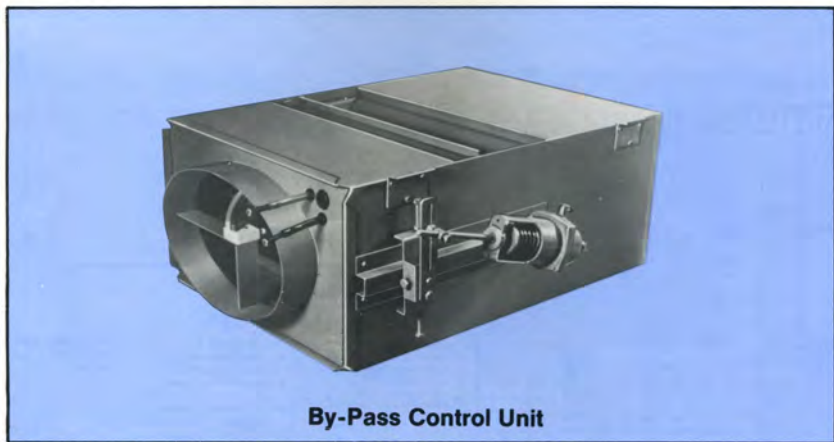


## By-Pass Control Unit—Model ABBA (Open End)



The **Carnes Model ABBA**, by-pass unit, provides variable air volume 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 unit while the supply fan delivers a constant CFM.

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

Downstream duct work pressure losses can be matched by adjusting an integral by-pass balancing damper.

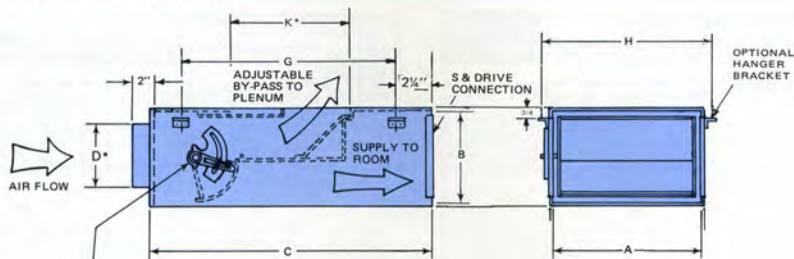
Model ABBA units are available in open-end and multi-discharge configurations.

### *Other Features Include:*

- Air flow capacities to 3,200 CFM.
- Low pressure drop.
- Low sound levels.
- Thermally and acoustically insulated casing.
- Open-end discharge units are provided with S and drive connection for easy installation.
- Multi-discharge units have round outlet connections with integral balancing dampers.
- Balancing damper in by-pass is standard.
- Air flow sensor at inlet is standard.
- Optional hanger brackets.
- Optional controls enclosure for electric controls.
- Basic control unit. Model ABBA available as open end discharge or with multi-discharge outlets.

## Dimensional Data—Model ABBA-By-Pass Control Unit

### BY-PASS UNIT — OPEN END



MANUAL OPERATOR SHOWN  
(ELECTRIC OR PNEUMATIC OPTIONAL)

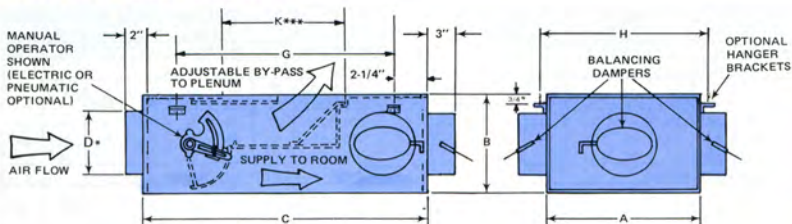
Size	CFM	A (Inches)	B (Inches)	C (Inches)	D (Inches)	G (Inches)	H (Inches)	K (Inches)	Weight Lbs.
02	200	13-1/8	8-1/8	23-3/4	5	13	14-1/8	5-3/8	20
04	400	13-1/8	8-1/8	23-3/4	7	13	14-1/8	5-3/8	20
06	600	14-1/8	10-1/8	23-3/4	9	13	15-1/8	6-3/8	22
08	800	17-1/8	10-1/8	23-3/4	10	13	18-1/8	6-3/8	26
12	1200	20-1/8	12-1/8	27	12	16-1/4	21-1/8	7-3/8	32
16	1600	22-1/8	14-1/8	29	14	18-1/4	23-1/8	8-5/8	40
24	2400	26-1/8	16-1/8	31	18	20-1/4	27-1/8	9-5/8	58
32	3200	32-1/8	18-1/8	43	20	32-1/4	33-1/8	11-3/4	77

○ = Indicates Elliptical

K\* = By Pass Opening — K x A

D\* = Indicates Duct Diameter to Fit Oval Inlet

### BY-PASS UNIT — MULTI-DISCHARGE



### OUTLET ARRANGEMENT — Top View

#### TERMINAL UNIT DIMENSIONS

Unit Size	CFM	A (Inches)	B (Inches)	C (Inches)	G (Inches)	H (Inches)	x (Inches)	Weight Lbs.	
02	200	13	8	23.3/4	5	13.1-2	14	5.3-8	22
04	400	13	8	23.3/4	7	13.1-2	14	5.3-8	22
06	600	14	10	23.3/4	9	13.1-2	16	6.3-8	24
08	800	17	10	23.3/4	10	13.1-2	18	6.3-8	26
12	1200	20	12	27	12	16.3/4	21	7.3-8	30
16	1600	22	14	29	14	18.3/4	23	8.3-8	46
24	2400	26	16	31.414	18	20.3/4	27	9.3-8	64
32	3200	32	18	43	20	32.3/4	33	11.3/4	88

○ = Indicates Elliptical

\* = 41 Inch Dimension for P and R Arrangements Only

\*\*\* = 37-1/4 Inch Dimension for P and R Arrangements Only

\*\*\* = By Pass Opening — K x A

D\* = Indicates Duct Diameter to Fit Oval Inlet

Unit Size	Outlet Arrangement Diagrams								Weight Lbs.
02	6	6	6	6	6	6	6	6	22
04	6	6	6	6	6	6	6	6	22
06	6 or 8	6 or 8	6	6	6 or 8	6	6	6	24
08	6	6 or 8	6	6	6 or 8	6	6	6	26
12	6 or 8	6 or 8	6 or 8	6 or 8	6 or 8	6 or 8	6 or 8	6 or 8	30
16	8	8	8	8	8	8	8	8	46
24	8	8	8	8	8	8	8	8	64
32	8	8	8	8	8	8	8	8	88

