



Standard version RV5



Optional version externally insulated RV5I

**Product description:**

Variable airflow regulators with circular section, equipped with an internal sealing damper and dynamic pressure probe, designed for airflow control in ventilation and air conditioning systems

**Use and application:**

Used for controlling and regulating airflow in VAV (Variable Air Volume) systems, this device is ideal for balancing airflows within distribution networks.

It is employed in civil, residential, commercial, and industrial HVAC systems, optimizing environmental comfort and the energy efficiency of the system.

**Construction:**

- Construction in Z200 galvanized steel;
- Casing thickness of 0.8 mm (from Ø100 to Ø250) and 1 mm (from Ø315 to Ø400);
- Male connection on both sides with external silicone gasket;
- Dynamic pressure probe in natural aluminum, for measuring and regulating airflow according to the room demand;
- External pressure taps in nylon;
- Blade thickness of 0.8 mm (from Ø100 to Ø200), of 1 mm (from Ø200 to Ø250) and of 1.5 mm (from Ø315 to Ø400);
- Internal sealing silicone gasket on the blade;
- Bronze bushings Ø8 (from Ø100 to Ø250) and nylon Ø12 (from Ø315 to Ø400);
- Terminal shafts in galvanized steel;
- Protruding control shaft motorized;
- Damper adjustment and airflow control via communicating actuator;

**Optional version available RV5I:**

- External insulation with polyester fiber, 15 kg/m<sup>3</sup> density, 40 mm thickness, complete with a containment casing thickness of 0,8 mm in galvanized steel.

**Operating limit:**

- Pressure: from 20 to 1000Pa (graph pag3);
- Range temperature: from 0 °C to +50 °C;
- Available sizes: from Ø100 to Ø400;
- Dimensional drawing std (see pag.2).

**Certifications:**

- Self-generated and radiated noise tests in accordance with UNI EN 25135 at Istituto Giordano (Test reports No. 153262 and No. 154143);
- External insulation with fire reaction classification UNI EN 13501-1 Bs2, do: UNI 9177 class 1.

**Available accessories and protocols**

Modulating electric actuators with VAV controllers - Belimo;

Modulating electric actuators with VAV controllers - Siemens;





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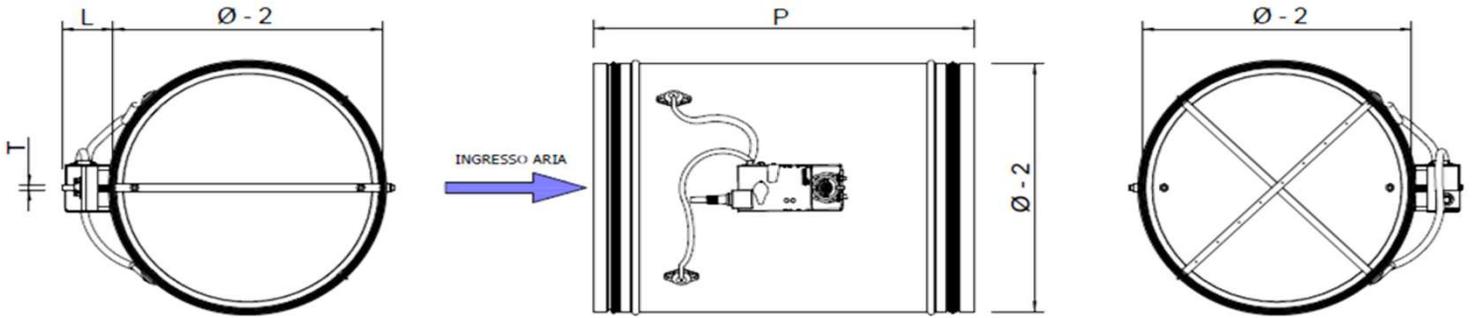
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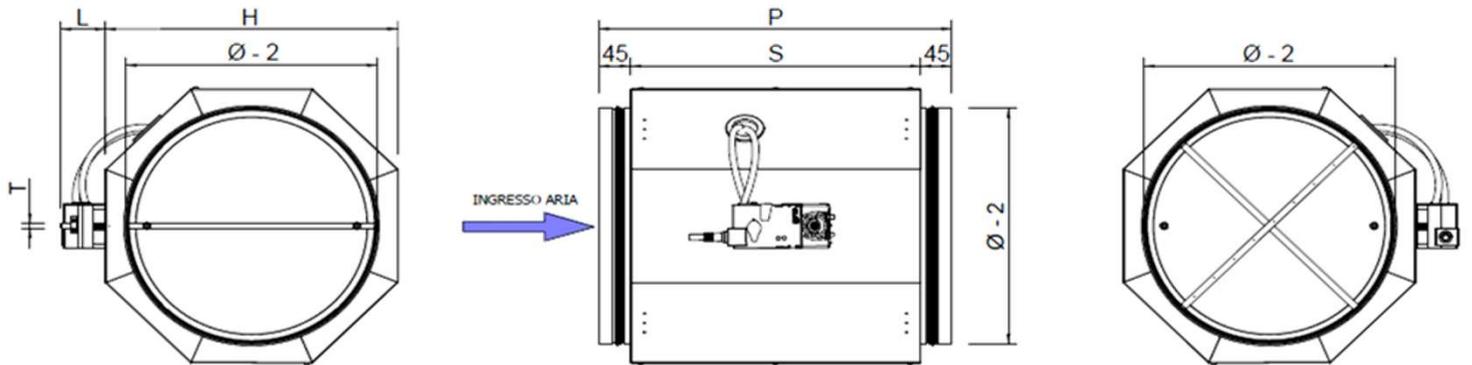
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RV5 dimensional drawing and standard drilling (dimensions in mm, always referred to nominal size)

**RV5 - STANDARD VERSION NOT EXTERNALLY INSULATED**



**RV5I - OPTIONAL VERSION EXTERNALLY INSULATED**



Dimensional table RV5 / RV5I [mm]					
Ø	P	T	L	H	S
100	310	Ø8	60	160	220
125	310	Ø8	60	185	220
160	400	Ø8	60	220	220
200	400	Ø8	60	260	310
250	400	Ø8	60	310	310
315	500	Ø12	100	375	310
355	500	Ø12	100	415	410
400	630	Ø12	100	460	410

Weight table [Kg]		
Ø	RV5	RV5I (INSULATED)
100	1,0	1,5
125	1,2	1,6
160	1,5	3,5
200	2,0	4,0
250	2,5	5,0
315	4,5	8,0
355	5,0	9,0
400	6,0	11,0

**Note:** weights refer to standard regulator, without actuator



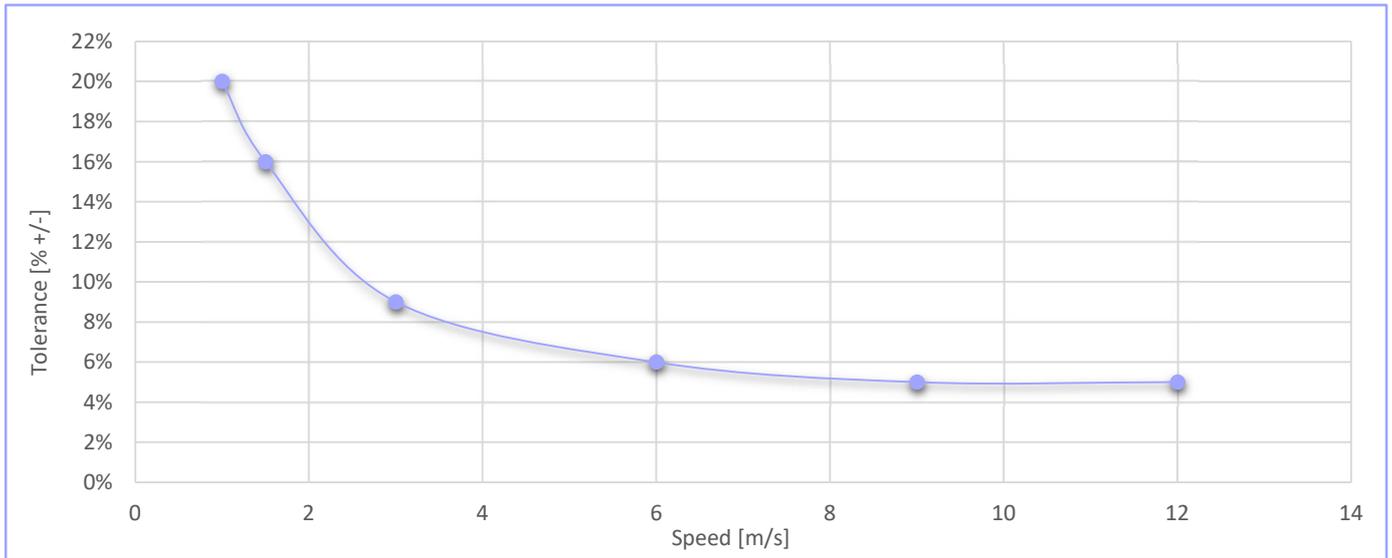
Airflow range min-max table	
$\varnothing$	[m <sup>3</sup> /h]
100	34 - 340
125	53 - 530
160	87 - 870
200	138 - 1380
250	212 - 2120
315	337 - 3370
355	428 - 4280
400	543 - 5430

- For constant airflow (CAV): the settable flow rate cannot be lower than 20% of the maximum value indicated in the table;
- For variable airflow (VAV): the maximum settable airflow rate cannot be lower than 20% of the maximum value indicated in the table;
- Minimum airflow rate: can be set to 0 m<sup>3</sup>/h, but no other values lower than the minimum value indicated in the table are allowed;
- Measurement uncertainty: shown in the graph below (see Installation section);

### Installation

For correct pressure measurement and a flow tolerance of  $\pm 5\%$ , a straight duct section must be provided upstream of the regulator, with a minimum length equal to twice the diameter ( $\varnothing \times 2$ ) of the selected regulator

Probe uncertainty percentage graph (under installation conditions)





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Dim. nom Ø	Noise RV5 / RV5I																			
	Airflow	Speed	NOISE 200 Pa								NOISE 500 Pa									
			Frequency [Hz] and noise [dB]								Lw	Frequency [Hz] and noise [dB]								Lw
			125	250	500	1000	2000	4000	8000	dB(A)		125	250	500	1000	2000	4000	8000	dB(A)	
100	[m³/h]	[m/s]	<b>GENERATED *</b>																	
	57	2	35	38	38	38	35	27	21	42	39	43	45	47	44	38	36	51		
	170	6	48	51	50	47	43	36	29	52	51	56	55	56	52	47	43	60		
	283	10	54	57	54	49	45	40	31	55	57	61	62	60	56	51	45	64		
	339	12	57	58	57	51	48	41	32	57	61	61	64	62	57	53	46	66		
	[m³/h]	[m/s]	<b>IRRADIATED NOT INSULATION VERSION *</b>																	
	57	2	19	23	26	29	27	19	14	33	23	28	33	38	36	30	29	42		
	170	6	32	36	38	38	35	28	22	42	35	41	43	47	44	39	36	50		
	283	10	38	42	42	40	37	32	24	45	41	46	50	51	48	43	38	55		
	339	12	41	43	45	42	40	33	25	47	45	49	52	53	49	45	39	56		
	[m³/h]	[m/s]	<b>IRRADIATED EXTERNAL INSULATION VERSION *</b>																	
	57	2	16	21	22	20	17	9	1	24	20	26	29	29	26	20	16	33		
	170	6	29	34	34	29	25	18	9	35	32	39	39	38	34	29	23	42		
	283	10	35	40	38	31	27	22	11	38	38	44	46	42	38	33	25	47		
	339	12	38	41	41	33	30	23	12	41	42	47	48	44	39	35	26	49		
	125	[m³/h]	[m/s]	<b>GENERATED *</b>																
70		2	38	39	39	39	36	29	23	43	42	44	47	48	45	40	37	52		
250		6	50	52	51	48	44	38	31	53	54	57	58	57	53	49	44	61		
450		10	56	58	56	51	47	42	34	57	60	63	64	61	57	53	47	66		
530		12	59	60	59	53	49	43	35	59	63	66	66	63	58	55	48	68		
[m³/h]		[m/s]	<b>IRRADIATED NOT INSULATION VERSION *</b>																	
70		2	22	24	27	30	28	21	16	34	26	29	35	39	37	32	30	43		
250		6	34	37	39	39	36	30	24	43	38	42	46	48	45	41	37	52		
450		10	40	43	44	42	39	34	27	47	44	48	52	52	49	45	40	56		
530		12	43	45	47	44	41	35	28	49	47	51	54	54	50	47	41	58		
[m³/h]		[m/s]	<b>IRRADIATED EXTERNAL INSULATION VERSION *</b>																	
70		2	19	22	23	21	18	11	3	25	23	27	31	30	27	22	17	34		
250		6	31	35	35	30	26	20	11	36	35	40	42	39	35	31	24	44		
450		10	37	41	40	33	29	24	14	40	41	46	48	43	39	35	27	48		
530		12	40	43	42	35	31	25	15	42	44	49	50	45	40	37	28	50		
160		[m³/h]	[m/s]	<b>GENERATED *</b>																
	110	2	40	40	40	40	37	31	25	44	45	45	48	49	47	42	38	53		
	400	6	52	53	52	49	45	40	33	54	57	58	59	58	54	51	45	62		
	730	10	58	59	58	53	49	44	37	59	63	65	65	62	58	55	49	67		
	869	12	61	62	60	55	50	45	38	61	65	68	68	64	59	57	50	69		
	[m³/h]	[m/s]	<b>IRRADIATED NOT INSULATION VERSION *</b>																	
	110	2	24	25	28	31	29	23	18	35	29	30	36	40	39	34	31	44		
	400	6	36	38	40	40	37	32	26	44	41	43	47	49	46	43	38	53		
	730	10	42	44	46	44	41	36	30	49	47	50	53	53	50	47	42	57		
	869	12	45	47	48	46	42	37	31	50	49	53	56	55	51	49	43	59		
	[m³/h]	[m/s]	<b>IRRADIATED EXTERNAL INSULATION VERSION *</b>																	
	110	2	21	23	24	22	19	13	5	27	26	28	32	31	29	24	18	35		
	400	6	33	36	36	31	27	22	13	37	38	41	43	40	36	33	25	45		
	730	10	39	42	42	35	31	26	17	42	44	48	49	44	40	37	29	50		
	869	12	42	45	44	37	32	27	18	44	46	51	51	46	41	39	30	52		

\*Indicative values obtained by extrapolation, not derived from experimental tests



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Dim. nom Ø	Noise RV5 / RV5I																			
	Airflow	Speed	NOISE 200 Pa								NOISE 500 Pa									
			Frequency [Hz] and noise [dB]								Lw	Frequency [Hz] and noise [dB]								Lw
			125	250	500	1000	2000	4000	8000	dB(A)		125	250	500	1000	2000	4000	8000	dB(A)	
200	[m³/h]	[m/s]	<b>GENERATED *</b>																	
	160	2	35	38	38	41	38	34	27	45	41	44	45	49	48	44	39	53		
	625	6	54	52	50	51	47	42	35	55	59	58	57	59	57	52	47	63		
	1150	10	62	59	56	55	51	46	38	59	67	65	63	63	62	56	50	68		
	1357	12	65	62	58	57	53	47	39	62	71	68	65	65	63	58	52	70		
	[m³/h]	[m/s]	<b>IRRADIATED NOT INSULATION VERSION *</b>																	
	160	2	19	23	26	32	30	26	20	36	25	29	33	40	40	36	32	45		
	625	6	38	37	38	42	39	34	28	45	43	43	45	50	49	44	40	54		
	1150	10	46	44	44	46	43	38	31	50	51	50	51	54	54	48	43	59		
	1357	12	49	47	46	48	45	39	32	52	55	53	53	56	55	50	45	61		
	[m³/h]	[m/s]	<b>IRRADIATED EXTERNAL INSULATION VERSION *</b>																	
	160	2	16	21	22	23	20	16	7	27	22	27	29	31	30	26	19	36		
	625	6	35	35	34	33	29	24	15	37	40	41	41	41	39	34	27	45		
	1150	10	43	42	40	37	33	30	21	44	48	48	47	45	44	38	30	50		
	1357	12	47	45	42	39	35	29	19	44	52	51	49	47	45	41	33	54		
	250	[m³/h]	[m/s]	<b>GENERATED *</b>																
250		2	46	44	42	44	38	30	29	47	52	51	50	53	48	40	40	56		
970		6	58	55	54	51	47	42	37	56	64	62	62	61	57	52	48	65		
1800		10	64	61	59	55	51	48	41	61	69	68	67	64	61	57	51	69		
2121		12	66	63	61	56	53	50	42	63	72	70	69	65	63	60	53	71		
[m³/h]		[m/s]	<b>IRRADIATED NOT INSULATION VERSION *</b>																	
250		2	30	29	30	35	30	22	22	37	36	36	38	44	40	32	33	47		
970		6	42	40	42	42	39	34	30	46	48	47	50	52	49	44	41	56		
1800		10	48	46	47	46	43	40	34	51	53	53	55	55	53	49	44	60		
2121		12	50	48	49	47	45	42	35	52	56	55	57	56	55	52	46	61		
[m³/h]		[m/s]	<b>IRRADIATED EXTERNAL INSULATION VERSION *</b>																	
250		2	27	27	26	26	20	12	9	29	32	30	33	33	32	27	23	38		
970		6	39	38	38	33	29	24	17	39	45	45	46	43	39	34	28	48		
1800		10	45	44	43	37	33	30	21	44	50	51	51	46	43	39	31	52		
2121		12	47	46	45	38	35	32	22	45	53	53	53	47	45	41	33	54		
315		[m³/h]	[m/s]	<b>GENERATED *</b>																
	400	2	46	42	43	44	41	37	32	48	51	47	49	51	50	45	43	56		
	1550	6	59	56	55	53	49	46	40	58	64	61	62	61	58	55	50	66		
	2850	10	65	62	61	57	53	50	43	63	70	68	67	65	62	59	54	70		
	3367	12	67	65	63	58	54	51	44	64	71	70	68	66	62	60	57	71		
	[m³/h]	[m/s]	<b>IRRADIATED NOT INSULATION VERSION *</b>																	
	400	2	30	27	31	35	33	29	25	39	35	32	37	42	42	37	36	47		
	1550	6	43	41	43	44	41	38	33	48	48	46	50	52	50	47	43	56		
	2850	10	49	47	49	48	45	42	36	52	54	53	55	56	54	51	47	61		
	3367	12	51	50	51	49	46	43	37	54	55	55	56	57	54	52	50	61		
	[m³/h]	[m/s]	<b>IRRADIATED EXTERNAL INSULATION VERSION *</b>																	
	400	2	27	25	27	26	23	19	12	30	32	30	33	33	32	27	23	38		
	1550	6	40	39	39	35	31	28	20	40	45	44	46	43	40	37	30	48		
	2850	10	46	45	45	39	35	32	23	45	51	51	51	47	44	41	34	53		
	3367	12	48	48	47	40	36	33	24	47	53	53	52	48	44	41	36	54		

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Dim. nom Ø		Noise RV5 / RV5I																		
		Airflow	Speed	NOISE 200 Pa								NOISE 500 Pa								
				Frequency [Hz] and noise [dB]								Frequency [Hz] and noise [dB]								
				125	250	500	1000	2000	4000	8000	Lw	125	250	500	1000	2000	4000	8000	Lw	
		[m³/h]	[m/s]	<b>GENERATED *</b>																
		500	2	45	44	42	45	42	39	33	49	53	46	51	52	53	44	44	57	
		2000	6	62	56	58	57	48	48	42	60	64	61	62	61	58	55	50	66	
		3700	10	65	62	61	57	53	50	43	63	74	67	70	66	66	57	56	72	
		4276	12	67	65	63	58	54	51	44	64	74	70	71	67	65	60	56	73	
		[m³/h]	[m/s]	<b>IRRADIATED NOT INSULATION VERSION *</b>																
		500	2	29	29	30	36	34	31	26	40	37	31	39	43	45	36	37	49	
		2000	6	46	41	46	48	40	40	35	51	48	46	50	52	50	47	43	56	
		3700	10	49	47	49	48	45	42	36	52	58	52	58	57	58	49	49	63	
		4276	12	51	50	51	49	46	43	37	54	58	55	59	58	57	52	49	63	
		[m³/h]	[m/s]	<b>IRRADIATED EXTERNAL INSULATION VERSION *</b>																
		500	2	26	27	26	27	24	21	13	31	34	29	35	34	35	26	24	40	
		2000	6	43	39	42	39	30	30	22	43	45	44	46	43	40	37	30	48	
		3700	10	46	45	45	39	35	32	23	45	55	50	54	48	48	39	36	55	
		4276	12	48	48	47	40	36	33	24	47	55	54	54	49	47	42	36	55	
		[m³/h]	[m/s]	<b>GENERATED *</b>																
		648	2	48	43	44	44	43	38	34	49	53	49	50	52	52	46	44	57	
		2500	6	63	55	59	58	52	50	44	62	66	62	62	62	9	56	53	66	
		4550	10	66	62	61	58	54	52	47	63	71	68	67	66	63	61	57	71	
		5429	12	68	65	64	60	55	54	49	66	74	70	70	68	64	62	59	73	
		[m³/h]	[m/s]	<b>IRRADIATED NOT INSULATION VERSION *</b>																
		648	2	32	28	32	35	35	30	27	40	37	34	38	43	44	38	37	48	
		2500	6	47	40	47	49	44	42	37	52	50	47	50	53	51	48	46	57	
		4550	10	50	47	49	49	46	44	40	53	55	53	55	57	55	53	50	62	
		5429	12	52	50	52	51	47	46	42	55	58	55	58	59	56	54	52	63	
		[m³/h]	[m/s]	<b>IRRADIATED EXTERNAL INSULATION VERSION *</b>																
		648	2	29	26	28	26	25	20	14	31	34	32	34	34	34	28	24	39	
		2500	6	44	38	43	40	34	32	24	44	47	45	46	44	41	38	33	49	
		4550	10	47	45	45	40	36	34	27	46	52	51	51	48	45	43	37	53	
		5429	12	49	48	47	42	37	36	29	48	55	53	53	50	46	44	39	55	

\*Indicative values obtained by extrapolation, not derived from experimental tests



### Optional circular silencer



#### Construction:

- Construction in Z200 galvanized steel;
- Casing thickness 0,8 mm;
- Length 900 mm;
- Internal sound-absorbing material in glass wool, 30 kg/m<sup>3</sup> density, 50 mm thickness, with black glass veil;
- Internal expanded metal mesh protecting the glass veil and the sound-absorbing material;
- Bayonet connection, male on both sides;

#### Notes:

- Silencer with male connection matching the regulator, designed for coupling via sleeve;
- Sleeve not included and not supplied;
- For attenuation details, refer to the technical datasheet of silencer model SCZB.

### Dimensional drawing of optional circular silencer (dimensions in mm, always referred to the nominal size)

∅
100
125
160
200
250
315
355
400

