

RV5 - RV5I

Circular variable airflow regulator in galvanized steel

CLASSE TENUTA
AIR LEAKAGE CLASSIFICATION

EN 1751:2014

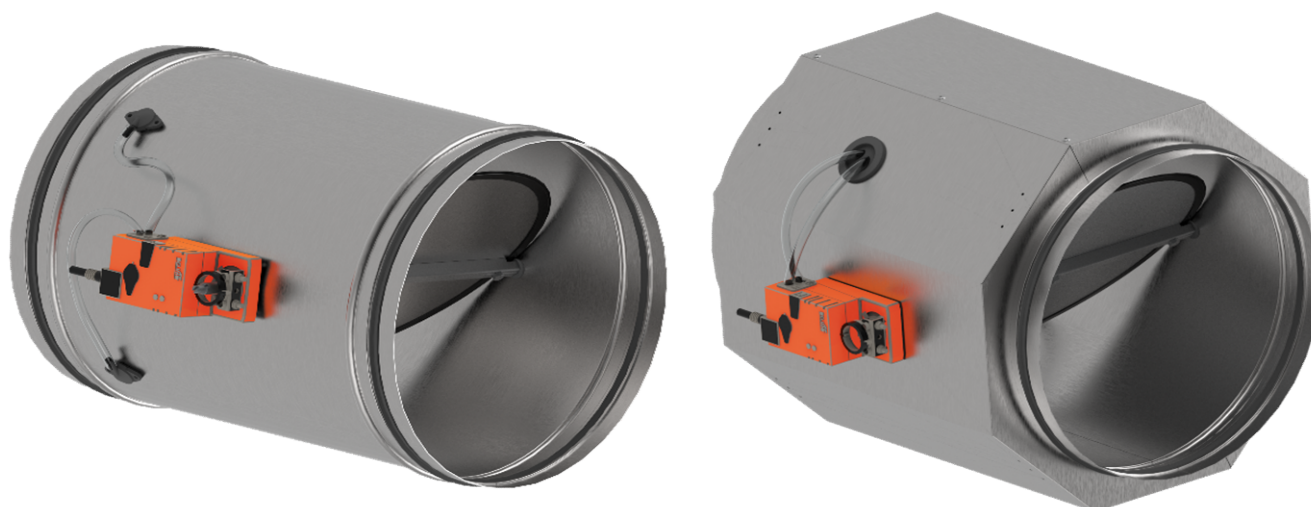
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EN 1751:2024

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VAV

Description and application:

Variable air volume regulator with circular section, equipped with an extended shaft suitable for motorization, equipped with an internal airleakage damper and dynamic pressure probe.

Designed for the control, regulation and balancing of airflow in HVAC systems, optimizing indoor comfort and energy efficiency, it is ideal for installation in air distribution networks, on circular ducts, whether main, secondary or terminal sections in ventilation and air conditioning systems, for both civil and industrial applications.

Construction:

- Execution made of Z200 galvanized steel;
- Frame thickness 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 connected to the actuator with PVC tubes Ø_{int}=5 / Ø_{ext}=8;
- Blade thickness 0.8 mm (from Ø100 to Ø160), 1 mm (from Ø200 to Ø250) and 1,5 mm (from Ø315 to Ø400);
- Internal silicone sealing gasket on the blade;
- Bronze bushings Ø8 (from Ø100 to Ø250) and nylon Ø12 (from Ø315 to Ø400);
- Stub shafts in galvanized steel;
- Control shaft motorized;
- Damper adjustment and airflow control via communicating actuator.

Available options:

- External insulation with polyester fiber, 15 kg/m³ density, thickness 40 mm, complete with a containment casing in galvanized steel, thickness 0,8 mm (RV5I version).

Operating limits:

- Available dimensions: Ø100 / Ø125 / Ø160 / Ø200 / Ø250 / Ø315 / Ø355 / Ø400;
- Temperature range: da 0 °C a +50 °C;
- Dimensional drawing and weights: page 3;
- V max: 12 m/s;
- AirFlow rate range and pressure losses: page 4;
- Acoustic data: from page 5 to page 7;
- Pressure: from 20 to 1000 Pa.

Certifications:

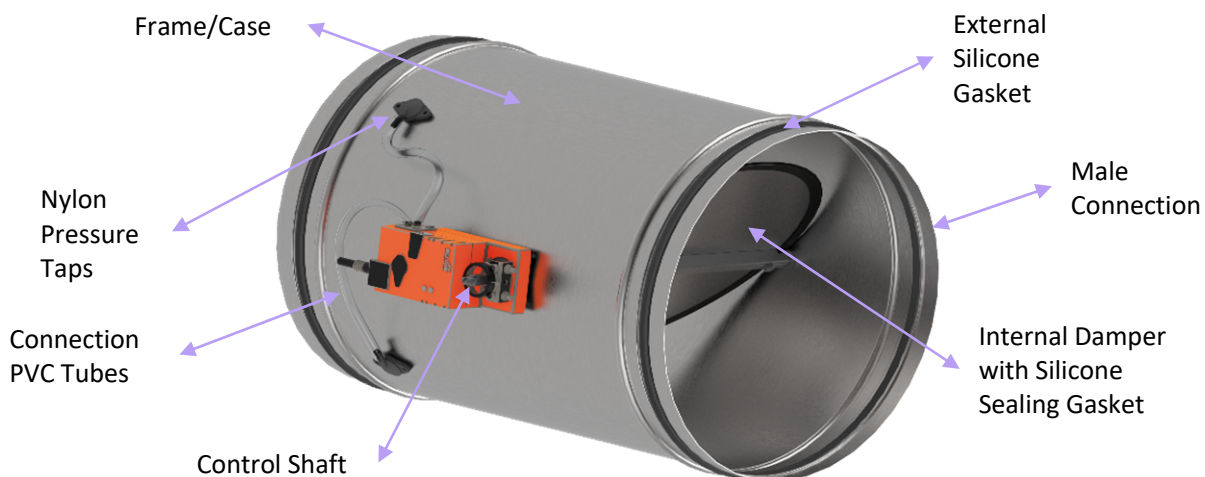
- Self-generated and radiated noise tests carried out in accordance with UNI EN 3741;
- Air leakage tests carried out in accordance with EN 1751 at CETIAT Institute (test report no. 2415214-3);
- External insulation material with fire reaction class Bs2,d0 according to UNI EN 13501-1 and smoke emission class 1 according to UNI 9177.



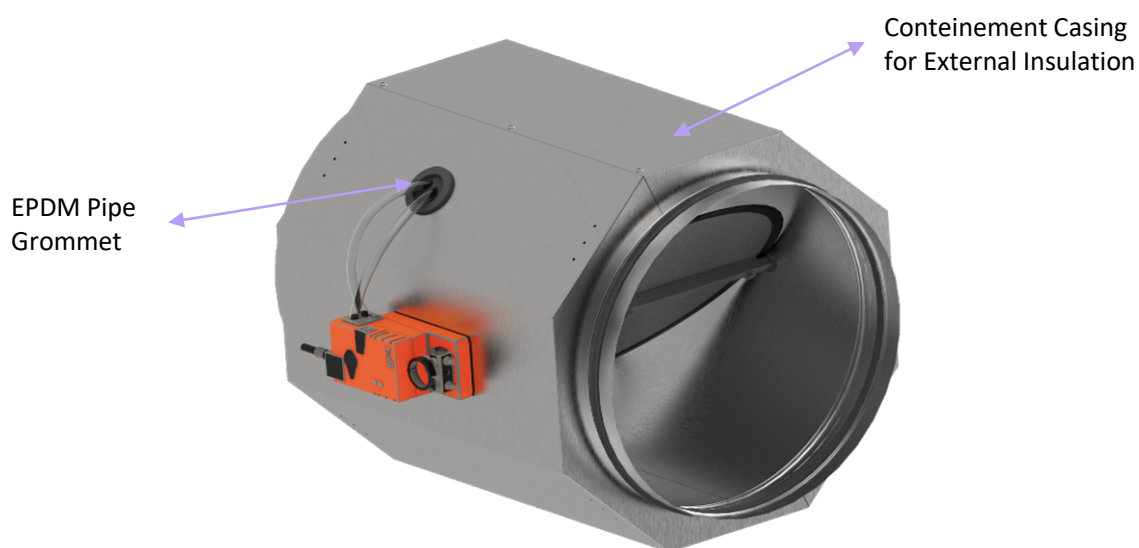
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Additional Construction Details RV5



Additional Construction Details RV5I



Accessories and Available Communication Protocols

Actuators

Modulating electric actuators with VAV regulators and dynamic Δp sensor - Belimo;



Modulating electric actuators with VAV regulators and dynamic Δp sensor - Siemens;



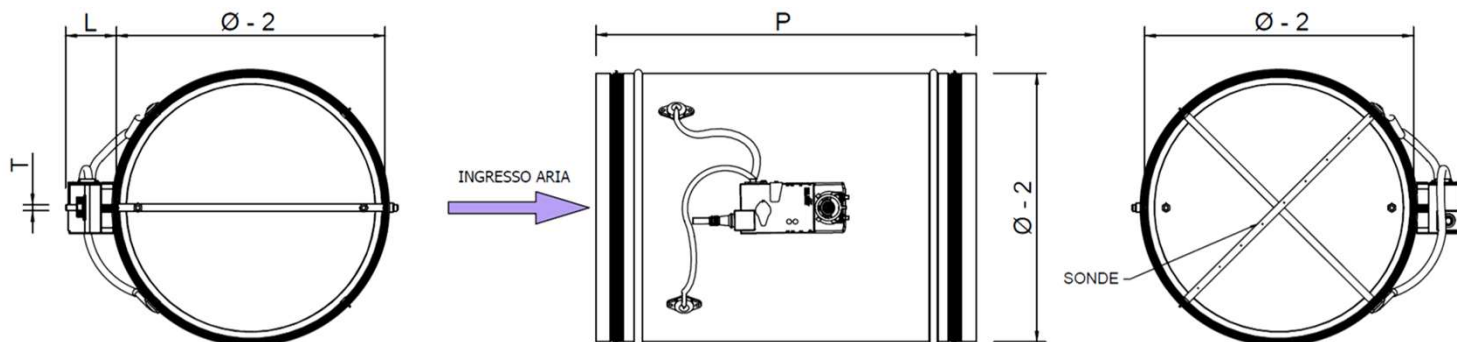


RV5 - RV5I

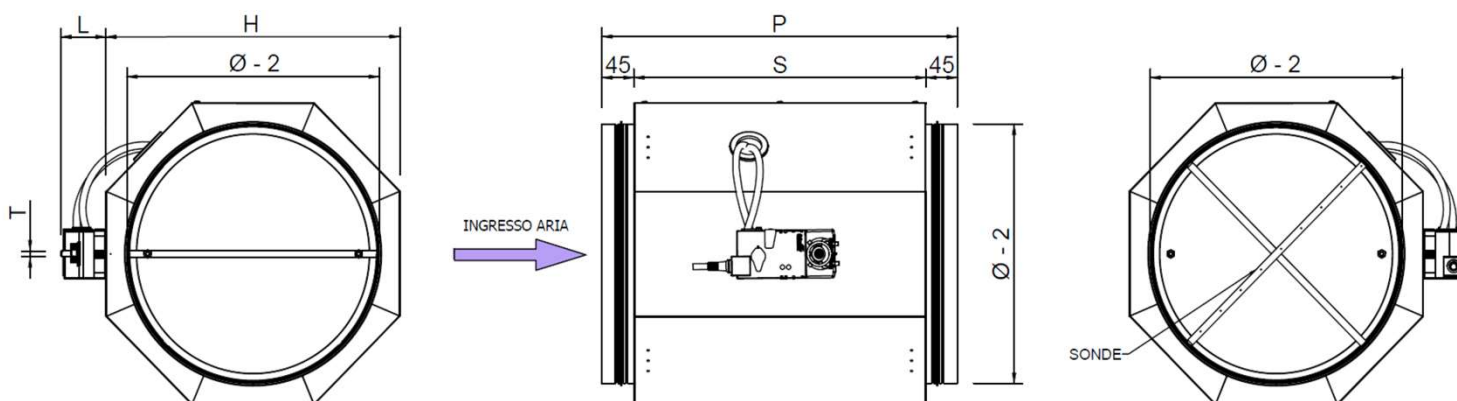
Circular variable airflow regulator in galvanized steel

Dimensional Drawing RV5 - RV5I and Standard Size Table (size in mm always referred to the nominal)

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	310
200	400	Ø8	60	260	310
250	400	Ø8	60	310	310
315	500	Ø12	100	375	410
355	500	Ø12	100	415	410
400	630	Ø12	100	460	540

Weights 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 regulator without actuator.



RV5 - RV5I

Circular variable airflow regulator in galvanized steel

Airflow Range Table min-max	
$\varnothing$	[m ³ /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

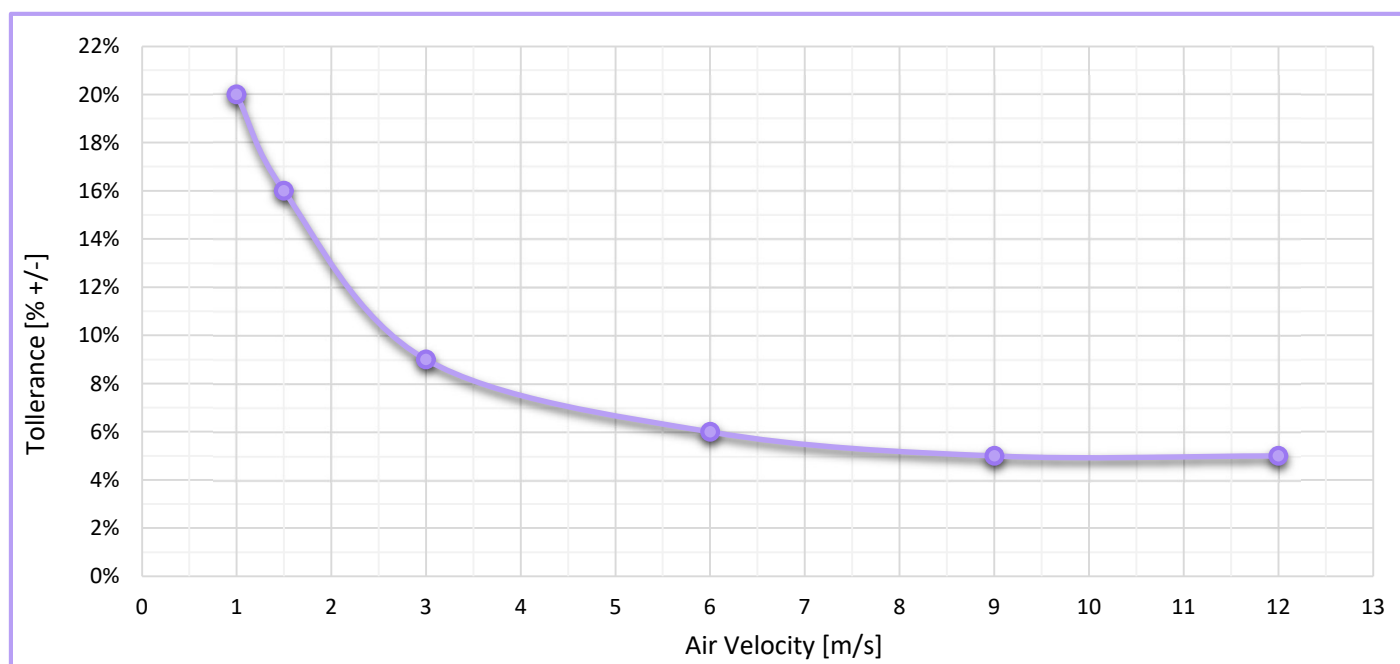
- For constant airflow (CAV): the settable flow rate cannot be lower than 20% of the maximum value indicated in the table;
- For variable airflow (VAV): the maximum settable airflow rate cannot be lower than 20% of the maximum value indicated in the table;
- Minimum airflow rate: can be set to 0 m³/h, 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);

Air Velocity [m/s]	Pressure Table	
	Pressure Loss [Pa] 100% open damper	Minimum Pressure Δp_{min} [Pa]
2	<5	20
6	<5	30
10	17	61
12	24	79

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 Chart (in installation conditions)





RV5 - RV51

Circular variable airflow regulator in galvanized steel

Nominal dim. Ø	Noise Table RV5 / RV51																	
	AirFlow rate	V	NOISE AT 200 Pa								NOISE AT 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	
100	[m³/h]	[m/s]	GENERATED *															
	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]	IRRADIATED NOT INSULATION VERSION *															
	57	2	<20	23	26	29	27	<20	<20	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]	IRRADIATED EXTERNAL INSULATION VERSION *															
	57	2	<20	21	22	20	<20	<20	<20	24	20	26	29	29	26	20	<20	33
	170	6	29	34	34	29	25	<20	<20	35	32	39	39	38	34	29	23	42
	283	10	35	40	38	31	27	22	<20	38	38	44	46	42	38	33	25	47
	339	12	38	41	41	33	30	23	<20	41	42	47	48	44	39	35	26	49
125	[m³/h]	[m/s]	GENERATED *															
	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]	IRRADIATED NOT INSULATION VERSION *															
	70	2	22	24	27	30	28	21	<20	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]	IRRADIATED EXTERNAL INSULATION VERSION *															
	70	2	<20	22	23	21	<20	<20	<20	25	23	27	31	30	27	22	<20	34
	250	6	31	35	35	30	26	20	<20	36	35	40	42	39	35	31	24	44
	450	10	37	41	40	33	29	24	<20	40	41	46	48	43	39	35	27	48
	530	12	40	43	42	35	31	25	<20	42	44	49	50	45	40	37	28	50
160	[m³/h]	[m/s]	GENERATED *															
	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]	IRRADIATED NOT INSULATION VERSION *															
	110	2	24	25	28	31	29	23	<20	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]	IRRADIATED EXTERNAL INSULATION VERSION *															
	110	2	21	23	24	22	<20	<20	<20	27	26	28	32	31	29	24	<20	35
	400	6	33	36	36	31	27	22	<20	37	38	41	43	40	36	33	25	45
	730	10	39	42	42	35	31	26	<20	42	44	48	49	44	40	37	29	50
	869	12	42	45	44	37	32	27	<20	44	46	51	51	46	41	39	30	52

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



RV5 - RV51

Circular variable airflow regulator in galvanized steel

Nominal dim. Ø	Noise Table RV5 / RV51																	
	AirFlow rate	V	NOISE AT 200 Pa								NOISE AT 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	
200	[m³/h]	[m/s]	GENERATED *															
	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]	IRRADIATED NOT INSULATION VERSION *															
	160	2	<20	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]	IRRADIATED EXTERNAL INSULATION VERSION *															
	160	2	<20	21	22	23	20	<20	<20	27	22	27	29	31	30	26	<20	36
	625	6	35	35	34	33	29	24	<20	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	<20	44	52	51	49	47	45	41	33	54
250	[m³/h]	[m/s]	GENERATED *															
	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]	IRRADIATED NOT INSULATION VERSION *															
	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]	IRRADIATED EXTERNAL INSULATION VERSION *															
	250	2	27	27	26	26	20	<20	<20	29	32	30	33	33	32	27	23	38
	970	6	39	38	38	33	29	24	<20	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]	GENERATED *															
	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]	IRRADIATED NOT INSULATION VERSION *															
	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]	IRRADIATED EXTERNAL INSULATION VERSION *															
	400	2	27	25	27	26	23	<20	<20	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

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



RV5 - RV5I

Circular variable airflow regulator in galvanized steel

Nominal dim. Ø	Noise Table RV5 / RV5I																	
	AirFlow rate	V	NOISE AT 200 Pa								NOISE AT 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	
355	[m³/h]	[m/s]	GENERATED *															
	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]	IRRADIATED NOT INSULATION VERSION *															
	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]	IRRADIATED EXTERNAL INSULATION VERSION *															
	500	2	26	27	26	27	24	21	<20	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
400	[m³/h]	[m/s]	GENERATED *															
	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]	IRRADIATED NOT INSULATION VERSION *															
	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]	IRRADIATED EXTERNAL INSULATION VERSION *															
	648	2	29	26	28	26	25	20	<20	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

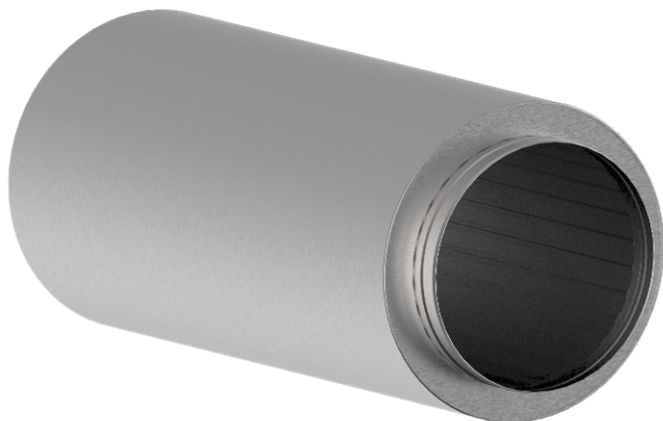
*Indicative values obtained by extrapolation, not derived from experimental tests.



RV5 - RV5I

Circular variable airflow regulator in galvanized steel

Circular Silencer Accessory model SCB



Construction:

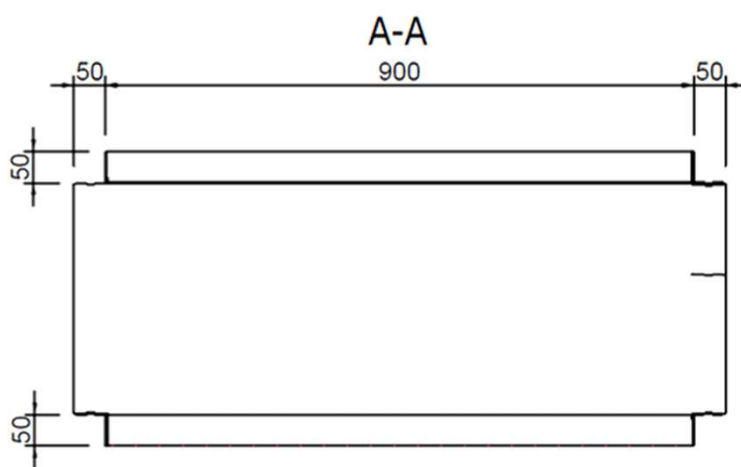
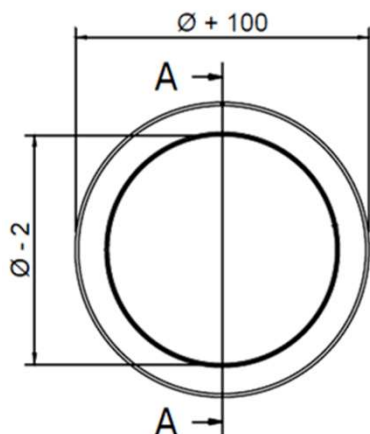
- Execution made of Z200 galvanized steel;
- Casing thickness 0,8 mm;
- Length 900 mm;
- Sound-absorbing material in glass mineral wool, density 30 kg/m³, thickness 50mm, with black glass fiber veil;
- Internal micro-expanded mesh to protect the glass veil and sound-absorbing material;
- Male connection on both side, with external silicone gasket.

Notes:

- Silencer with male connection, same of regulator, designed for installation using a coupling sleeve.
- Coupling sleeve not included and not supplied by us.
- For attenuation performance details, please refer to the technical datasheet of the SCZB silencer model.

Dimensional Drawing Circular Silencer Accessory (size in mm always referred to the nominal diameter)

Ø
100
125
160
200
250
315
355
400



AZIENDA CON SISTEMA
DI GESTIONE QUALITÀ
CERTIFICATO DA DNV GL
ISO 9001

AZIENDA CON
SISTEMA DI GESTIONE
AMBIENTALE CERTIFICATO
DA DNV
ISO 14001



CLA & UTEK reserves the right to make any necessary changes at any time to improve the products, without prior notice.