

**By Pass Type - VAV AHRI Certified**
**B-10 Series**

**Model: VAV-B-11x / 12x**

**11- Top By Pass; 12 - Side By Pass**

**Construction: Galvanized Steel (GI)**

**Application: Light & Medium Duty**

**By-Pass VAV Model VAV-B-11/12**, is a device that receives a constant volume of air into the unit and provides variable volume of air to the space. It diverts a portion of the supply airflow to the plenum either through a duct to the return ductwork or directly into a return air plenum.

VAV responds to the thermostat demand for cooling by varying the position of the unit damper, which in turn controls the amount of air entering a zone. At reduced zone loads, cool primary air is returned to the air handler via the plenum or return air duct without experiencing zone heat gains. The lower return air temperature allows the air handler to operate more efficiently.

**Standard construction**
**Casing**

0.9 mm thick galvanized sheet steel.

**Insulation**

13 mm thick 32 kg/m<sup>3</sup> density Acoustic liner.

**Blade**

0.9 mm thick galvanized sheet steel.

**Axle Shaft**

12 mm diameter damper shaft made of galvanized steel.

**Bearing**

12 mm diameter Brass.

**Gasket**

Neoprene Gasket.

**Controls**

Modulating / On-Off.

**Optional Construction**
**Controls**

Backnet DDC with suitable thermostat.

**Sound Attenuator**

VAV with additional length insulated casing for sound attenuation.

**Insulation**

25 mm thick 32 kg/m<sup>3</sup> density Acoustic liner.

**Blade**

0.9 mm thick aluminium extruded aerofoil multiple blades.

**Duct Heater**

Slip-in type electric duct heater (230V AC 1 Phase or 400V AC 3 Phase)

**Double skin**

Insulated internal walls surface with Galvanized perforated sheet used for low noise applications to minimise breakout noise.

**Neck connections**

Round inlet with round outlet and square inlet with square outlet.


**Technical Features:**

- AHRI Certified.
- Test Conducted at minimum static pressure at 100% of standard airflow.
- Full range of control of variable air volume supply from 0 to 100% is possible to the conditioned zone.
- A minimum air volume set in terms of percentage (20%) can be provided if required, field adjustment is also possible.
- Low Leakage i.e. less than 2% of V nominal at 750 Pa.
- Designed to produce low NC levels with minimal pressure drop to the system.
- Air volume capacity upto 2800 CFM
- Electronics control factory supply & mounted.
- Variety of control options available, based on applications.
- Electronic thermostat & actuator provide accurate mounting control.
- Metal encapsulated edges limit fiberglass insulation erosion into the airstream.
- Single-point power connection reduces installed cost. Maintenance free.

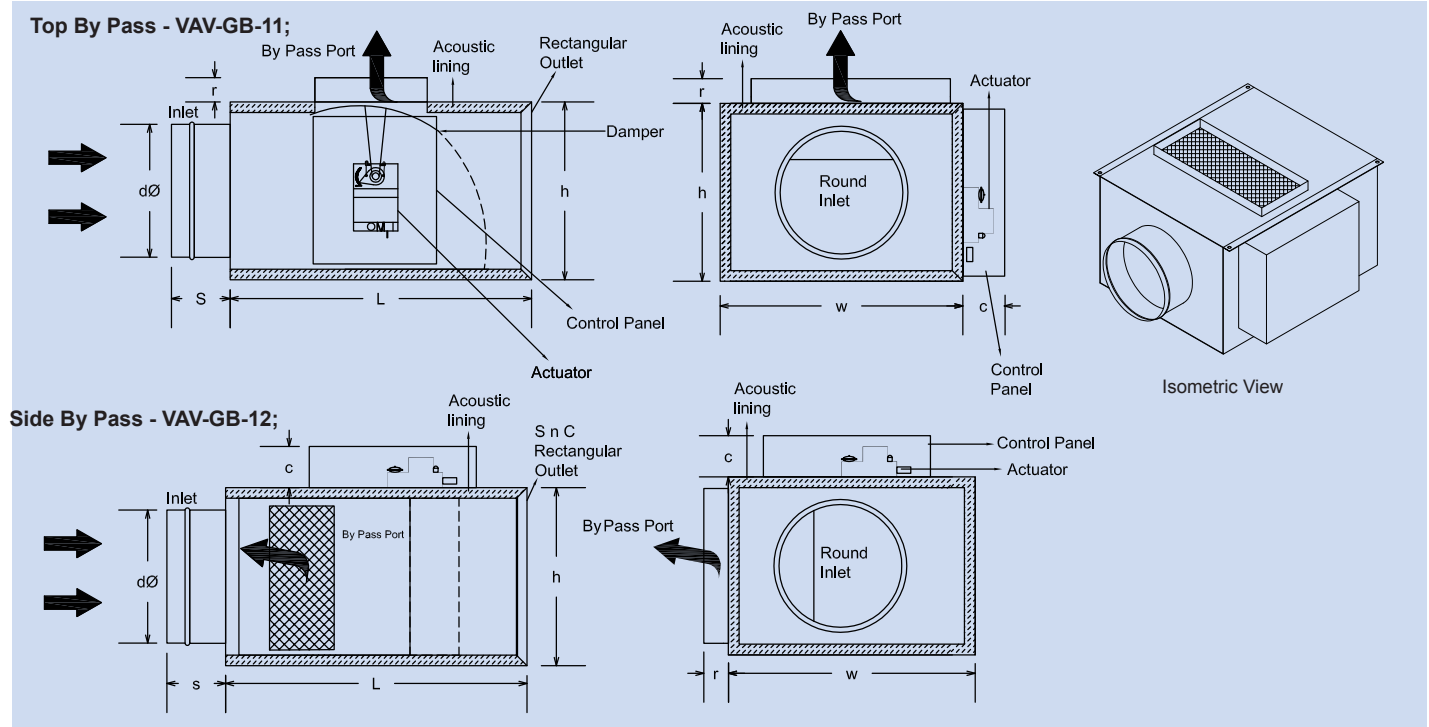
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## AHRI Certified By Pass Type - VAV

## B - 10 Series

### Models : VAV-B-11 / 12 Construction Details and Dimensions



**Dimensional data for VAV-B-11/12**

Model (X)	Air Flow Range (cfm)	d inlet(mm)	L (mm)	w 11 (mm)	w 12 (mm)	h (mm)	L+SA (mm)	s (mm)	r (mm)	c (mm)	Thickness of Sheet (Gauge)
A	250	150 ø	400	275	410	200	1000	125	20	80	20g
B	400	150 ø	400	300	550	200	1000	125	20	80	20g
C	550	200 ø	400	325	490	250	1000	125	20	80	20g
D	700	200 ø	400	350	525	250	1000	125	20	80	20g
E	900	250 ø	500	375	575	300	1100	125	20	80	20g
F	1100	250 ø	500	400	600	300	1100	125	20	80	20g
G	1400	300 ø	500	425	650	350	1100	125	20	80	20g
H	1600	300 ø	500	450	700	350	1100	125	20	80	20g
I	2100	350 ø	600	500	800	400	1200	125	20	80	20g
J	2800	350 ø	600	600	900	400	1200	125	20	80	20g

Unit Model	CFM	Minimum Operating pressure (in w.g)	AHRI Standard Ratings - Sound Power Level, dB Re: 1 x 10 <sup>-12</sup> watts											
			Radiated @ 1.5" Water Static Pressure						Discharge @ 1.5" Water Static Pressure					
			Octave Band center frequency (Hz)						Octave Band center frequency (Hz)					
			125	250	500	1000	2000	4000	125	250	500	1000	2000	4000
A	250	0.01	47	39	35	33	24	20	62	59	51	40	31	28
B	400	0.00	51	42	39	37	27	22	57	55	45	34	26	25
C	550	0.02	49	45	43	37	31	23	59	56	48	39	32	25
D	700	0.00	39	32	26	24	20	19	61	57	47	39	33	27
E	900	0.01	49	44	44	39	28	22	61	58	50	40	33	27
F	1100	0.02	52	51	45	41	35	26	59	56	47	38	36	29
G	1400	0.00	50	47	46	39	32	20	62	56	51	45	38	30
H	1600	0.00	53	52	49	44	37	25	59	58	51	43	39	31
I	2100	0.00	50	49	47	37	31	30	61	57	54	41	37	29
J	2800	0.05	58	57	53	42	35	25	83	76	73	65	60	56

Duct end corrections included in sound power levels as per AHRI 880

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