

VAV boxes with build-in actuator type VAV-B BELIMO

VAV-B air flow regulator can be used both for variable and constant flow and, if appropriate, for forced shut-off for both air supply, type VAV-B-S, and air exhaust, type VAV-B-E.

Application

- Regulating of air volumes to change the temperature or air quality in a room
- Control and regulate the supply air flow and exhaust air flow
- Airflow range can be set between two set values or as constant airflow

Material

- Galvanized steel

Composition

- Operating range is between 2 and 12 m/s
- Integrated flow measurement with separate measurement nipples for control and manual measurement
- The casing of the damper is equipped with a EPDM rubber blade seal conforms to air tightness class C
- Blade air tightness class 3 in accordance with EN1751 due to EPDM Seal around the blade
- Manual measurement of the air flow can be performed without disturbing the control circuit through a separate pressure outlet on the orifice plate of the flow variator
- Acoustic and thermal Insulated box

Controls

- Controller type Belimo LMV-D3-MP of 5Nm (size 125 up to 400) are pressure regulated actuators for pressure independent controls. Settings can be done by using the Assistant App* (smartphone) with NFC connection (Near Field Communication) or by using the service tool ZTH (PC-tool).
- Operating range 0-10V or 2-10V (Standard set on 2-10V)
- Units of airflow: l/s or m³/h
- Minimum adjustable air volume set at air velocity at +/- 2m/s and maximum adjustable air volume set at air velocity of 12m/s
- Differential pressure range Δp @ V_{nom} 38 - 500 Pa
- Running time over the full actuator range : 100s

- Power consumption 5 Nm: 2W, 3.5VA
- Supply voltage 24V AC/DC
- * Assistant App available in App Store & Google Play Store
- * For iPhone an ZIP-BT-NFC converter is needed!

Options

- Electrical heating battery of water heating battery available upon request
- Outlet piece with circular duct connections available upon request
- Other communication types (ModBus, KNX) and other brands of servomotors available on request

Order example

■ **VAV-B-S Belimo MP DIA 200**

Explanation:

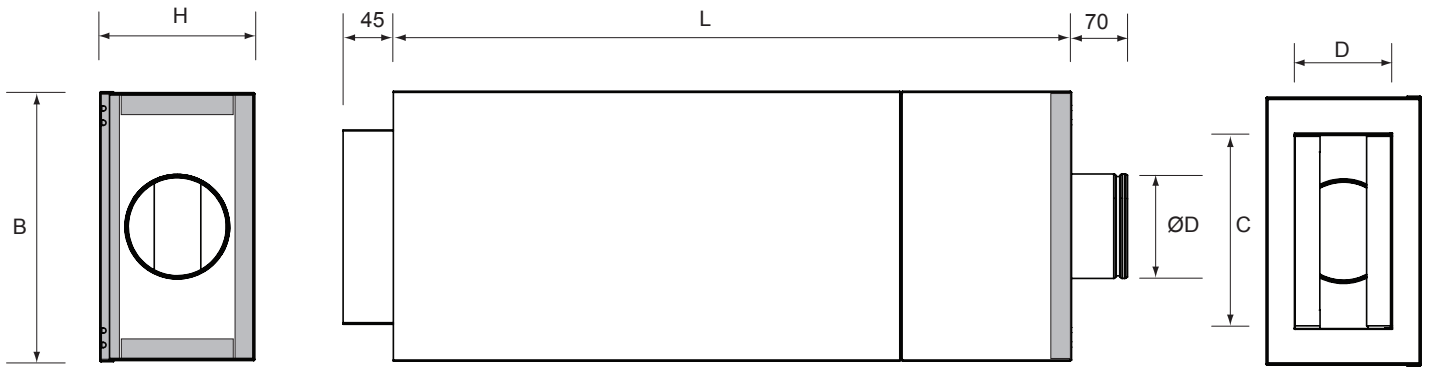
VAV-B = Circular Variable Airflow regulator

-S = Supply type

DIA 200 = Size of the connection

Selection table			
Type VAV	ØD [mm]	Q _{min} [m³/h]	Q _{max} [m³/h]
VAV-B-S DIA 125 Belimo MP	125	54	540
VAV-B-S DIA 160 Belimo MP	160	90	900
VAV-B-S DIA 200 Belimo MP	200	145	1459
VAV-B-S DIA 250 Belimo MP	250	217	2215
VAV-B-S DIA 315 Belimo MP	315	380	3680
VAV-B-S DIA 400 Belimo MP	400	615	6047
VAV-B-E DIA 125 Belimo MP	125	54	540
VAV-B-E DIA 160 Belimo MP	160	90	900
VAV-B-E DIA 200 Belimo MP	200	145	1459
VAV-B-E DIA 250 Belimo MP	250	217	2215
VAV-B-E DIA 315 Belimo MP	315	380	3680
VAV-B-E DIA 400 Belimo MP	400	615	6047

VAV-B-S		Q [m³/h]	Sound data																	
			Ø125					Ø160					Ø200							
Pt = 125 Pa	Lw [dB/Okt]	f [Hz]	63	50	49	47	54	56	50	51	52	55	63	33	39	46	51	59		
			125	26	33	44	50	51	33	42	52	54	59	29	38	43	45	54		
			250	18	26	35	41	49	24	31	39	49	51	23	28	33	37	46		
			500	15	17	18	25	36	15	18	21	30	38	15	15	16	27	38		
			1000	15	15	15	16	23	15	15	15	23	33	15	15	15	21	33		
			2000	15	15	15	15	15	15	15	18	21	15	27	15	15	15	15	28	
			4000	15	15	15	15	15	15	15	15	16	15	17	15	15	15	21	15	
			8000	16	15	15	15	15	15	15	15	16	15	16	17	16	15	15	15	
					Lw [dB(A)]	26	27	31	37	42	27	30	38	43	47	23	26	30	34	43
			Pt = 250 Pa	Lw [dB/Okt]	f [Hz]	63	55	57	51	57	59	53	52	55	58	65	51	47	50	55
125	32	43				47	51	54	45	48	53	56	61	32	41	45	48	56		
250	25	35				37	43	51	29	40	41	52	53	26	34	36	40	49		
500	16	18				22	28	42	17	23	25	33	40	15	20	21	31	40		
1000	15	15				15	19	37	15	15	15	25	35	15	15	15	23	35		
2000	15	15				15	15	33	15	15	15	17	29	15	15	15	17	30		
4000	15	15				15	15	19	15	15	19	17	21	15	15	15	15	24		
8000	19	21				22	19	20	19	20	21	20	22	20	15	15	15	19	22	
		Lw [dB(A)]				30	34	34	39	46	32	36	39	45	49	28	30	32	37	46
Pt = 500 Pa	Lw [dB/Okt]	f [Hz]				63	56	60	53	58	62	55	54	56	60	66	42	55	58	58
			125	31	41	46	58	60	37	49	54	60	66	33	44	49	53	57		
			250	25	36	41	47	55	29	41	45	52	56	29	37	41	47	50		
			500	16	23	26	32	38	20	28	34	37	44	19	28	30	34	44		
			1000	15	15	15	20	28	15	16	26	28	38	16	15	15	25	39		
			2000	15	15	15	15	20	15	15	23	20	33	15	15	15	18	34		
			4000	15	15	15	18	18	15	15	21	18	25	15	15	15	15	27		
			8000	22	23	22	28	29	19	23	23	27	31	23	22	25	28	31		
					Lw [dB(A)]	31	36	36	44	49	31	37	41	47	53	27	34	38	42	48
			VAV-B-S		Q [m³/h]	Ø250					Ø315					Ø400				
Pt = 125 Pa	Lw [dB/Okt]	f [Hz]	63	36		41	47	52	60	35	43	49	57	65	35	43	51	66	72	
			125	34	38	42	45	52	36	41	46	47	54	35	42	48	53	63		
			250	20	24	28	36	44	28	33	37	38	49	28	31	34	43	45		
			500	15	16	17	33	40	15	16	16	25	37	15	19	22	36	42		
			1000	15	15	15	28	36	15	15	15	21	34	15	17	19	35	39		
			2000	15	15	15	24	33	15	15	15	15	31	15	16	18	30	39		
			4000	15	18	21	32	15	15	19	23	29	15	15	17	19	30	37		
			8000	15	15	15	25	33	15	20	25	34	34	15	19	23	35	41		
					Lw [dB(A)]	24	26	29	38	44	25	30	34	38	45	25	29	34	44	51
			Pt = 250 Pa	Lw [dB/Okt]	f [Hz]	63	42	48	50	56	63	41	53	53	60	67	41	51	54	67
125	36	39				45	50	56	37	47	49	52	58	38	48	51	56	65		
250	25	30				33	41	48	31	40	41	43	53	32	37	39	47	50		
500	15	18				22	36	43	15	22	22	30	41	15	21	27	39	45		
1000	15	15				15	31	39	15	15	15	26	37	15	18	24	37	42		
2000	15	15				15	27	36	15	15	15	20	34	15	18	23	33	41		
4000	15	15				15	24	34	15	15	15	27	34	15	20	26	34	41		
8000	18	15				18	28	36	15	25	29	37	38	15	24	30	39	45		
		Lw [dB(A)]				26	28	32	40	47	27	35	37	42	49	27	35	38	47	55
Pt = 500 Pa	Lw [dB/Okt]	f [Hz]				63	46	49	55	59	66	49	52	61	65	72	41	55	58	69
			125	40	44	50	57	60	38	51	58	60	65	43	53	56	61	67		
			250	28	37	41	46	52	35	45	49	51	54	37	49	50	52	57		
			500	15	26	29	37	46	23	27	33	39	47	24	29	34	40	50		
			1000	15	15	22	32	42	17	25	31	37	45	16	26	31	38	49		
			2000	15	15	20	28	39	15	22	29	35	42	15	26	30	36	46		
			4000	15	15	21	27	36	15	27	30	35	41	20	31	34	39	46		
			8000	20	18	26	31	39	22	34	37	42	45	25	35	38	44	50		
					Lw [dB(A)]	28	33	38	44	51	31	40	46	49	54	33	43	46	51	58



VAV-B	ØD [mm]	B [mm]	H [mm]	L [mm]	C [mm]	D [mm]
Ø125	123	300	236	1035	200	150
Ø160	158	410	236	1035	300	150
Ø200	198	560	281	1320	460	200
Ø250	248	700	311	1440	600	200
Ø315	313	900	442	1440	800	250
Ø400	398	1000	525	1820	900	350

Mounting

