

RECTANGULAR DAMPER FOR DIFFERENTIAL PRESSURE SYSTEMS



Characteristics:

SRC multi-blade dampers with backward blades are designed for airflow control or closing in rectangular ventilation ducts.



version: 26/05/26

Intended Use

SRC multi-blade dampers with backward blades are designed for airflow control or closing in rectangular ventilation ducts.

They can be installed outside buildings because the actuator and the damper mechanism are protected from the direct impact of meteorological factors. Special sealing inserts installed at the blade ends ensure high integrity.

Within the range of class 3 – 4 in accordance with EN-1751. The respective blades are driven by an actuator, through a system of tie rods and gear reducer in a backward arrangement. Operating temperature: from -20 °C to +50 °C

Design

The housing of the SRC damper is made of galvanised sheet steel. RAL painting of the body is also available upon special order. The damper blades are made of aluminium profiles. Special inserts with a sleeve seal are installed at the ends of the blades. The blades are provided with plain bearings made of fibreglass-reinforced PP.



The aluminium profile shape is protected as a utility design and was registered with the Patent Office of the Republic of Poland.

In terms of external appearance, the actuator and the damper mechanism are installed in a box providing protection against direct impact of meteorological factors.

Manufacturing Versions

- SRC-W-R - Internal control damper
- SRC-W-O - Internal shut-off damper
- SRC-W-U - Internal damper for the double intake vent system
- SRC-Z-R - External control damper
- SRC-Z-O - External shut-off damper
- SRC-Z-U - External damper for the double intake vent system
- SRC-Z-KWR - External damper for the compact control exhaust louvre

SRC-Z-KSN - External damper for the compact permanent leakage

Dimensions

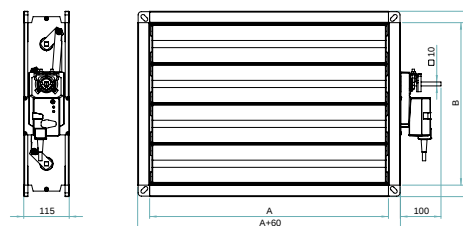


Figure 1. SRC-W... damper dimensions.

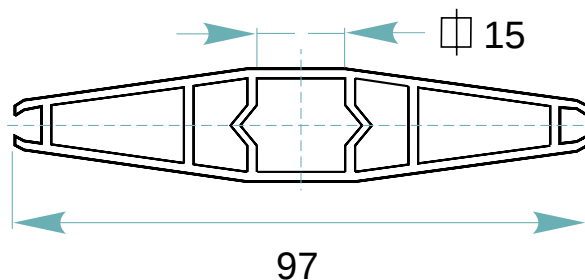


Figure 2. SRC damper blade.

Standard dimensions of SRC dampers:

- Width **A = 300+1400 mm** (1 mm interval)
- Height **B = 305+1405 mm** (100 mm interval)

Due to the width of the blade, the recommended height is $B = n \times 100 + 5$, where n is the number of the blades. It is possible to make the damper another height (1 mm interval), with a masking frame covering the clearance partially.

We manufacture dampers with insulated blades for A<1400.

If it is necessary to use a damper larger than 1400 x 1405 mm, a combined damper consisting of two smaller dampers is made.

The dampers have independent driving axles (two separate manual mechanisms or actuators on opposite sides).

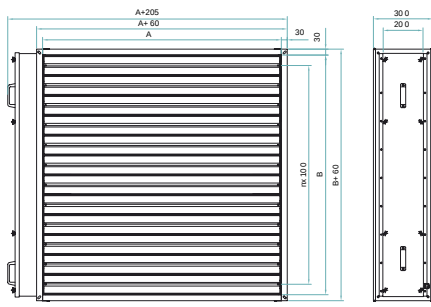


Figure 3. SRC-Z-R, SRC-Z-O and SRC-Z-U damper dimensions.

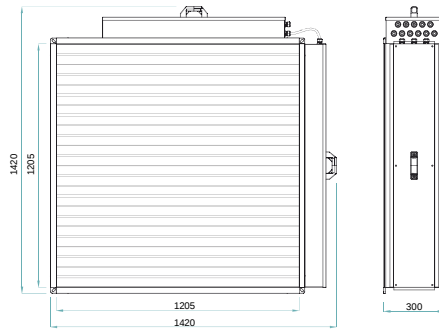


Figure 4. SRC-Z-KWR damper dimensions.

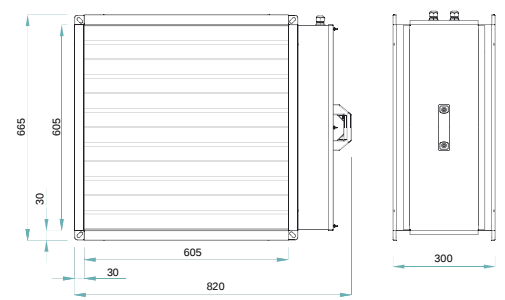
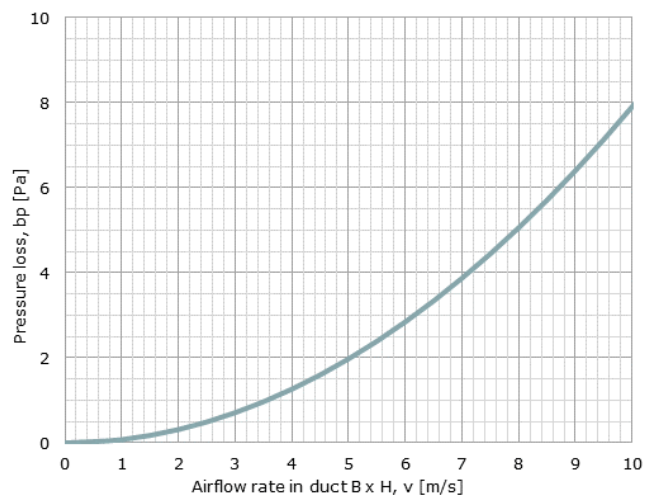


Figure 5. SRC-Z-KSN damper dimensions.

Technical Data

Table 1. Net surface areas for the SRC damper in a fully open position.

Height B, [mm]	Width A, [mm]													
	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400
105	0,009	0,017	0,026	0,035	0,043	0,052	0,061	0,070	0,078	0,087	0,096	0,104	0,113	0,122
205	0,017	0,034	0,051	0,067	0,084	0,101	0,118	0,135	0,152	0,169	0,186	0,203	0,220	0,236
305	0,025	0,050	0,075	0,100	0,125	0,150	0,175	0,201	0,226	0,251	0,276	0,301	0,326	0,351
405	0,033	0,066	0,100	0,133	0,166	0,199	0,233	0,266	0,299	0,333	0,366	0,399	0,433	0,466
505	0,041	0,083	0,124	0,166	0,207	0,249	0,290	0,332	0,373	0,415	0,456	0,498	0,539	0,581
605	0,049	0,099	0,149	0,198	0,248	0,298	0,347	0,397	0,447	0,496	0,546	0,596	0,646	0,695
705	0,057	0,115	0,173	0,231	0,289	0,347	0,405	0,463	0,520	0,578	0,636	0,694	0,752	0,810
805	0,065	0,131	0,198	0,264	0,330	0,396	0,462	0,528	0,594	0,660	0,726	0,792	0,859	0,925
905	0,073	0,148	0,222	0,296	0,371	0,445	0,519	0,594	0,668	0,742	0,816	0,891	0,965	1,039
1005	0,082	0,164	0,247	0,329	0,412	0,494	0,577	0,659	0,742	0,824	0,907	0,989	1,072	1,154
1105	0,090	0,180	0,271	0,362	0,452	0,543	0,634	0,725	0,815	0,906	0,997	1,087	1,178	1,269
1205	0,098	0,197	0,296	0,394	0,493	0,592	0,691	0,790	0,889	0,988	1,087	1,186	1,285	1,383
1305	0,106	0,213	0,320	0,427	0,534	0,641	0,749	0,856	0,963	1,070	1,177	1,284	1,391	1,498
1405	0,114	0,229	0,345	0,460	0,575	0,691	0,806	0,921	1,036	1,152	1,267	1,382	1,498	1,613



Pressure loss in a custom-height damper (with a masking frame covering the clearance partially) is comparable to the pressure loss for the nearest smaller standard height damper read from Chart 1.

$\Delta p (600 \times 460) \approx \Delta p (600 \times 405)$ from Chart 1

Chart 1. Pressure loss in a standard-height SRC damper (in a fully open position).

Types and number of actuators

Table 2. The number of actuators for SRC-W-R and SRC-Z-R dampers (NMQ24A-SR actuator).

	A - Damper width												
	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	
B - Damper height	305	1	1	1	1	1	1	1	1	1	1	1	1
	405	1	1	1	1	1	1	1	1	1	1	1	V2
	505	1	1	1	1	1	1	1	1	1	1	V2	V2
	605	1	1	1	1	1	1	1	1	1	V2	V2	V2
	705	1	1	1	1	1	1	1	1	V2	V2	V2	V2
	805	1	1	1	1	1	1	1	V2	V2	V2	V2	V2
	905	H2	H2	H2	H2	H2	H2	H2	H2	H2	H2	H3	H3
	1005	H2	H2	H2	H2	H2	H2	H2	H2	H2	H2	H3	HV4
	1105	H2	H2	H2	H2	H2	H2	H2	H2	H2	H3	H3	HV4
	1205	H2	H2	H2	H2	H2	H2	H2	H2	H2	H3	H3	HV4
	1305	H2	H2	H2	H2	H2	H2	H2	H2	H3	H3	HV4	HV4
	1405	H2	H2	H2	H2	H2	H2	H2	H2	H3	H3	HV4	HV4

LEGENDE

- Cyfra** – Quantity of the actuators in the damper
- H** – Horizontal damper split
- V** – Vertical damper split

Table 3. The number of actuators for SRC-W-O and SRC-Z-O dampers (BF24 actuator).

	A – Damper width												
	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	
B – Damper height	305	1	1	1	1	1	1	1	1	1	1	1	1
	405	1	1	1	1	1	1	1	1	1	1	1	1
	505	1	1	1	1	1	1	1	1	1	1	1	1
	605	1	1	1	1	1	1	1	1	1	1	1	1
	705	1	1	1	1	1	1	1	1	1	1	1	1
	805	1	1	1	1	1	1	1	1	1	1	1	1
	905	1	1	1	1	1	1	1	1	1	1	1	H2
	1005	1	1	1	1	1	1	1	1	1	1	H2	H2
	1105	H2	H2	H2	H2	H2	H2	H2	H2	H2	H2	H2	H2
	1205	H2	H2	H2	H2	H2	H2	H2	H2	H2	H2	H2	H2
	1305	H2	H2	H2	H2	H2	H2	H2	H2	H2	H2	H2	H2
	1405	H2	H2	H2	H2	H2	H2	H2	H2	H2	H2	H2	H2

LEGENDE

Cyfra – Quantity of the actuators in the damper

H – Horizontal damper split

Table 4. Types of actuators for SRC-W-U and SRC-Z-O SRC-Z-U (BEN24/BEE24 actuators).

	A – Damper width												
	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	
B – Damper height	305	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN
	405	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN
	505	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN
	605	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN
	705	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN
	805	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN
	905	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN
	1005	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN
	1105	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEE
	1205	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEN	BEE	BEE
	1305	BEE	BEE	BEE	BEE	BEE	BEE	BEE	BEE	BEE	BEE	BEE	BEE
	1405	BEE	BEE	BEE	BEE	BEE	BEE	BEE	BEE	BEE	BEE	BEE	BEE

LEGEND

BEN Damper Belimo BEN

BEE Damper Belimo BE

Table 5. Types of actuators for SRC-Z-KWR dampers.

B – Damper height	A – Damper width: 1205
1205	NMQ-24A-SR actuator – 3 pcs, MAC-D-min, PZ3 box, thermally insulated damper blades [protection against moisture condensation]

Table 6. Types of actuators for SRC-Z-KSN dampers.

B – Damper height	A – Damper width: 605
605	BF24 actuator – 1 pc, SCAME connection box, thermally insulated damper blades [protection against moisture condensation]

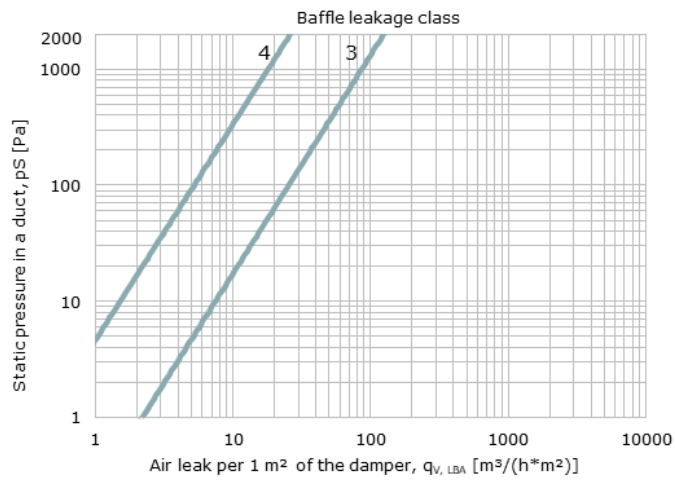


Chart 2. Air leaks through the SRC damper baffle (in a fully closed position).

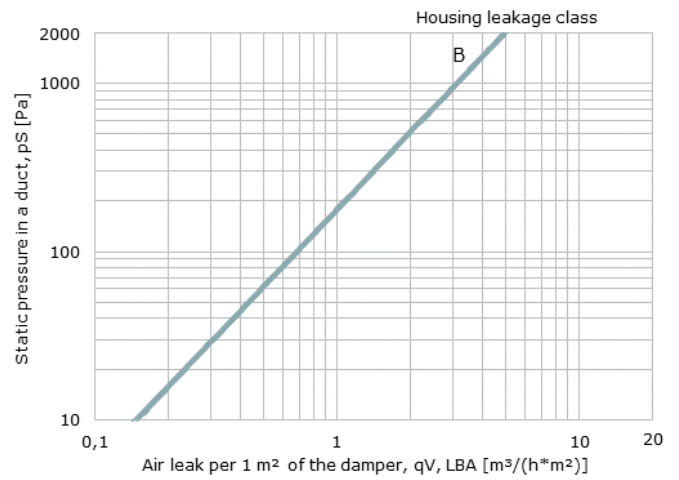


Chart 3. Air leaks through the SRC damper housing (in a fully closed position).

Table 7. Approximate weight of SRC-W-... Dampers.

Height B, [mm]	Width A, [mm]											
	300	400	500	600	700	800	900	1000	1100	1200	1300	1400
305	6,0	6,6	7,3	7,9	8,6	9,2	9,9	10,5	11,2	11,8	12,4	13,1
405	6,8	7,6	8,3	9,1	9,8	10,6	11,4	12,1	12,9	13,6	14,4	18,4
505	7,7	8,5	9,4	10,3	11,1	12,0	12,8	13,7	14,6	15,4	20,0	20,8
605	8,5	9,5	10,4	11,4	12,4	13,3	14,3	15,3	16,3	21,3	22,2	23,2
705	9,3	10,4	11,5	12,6	13,6	14,7	15,8	16,9	22,3	23,4	24,5	25,6
805	10,2	11,4	12,5	13,7	14,9	16,1	17,3	23,2	24,4	25,6	26,8	28,0
905	12,8	14,1	15,4	16,7	18,0	19,3	20,6	21,9	23,2	24,5	27,6	28,9
1005	13,6	15,0	16,5	17,9	19,3	20,7	22,1	23,5	24,9	26,3	29,5	36,3
1105	14,5	16,0	17,5	19,0	20,5	22,0	23,5	25,1	26,6	29,9	31,4	38,7
1205	15,3	16,9	18,6	20,2	21,8	23,4	25,0	26,6	28,3	31,7	33,3	41,1
1305	16,1	17,9	19,6	21,3	23,1	24,8	26,5	28,2	31,8	33,5	41,8	43,5
1405	17,2	19,1	21,0	22,9	24,8	26,7	28,6	30,5	34,2	36,1	44,8	46,7

Table 8. Approximate weight of SRC-Z-... Dampers.

Height B, [mm]	Width A, [mm]											
	300	400	500	600	700	800	900	1000	1100	1200	1300	1400
305	11,2	12,2	13,1	14,1	15,0	16,0	17,0	17,9	18,9	19,9	20,8	21,8
405	13,2	14,3	15,4	16,5	17,7	18,8	19,9	21,1	22,2	23,3	24,4	33,3
505	14,9	16,1	17,4	18,6	19,8	21,1	22,3	23,5	24,8	26,0	36,2	37,4
605	16,6	18,0	19,3	20,7	22,0	23,4	24,7	26,0	27,4	38,9	40,2	41,5
705	18,4	19,9	21,4	22,8	24,3	25,7	27,2	28,6	41,4	42,9	44,3	45,8
805	20,2	21,7	23,3	24,9	26,4	28,0	29,6	43,7	45,2	46,8	48,4	49,9
905	24,1	25,8	27,6	29,3	31,0	32,7	34,5	36,2	37,9	39,6	43,3	45,0
1005	25,8	27,7	29,5	31,3	33,2	35,0	36,8	38,7	40,5	42,4	46,1	63,2
1105	27,6	29,5	31,5	33,4	35,4	37,3	39,2	41,2	43,1	47,0	49,0	67,3
1205	29,3	31,4	33,4	35,5	37,5	39,6	41,6	43,7	45,7	49,7	51,8	71,4
1305	31,1	33,2	35,4	37,5	39,7	41,9	44,0	46,2	50,3	52,4	73,3	75,5
1405	32,8	35,1	37,3	39,6	41,9	44,1	46,4	48,7	52,9	55,2	77,3	79,6

SRC - Rectangular damper for differential pressure systems

When ordering, please provide information as follows:

SRC <I> - <S> - <T> - <A> x - P<RAL> - <KL>

Where:

I	Damper blade insulation*
	none – Without insulating foam filling
	t – Filled with insulating foam
S	is the working environment
	W – Inside
	Z – Outside
T	is the drive type*
	R – Control
	O – Shut-off
	U – For the double intake vent system
	KWR – For the compact control exhaust louvre
	KSN – For the compact permanent leakage
A	Damper inner clearance width [mm]
B	Damper inner clearance height [mm]
P	Finish
	SO – Galvanised steel
	SL – Painted steel
RAL	SLColour as per RAL (for SL finishing)
KL	EN 1751 leakage class*
	B3 – Housing: B baffle: 3
	B4 – Housing: B baffle: 4

* Optional values, if not specified, the default values will be used

Order example: **SRCt-Z-R-400x405-SO-B3**