	112	57	120
	50	0.2	51	107	51	108	54	114
	100	0.4	46	98	47	99	49	105
	200	0.8	37	79	38	80	40	85
	250	1.0	34	71	34	72	36	76

NOTE: For additional data points, refer to HVI Directory at www.hvi.org

ERVCRLHB1200, HRVCRLHB1150, HRVCRLHB1250



1. Fresh air to house.
2. Exhaust air from house.
3. Fresh air from outside.
4. Exhaust air to outside.



A12341

PHYSICAL & ELECTRICAL DATA

MODEL	CAPACITY (LO–HI)		PORT LOC.	CORE		WEIGHT LBS. [KG]	VOLTAGE	MAX POWER WATTS	MAX AMPS
	CFM	L/S		TYPE	AIR FLOW				
ERVCRLHB1200	80 – 198	38 – 93	Ends	Enthalpic transfer media	Cross flow	76 [35]	120/60/1	200	2.1
HRVCRLHB1150	66 – 163	31 – 77	Ends	Polypropylene	Cross flow	65 [30]	120/60/1	160	1.5
HRVCRLHB1250	82 – 204	39 – 96	Ends	Polypropylene	Cross flow	65 [30]	120/60/1	195	2.1

DEFROST OPERATION

MODEL	OUTSIDE TEMPERATURE		DEFROST CYCLE (MIN.)		EXTENDED DEFROST CYCLES (MIN.)	
	°C	°F	Defrosting	Operation Time Between Each Defrost Cycle	Defrosting	Operation Time Between Each Defrost Cycle
ERVCRLHB1200	–5	23	10	60	10	30
	–15	5	10	30	10	20
	–27	–17	10	20	10	15
HRVCRLHB1150	–5	23	7	50	10	30
	–15	5	7	25	10	20
	–27	–17	10	20	10	15
HRVCRLHB1250	–5	23	6	50	10	30
	–15	5	6	25	10	20
	–27	–17	10	20	10	15

ERVCRLHB1200, HRVCRLHB1150, HRVCRLHB1250 (cont.)

HVI RATED ENERGY PERFORMANCE

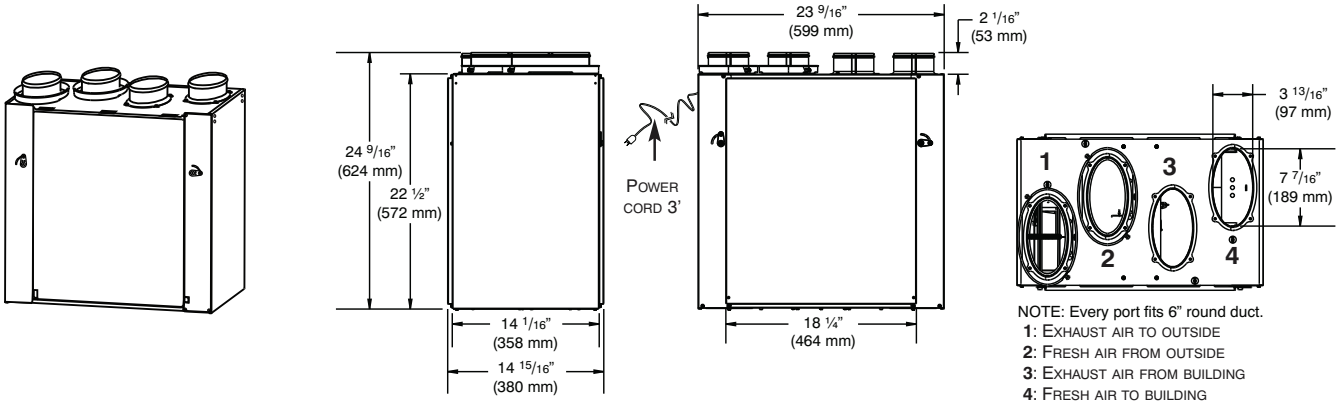
MODEL	MODE	SUPPLY TEMP		NET AIR FLOW		POWER CONSUMED (WATTS)	SENSIBLE RECOVERY EFFICIENCY	APPARENT SENSIBLE EFFECTIVENESS	LATENT RECOVERY MOISTURE TRANSFER	TOTAL RECOVERY EFFICIENCY
		°C	°F	L/S	CFM					
ERVCRLHB1200	Heat	0	32	39	80	84	60	72	0.60	
		0	32	54	114	113	58	69	0.53	
		0	32	79	167	169	56	66	0.45	
		−25	−13	31	65	116	41	86	0.47	
	Cool	35	95	39	82	81				52
HRVCRLHB1150	Heat	0	32	31	66	67	67	79	−0.01	
		0	32	40	86	74	65	75	−0.01	
		0	32	54	115	90	61	70	−0.01	
		−25	−13	38	81	87	60	76	0.02	
HRVCRLHB1250	Heat	0	32	39	82	71	65	75	0.01	
		0	32	61	130	129	60	69	0.01	
		−25	−13	40	84	114	60	76	0.03	

VENTILATION PERFORMANCE

MODEL	EXT. STATIC PRESSURE		NET SUPPLY AIR FLOW		GROSS AIR FLOW			
					SUPPLY		EXHAUST	
	Pa	In w.g.	L/S	CFM	L/S	CFM	L/S	CFM
ERVCRLHB1200	25	0.1	105	222	106	225	106	225
	75	0.3	93	198	94	200	100	212
	100	0.4	86	183	88	186	93	198
	150	0.6	70	148	71	150	75	158
	200	0.8	50	107	51	108	29	61
HRVCRLHB1150	25	0.1	85	180	86	182	92	194
	75	0.3	77	163	77	164	81	171
	100	0.4	71	150	71	151	71	151
	150	0.6	60	128	61	130	40	85
	175	0.7	51	108	52	110	27	57
HRVCRLHB1250	25	0.1	106	225	107	227	118	249
	75	0.3	96	204	97	205	111	235
	100	0.4	90	192	91	193	107	226
	150	0.6	76	161	76	162	89	189
	175	0.7	67	142	67	143	75	159

NOTE: For additional data points, refer to HVI Directory at www.hvi.org

HRVCRSVU1157



NOTE: Every port fits 6" round duct.
1: EXHAUST AIR TO OUTSIDE
2: FRESH AIR FROM OUTSIDE
3: EXHAUST AIR FROM BUILDING
4: FRESH AIR TO BUILDING

A12331

PHYSICAL & ELECTRICAL DATA

MODEL	CAPACITY (LO–HI)		PORT LOC.	CORE		WEIGHT LBS. [KG]	VOLTAGE	MAX POWER WATTS	MAX AMPS
	CFM	L/S		TYPE	AIR FLOW				
HRVCRSVU1157	67 – 170	32 – 80	Top	Polypropylene	Cross flow	52 [24]	120/60/1	125	1.0

DEFROST OPERATION

MODEL	OUTSIDE TEMPERATURE		DEFROST CYCLE (MINUTES	
	°C	°F	Defrosting	Exchange
HRVCRSVU1157	–5 to –15	23 to 55	7	25
	–16 to –27	4 to –17	7	25
	Below –27	Below –17	10	22

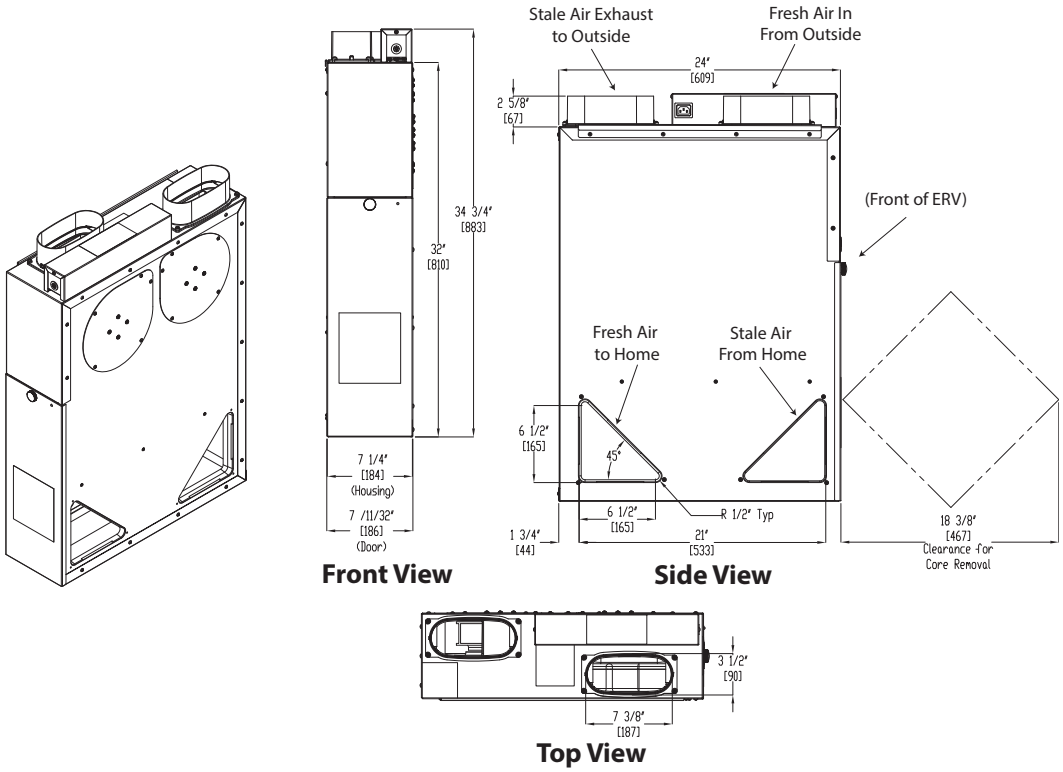
HVI RATED ENERGY PERFORMANCE

MODEL	MODE	SUPPLY TEMP		NET AIR FLOW		POWER CONSUMED (WATTS)	SENSIBLE RECOVERY EFFICIENCY	APPARENT SENSIBLE EFFECTIVENESS	LATENT RECOVERY MOISTURE TRANSFER
		°C	°F	L/S	CFM				
HRVCRSVU1157	Heat	0	32	32	67	56	70	78	0.00
		0	32	40	86	64	68	75	0.01
		0	32	56	120	86	64	70	0.01
		–25	–13	30	63	79	61	83	0.01

VENTILATION PERFORMANCE

MODEL	EXT. STATIC PRESSURE		NET SUPPLY AIR FLOW		GROSS AIR FLOW			
					Supply		Exhaust	
	Pa	In w.g.	L/S	CFM	L/S	CFM	L/S	CFM
HRVCRSVU1157	25	0.1	91	193	92	195	91	194
	75	0.3	80	170	81	171	80	169
	100	0.4	74	157	74	158	74	157
	150	0.6	62	132	62	133	63	133
	200	0.8	47	101	48	101	49	104
	250	1.0	33	71	34	71	34	74

ERVCRNVA1090



A13294

PHYSICAL & ELECTRICAL DATA

Model	CAPACITY (LO-HI)		Port Loc.	Core Type	Core Air Flow	Weight Lbs. [kg]	Voltage	Max. Power Watts	Max. Amps
	CFM	L/S							
ERVCRNVA1090	52-128	25-60	Top	Enthalpy Paper	Cross flow	40	120/60/1	140	1.3

HVI RATED ENERGY PERFORMANCE

Model	Mode	Supply Temp		Net Air Flow		Power Consumed (Watts)	Sensible Recovery Efficiency	Apparent Sensible Effectiveness	Latent Recovery Moisture Transfer	Total Recovery Efficiency Transfer
		°C	°F	L/S	CFM					
ERVCRNVA1090	Heat	0 0 0	32 32 32	22 33 44	46 70 92	68 106 140	60% 59% 55%	76% 75% 69%	0.56 0.54 0.48	
	Cool	35	95	23	48					55%

NOTE TO ENERGY RATERS

HVI rated performance of this ERV is not representative of the actual CFM/watt performance in the actual application due to test protocol of the laboratory rating test. Actual ERV CFM/watt performance with the triangular openings connected to a location under negative static pressure will significantly improve. For example at medium speed with the connection location at –0.2–in. w.c. and with +0.1–in. w.c. duct connection static, a typical measurement is 1.14 CFM/watt. For additional performance data points more representative of actual application, refer to the "Maximum ERV Airflow Delivery (CFM) & Power Consumption" table below.

MAXIMUM ERV AIRFLOW DELIVERY (CFM) & POWER CONSUMPTION[1]

HVAC Return Pressure	ERV Fan Speed (CFM)								
	Low			Medium			High		
	Supply	Exhaust	Watts	Supply	Exhaust	Watts	Supply	Exhaust	Watts
-0.1" w.c.	74	69	67	104	122	103	121	148	135
-0.2" w.c.	93	62	66	120	116	102	136	143	135
-0.3" w.c.	110	54	66	135	110	102	150	137	135
-0.4" w.c.				150	103	102	163	132	135

[1]Maximum airflow delivery assumes no more than 0.1" external static from the duct collar to the intake or exhaust hood. If your duct runs are long or have a lot of bends or compressions, you may not be able to achieve the maximum airflow.

ERVCRNVA1090 (CONT.)

VENTILATION PERFORMANCE

Return Pressure inches w.c.	Ext. Duct Pressure inches w.c.	ERV Fan Speed Setting (CFM)					
		Low		Medium		High	
		Supply	Exhaust	Supply	Exhaust	Supply	Exhaust
-0.1	0.1	74	69	104	122	121	148
	0.2	60	58	99	110	116	139
	0.3	58	51	94	101	112	128
	0.4			87	92	107	120
	0.5			69	72		111
-0.2	0.1	93	62	120	116	136	143
	0.2	86	51	115	104	133	132
	0.3	71		110	94	127	122
	0.4	60		101	86	123	112
	0.5			96	76	119	
	0.6			89	67	115	
	0.7			83		111	
	0.8			76			
	0.9			70			
	1.0			64			
-0.3	0.1	110	54	135	110	150	137
	0.2	104		130	98	147	127
	0.3	91		126	88	142	116
	0.4	81		113	81	133	
	0.5	71		109	70	128	
	0.6	61		104	60	121	
	0.7	51		85	50	116	
	0.8			86			
	0.9			81			
	1.0			73			
	1.1			66			
	1.2			59			
	1.3			52			
-0.4	0.1			150	103	163	132
	0.2			146	92	160	122
	0.3			141	82	156	111
	0.4			127	74	143	101
	0.5			123	64	140	
	0.6			114	55	133	
	0.7			108		128	
	0.8			102		124	
	0.9			93		116	
	1.0			86		110	
	1.1			79			
	1.2			71			
	1.3			64			
	1.4			57			

DEFROST

This model is NOT equipped with a defrost feature. It is designed only for use in IECC Climate Zones 1 through 5, which EXCLUDE the following states in their entirety: Montana, Wyoming, North Dakota, Minnesota, Wisconsin, Vermont, New Hampshire, Maine. **– Do not install this model in these states.**

The following states have *some* areas in Climate Zone 5: Washington, Idaho, Utah, Colorado, South Dakota, Iowa, Michigan, Pennsylvania, New York, California. **Prior to installing this model in these states, refer to the IECC Climate Zone Map to ensure that the installation location is within Climate Zones 1 through 5.** (See Fig. 1.)

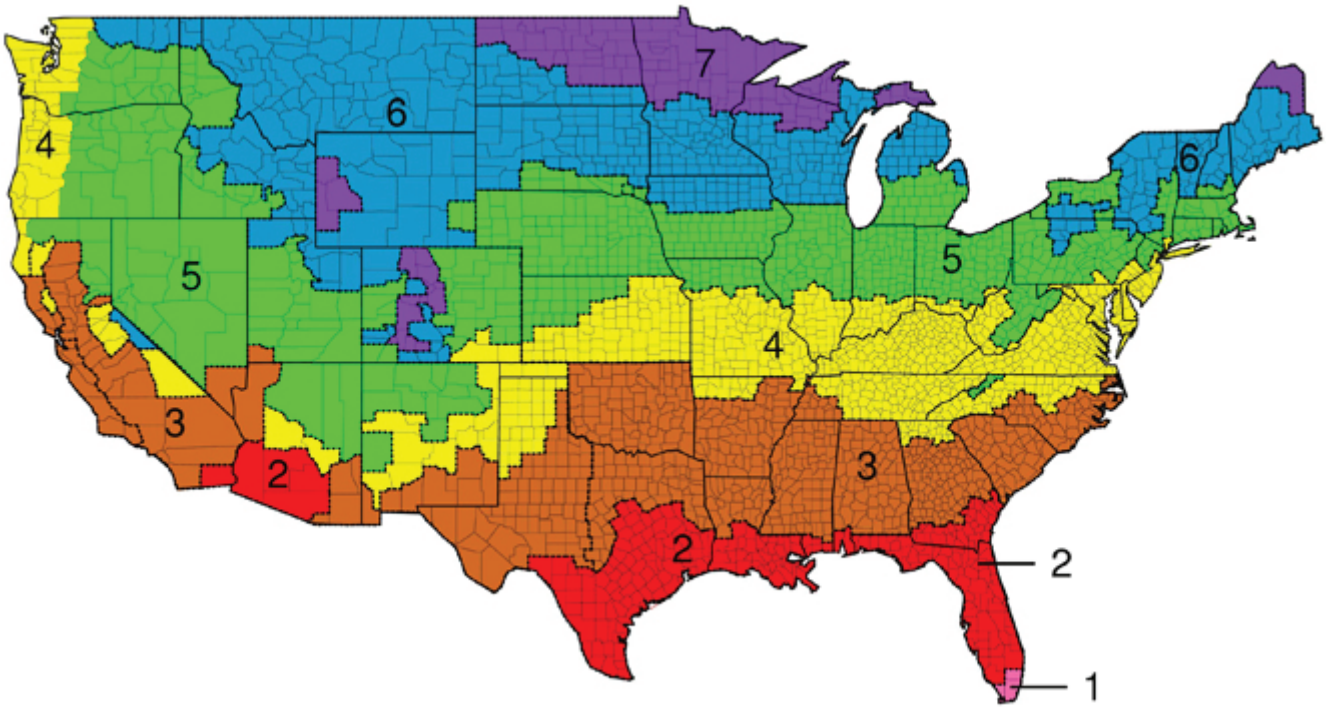


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Fig. 1 – IECC Climate Zone Map

METHOD TO SIZE ERVs and HRVs

Ventilator Sizing

The tables below should be used to determine the required airflow for a home. These guidelines are taken from ASHRAE 62.2.

VENTILATION AIR REQUIREMENTS, ASHRAE 62.2 – 2010

House Size		Number of Bedrooms									
		0 - 1		2 - 3		4 - 5		6 - 7		>7	
Sq. Ft.	Sq. Meters	CFM	L/S	CFM	L/S	CFM	L/S	CFM	L/S	CFM	L/S
≤1500	≤139	30	14	45	21	60	28	75	35	90	42
1501 - 3000	139.1 - 278	45	21	60	28	75	35	90	42	105	50
3001 - 4500	279.1 - 418	60	28	75	35	90	42	105	50	120	57
4501 - 6000	418.1 - 557	75	35	90	42	105	50	120	57	135	64
6001 - 7500	557.1 - 697	90	42	105	50	120	57	135	64	150	71
>7500	>697	105	50	120	57	135	64	150	71	165	78

VENTILATION AIR REQUIREMENTS, ASHRAE 62.2 – 2013*

House Size		Number of Bedrooms									
		1		2		3		4		5	
Sq. Ft.	Sq. Meters	CFM	L/S	CFM	L/S	CFM	L/S	CFM	L/S	CFM	L/S
<500	<47	30	14	38	18	45	21	53	25	60	28
501 - 1000	47 - 93	45	21	53	24	60	28	68	31	75	35
1001 - 1500	93 - 139	60	28	68	31	75	35	83	38	90	42
1501 - 2000	140 - 186	75	35	83	38	90	42	98	45	105	49
2001 - 2500	186 - 232	90	42	98	45	105	49	113	52	120	56
2501 - 3000	232 - 279	105	49	113	52	120	56	128	59	135	63
3001 - 3500	279 - 325	120	56	128	59	135	63	143	66	150	70
3501 - 4000	325 - 372	135	63	143	66	150	70	158	73	165	77
4001 - 4500	372 - 418	150	70	158	73	165	77	173	80	180	84
4501 - 5000	418 - 465	165	77	173	80	180	84	188	87	195	91

*For 2013, CFM & L/S values shown are used if no Blower Door Test is done. If test is done, leakage values can be deducted from the above.

HEATING AND COOLING LOAD CHARTS

Although the ventilators process the outside air before it enters the home, additional heating and cooling loads need to be considered.

HEATING LOAD BTUH (APPROXIMATE)

Outside Temperature		Heating Load (btuh) @ Inside Design Temperature 72° F (21°C)								
		HRV					ERV			
Deg. C	Deg. F	SVB1100	SHB1100	SVU1157	LHB1150	LHB1250	SVB1100	SHB1100	**LHB1200**	NVA1090
−32	−25	4778	4778	7690	6636	10603	4071	4071	8143	4071
−29	−20	4531	4531	7090	6294	10057	3861	3861	7723	3861
−26	−15	4285	4285	6520	5952	9510	3983	3983	7967	3983
−23	−10	4039	4039	5970	5610	8964	3759	3759	7509	3759
−21	−5	3800	3800	5440	5268	8417	3525	3525	7051	3525
−18	0	3410	3410	4840	4925	7871	3297	3297	6594	3297
−15	5	3095	3095	4360	4583	7324	3323	3323	6647	3323
−12	10	2795	2795	3900	4241	6777	3215	3215	6430	3215
−9	15	2465	2465	3400	3899	6231	3107	3107	6214	3107
−7	20	2195	2195	3000	3557	5684	2834	2834	5669	2834
−4	25	1935	1935	2610	3215	5138	2562	2562	5124	2562
−1	30	1680	1680	2250	2873	4591	2289	2289	4579	2289
2	35	1425	1425	1880	2531	4045	2017	2017	4034	2017
4	40	1200	1200	1560	2189	3498	1744	1744	3489	1744

COOLING LOAD BTUH (APPROXIMATE)

Outside Enthalpy	Cooling Load (btuh) @ Inside Design Temperature 72°F (21°C) and 50% Relative Humidity								
	HRV					ERV			
Btu/lb	SVB1100	SHB1100	SVU1157	LHB1150	LHB1250	SVB1100	SHB1100	**LHB1200**	NVA1090
30	482	482	990	670	1071	320	320	640	320
31	785	785	1650	1090	1741	520	520	1040	520
32	1086	1086	2310	1509	2411	720	720	1441	720
33	1388	1388	2970	1928	3080	920	920	1841	920
34	1690	1690	3630	2347	3750	1120	1120	2241	1120
35	1992	1992	4290	2766	4419	1320	1320	2641	1320
36	2293	2293	4950	3185	5089	1520	1520	3041	1520
37	2595	2595	5610	3604	5759	1720	1720	3441	1720
38	2897	2897	6270	4023	6428	1921	1921	3842	1921
39	3198	3198	6930	4442	7098	2121	2121	4242	2121
40	3478	3478	7590	4831	7767	2321	2321	4642	2321
41	3802	3802	8250	5280	8437	2521	2521	5042	2521
42	4103	4103	8910	5699	9107	2721	2721	5442	2721

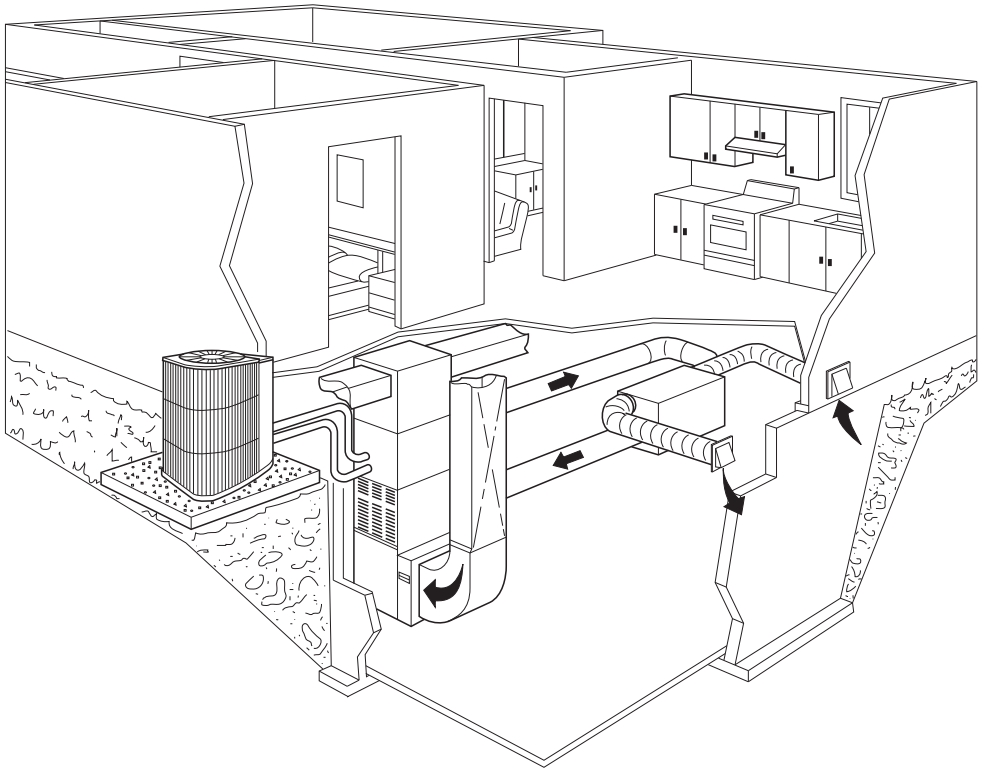
HEATING LOAD BTUH

The heating load chart shows the heating loads in Btuh for a range of winter design temperatures for each model of ventilator.

COOLING LOAD BTUH

The cooling load chart shows loads in Btuh as well. To use the cooling load chart, first find the design enthalpy from a psychrometric chart using the design dry bulb and wet bulb temperatures. The cooling load can then be found for a range of enthalpies for each ventilator.

Ventilator installed with forced air system



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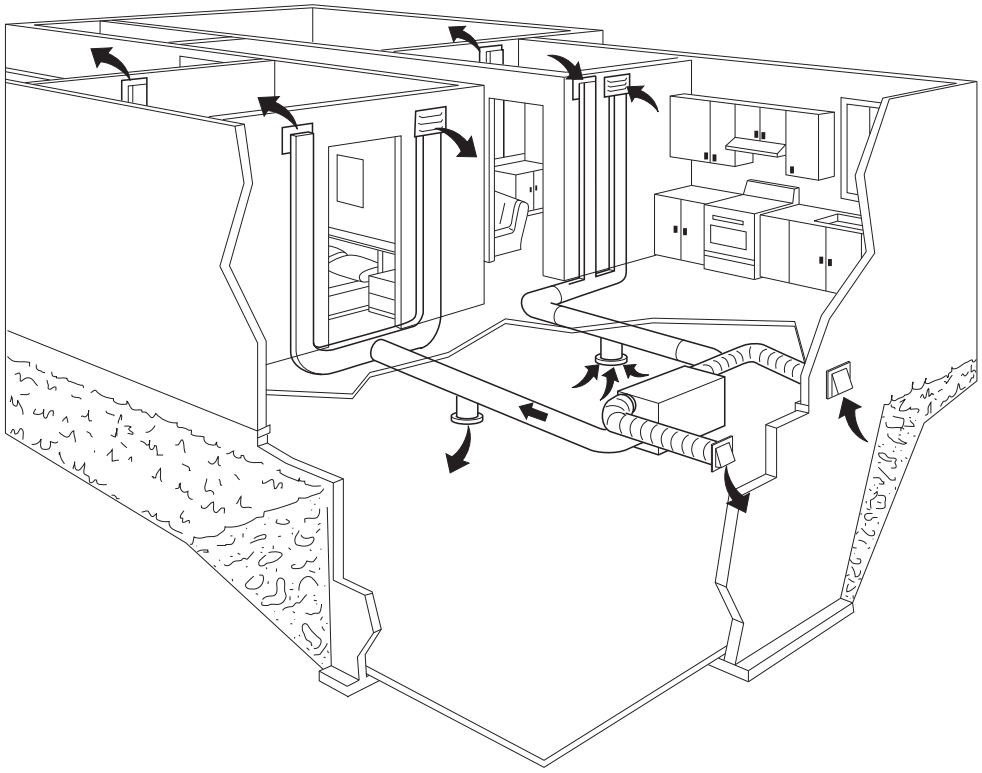
Ventilator installed with independent air distribution



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CARRIER VENTILATOR CONTROLS COMPATIBILITY MATRIX*

	Main Controls				Auxiliary Controls	
Control						
Name	One-Touch	Econo (Basic)	Standard (HRV)	Standard Latent (ERV)	60 min. Crank Timer	20 min. Push Button
Carrier Part #	KVBCN0101CLT	KVBCN0101CBS	KVBCN0101CST	KVACN0101CLC	KVATM010160M	KVATM010120C
Main features	OFF-min-max-intermittent- lighted button	OFF-min-max	OFF-min-intermittent-dehumidistat	OFF-min-intermittent-dehumidistat	Allows up to 60 min of high speed	20-min high speed lighted push-button
Modes	Off, Intermittent (20 min. low, 40 min. off), Low continuous, High continuous	Off, Low continuous, High continuous. No humidistat	Off, Low continuous, Intermittent, High speeed when humidity is **above** setpoint	Off, Low continuous, Intermittent, High speeed when humidity is **below** setpoint	Overrides main wall control. Vent. will operate in high for selected number of minutes. Up to 5 secondary controls may be connected to a single ventilator. No humidistat.	Overrides main wall control. Vent. will operate in high for 20 minutes unless button is pressed before 20 minutes expires, then turns unit off. Up to 5 secondary controls may be connected to a single ventilator.
ERVCRSHB1100 ERVCRSVB1100	•			•	•	•
HRVCRSHB1100 HRVCRSVB1100	•		•		•	•
HRVCRSVU1157	•	•	•		•	•
ERVCRLHB1200	•			•	•	•
HRVCRLHB1150 HRVCRLHB1250	• •	• •	• •		• •	• •

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***Model ERVCRNVA1090 does not require an external wall control.**

ACCESSORIES

VENTILATOR ACCESSORY NUMBER NOMENCLATURE

1	2	3	4	5	6	7	8	9	10	11	12
K	V	B	C	N	0	1	0	1	C	B	S

Product

KV – Ventilator Accessory Kit

Series
A – Original Series
B – Second Series

Type
AC01 – Accessory
CN01 – Control
TM01 – Timer
AC01 – Accessory

Package Quantity
01 – Single Pack

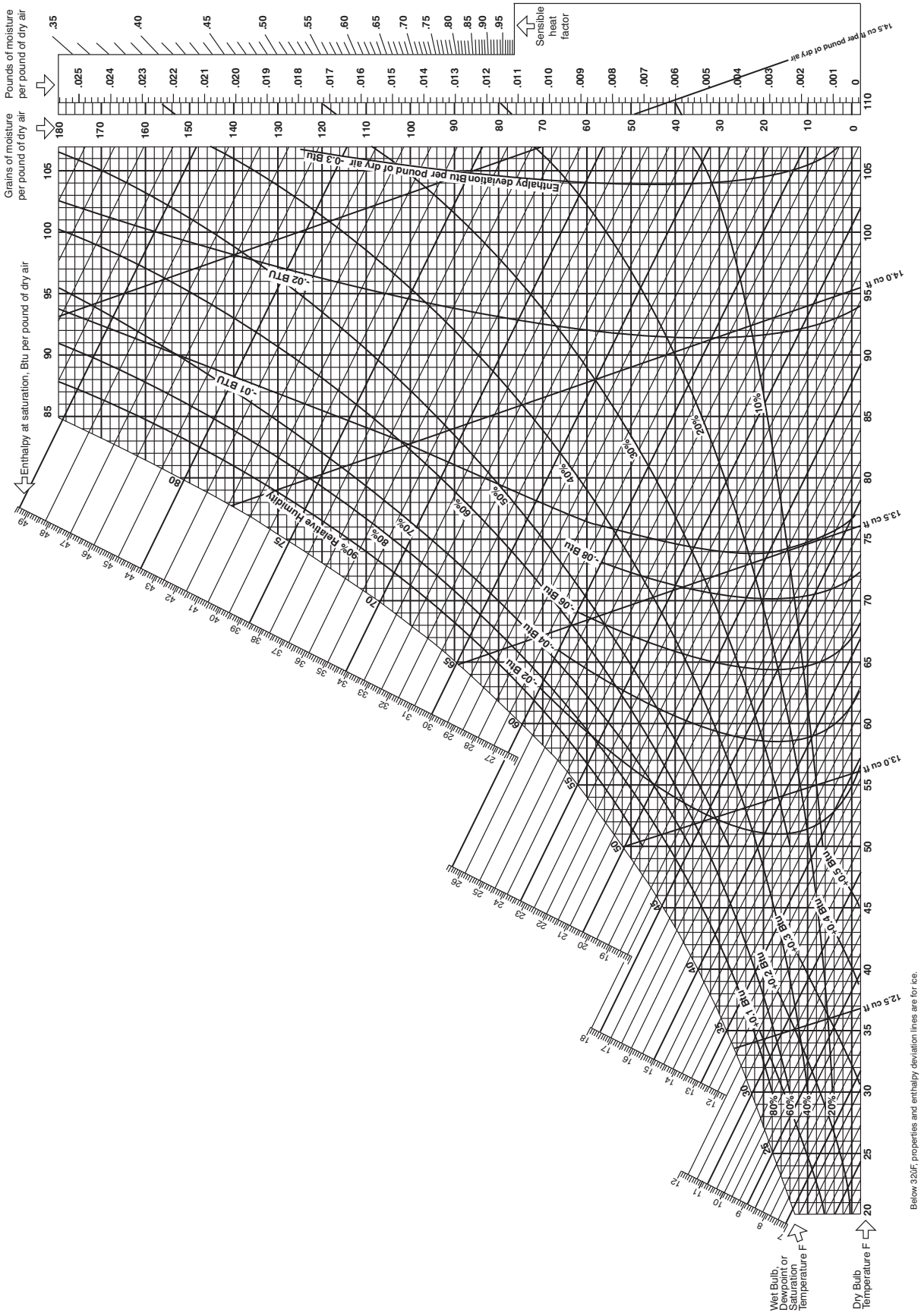
Control Description
CBS – Carrier Basic Control
CLC – Carrier Latent Control
CLT – Carrier OneTouch Control
CST – Carrier Standard Control

Accessory Description
HCO – Hood Concentric
HOD – Intake Hood
KIT – Airflow Measuring Kit
6FM – Flow Collar 6–in.
7FM – Flow Collar 7–in.
8FM – Flow Collar 8–in.

Timer Description
120C – 20 Minute Timer Kit
160M – 60 Minute Timer Kit

KIT NUMBER	DESCRIPTION	WHERE USED
KVBCN0101CBS	Basic Wall Control	Used with HRVs
KVACN0101CLC	Latent Wall Control	Used with ERVs
KVBCN0101CLT	OneTouch Control	Used with ERVs and HRVs as a main wall control
KVBCN0101CST	Standard HRV Control	Used with HRVs
KVAAC0101HOD	Exterior Intake and Exhaust Hood	Used with ERVs and HRVs, 2 Required
KVBAC0101KIT	Airflow Measuring Kit	Start up Balancing Kit, includes (2) 6 in. Flow Meter Collars & Magnehelic Gauge
KVATM010120B	20 Minute Push Button Timer	Used with ERVs and HRVs when 20 minute manual operation is required
KVATM010160M	60 Minute Timer	Used with ERVs and HRVs, time is adjustable between 10 and 60 minutes
KVAAC01016FM	6 in. Flow Meter Collar	Used with ERVs and HRVs, at start up, when 6 in. duct work is connected to HRV
KVAAC01017FM	7 in. Flow Meter Collar	Used with ERVs and HRVs, at start up, when 7 in. duct work is connected to HRV
KVAAC01018FM	8 in. Flow Meter Collar	Used with ERVs and HRVs, at start up, when 8 in. duct work is connected to HRV
KVAAC0101HCO	Concentric Intake/Exhaust Hood	Used as a single intake/exhaust for SVB1100, SHB1100 & NVA1090 models only
Totaline 6506C	Fresh–Air Intake Damper NCPO	Used with NVA1090
Totaline 5428	Fan Coil Connection Kit	Used with NVA1090. **Note**: “G” signal required. Not for use with communicating controls.

PSYCHOMETRIC CHART



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NOTES:

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