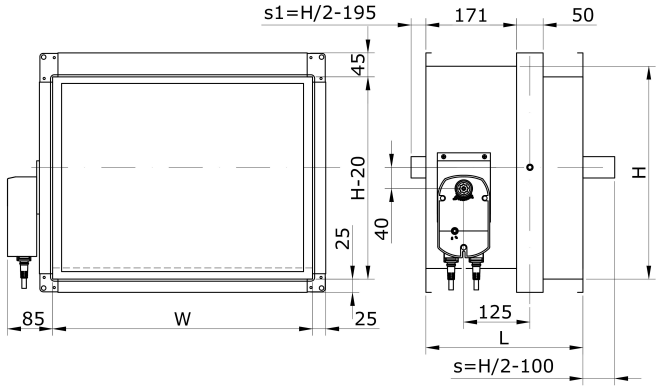
TECHNIKA

Rectangular smoke dampers with actuator DV(P)

Description

Rectangular smoke dampers are used to install a ventilation system in buildings along with rectangular smoke ducts in automatic smoke extraction systems. These smoke dampers can be installed for the separation of two enclosure protection zones across the wall - "multi". The smoke damper stops the spread of fire and smoke to other areas through the duct system or allows the smoke to be drawn out of the required area. The blade of the damper is made of filled heat-resistant material. Casing tightness class is C according to LST EN 1751. The dampers are tested and classified according the standards LST EN 1366-10 and LST EN 13501-4 with allowable negative pressures up to 1500 Pa. Dampers are CE marked according LST EN 12101-8. This type of damper can be installed in solid walls of concrete, porous silicate blocks and flexible board walls. The dampers DV (P) have a springless electric actuator. The actuator must always be connected to the mains using non-flammable cables. In the normal position, the blade of a damper is closed. It opens during the smoke extracting. Fire resistance when dividing multiple fire zones, EI120 (v_{ew} i <-> o) 1000C_{300}AAmulti, EI120 (v_{ew} i <-> o) 1500C_{10000}AAmulti. The classification depends on the dimension and pressure differential class. The valves are equipped with integrated end position contacts. The dampers are made of galvanized sheet steel with a zinc content of 275 g/m2 - corrosion class C2/C3 (L) according to LST EN ISO 12944 standard. Can also be manufactured from other materials, such as stainless steel sheet AISI 304 (1.4301) or, AISI 316L (1.4404) - corrosion class C5. The damper is sealed in the duct system by sealing with seals such as the smoke duct system. The damper can be used at temperatures from -20 °C to + 50 °C. The maximum permissible absolute humidity inside and outside the air stream is 18 g/kg. The smoke damper must not be used in a system that carries solids.

Dimensions



W [mm]	H [mm]	s [mm]	s1 [mm]	L [mm]
200 - 1500	200	-	-	296
200 - 1500	300	50	-	296
200 - 1500	400	100	5	296
200 - 1500	500	150	55	296
200 - 1500	600	200	105	296
200 - 1500	700	250	155	296
200 - 1500	800	300	205	296
200 - 1500	900	350	255	296
200 - 1500	1000	400	305	296
200 - 1500	1100	450	355	296
200 - 1500	1200	500	405	296
200 - 1500	1300	550	455	296
200 - 1500	1400	600	505	296
200 - 1500	1500	650	555	296

* EI120(v_{ew} i<-> o)1000C_{300}AAmulti - maximum allowable cross section area of smoke damper - 1,5 m^2.
** EI120(v_{ew} i<->o)1500C_{10000}AAmulti – maximum allowable cross section area of smoke damper - 1,25 m^2.

Ordering code

..... DV400200P230

Galvanized steel -
AISI 304 – NP
AISI 316L – 316NP
Product
Size
Actuators 24V – P24, 230V - P230

Sample: DV400200P230 – made of galvanized steel smoke damper, dimensions WxH - 400x200 mm, with actuator, without return spring.

We reserve the right to make changes without prior notice

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Technical data

Smoke dampers DV are made of double side casing with heat-resistant material between - type FID S / V. The actuators BE and BLE used for smoke dampers are with out spring mechanism.

	W [mm]	H [mm]
Minimum dimension	200	200
Maximum dimension	1500	1500
Standard step, mm	100	
Non standard step up to order, mm	50	
Maximum cross section area of damper, m^2	1,25** ir 1,5*	
Weight formula: m[kg]=34*W[m]*H[m]+12*(W[m]+H[m]) ***	From 200 to 1500	From 200 to 1500

*** need to add the weight of actuator ~ 1,5 kg

Fire resistance classification according LST EN 13501-4

			EI 120 * 1000 Pa, C_{300}	EI 120 ** 1500 Pa, C_{10000}
Solid wall	**EI 120 – installation in solid masonry wall**	Wet installation	200x200 - 1500x1500*	200x200 - 1500x1500**
	Minimum thickness of the wall – 110* mm			
	Minimum density of the wall – 550 kg/m^3			
	Concrete or cement lime masonry mortar			
	v_{ew} i<-> o, distance between dampers 200 mm , to wall corner 75 mm			
Flexible wall	**EI 120 – installation in flexible wall**	Wet installation	-	200x200 - 1500x1500**
	Minimum thickness of the wall – 125 mm			
	Minimum density of the mineral wool used in the construction – 80 kg/m^3			
	Plaster filler fire resistance class A1 or cement mortar.			
	v_{ew} i<-> o, distance between dampers 200 mm , to wall corner 75 mm			

* Maximum allowable cross section area of smoke damper 1,5 m^2.
** Maximum allowable cross section area of smoke damper 1,25 m^2.

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WxH – air duct dimensions [mm], v – speed [m/s], S_{ort} – duct cross section area [m^2], S_{ps} – damper cross section area [m^2], Q – air flow [m^3/h], dp – pressure drop [Pa], L_{wa} – sound power [dB].

EI 120,

WxH [mm]	S_{ort} [m^2]	S_{ps} [m^2]	v [m/s]	Q [m^3/h]	dp [Pa]	L_{wa} [dB]
200 x 200	0,040	0,029	4	420	8	29
			6	631	19	40
			8	841	34	48
			10	1051	54	54
400 x 200	0,080	0,058	4	841	8	32
			6	1261	19	43
			8	1682	34	51
			10	2102	53	56
800 x 200	0,160	0,117	4	1682	7	33
			6	2523	17	45
			8	3364	30	52
			10	4205	47	58
1000 x 200	0,20	0,146	4	2102	7	34
			6	3154	15	44
			8	4205	28	52
			10	5256	43	58
400 x 400	0,160	0,138	4	1993	6	32
			6	2989	13	42
			8	3986	24	50
			10	4982	38	56
800 x 400	0,32	0,277	4	3986	5	32
			6	5979	11	43
			8	7972	21	51
			10	9965	32	57
1000 x 400	0,40	0,346	4	4982	4	30
			6	7474	10	42
			8	9965	18	50
			10	12456	29	56
1200 x 400	0,480	0,415	4	5979	4	31
			6	8968	9	42
			8	11958	16	49
			10	14947	25	55
800 x 600	0,480	0,437	4	6290	4	31
			6	9435	9	42
			8	12580	16	50
			10	15725	26	56
1000 x 600	0,600	0,546	4	7862	3	29
			6	11794	8	41
			8	15725	14	49
			10	19656	23	55
1200 x 600	0,720	0,655	4	9435	3	29
			6	14152	7	41
			8	18870	12	48
			10	23587	20	54

Technical data

EI 120,

WxH [mm]	S_{ort} [m^2]	S_{ps} [m^2]	v [m/s]	Q [m^3/h]	dp [Pa]	L_{wa} [dB]
800 x 800	0,640	0,597	4	8594	3	29
			6	12891	8	42
			8	17188	14	49
			10	21485	22	55
1000 x 800	0,800	0,746	4	10742	3	30
			6	16114	7	41
			8	21485	12	48
			10	26856	19	54
1200 x 800	0,960	0,895	4	12891	2	26
			6	19336	6	40
			8	25782	10	47
			10	32227	16	53
1000 x 1000	1,000	0,946	4	13622	2	26
			6	20434	6	40
			8	27245	11	48
			10	34056	17	54
1200 x 1000	1,200	1,135	4	16347	2	27
			6	24520	5	39
			8	32694	9	46
			10	40867	14	52
1200 x 1200	1,440	1,375	4	19803	2	27
			6	29704	4	36
			8	39606	8	45
			10	49507	13	52

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