



Description

Constant volume flow regulator with automatic mechanical operation without external driving energy. The device is intended for use in all ventilation systems where we want to ensure a constant air flow. Operating temperature: -20 °C ... + 70 °C.

Versions

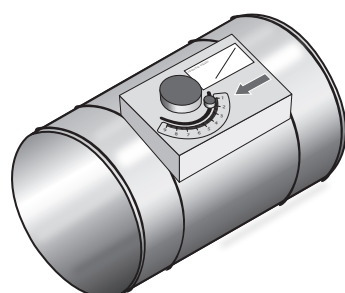
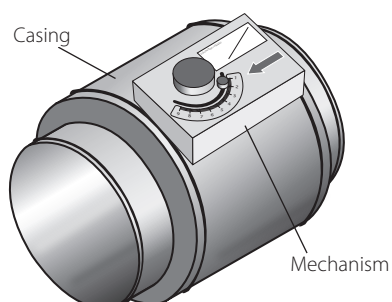
RPM-R: standard model (without insulation).
RPM-R-I: model with insulation.

Material

Galvanized steel sheet.

Construction

The damper blades shaft is supported by two smooth-running maintenance-free brass bearings. Pneumatic shock absorber smooths out the damping shock impulse, preventing the vibration and oscillation of the damper blade to ensure sensitive responding behaviour and a precise control.



CASING – made of galvanised sheet steel

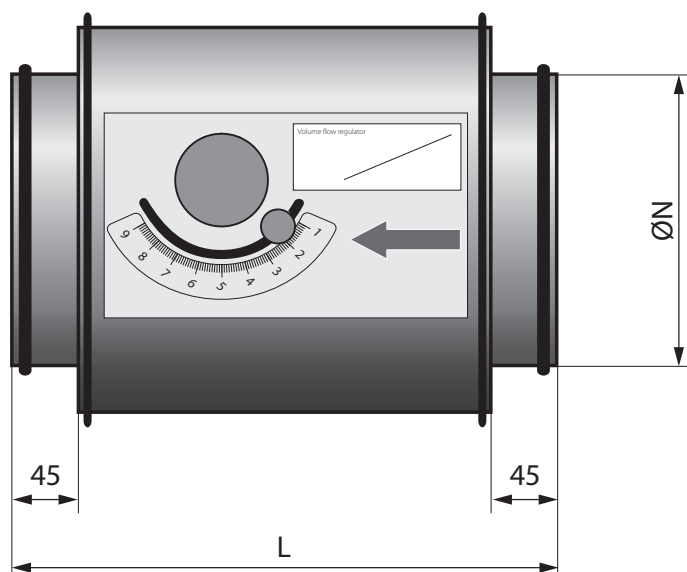
MECHANISM – control lever mechanism adjusts the spring tension to control the air flow

DAMPER BLADE – provides resistance to the air flow

SHOCK ABSORBER – serves to absorb the damper blade vibration caused by the air flow

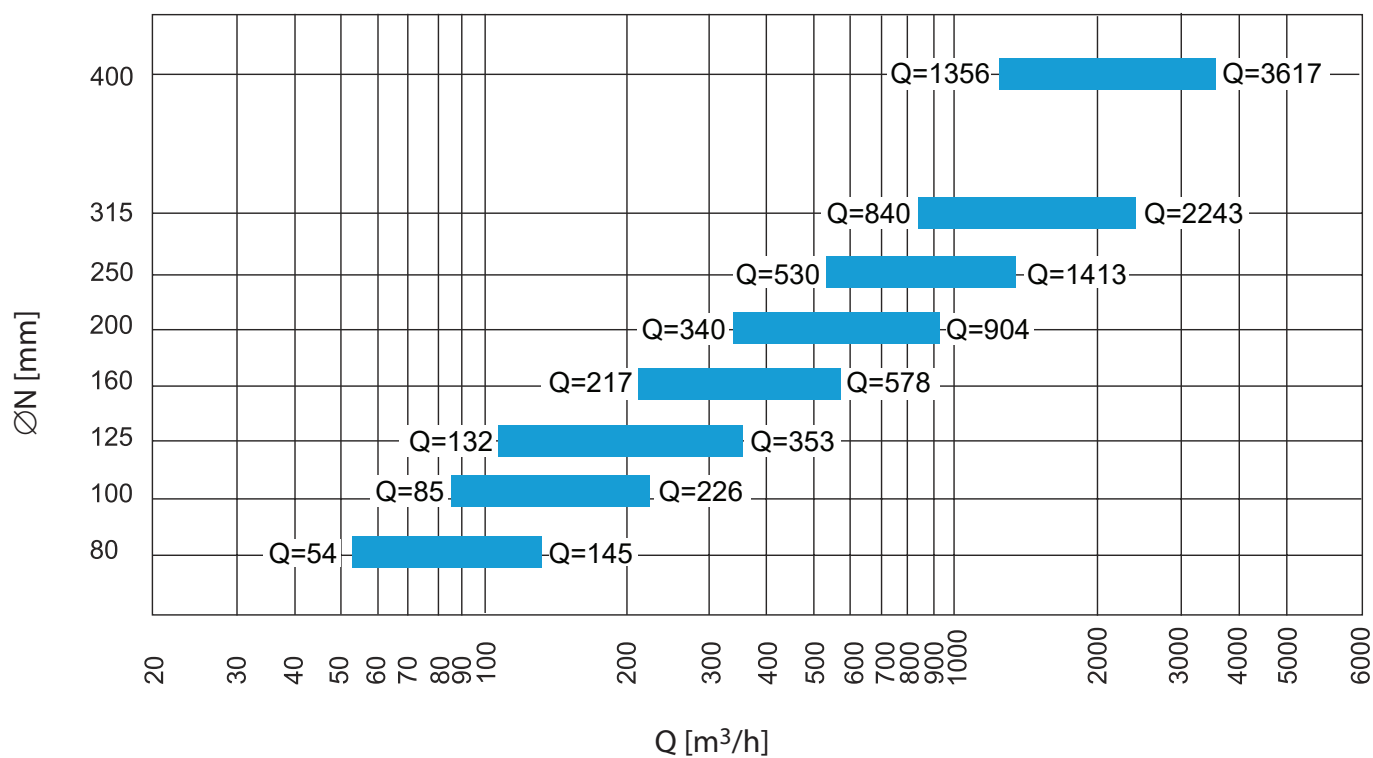
INSULATION CLADDING – 30 mm mineral wool layer with galvanised sheet steel outer

Dimensions



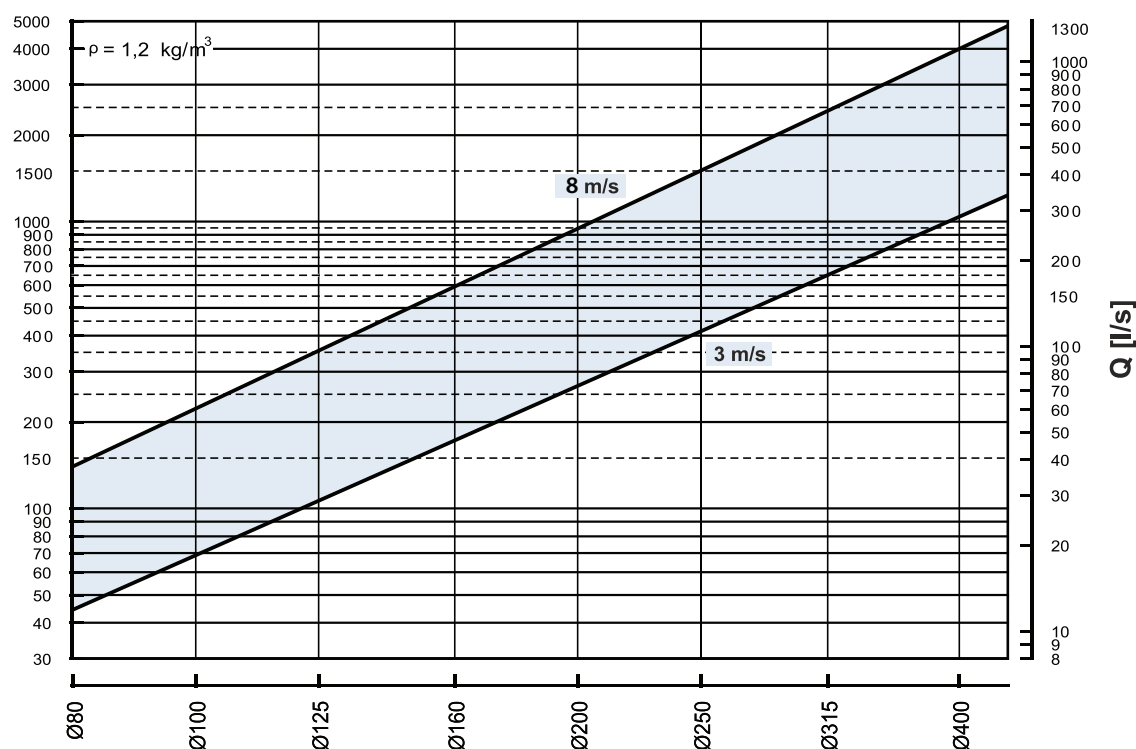
Diameter (ØN) [mm]	Length (L) [mm]
80	300
100	300
125	300
160	300
200	300
250	400
315	400
355	400
400	400

Quick selection diagram

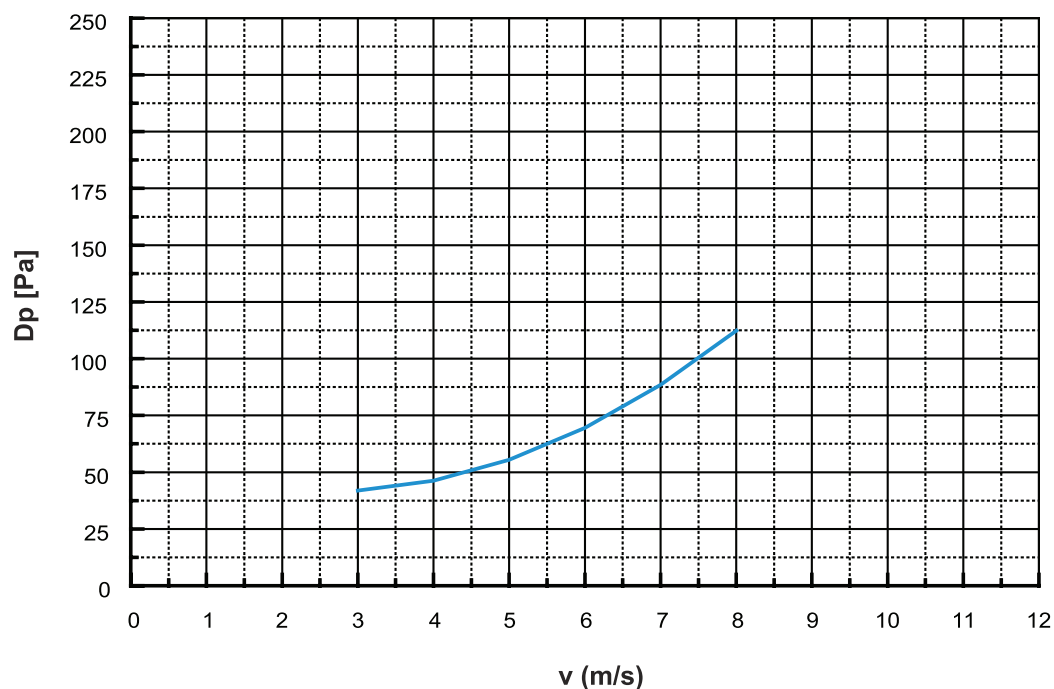


Flow rate range in relation to duct cross section

* Flow rate calibration possible at air velocities from 3 to 8 m/s.



Minimum static pressure difference at the regulator.



Legend:

Q [m^3/h or l/s]	flow rate
v [m/s]	air velocity
A [m^2]	effective outlet area
D_p [Pa]	static pressure difference

Generated noise RPM-R

Modell		$D_p = 125 \text{ Pa}$										$D_p = 250 \text{ Pa}$										$D_p = 500 \text{ Pa}$									
		Sound power L_w [dB/(A)]										Sound power L_w [dB/(A)]										Sound power L_w [dB/(A)]									
Ø [mm]	Q [m³/h]	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOT Hz	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOT Hz	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOT Hz			
80	54	64	53	45	41	39	39	35	30	38	60	54	48	45	42	42	40	37	41	60	57	51	49	46	47	47	45	46			
	90	61	57	51	44	40	42	39	36	41	60	59	54	50	45	45	44	42	46	63	62	56	54	49	48	49	48	49			
	145	59	61	59	50	45	46	44	41	47	61	64	62	56	50	48	49	47	51	63	66	62	59	53	51	52	51	54			
100	85	67	51	45	41	35	30	23	19	35	65	53	49	46	43	40	35	29	41	73	67	65	62	57	53	49	49	56			
	141	63	56	50	46	41	35	29	23	40	66	58	55	51	46	42	38	34	45	70	62	59	56	51	47	47	46	50			
	226	63	61	55	51	46	42	35	29	45	69	65	62	57	53	48	43	39	51	73	67	65	62	57	53	49	49	56			
125	132	58	53	46	43	39	32	25	21	37	62	57	52	49	46	43	38	32	44	62	61	57	54	49	50	50	46	50			
	221	60	60	53	49	43	37	32	28	43	62	63	59	55	50	45	41	39	49	65	66	63	60	54	52	50	49	54			
	353	63	66	58	54	50	44	40	37	49	65	70	64	60	55	50	46	44	54	68	72	69	65	60	56	53	52	59			
160	217	60	56	48	46	42	42	32	28	41	63	59	53	51	48	49	41	34	47	63	61	56	54	51	53	52	46	51			
	362	63	61	54	50	45	45	37	30	45	69	66	60	56	51	53	46	38	51	70	68	64	61	57	60	54	49	57			
	579	66	64	57	53	50	49	43	35	48	72	70	64	61	55	57	50	43	55	74	72	70	66	61	64	57	52	61			
200	339	60	52	43	43	42	41	39	32	40	64	55	48	49	49	50	48	41	48	63	57	52	52	55	56	55	50	54			
	565	63	56	49	46	45	45	43	39	43	65	61	54	51	51	51	51	46	49	69	64	60	56	57	57	57	52	55			
	904	68	62	53	51	50	51	48	43	46	70	67	59	56	54	54	54	48	51	74	71	64	60	59	59	59	54	56			
250	530	49	46	45	45	43	43	39	32	41	55	55	52	51	51	52	48	43	49	66	58	55	55	57	59	56	53	56			
	883	61	54	49	47	45	47	43	36	42	63	61	55	52	52	54	51	46	49	68	65	62	57	57	60	57	54	55			
	1413	68	61	53	52	49	52	48	42	45	71	68	58	56	53	56	53	48	49	73	72	64	61	59	62	59	56	55			
315	841	54	50	45	44	44	44	39	31	39	57	54	50	49	50	52	47	41	46	63	58	54	54	55	57	57	52	53			
	1402	58	56	51	48	47	49	44	37	42	64	60	55	52	52	54	52	47	47	68	65	61	57	57	59	58	55	52			
	2243	66	60	55	53	50	52	49	43	43	72	65	60	57	55	58	56	51	49	75	70	65	62	60	62	61	58	54			
400	1356	54	54	48	50	54	54	46	39	46	59	58	53	54	59	60	54	47	52	61	61	60	60	64	67	62	56	59			
	2261	62	58	54	54	57	58	51	45	48	67	63	59	57	61	63	58	51	53	70	66	63	62	66	69	65	59	59			
	3617	68	63	58	57	59	61	56	50	49	73	67	63	61	64	66	62	55	54	76	71	66	65	68	71	67	62	59			

Radiated noise RPM-R

Modell		$D_p = 125 \text{ Pa}$										$D_p = 250 \text{ Pa}$										$D_p = 500 \text{ Pa}$									
		Sound power L_w [dB/(A)]										Sound power L_w [dB/(A)]										Sound power L_w [dB/(A)]									
$\varnothing$ [mm]	Q [m³/h]	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOT Hz	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOT Hz	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOT Hz			
80	54	27	19	<15	19	21	27	23	20	23	23	20	15	23	24	30	28	27	27	23	23	18	27	28	35	35	35	33			
	90	24	23	18	22	22	30	27	26	26	23	25	21	28	27	33	32	32	30	26	28	23	32	31	36	37	38	35			
	145	22	27	26	28	27	34	32	31	31	24	30	29	34	32	36	37	37	35	26	32	29	37	35	39	40	41	38			
100	85	32	19	<15	20	18	18	<15	<15	16	30	21	18	25	26	28	23	19	24	33	26	24	31	31	34	35	34	33			
	141	28	24	19	25	24	23	17	<15	21	31	26	24	30	29	30	26	24	27	35	30	28	35	34	35	35	36	34			
	226	28	29	24	30	29	30	23	19	27	34	33	31	36	36	36	31	29	33	38	35	34	41	40	41	37	39	39			
125	132	32	23	16	19	17	<15	<15	<15	<15	36	27	22	25	24	23	22	20	22	36	31	27	30	27	30	34	34	31			
	221	34	30	23	25	21	17	16	16	19	36	33	29	31	28	25	25	27	26	39	36	33	36	32	32	34	37	33			
	353	37	36	28	30	28	24	24	25	26	39	40	34	36	33	30	30	32	31	42	42	39	41	38	36	37	40	37			
160	217	35	33	28	28	32	33	23	24	29	38	36	33	33	38	40	32	30	36	38	38	36	36	41	44	43	42	41			
	362	38	38	34	32	35	36	28	26	32	44	43	40	38	41	44	37	34	40	45	45	44	43	47	51	45	45	47			
	579	41	41	37	35	40	40	34	31	37	47	47	44	43	45	48	41	39	44	49	49	50	48	51	55	48	48	51			
200	339	39	35	28	28	28	30	30	23	28	43	38	33	34	35	39	39	32	36	42	40	37	37	41	45	46	41	43			
	565	42	39	34	31	31	34	34	30	32	44	44	39	36	37	40	42	37	39	48	47	45	41	43	46	48	43	45			
	904	47	45	38	36	36	40	39	34	37	49	50	44	41	40	43	45	39	42	53	54	49	45	45	48	50	45	47			
250	530	30	31	31	31	30	32	30	23	29	36	40	38	37	38	41	39	34	38	47	43	41	41	44	48	47	44	45			
	883	42	39	35	33	32	36	34	27	33	44	46	41	38	39	43	42	37	40	49	50	48	43	44	49	48	45	46			
	1413	49	46	39	38	36	41	39	33	38	52	53	44	42	40	45	44	39	42	54	57	50	47	46	51	50	47	48			
315	841	37	36	32	30	31	33	30	22	30	40	40	37	35	37	41	38	32	37	46	44	41	40	42	46	48	43	44			
	1402	41	42	38	34	34	38	35	28	35	47	46	42	38	39	43	43	38	41	51	51	48	43	44	48	49	46	46			
	2243	49	46	42	39	37	41	40	34	38	55	51	47	43	42	47	47	42	45	58	56	52	48	47	51	52	49	49			
400	1356	37	38	39	43	48	50	40	24	45	42	42	44	47	53	56	48	32	51	44	45	51	53	58	63	56	41	58			
	2261	45	42	45	47	51	54	45	30	49	50	47	50	50	55	59	52	36	54	53	50	54	55	60	65	59	44	60			
	3617	51	47	49	50	53	57	50	35	52	56	51	54	54	58	62	56	40	57	59	55	57	58	62	67	61	47	62			

Generated noise RPM-R-I

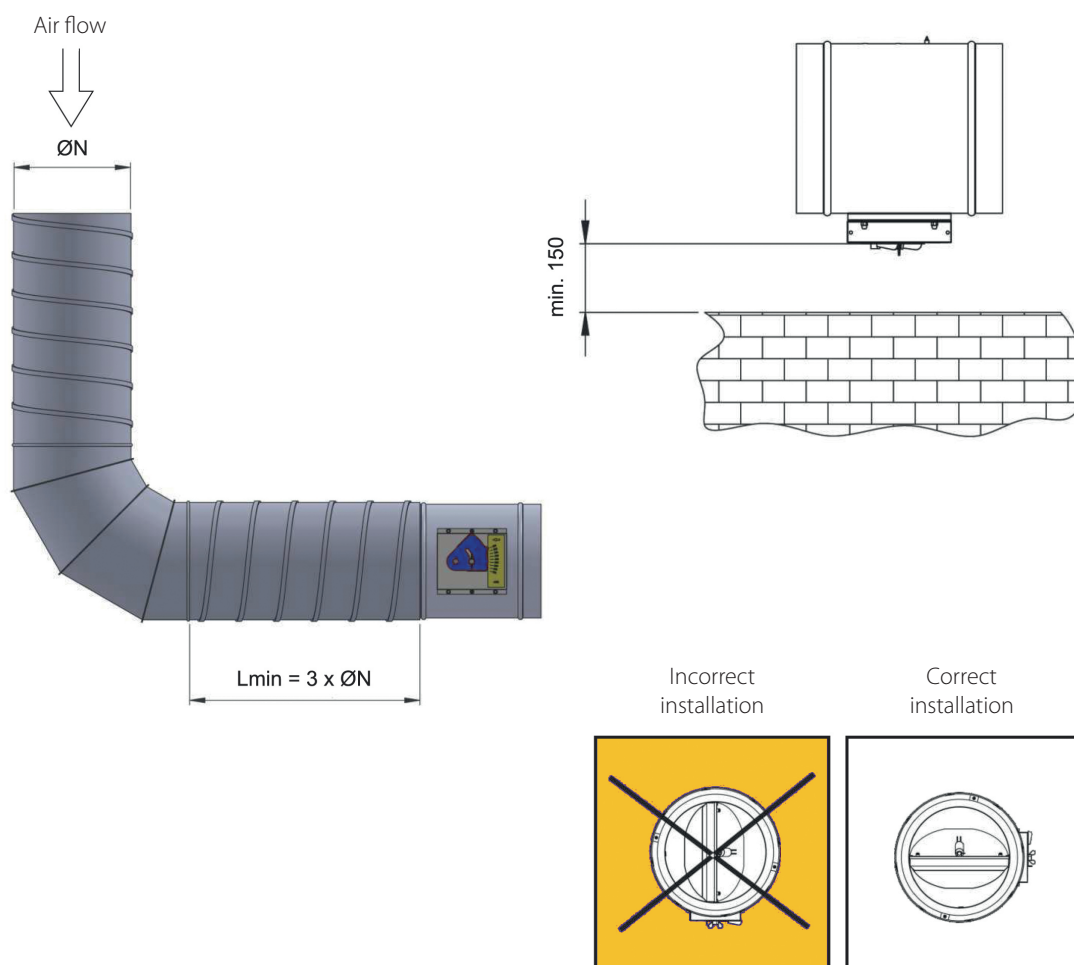
Modell		$D_p = 125 \text{ Pa}$										$D_p = 250 \text{ Pa}$										$D_p = 500 \text{ Pa}$									
		Sound power L_w [dB/(A)]										Sound power L_w [dB/(A)]										Sound power L_w [dB/(A)]									
Ø [mm]	Q [m³/h]	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOT Hz	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOT Hz	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOT Hz			
80	54	64	53	45	41	39	39	35	30	38	60	54	48	45	42	42	40	37	41	60	57	51	49	46	47	47	45	46			
	90	61	57	51	44	40	42	39	36	41	60	59	54	50	45	45	44	42	46	63	62	56	54	49	48	49	48	49			
	145	59	61	59	50	45	46	44	41	47	61	64	62	56	50	48	49	47	51	63	66	62	59	53	51	52	51	54			
100	85	67	51	45	41	35	30	23	19	35	65	53	49	46	43	40	35	29	41	73	67	65	62	57	53	49	49	56			
	141	63	56	50	46	41	35	29	23	40	66	58	55	51	46	42	38	34	45	70	62	59	56	51	47	47	46	50			
	226	63	61	55	51	46	42	35	29	45	69	65	62	57	53	48	43	39	51	73	67	65	62	57	53	49	49	56			
125	132	58	53	46	43	39	32	25	21	37	62	57	52	49	46	43	38	32	44	62	61	57	54	49	50	50	46	50			
	221	60	60	53	49	43	37	32	28	43	62	63	59	55	50	45	41	39	49	65	66	63	60	54	52	50	49	54			
	353	63	66	58	54	50	44	40	37	49	65	70	64	60	55	50	46	44	54	68	72	69	65	60	56	53	52	59			
160	217	60	56	48	46	42	42	32	28	41	63	59	53	51	48	49	41	34	47	63	61	56	54	51	53	52	46	51			
	362	63	61	54	50	45	45	37	30	45	69	66	60	56	51	53	46	38	51	70	68	64	61	57	60	54	49	57			
	579	66	64	57	53	50	49	43	35	48	72	70	64	61	55	57	50	43	55	74	72	70	66	61	64	57	52	61			
200	339	60	52	43	43	42	41	39	32	40	64	55	48	49	49	50	48	41	48	63	57	52	52	55	56	55	50	54			
	565	63	56	49	46	45	45	43	39	43	65	61	54	51	51	51	51	46	49	69	64	60	56	57	57	57	52	55			
	904	68	62	53	51	50	51	48	43	46	70	67	59	56	54	54	54	48	51	74	71	64	60	59	59	59	54	56			
250	530	49	46	45	45	43	43	39	32	41	55	55	52	51	51	52	48	43	49	66	58	55	55	57	59	56	53	56			
	883	61	54	49	47	45	47	43	36	42	63	61	55	52	52	54	51	46	49	68	65	62	57	57	60	57	54	55			
	1413	68	61	53	52	49	52	48	42	45	71	68	58	56	53	56	53	48	49	73	72	64	61	59	62	59	56	55			
315	841	54	50	45	44	44	44	39	31	39	57	54	50	49	50	52	47	41	46	63	58	54	54	55	57	57	52	53			
	1402	58	56	51	48	47	49	44	37	42	64	60	55	52	52	54	52	47	47	68	65	61	57	57	59	58	55	52			
	2243	66	60	55	53	50	52	49	43	43	72	65	60	57	55	58	56	51	49	75	70	65	62	60	62	61	58	54			
400	1356	54	54	48	50	54	54	46	39	46	59	58	53	54	59	60	54	47	52	61	61	60	60	64	67	62	56	59			
	2261	62	58	54	54	57	58	51	45	48	67	63	59	57	61	63	58	51	53	70	66	63	62	66	69	65	59	59			
	3617	68	63	58	57	59	61	56	50	49	73	67	63	61	64	66	62	55	54	76	71	66	65	68	71	67	62	59			

Radiated noise RPM-R

Modell		$D_p = 125 \text{ Pa}$									$D_p = 250 \text{ Pa}$									$D_p = 500 \text{ Pa}$								
		Schallleistungspegel L_w [dB/(A)]									Schallleistungspegel L_w [dB/(A)]									Schallleistungspegel L_w [dB/(A)]								
$\varnothing$ [mm]	Q [m³/h]	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOT Hz	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOT Hz	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	TOT Hz
80	54	20	<15	<15	<15	<15	<15	<15	<15	<15	16	15	<15	<15	<15	<15	<15	<15	<15	16	18	<15	<15	<15	<15	<15	<15	<15
	90	17	18	<15	<15	<15	<15	<15	<15	<15	16	20	<15	<15	<15	<15	<15	<15	<15	19	23	<15	<15	<15	<15	<15	<15	<15
	145	15	22	<15	<15	<15	<15	<15	<15	<15	17	25	15	<15	<15	<15	<15	<15	<15	19	27	15	<15	<15	<15	<15	<15	<15
100	85	25	<15	<15	<15	<15	<15	<15	<15	<15	23	16	<15	<15	<15	<15	<15	<15	<15	26	21	<15	<15	<15	<15	<15	<15	<15
	141	21	19	<15	<15	<15	<15	<15	<15	<15	24	21	<15	<15	<15	<15	<15	<15	<15	28	25	<15	<15	<15	<15	<15	<15	<15
	226	21	24	<15	<15	<15	<15	<15	<15	<15	27	28	17	<15	<15	<15	<15	<15	<15	31	30	20	16	<15	<15	<15	<15	<15
125	132	25	18	<15	<15	<15	<15	<15	<15	<15	29	22	<15	<15	<15	<15	<15	<15	<15	29	26	<15	<15	<15	<15	<15	<15	<15
	221	27	25	<15	<15	<15	<15	<15	<15	<15	29	28	15	<15	<15	<15	<15	<15	<15	32	31	19	<15	<15	<15	<15	<15	<15
	353	30	31	<15	<15	<15	<15	<15	<15	<15	32	35	20	<15	<15	<15	<15	<15	<15	35	37	25	16	<15	<15	<15	<15	<15
160	217	28	28	<15	<15	<15	<15	<15	<15	<15	31	31	19	<15	<15	<15	<15	<15	<15	31	33	22	<15	<15	<15	<15	<15	<15
	362	31	33	20	<15	<15	<15	<15	<15	<15	37	38	26	<15	<15	<15	<15	<15	<15	38	40	30	18	16	<15	<15	<15	18
	579	34	36	23	<15	<15	<15	<15	<15	<15	40	42	30	18	<15	<15	<15	<15	<15	42	44	36	23	20	<15	<15	<15	23
200	339	32	30	<15	<15	<15	<15	<15	<15	<15	36	33	19	<15	<15	<15	<15	<15	<15	35	35	23	<15	<15	<15	<15	<15	<15
	565	35	34	20	<15	<15	<15	<15	<15	<15	37	39	25	<15	<15	<15	<15	<15	<15	41	42	31	16	<15	<15	<15	<15	19
	904	40	40	24	<15	<15	<15	<15	<15	15	42	45	30	16	<15	<15	<15	<15	20	46	49	35	20	<15	<15	<15	<15	25
250	530	23	26	17	<15	<15	<15	<15	<15	<15	29	35	24	<15	<15	<15	<15	<15	<15	40	38	27	16	<15	<15	<15	<15	16
	883	35	34	21	<15	<15	<15	<15	<15	<15	37	41	27	<15	<15	<15	<15	<15	17	42	45	34	18	<15	<15	<15	<15	22
	1413	42	41	25	<15	<15	<15	<15	<15	16	45	48	30	17	<15	<15	<15	<15	23	47	52	36	22	15	<15	<15	<15	27
315	841	30	31	18	<15	<15	<15	<15	<15	<15	33	35	23	<15	<15	<15	<15	<15	<15	39	39	27	15	<15	<15	<15	<15	16
	1402	34	37	24	<15	<15	<15	<15	<15	<15	40	41	28	<15	<15	<15	<15	<15	17	44	46	34	18	<15	<15	<15	<15	22
	2243	42	41	28	<15	<15	<15	<15	<15	17	48	46	33	18	<15	<15	<15	<15	22	51	51	38	23	16	<15	<15	<15	27
400	1356	31	37	22	<15	<15	<15	<15	<15	<15	36	41	27	17	18	<15	<15	<15	18	38	44	34	23	23	18	<15	15	23
	2261	39	41	28	17	16	<15	<15	<15	18	44	46	33	20	20	<15	<15	<15	22	47	49	37	25	25	20	<15	18	26
	3617	45	46	32	20	18	<15	<15	<15	22	50	50	37	24	23	17	<15	<15	26	53	54	40	28	27	22	15	21	30

Installation

Circular regulators are connected to a duct like a standard ventilation duct fitting. The regulator can be installed in horizontal, vertical or inclined mounted duct in a manner that the rotational axis of the damper blade is always in a horizontal position. Also it is necessary to pay attention to the correct mounting direction shown with the air flow direction arrow on the regulator. Required length of the straight duct section is $L > 3 d$ before and $L > 1,5 d$ after the the regulator. If this lengths are smaller, deviations of the set flow rate can occure and the stated accuracy of the flow rate may not be achived; therefore, such installations are not recommended. Regulators are maintenance free.



Order codes

RPM-R - I / 315 / Q

Air flow [m³/h]

Dimensions

Model with insulation.

Constant volume flow controller, circular