



SMOKE EXTRACTION SEDS SERIES

SEDS
SEDS-L

Smoke extraction damper
Smoke extraction damper



SAMOVENT®
TECHNIK

DIFUSIÓN Y VENTILACIÓN



SEDS



SEDS-L

SEDS SERIES

SEDS

SMOKE EXTRACTION DAMPER



Model **SEDS**. Smoke extraction dampers - simple are louvers in smoke extraction piping systems. The dampers are designed to remove heat and products of combustion (e.g. smoke) from a fire compartment. The damper is operated by a drive mechanism.

Characteristics:

- The dampers can be installed in various duct sizes with respect to the direct application range according to EN 1366-9.
- The direct field of application based on test results is acceptable according to EN 1363-1, part A.1 and A.2, EN 1366-2, part 13 and EN 1366-10, part 9.
- Declaration of Performance No. PM/SEDS/01/21/1
- The dampers are designed for smoke evacuation systems with max. -1000 Pa underpressure or max. 500 Pa overpressure.
- The dampers are designed for a max. air velocity of 15 m/s.
- Smoke exhaust dampers - single are classified as E600 90 (ve-i ↔o) A1000C₃₀₀AAsingle.
- In case of fire, the smoke and fire ventilation system opens the damper in the affected section, which removes the products of combustion and heat from this section.
- The dampers are designed for installation with horizontal louvered shaft. The direction of flow should be directed from the actuating side (it is marked with an arrow on the damper housing).
- The dampers are designed for macroclimatic zones with mild climate according to EN 60 721-3-3.
- The temperature at the installation site can range from -30°C to +50°C.

Dimensions:

200X200 a 1000x1000

Models:

SEDS.44

Drive mechanism
BLE230(BE230-12), InMax
50.75-S

SEDS.54

Drive mechanism
BLE24(BE24-12), InMax 50.75-S

SEDS.66

Communication and power
supply device BKNE 230-24 and
drive mechanism BLE24
(BE24-12)-ST

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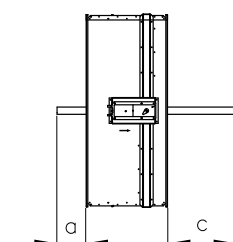
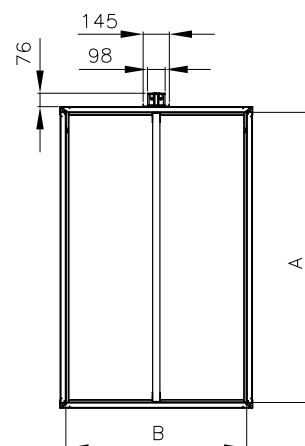
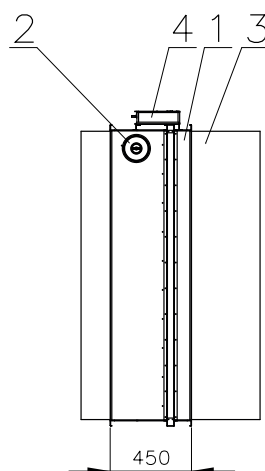
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SMOKE EXTRACTION
DAMPER



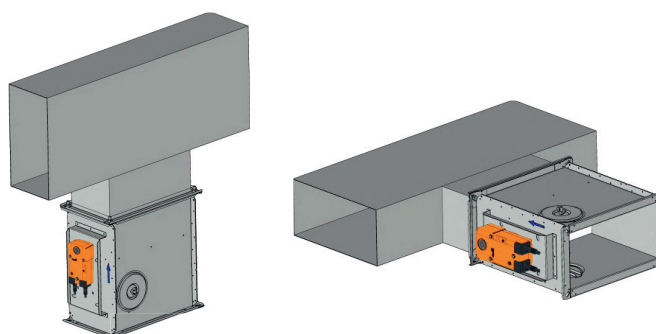
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- 1. Damper body
- 2. Inspection hole cover
- 3. Damper blade
- 4. Actuating mechanism



Installation examples

Smoke extraction dampers - single are designed to remove heat and products of combustion (e.g. smoke) from a fire compartment in accordance with EN 1366-9. Smoke extraction dampers - single are designed for installation with horizontal blade shaft. The back-to-back smoke exhaust duct must be hung or supported in such a way as to absolutely exclude any load transfer from the back-to-back smoke exhaust duct to the damper. To provide the necessary access space to the control device, all other objects must be located at least 350 mm from the control parts of the damper.



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TECHNICAL DATA

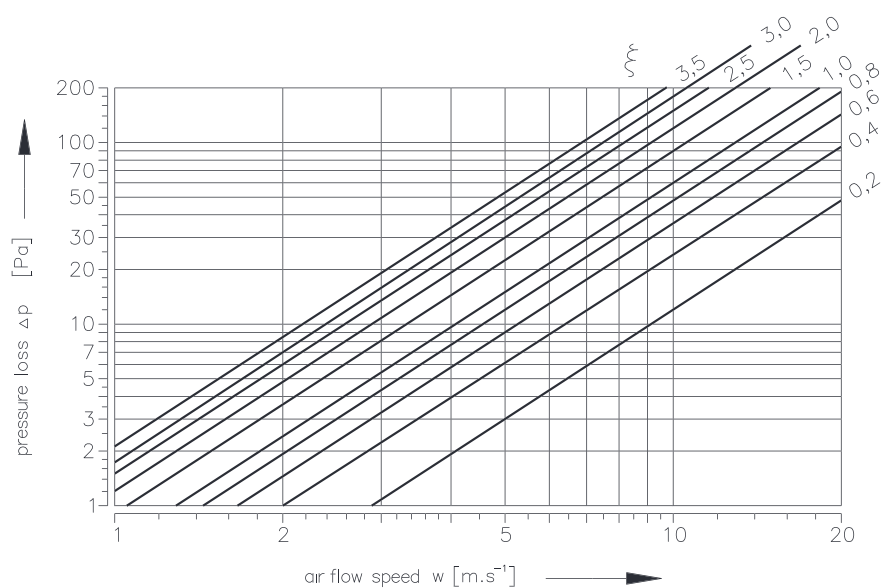


Pressure loss calculation

$$\Delta p = \xi \cdot \rho \cdot \frac{w^2}{2}$$

Δp	[Pa]	Pressure drop
w	[m.s ⁻¹]	Air flow velocity at nominal damper section
ρ	[kg.m ⁻³]	Air density
ξ	[-]	Local pressure loss coefficient for the nominal cross-section of the damper

Determination of pressure loss using $\rho=1.2\text{kg.m}^3$ diagram



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TECHNICAL DATA



Local pressure loss coefficient ξ (-) ξ

A	B																					
	180	200	225	250	280	300	315	355	400	450	500	550	560	600	630	650	700	710	750	800	900	1000
180	1,849	1,476	1,186	0,983	0,869	0,776	0,703	0,608	0,535	0,478	0,437	0,411	0,400	0,381	0,369	0,352	0,349	0,343	0,331	0,322	0,304	0,291
200	1,737	1,385	1,152	0,921	0,823	0,736	0,658	0,569	0,500	0,446	0,407	0,385	0,373	0,356	0,344	0,331	0,325	0,320	0,312	0,300	0,284	0,271
225	1,635	1,296	1,078	0,877	0,778	0,682	0,614	0,543	0,479	0,421	0,386	0,364	0,348	0,336	0,327	0,315	0,311	0,302	0,296	0,281	0,268	0,254
250	1,553	1,236	1,012	0,819	0,716	0,635	0,583	0,504	0,442	0,394	0,360	0,346	0,330	0,316	0,304	0,294	0,289	0,286	0,278	0,264	0,255	0,239
280	1,513	1,201	0,981	0,789	0,681	0,618	0,549	0,489	0,426	0,375	0,352	0,327	0,312	0,303	0,291	0,284	0,282	0,278	0,263	0,253	0,248	0,231
300	1,475	1,166	0,925	0,752	0,669	0,593	0,534	0,475	0,415	0,367	0,331	0,313	0,306	0,291	0,279	0,275	0,272	0,269	0,251	0,246	0,237	0,224
315	1,415	1,124	0,899	0,728	0,641	0,579	0,518	0,456	0,400	0,356	0,325	0,302	0,297	0,276	0,274	0,263	0,258	0,254	0,241	0,238	0,225	0,215
355	1,359	1,079	0,856	0,713	0,628	0,545	0,506	0,436	0,383	0,341	0,311	0,288	0,284	0,268	0,262	0,254	0,248	0,243	0,233	0,228	0,215	0,205
400	1,312	1,041	0,811	0,687	0,601	0,532	0,487	0,420	0,368	0,328	0,299	0,279	0,273	0,263	0,252	0,246	0,241	0,234	0,226	0,219	0,207	0,197
450	1,271	1,009	0,789	0,665	0,589	0,519	0,471	0,406	0,356	0,317	0,289	0,268	0,264	0,256	0,243	0,238	0,231	0,226	0,221	0,211	0,199	0,190
500	1,240	0,983	0,786	0,648	0,556	0,499	0,449	0,395	0,346	0,308	0,281	0,265	0,257	0,246	0,236	0,228	0,223	0,219	0,211	0,205	0,194	0,185
550	1,219	0,971	0,763	0,637	0,543	0,482	0,442	0,389	0,341	0,305	0,278	0,261	0,251	0,244	0,234	0,224	0,221	0,215	0,207	0,203	0,191	0,183
560	1,211	0,960	0,758	0,632	0,533	0,483	0,437	0,385	0,337	0,300	0,274	0,258	0,250	0,241	0,230	0,221	0,219	0,214	0,203	0,200	0,189	0,180
600	1,191	0,948	0,753	0,627	0,527	0,473	0,431	0,379	0,331	0,298	0,270	0,257	0,247	0,234	0,228	0,216	0,214	0,211	0,202	0,198	0,186	0,178
630	1,184	0,938	0,749	0,617	0,521	0,463	0,427	0,376	0,329	0,293	0,267	0,253	0,244	0,231	0,225	0,213	0,210	0,208	0,201	0,195	0,184	0,176
650	1,179	0,926	0,738	0,613	0,511	0,458	0,425	0,372	0,327	0,291	0,265	0,251	0,241	0,231	0,224	0,212	0,209	0,206	0,200	0,194	0,183	0,175
700	1,169	0,922	0,736	0,607	0,501	0,453	0,421	0,370	0,324	0,289	0,263	0,250	0,240	0,227	0,223	0,211	0,208	0,205	0,199	0,193	0,181	0,173
710	1,160	0,919	0,722	0,604	0,502	0,444	0,417	0,368	0,322	0,287	0,261	0,248	0,239	0,224	0,220	0,210	0,206	0,204	0,197	0,191	0,180	0,172
750	1,151	0,907	0,716	0,599	0,499	0,441	0,411	0,364	0,318	0,285	0,258	0,247	0,237	0,221	0,218	0,209	0,204	0,202	0,195	0,189	0,178	0,169
800	1,140	0,903	0,711	0,593	0,496	0,438	0,409	0,361	0,316	0,281	0,256	0,246	0,234	0,221	0,215	0,208	0,203	0,200	0,193	0,187	0,176	0,168
900	1,122	0,888	0,709	0,583	0,484	0,427	0,402	0,355	0,310	0,276	0,252	0,244	0,230	0,221	0,212	0,207	0,201	0,196	0,187	0,184	0,173	0,165
1000	1,108	0,877	0,706	0,576	0,467	0,418	0,397	0,350	0,306	0,273	0,248	0,236	0,227	0,218	0,209	0,206	0,197	0,193	0,185	0,181	0,171	0,163
1100	1,095	0,867	0,701	0,569	0,456	0,412	0,392	0,345	0,302	0,269	0,245	0,231	0,224	0,211	0,206	0,201	0,194	0,191	0,182	0,179	0,168	0,161
1250	1,084	0,857	0,693	0,562	0,455	0,411	0,387	0,342	0,299	0,266	0,242	0,228	0,221	0,208	0,203	0,199	0,193	0,189	0,181	0,176	0,166	0,159
1400	1,073	0,849	0,688	0,557	0,454	0,410	0,383	0,338	0,296	0,263	0,240	0,225	0,219	0,206	0,201	0,196	0,192	0,187	0,179	0,175	0,165	0,157
1500	1,067	0,844	0,683	0,554	0,452	0,408	0,381	0,336	0,294	0,262	0,238	0,223	0,218	0,205	0,200	0,194	0,191	0,186	0,178	0,174	0,164	0,156
1600	1,062	0,840	0,657	0,551	0,451	0,406	0,379	0,334	0,293	0,260	0,237	0,222	0,216	0,203	0,199	0,192	0,190	0,185	0,176	0,173	0,163	0,155



SEDS SERIES

SEDS-L

SMOKE EXTRACTION DAMPER



Model **SEDS-L**. Smoke extraction dampers - simple are louvers in smoke extraction piping systems. The dampers are designed to remove heat and combustion products (e.g. smoke) from a single fire compartment. In the event of a fire, the smoke and fire exhaust system opens the damper in the affected section, which removes combustion products and heat from this section.

Characteristics:

- The dampers can be installed in various duct sizes with respect to the direct application range according to EN 1366-9.
- The direct application range based on test results is acceptable according to EN 1363-1, part A.1 and A.2, EN 1366-2, part 13 and EN 1366-10, part 9.
- Smoke extraction dampers - single are classified as o E₆₀₀ 120 (v_{e-i} ↔ o) A1500C_{mod}MA single.
- CE-certified according to EN 12101-8
- Tested according to EN 1366-10
- Classified according to EN 13501- 4+A1
- External housing leakage min. class B, internal leakage min. class 3 acc. to EN 1751
- Cycle test in class Cmod according to EN 12101-8
- Certificate EN No. 1391-CPR-2020/0187
- Declaration of Performance No. PM/SEDS-L/01/20/2
- Hygienic evaluation of fire dampers - Report No. 1.6/pos/19c

Dimensions:

200x200 to 1200x1200

Models:

- SEDS-L.44** Actuating mechanism BLE230(BE230-12)
- SEDS-L.54** Actuating mechanism BLE24(BE24-12)

Working conditions:

- The dampers are designed for smoke evacuation systems with a maximum underpressure of 1500 Pa. 1500 Pa or max. overpressure 500 Pa.
- The dampers are designed for a maximum air velocity of 12 m/s.
- The dampers are installed with horizontal or vertical blade axis.
- The dampers are intended for installation in air ducts and in/on walls, where in case of wall installation, this wall with damper has no fire resistance and therefore does not separate two fire sectors.
- The dampers are suitable for systems without abrasive, chemical and adhesive particles. The dampers are designed for macroclimatic zones with mild climate according to EN 60 721-3-3. The temperature at the installation site can range from -20°C to +50°C.

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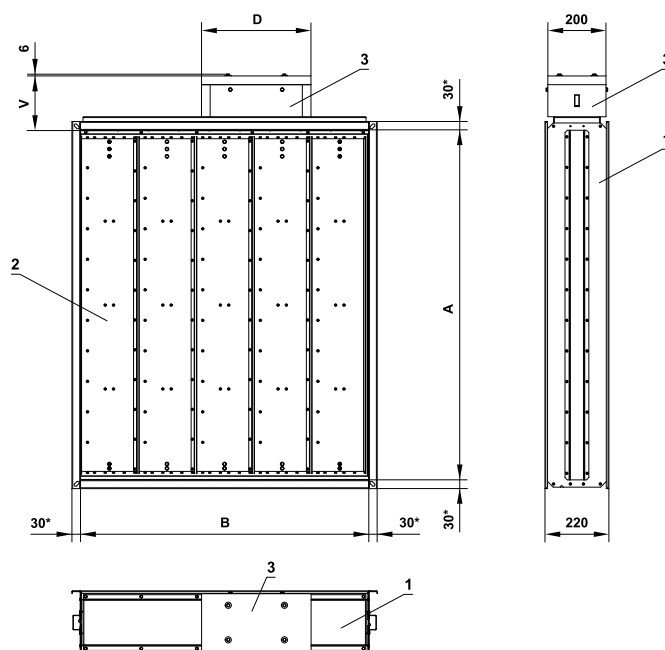
SEDS-L

SMOKE EXTRACTION
DAMPER



SEDS-L

1. Gate body
2. Damper blade
3. Actuating mechanism cover



* standard flange height

Actuating mechanism	V [mm]	D [mm]
BEN /BEE	176,5	315
BE	186,5	380
BEN / BEE + BKNE	236,5	315
BE + BKNE	251,5	380



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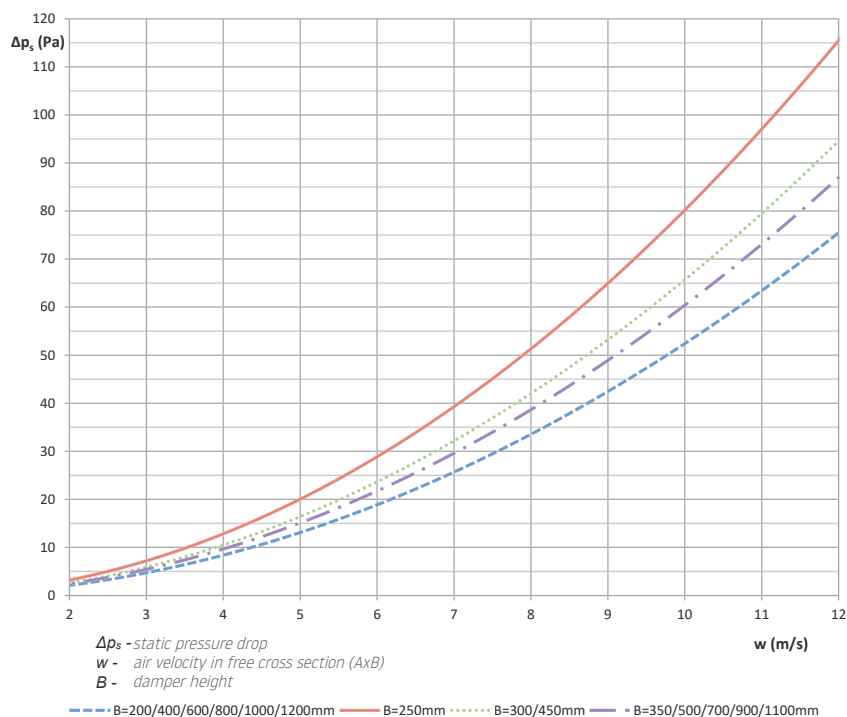
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TECHNICAL DATA



Loss of pressure

The pressure losses of the damper were determined for an air density of 1.2 kg/m³.



Noise information

Sound power level corrected with filter A

Sound power level L_w in dB (A) for B= 250/300/450mm, damper fully open

	f (Hz)	63	125	250	500	1000	2000	4000	8000	Total
w (m/s)	2	16	24	29	29	28	26	23	9	35
	3	25	33	38	38	37	35	32	18	44
	4	32	40	45	45	44	42	39	25	51
	5	28	46	51	51	50	48	45	31	57
	6	42	50	55	55	54	52	49	35	61
	7	46	54	59	59	58	56	53	39	65
	8	49	57	62	62	61	59	56	42	68
	9	50	58	63	63	62	60	57	43	69
	10	53	61	66	66	65	63	60	46	72
	11	55	63	68	68	67	65	62	48	74
	12	57	65	70	70	69	67	64	50	76

w - air velocity in the free cross section (AxB) - i.e. before the blades
 f - octave band frequency

SEDS SERIES

SEDS-L

TECHNICAL DATA



Sound power level L_w in dB (A) for B= 350/500/700/900/1100mm, damper fully open

	f (Hz)	63	125	250	500	1000	2000	4000	8000	Total
w (m/s)	2	15	23	28	28	27	25	22	8	34
	3	24	32	37	37	36	34	31	17	43
	4	31	39	44	44	43	41	38	24	50
	5	36	44	49	49	48	46	43	29	55
	6	41	49	54	54	53	51	48	34	60
	7	45	53	58	58	57	55	52	38	64
	8	48	56	61	61	60	58	55	41	67
	9	49	57	62	62	61	59	56	42	68
	10	51	59	64	64	63	61	58	44	70
	11	53	61	66	66	65	63	60	46	72
	12	55	63	68	68	67	65	62	48	74

w - air velocity in the free cross section (AxB) - i.e. before the blades
f - octave band frequency

Sound power level L_w in dB (A) for B= 200/400/600/800/1000/1200mm, fully open damper

	f (Hz)	63	125	250	500	1000	2000	4000	8000	Total
w (m/s)	2	13	21	26	26	25	23	20	6	32
	3	21	29	34	34	33	31	28	14	40
	4	28	36	41	41	40	38	35	21	47
	5	34	42	47	47	46	44	41	27	53
	6	38	46	51	51	50	48	45	31	57
	7	42	50	55	55	54	52	49	35	61
	8	45	53	58	58	57	55	52	38	64
	9	47	55	60	60	59	57	54	40	66
	10	48	56	61	61	60	58	55	41	67
	11	50	58	63	63	62	60	57	43	69
	12	52	60	65	65	64	62	59	45	71

w - air velocity in the free cross section (AxB) - i.e. before the blades
f - octave band frequency



SIMBOLOGY

TECHNICAL ICONS



SUPPLY



RETURN



SWIRL



MULTIDIRECTIONAL



LONG RANGE



ACCESSORIES



SQUARED



ROUND



LINEAR



FIX



ADJUSTABLE



CEILING



FALSE CEILING



WALL



FLOOR



TRANSIT



DUCT



OUTER/EXTERNAL



FIRE



DAMP



SMOKE



