

Multi blade fire dampers

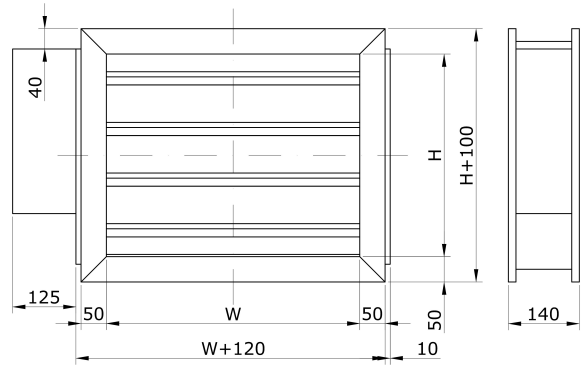
US(P)



Description

US(P) multi-blade fire dampers are designed for use in general ventilation installation, in points of penetration of these installations through building partitions. During fire, they allow to maintain fire resistance of the building partition through which ventilation and air conditioning ducts run. They also prevent propagation of fire, smoke and fire gases to the safe part of the building. 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 in accordance with standards LST EN 1366-2 and LST EN 13501-3 with allowable negative pressures up to 300 Pa. Dampers are CE marked using standard LST EN 15650. These types of dampers can be installed in solid walls of concrete or porous silicate blocks. The dampers US (P) have an electric actuator with a sensor that activates when the temperature rises to 72°C and closes with a closing spring. The damper have integrated end position contacts in the actuator. In the normal position, the blade of the damper is open when the damper is triggered in case of fire, the blade closes automatically. The fire resistance is EI60 (v_e i ↔ o) S - WIP/S type. When fitted with original fire grilles, the fire resistance class is EI120 (v_e i ↔ o) - WIP/T type. 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 standard ventilation 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]
Minimum dimension	120	200
Maximum dimension	1000	1000
Standard step, mm	50	
Longest side of smoke damper, mm	1000	
Maximum cross section area of damper, m ²	1,0	
Weight formula: m[kg]=34*W[m]*H[m]+12*(W[m]+H[m])	From 120 to 1000	From 200 to 1000

Ordering code

..... US400200P230

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

Sample: US400200P230 – made of galvanized steel, multi blade damper, dimensions WxH - 400x200 mm, with actuator 230V.



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Technical data

Fire resistance classification according LST EN 13501-3

		EI 60 S 300 [Pa]	EI 120 S 300 [Pa]
Solid wall	EI 120 S – installation in solid masonry wall	Wet installation	120x200 - 1000x1000*
	Minimum thickness of the wall – 120 mm		
	Minimum density of the wall – 650 kg/m ³		
	Concrete or cement lime masonry mortar		
	ve i<-> o, distance between dampers 200 mm , to wall corner 75 mm		
Solid wall	EI 120 S – installation in solid brick wall	Wet installation	120x200 - 1000x1000*
	Minimum thickness of the wall – 120 mm		
	Minimum density of the wall – 550 kg/m ³		
	Concrete or cement lime masonry mortar		
	ve i<-> o, distance between dampers 200 mm , to wall corner 75 mm		
Solid wall Without duct	EI 120 S – installation in solid brick wall	Wet installation	-
	Minimum thickness of the wall – 120 mm		
	Minimum density of the wall – 550 kg/m ³		
	Concrete or cement lime masonry mortar. If using wall grills, additional must be covered both wall sides with 12,5 mm gypsum boards.		
	ve i<-> o, atstumas tarp sklendzių 200 mm , iki sienos kampo 75 mm		120x200 - 1000x1000*

* Maximum allowable cross section area of fire damper - 1,0 m².



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WxH – air duct dimensions [mm], v – speed [m/s], S_{ort} – duct cross section area [m²], S_{ps} – damper cross section area [m²], Q – air flow [m³/h], dp – pressure drop [Pa], L_{wa} – sound power [dB].

EI 60 S

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	0,034	4	490	6	26
			6	734	13	36
			8	979	24	44
			10	1224	37	49
400 x 200	0,080	0,068	4	979	6	28
			6	1469	13	39
			8	1958	22	46
			10	2448	35	52
800 x 200	0,160	0,136	4	1958	5	30
			6	2938	12	41
			8	3917	21	48
			10	4896	33	54
1000 x 200	0,20	0,170	4	2448	5	31
			6	3672	12	41
			8	4896	21	49
			10	6120	32	54
400 x 400	0,160	0,136	4	1958	5	30
			6	2938	12	41
			8	3917	21	48
			10	4896	33	54
800 x 400	0,32	0,272	4	3917	5	33
			6	5875	11	43
			8	7834	20	50
			10	9792	31	56
1000 x 400	0,40	0,340	4	4896	5	33
			6	7344	11	43
			8	9792	19	51
			10	12240	30	57
600 x 600	0,360	0,306	4	4406	5	32
			6	6610	11	43
			8	8813	19	50
			10	11016	30	56
800 x 600	0,480	0,408	4	5875	5	33
			6	8813	10	44
			8	11750	19	51
			10	14688	29	57
1000 x 600	0,600	0,510	4	7344	4	34
			6	11016	10	44
			8	14688	18	52
			10	18360	28	57

Technical data

EI 60 S

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	0,544	4	7834	4	34
			6	11750	10	44
			8	15667	18	52
			10	19584	28	58
1000 x 800	0,800	0,680	4	9792	4	34
			6	14688	9	44
			8	19584	17	52
			10	24480	26	58
1000 x 1000	1,000	0,850	4	12240	4	34
			6	18360	9	44
			8	24480	15	52
			10	30600	24	58