

ADJUSTABLE CONSTANT AIR VOLUME DAMPER

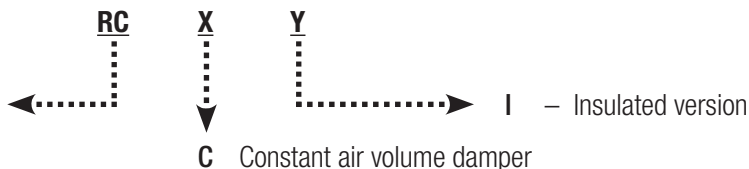
2.5.1

RCC / RCC-I

The RCC damper is an airflow self regulating system without any external power supply. It includes a full blade and an adjustable mechanical regulation device enabling to maintain a constant air flow whatever the pressure variations of the installation.

CODIFICATION

Range RC – Circular Damper



SETTING

The setting of the air flow is made by an adjustment screw located on the damper (tolerances according to the table on page 3).

CONSTRUCTION

Blades
aluminium

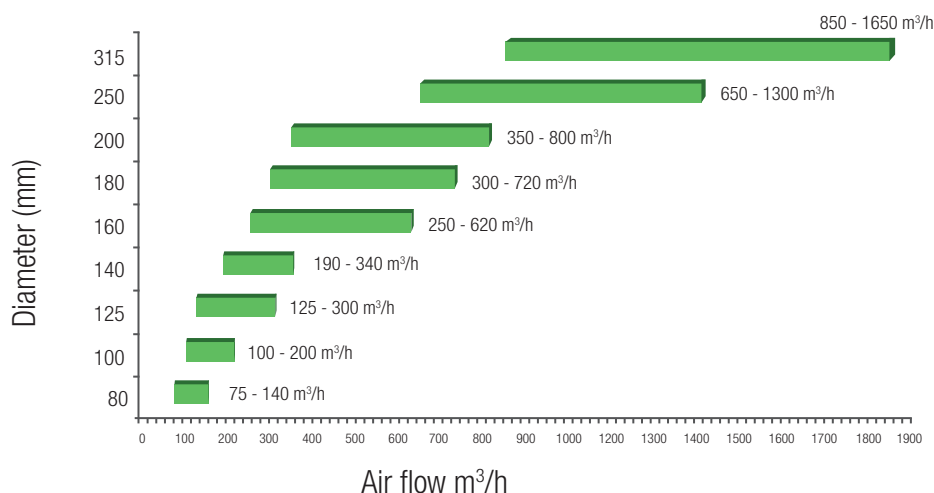


Body
galvanized steel
Ethylene-propylene airtight seals
Mineral wool thickness 50 mm (Isolated version I)
Zinc-plated steel shafts and screws

PERFORMANCES

	RCC
Recommended Air velocity	3 to 8 m/s
Acceptable pressure (L=1m)	50 Pa to 1 000 Pa
Operating temperature	From -20°C to +80°C

SELECTION OF A DIAMETER ACCORDING TO THE AIR FLOW



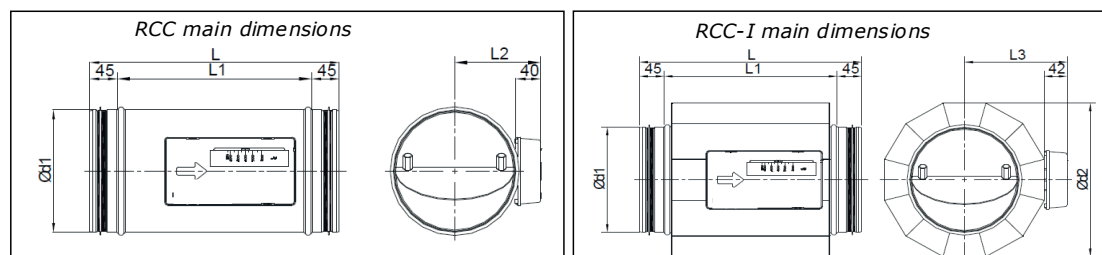
VOLUME CONTROL

ADJUSTABLE CONSTANT AIR FLOW DAMPER

RCC / RCC-I

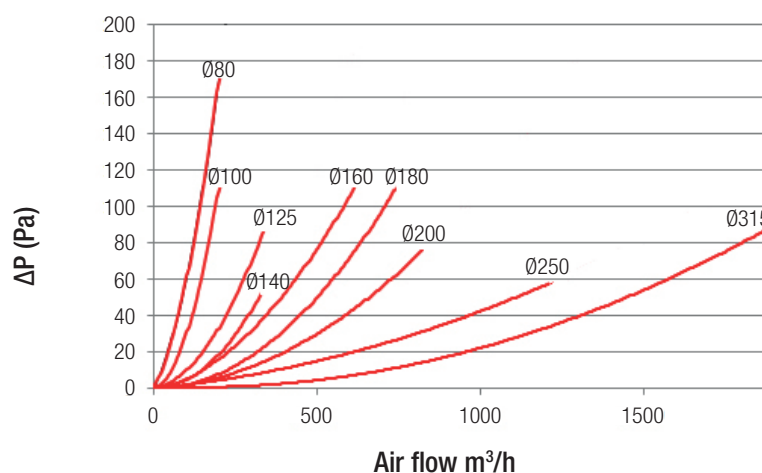
DIMENSIONS

	Ød1 (mm)	Ød2 (mm) (Version 1)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm) (Version 1)	M (kg)	m(i) (kg)
RCC 80	78	170	350	260	76	123	0.8	1.7
RCC 100	97	190	350	260	86	136	1	2.1
RCC 125	122	215	360	270	100	148	1.2	2.4
RCC 140	137	230	370	280	107	156	1.4	2.8
RCC 160	157	250	380	290	117	166	1.6	3.2
RCC 180	177	270	390	300	128	176	1.9	3.6
RCC 200	197	290	400	310	138	186	2.1	4
RCC 250	247	340	425	355	164	208	3.3	5.8
RCC 315	312	405	500	410	196	243	5	8.3
RCC 400	397	490	500	410	239	286		



PRESSURE LOSS

Pressure loss when damper is full open according to air flow and diameter



ADJUSTABLE CONSTANT AIR FLOW DAMPER

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SETTING ACCURACY

VOLUME CONTROL

	q m³h⁻¹	q l.s⁻¹	Q+- %
RCC 80	75	20.8	15
	100	27.8	15
	120	33.3	10
	140	38.9	10
RCC 100	100	27.8	11
	150	41.7	8
	175	48.6	5
	200	55.6	5
RCC 125	125	34.7	11
	200	55.6	8
	250	69.4	5
	300	83.3	5

	q m³h⁻¹	q l.s⁻¹	Q+- %
RCC 140	190	52.8	10
	250	69.4	7
	300	83.3	6
	340	94.4	5
RCC 160	250	83.3	10
	400	111.1	6
	500	138.9	5
	620	172.2	5
RCC 180	300	69.4	10
	400	111.1	6
	600	166.7	5
	720	200.	5

	q m³h⁻¹	q l.s⁻¹	Q+- %
RCC 200	350	97.2	10
	500	138.9	5
	700	194.4	5
	800	222.2	5
RCC 250	650	180.6	6
	900	250.0	5
	1100	305.6	2
	1300	361.1	2
RCC 315	850	236.1	10
	1200	333.3	5
	1500	416.7	2
	1650	486.1	2
RCC 400	1450	402,8	12
	2000	555,6	6
	2450	680,6	6
	2900	805,6	10

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ADJUSTABLE CONSTANT AIR FLOW DAMPER

RCC / RCC-I

Ø	Air Flow (m³/h)	Delta P = 50 Pa							Delta P = 100 Pa						
		Power level Lw dB							Power level Lw dB						
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
RCC 80	75	50	42	31	29	28	23	22	55	48	39	35	38	35	32
	100	52	46	35	33	31	26	25	57	52	43	39	41	38	34
	120	53	48	37	35	33	28	27	58	54	45	41	43	40	36
	140	54	50	39	37	35	30	29	60	58	48	44	45	43	39
RCC 100	100	51	48	40	38	26	25	22	55	54	48	44	36	37	30
	150	51	50	42	43	32	27	22	59	57	50	47	37	37	30
	200	51	50	43	44	33	29	23	59	58	50	48	38	38	31
	250	51	50	43	44	32	29	23	59	59	52	50	40	39	33
RCC 125	125	48	44	38	37	26	24	22	54	53	47	43	35	36	29
	200	50	46	40	41	31	28	22	57	56	49	47	37	37	30
	250	51	47	42	42	35	31	23	58	55	51	49	42	40	33
	300	54	49	48	46	42	38	30	62	56	53	51	50	46	37
RCC 160	250	48	44	41	39	35	31	23	57	51	50	47	44	41	32
	400	54	48	47	45	41	38	29	61	53	52	50	49	45	36
	500	55	51	49	47	44	41	34	63	55	54	52	51	47	40
	620	57	52	50	48	45	42	38	63	56	56	53	52	49	43
RCC 200	350	48	43	40	38	34	30	22	57	50	49	46	43	40	31
	500	52	45	46	46	42	38	29	59	52	52	49	46	45	36
	700	54	48	48	46	43	39	31	60	53	53	50	47	46	38
	800	56	51	50	47	45	43	33	61	55	55	52	50	49	40
RCC 250	650	51	47	46	42	39	34	24	56	51	51	48	47	44	34
	900	56	51	50	45	43	38	28	60	55	54	51	49	46	37
	1100	59	56	53	48	46	42	32	63	58	56	53	51	48	39
	1300	61	58	56	50	48	44	37	65	60	58	55	53	50	42
RCC 315	850	55	47	48	41	40	35	26	59	51	52	47	44	43	35
	1200	57	53	50	45	43	40	30	61	55	53	50	48	45	38
	1500	59	55	53	48	45	42	35	62	58	55	50	49	47	40
	1750	60	57	55	49	46	44	37	64	59	57	52	51	49	41

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ADJUSTABLE CONSTANT AIR FLOW DAMPER

RCC / RCC-I

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FLOW GENERATED SOUND POWER LEVEL

Ø	Air Flow (m³/h)	Delta P = 200 Pa								Delta P = 500 Pa							
		Power level Lw dB								Power level Lw dB							
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
RCC 80	75	56	50	45	40	42	39	38		60	54	51	47	47	47	46	
	100	59	54	48	43	44	42	40		63	58	55	50	49	49	48	
	120	61	57	50	45	45	44	42		65	60	57	52	50	51	50	
	140	63	62	54	48	48	47	45		68	64	61	55	53	55	52	
RCC 100	100	58	58	54	48	44	45	39		63	63	60	54	50	56	51	
	150	63	62	58	52	46	47	40		68	67	64	58	52	55	50	
	200	64	64	59	54	46	48	42		71	69	66	61	53	56	51	
	250	65	65	59	54	45	47	43		72	70	68	63	54	57	52	
RCC 125	125	57	55	52	47	42	42	36		62	62	59	52	48	52	50	
	200	61	60	57	52	44	45	39		68	67	63	58	50	54	48	
	250	63	59	59	54	45	47	43		71	68	67	63	57	58	52	
	300	65	62	60	57	56	54	47		74	69	68	66	63	63	56	
RCC 160	250	62	57	58	53	51	48	42		68	64	65	62	59	58	53	
	400	67	59	58	56	55	53	46		74	69	66	65	62	62	56	
	500	69	61	59	57	57	55	47		76	70	67	66	64	63	57	
	620	69	62	60	58	59	56	48		78	71	67	67	65	64	58	
RCC 200	350	61	55	55	53	51	48	42		68	62	63	61	58	57	53	
	500	65	58	57	56	54	52	45		75	67	64	64	63	64	57	
	700	66	59	58	57	55	55	46		76	70	65	66	64	63	57	
	800	67	60	58	57	57	57	47		76	69	65	66	68	65	58	
RCC 250	650	64	55	55	54	54	52	43		74	66	63	63	62	63	55	
	900	66	59	58	57	56	55	46		75	67	64	64	63	64	56	
	1100	68	62	60	58	57	56	47		76	68	65	65	65	65	58	
	1300	69	64	62	60	59	57	49		77	70	67	67	66	66	58	
RCC 315	850	64	57	55	53	55	52	47		71	64	62	60	61	59	55	
	1200	65	60	58	54	54	54	46		74	66	63	63	62	62	56	
	1500	64	60	57	55	54	47	46		75	68	66	66	63	64	57	
	1750	65	61	58	56	55	49	47		76	70	69	68	65	64	58	

Circular silencers type CONFORT and OPTIMUM can be supplied to reduce noise levels.

VOLUME CONTROL

ADJUSTABLE CONSTANT AIR FLOW DAMPER

RCC / RCC-I

FLOW GENERATED SOUND POWER LEVEL

Ø	Air Flow (m³/h)	Delta P = 200 Pa						
		Power level Lw dB						
		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
RCC 80	75	63	57	55	52	51	53	54
	100	66	61	58	55	53	54	55
	120	68	63	60	57	54	55	55
	140	71	70	65	60	55	56	56
RCC 100	100	69	66	64	59	53	60	58
	150	71	70	67	63	56	60	58
	200	73	72	69	65	58	61	59
	250	75	74	71	67	59	61	59
RCC 125	125	70	68	62	58	51	58	57
	200	72	70	65	63	55	59	58
	250	74	72	70	68	63	63	60
	300	79	76	73	71	70	69	65
RCC 160	250	73	70	69	68	66	65	62
	400	78	75	73	71	70	68	64
	500	80	77	74	72	71	69	65
	620	82	78	74	72	72	71	65
RCC 200	350	72	69	68	67	66	63	60
	500	78	76	72	70	69	65	62
	700	80	75	72	71	71	72	64
	800	82	78	72	71	72	73	65
RCC 250	650	78	75	70	71	71	70	63
	900	81	77	71	70	71	72	64
	1100	83	78	72	71	71	73	65
	1300	84	78	73	71	72	73	66
RCC 315	850	78	74	69	68	69	68	62
	1200	80	75	70	69	70	69	64
	1500	81	77	71	70	71	70	65
	1750	83	78	72	71	71	71	66

Circular silencers type CONFORT and OPTIMUM can be supplied to reduce noise levels.

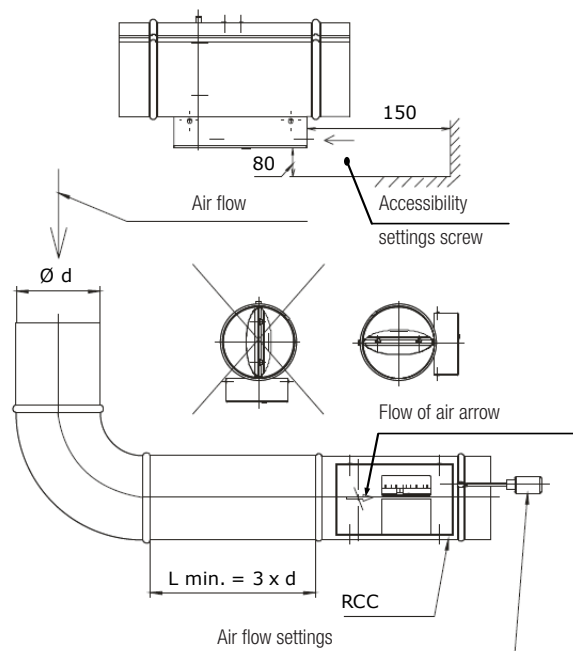
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INSTALLATION

For installations, make sure :

- to mount the damper in a homogenous and non-turbulent flow,
- not to twist the body of the damper to avoid any blocking of the blade,
- that the blade axis of the damper is always in a horizontal position, no matter the position of the duct,
- to mount the damper so that the air flow is in the same direction as the arrow on the control unit housing,
- to mount the damper so that the adjustment screw is accessible.

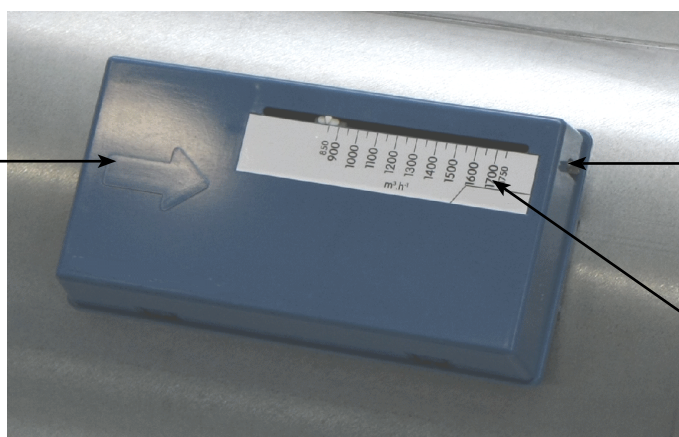
If a bend or a transformation is placed before the damper, a free space of $L \geq 3d$ is required. If $L \leq 3d$, performance will vary from $\pm 10\%$ (such a mounting is not recommended).



The air flow is set by turning the adjustment screw (to the right to increase it, to the left to decrease it). This screw is located on the right of the control unit housing.

The connection air-tightness is made by an airtight seal located on each end of the damper.

«Air direction»
arrow



Adjustment screw

Adjustment values
in $\text{m}^3.\text{h}^{-1}$