

Model ABWB

The **Carnes Model ABWB**, By-Pass Control Hot Water Reheat Unit, provides pressure dependent variable air volume with reheat capability to individual zones while by-passing the unneeded air to the ceiling plenum for recirculation.

Although zone air volumes in small buildings may vary greatly, the cost of fan controls many

times cannot be justified. Zone variable air volumes are realized with the by-pass reheat unit while the supply fan delivers a constant CFM.

The ABWB is compatible with reverse or direct acting pneumatic thermostats or electric thermostats. Zone thermostats directly controlling the by-pass damper assures that only the air that is needed is delivered to the zone.

Other Features Include:

- Air flow capacities from full shut-off to zone to 3,200 CFM.
- Pneumatic, electric, or manual damper control.
- Thermally and acoustically insulated casing (hot water coil casing is uninsulated).
- Reheat coils available in one or two rows. Pipe connections available left hand, easily field reversed.
- Open-end discharge provided with S and drive connection for easy installation.
- Balancing damper in by-pass is standard.
- Air flow sensor at inlet is standard.
- Optional hanger brackets.
- Optional controls enclosure for electric controls.
- Optional foil coated insulation (hospital, laboratory, etc. applications).

Available Modules:

- Basic control unit—Model ABWB.
- Multi-discharge adaptor—Model AXMA (See Section 5—Accessories).

SOUND DATA

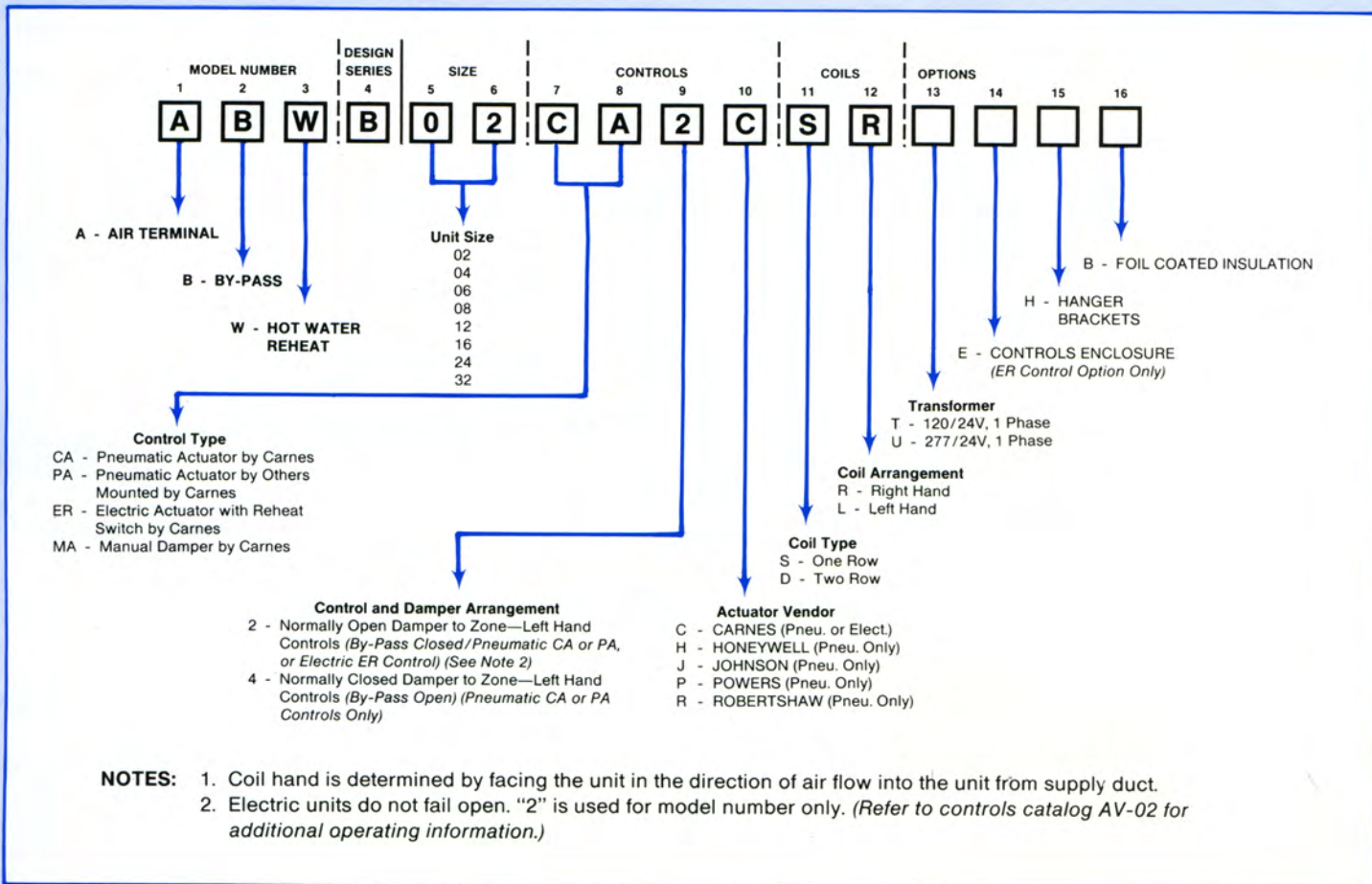
CFM	1-Row Coil ΔP_s	2-Row Coil ΔP_s	Sound Power db Octave Band							Max. Dis. NC	Radiated NC
			2	3	4	5	6	7			
SIZE 02											
80	0.08	0.08	—	32	26	—	—	—	—	—	
120	0.15	0.16	45	42	36	32	27	—	20	—	
160	0.26	0.28	51	49	43	40	37	32	29	—	
200	0.40	0.43	56	55	49	46	43	39	35	24	
SIZE 04											
160	0.08	0.09	—	29	23	—	—	—	—	—	
240	0.18	0.20	—	42	35	33	30	24	21	—	
320	0.32	0.35	52	50	43	41	40	37	31	24	
400	0.49	0.55	56	55	50	48	46	45	37	30	
SIZE 06											
240	0.07	0.10	—	29	22	—	—	—	—	—	
360	0.15	0.18	—	40	34	32	27	—	20	—	
480	0.25	0.31	49	48	42	40	39	35	30	21	
600	0.39	0.47	54	54	49	46	45	44	36	26	
SIZE 08											
320	0.06	0.07	—	—	—	—	—	—	—	—	
480	0.13	0.16	—	38	32	31	27	—	—	—	
640	0.22	0.26	49	47	41	40	39	35	30	21	
800	0.33	0.39	56	53	47	46	46	45	37	28	

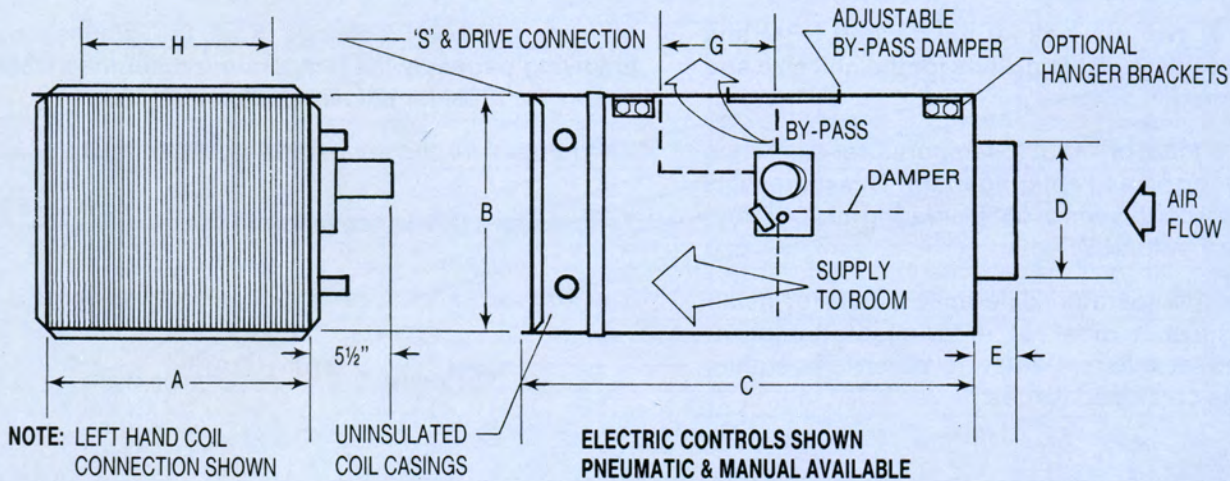
SOUND DATA

CFM	1-Row Coil ΔP_s	2-Row Coil ΔP_s	Sound Power db Octave Band							Max. Dis. NC	Radiated NC
			2	3	4	5	6	7			
SIZE 12											
480	0.06	0.09	—	29	23	21	—	—	—	—	
720	0.14	0.18	—	40	36	36	32	—	24	—	
960	0.24	0.30	51	48	42	44	44	40	35	23	
1200	0.35	0.44	56	54	49	49	50	49	41	29	
SIZE 16											
640	0.09	0.13	—	34	35	34	27	—	22	—	
960	0.19	0.28	—	44	44	45	42	37	34	—	
1280	0.32	0.48	53	51	49	51	51	47	42	22	
1600	0.49	0.74	58	55	55	55	55	53	46	29	
SIZE 24											
960	0.13	0.19	—	41	39	38	34	27	26	—	
1440	0.27	0.40	50	50	48	47	46	41	37	20	
1920	0.45	0.67	56	55	54	53	55	52	46	28	
2400	0.67	1.01	62	61	60	58	59	58	50	35	
SIZE 32											
1280	0.12	0.20	—	42	42	42	37	29	31	—	
1920	0.25	0.41	52	52	50	52	50	45	41	21	
2560	0.43	0.70	58	58	57	57	57	54	48	29	
3200	0.67	1.04	62	63	62	61	62	60	53	36	

- NOTES:**
1. ΔP_s static pressure difference from inlet to discharge with coil in place.
 2. Radiated NC is based on sound emanating from the casing with room absorption (10 db) and ceiling plenum absorption and transmission loss (10 db).
 3. Dash (—) indicates sound power db or NC level less than 20.
 4. All values of NC include 10 db room absorption.

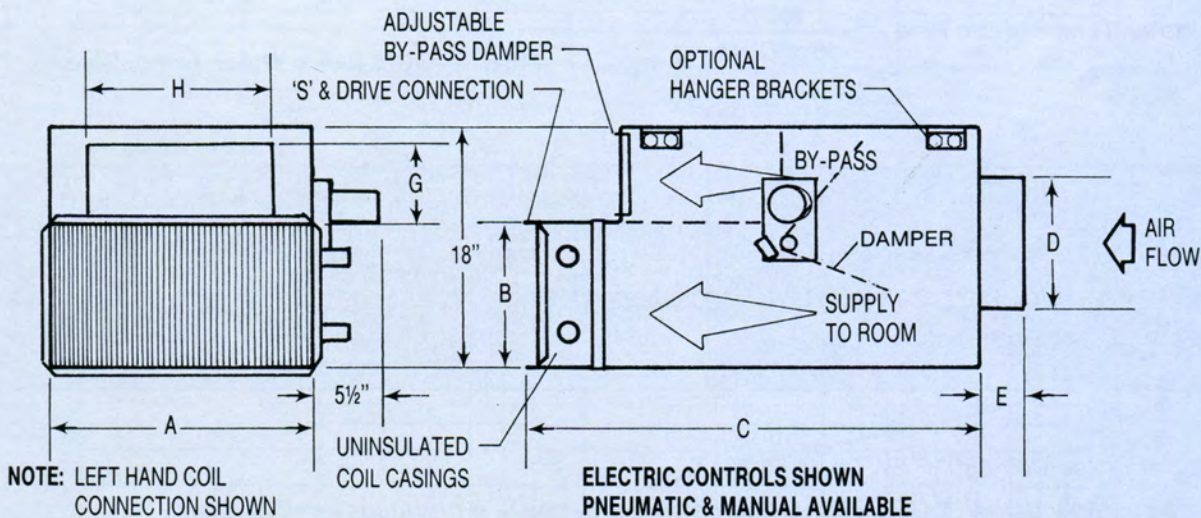
MODEL NUMBERING SYSTEM — Model ABWB





DIMENSIONS LISTED IN INCHES								
BASIC ASSEMBLY								
UNIT SIZE	DISCHARGE		C 1 ROW	C 2 ROW	D	E	BY-PASS OPENING	
	A	B					G	H
02	10	8	18 ⁷ / ₈	20 ¹ / ₄	5	2 ³ / ₈	4 ³ / ₁₆	7
04	12	10	18 ⁷ / ₈	20 ¹ / ₄	8	2 ³ / ₈	5 ⁷ / ₈	9
06	14	12	24 ⁷ / ₈	26 ¹ / ₄	10	2 ³ / ₈	9 ³ / ₄	11
08	16	14	24 ⁷ / ₈	26 ¹ / ₄	12	2 ³ / ₈	9 ⁵ / ₈	13
12	18	16	26 ⁷ / ₈	28 ¹ / ₄	14	2 ⁵ / ₈	10 ³ / ₈	15

Refer to Section 3 of this Catalog for Hot Water Coil Performance.



DIMENSIONS LISTED IN INCHES								
BASIC ASSEMBLY								
UNIT SIZE	DISCHARGE		C 1 ROW	C 2 ROW	D	E	BY-PASS OPENING	
	A	B					G	H
16	20	10	27 ¹ / ₄	28 ⁵ / ₈	16	2 ⁵ / ₈	6 ¹ / ₂	17
24	24	10	27 ¹ / ₄	28 ⁵ / ₈	16x18	3 ³ / ₈	6 ¹ / ₂	21
32	32	10	27 ¹ / ₄	28 ⁵ / ₈	16x24	3 ³ / ₈	6 ¹ / ₂	29