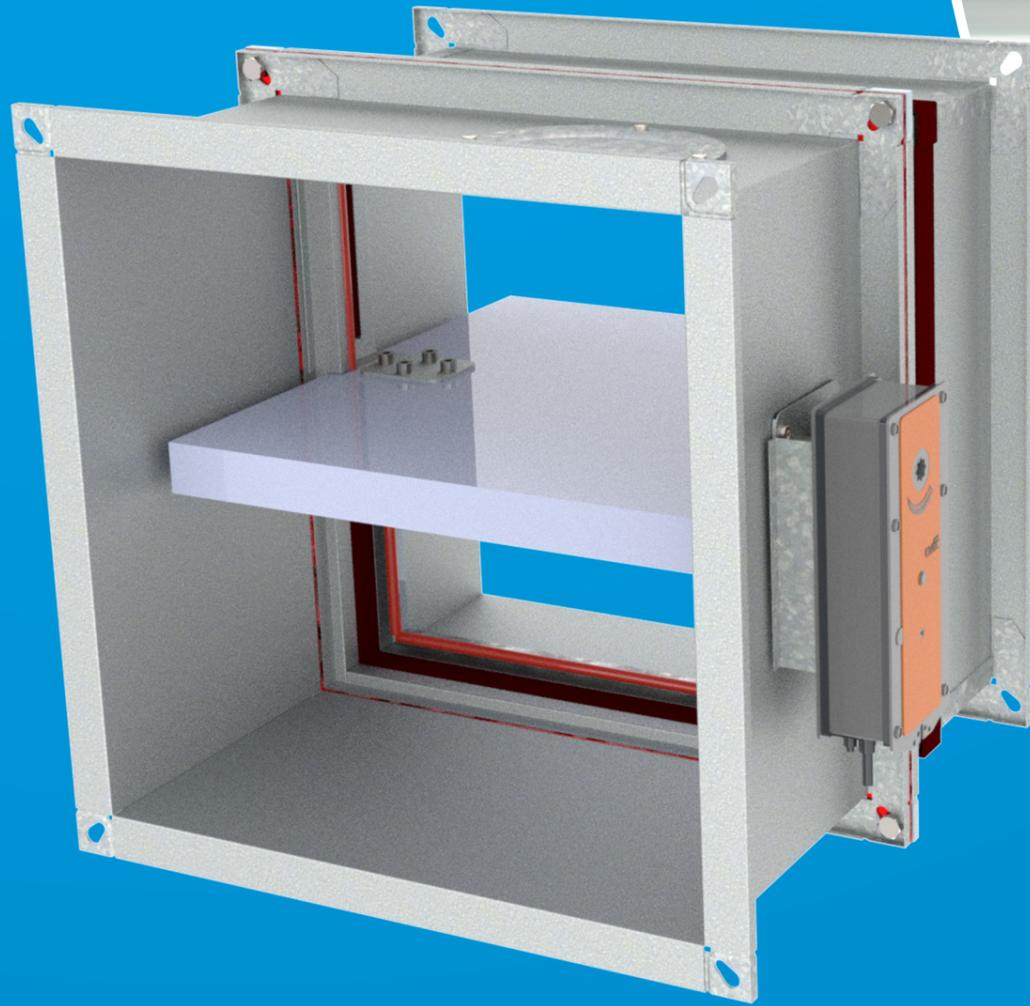
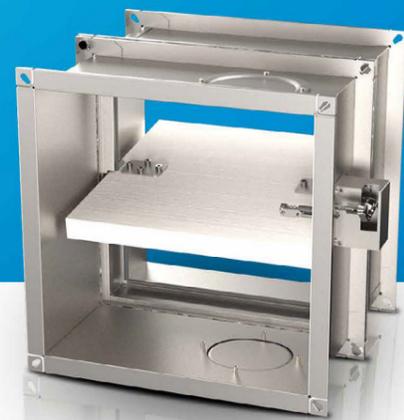


# VGF

PRISMATIC FIRE AND  
SMOKE DAMPER



# ATEX-CERTIFIED Prismatic Fire and Smoke Damper IMPENETRABLE



**VGF Prismatic and Smoke Fire Damper**, certified for use in explosive and flammable environments with the **ATEX** certificate, prevents the spread of flames and smoke in the fire zone for **120 minutes** in compliance with the **EN15650** standard.



## VGF

## PRISMATIC FIRE AND SMOKE DAMPER

### FEATURES

- It has been subjected to 132 minutes Fire Resistance Test according to EN 1366-2: 2015 standard by "Applus + Laboratories", which has ENAC [Spanish Accreditation Agency] accreditation. According to EN 13501-3:2005 +A1:2009 standard, EI 120 [and, ho i <-> o] S fire resistance class conditions are met.
- It can be produced between 200 x 200 mm and 1300 x 800mm.
- The blade is in open position as a standard during operation, the closing mechanism of the blade works with a spring return servo motor with 24V AC/DC supply voltage.
- VGF - Prismatic Fire / Smoke Damper is used to isolate other parts of the ventilation system from flame, smoke and heat [EIS] in case of fire in one part of the ventilation system. It can be installed in direction of air flow or in the opposite direction.

### MATERIAL

Part Name	Type of Material
Frame	1,20 mm Galvanized Sheet
Blade	Ca <sub>2</sub> SiO <sub>4</sub> [Calcium Silicate]
Frame Inside Gasket	Intumescent Gasket [Swelling with heat]
Blade Gasket	Fireproof Gasket
Blade Bushing	Brass Rod - Ø30 mm
Blade Shell	Stainless Steel Sheet
Blade Arm	Galvanized
Blade Shaft	Steel Vending Machine

The casing of VGF - Prismatic Fire / Smoke Damper is manufactured from galvanized sheet without welding. Thus, its corrosion resistance is high. Ca<sub>2</sub>SiO<sub>4</sub> [Calcium Silicate] is used as blade material. Silicone-based fire-resistant sealed buffers are installed. Apart from this, there is a hidden intumescent gasket [heat swelling gasket] inside the casing to maintain impermeability at high temperatures.

Blade shafts are produced from automat material, zinc plated. It has high corrosion resistance. Bushing parts are made of brass material. Since these two materials are compatible, it does not require lubrication for years and maintains its first-day working performance.

Blade motor connection arms are made of galvanized steel. Connection arms are made with 304 quality stainless steel shafts.

## STANDARD DIMENSIONS

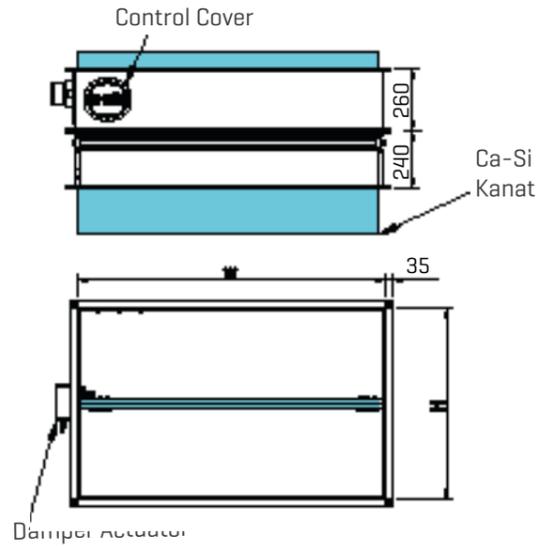


Table 1. Standard Dimensions

Standard Dimensions															
W [Width] [mm]	200	250	300	350	400	450	500	600	700	800	900	1000	1100	1200	1300
H [Height] [mm]	200	250	300	350	400	450	500	600	700	800					

## SELECTION

Table 2. Effective Area Table

W/H [mm]	200	250	300	350	400	450	500	600	700	800
200	0,028	0,037	0,046	0,055	0,064	0,073	0,082	0,113	0,133	0,153
250	0,035	0,046	0,058	0,069	0,080	0,091	0,102	0,141	0,166	0,191
300	0,042	0,056	0,069	0,083	0,096	0,109	0,123	0,150	0,176	0,203
350	0,049	0,065	0,081	0,096	0,112	0,128	0,143	0,175	0,206	0,237
400	0,057	0,075	0,092	0,110	0,128	0,146	0,164	0,200	0,236	0,272
450	0,064	0,084	0,104	0,124	0,144	0,165	0,185	0,225	0,265	0,306
500	0,071	0,093	0,116	0,138	0,160	0,183	0,205	0,250	0,295	0,340
600	0,085	0,112	0,139	0,166	0,193	0,220	0,246	0,300	0,354	0,408
700	0,099	0,131	0,162	0,193	0,225	0,256	0,288	0,351	0,413	0,476
800	0,113	0,149	0,185	0,221	0,257	0,293	0,329	0,401	0,473	0,544
900	0,128	0,168	0,209	0,249	0,289	0,330	0,370	0,451	0,532	0,613
1000	0,142	0,187	0,232	0,277	0,322	0,366	0,411	0,501	0,591	0,681
1100	0,156	0,206	0,255	0,304	0,354	0,403	0,453	0,551	0,650	0,749
1200	0,170	0,224	0,278	0,332	0,386	0,440	0,494	0,602	0,709	0,817
1300	0,185	0,243	0,301	0,360	0,418	0,477	0,535	0,652	0,769	0,885

Table 3. Damper Weight Table

W/H [mm]	200	250	300	350	400	450	500	600	700	800
200	10,3	11,2	12,2	13,1	14,1	15,1	16	-	-	-
250	11,2	12,3	13,4	14,4	15,5	16,6	17,6	-	-	-
300	12,2	13,4	14,5	15,7	16,9	18,1	19,2	21,6	23,9	26,3
350	13,1	14,4	15,7	17	18,3	19,6	20,8	23,4	25,9	28,5
400	14,1	15,5	16,9	18,3	19,7	21,1	22,5	25,3	28,1	30,9
450	15,1	16,6	18,1	19,6	21,1	22,6	24,1	27,1	30,1	33,1
500	16	17,6	19,2	20,8	22,5	24,1	25,7	29	32,2	35,5
600	17,9	19,8	21,6	23,4	25,3	27,1	28,9	32,6	36,2	39,9
700	19,8	21,9	23,9	26	28,1	30,1	32,2	36,4	40,5	44,7
800	21,8	24	26,3	28,6	30,8	33,1	35,4	39,9	44,5	49
900	23,7	26,2	28,6	31,1	33,6	36	38,5	43,5	45,4	53,4
1000	25,6	28,3	31	33,7	36,4	39,1	41,8	47,2	52,6	58
1100	27,5	28,3	33,3	36,3	39,2	42,1	45,1	51	56,9	62,8
1200	29,4	32,6	35,7	38,8	42	45,1	48,2	54,5	60,7	67
1300	31,4	34,7	38,1	41,4	44,7	48,1	51,4	58	64,7	71,3

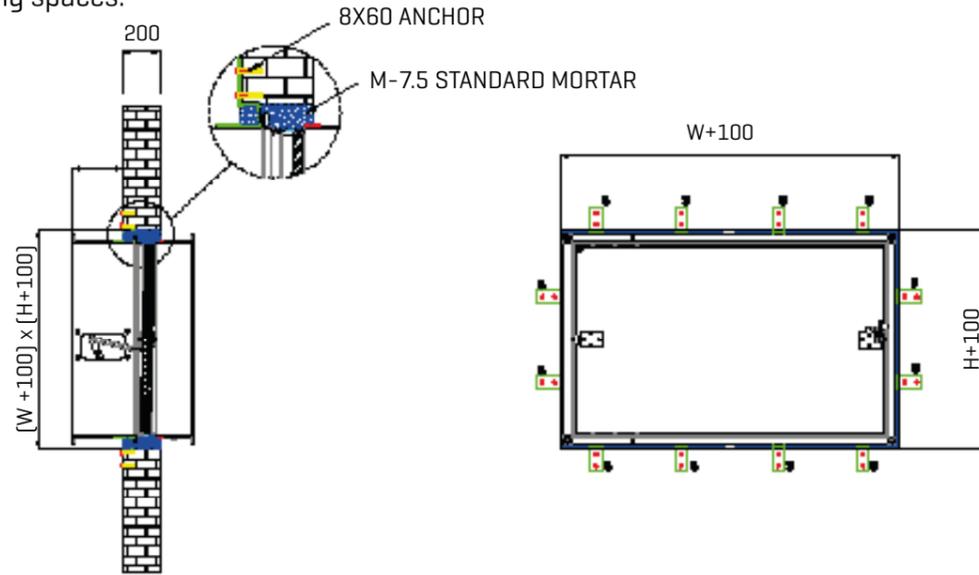
Table 4. Sound Level and Pressure Loss

	V [m/s]											
		200	250	300	350	400	450	500	600	700	800	
Pressure Drop [Pa]	3 m/s	13,4	7,5	5	4,5	3,5	3	2,5	2,2	2	1,5	
	4 m/s	23,8	13,8	9	7,5	6	5	4,5	3,5	3	2,5	
	5 m/s	36,2	21	14	12	9	8	7	5,5	5	4	
	6 m/s	>50	30	20	17	13	11	10	8	7	6	
	7 m/s	>50	41	28	24	18	16	14	11,5	10	8	
	8 m/s	>50	>50	36	30	23	20	17	14	12,5	11	
	9 m/s	>50	>50	46	39	30	27	23	19	16	14	
	10 m/s	>50	>50	>50	48	37	31	28	23	20	17	
	Sound Power Level [dB]	3 m/s	34	<30	<30	<30	<30	<30	<30	<30	<30	<30
		4 m/s	41	36	33	31	30	<30	<30	<30	<30	<30
5 m/s		47	42	39	38	36	35	35	35	35	35	
6 m/s		>50	47	44	43	42	42	41	41	41	41	
7 m/s		>50	>50	48	47	46	46	46	46	46	46	
8 m/s		>50	>50	>50	>50	>50	50	50	50	50	50	
9 m/s		>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	
10 m/s		>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	

## ASSEMBLY

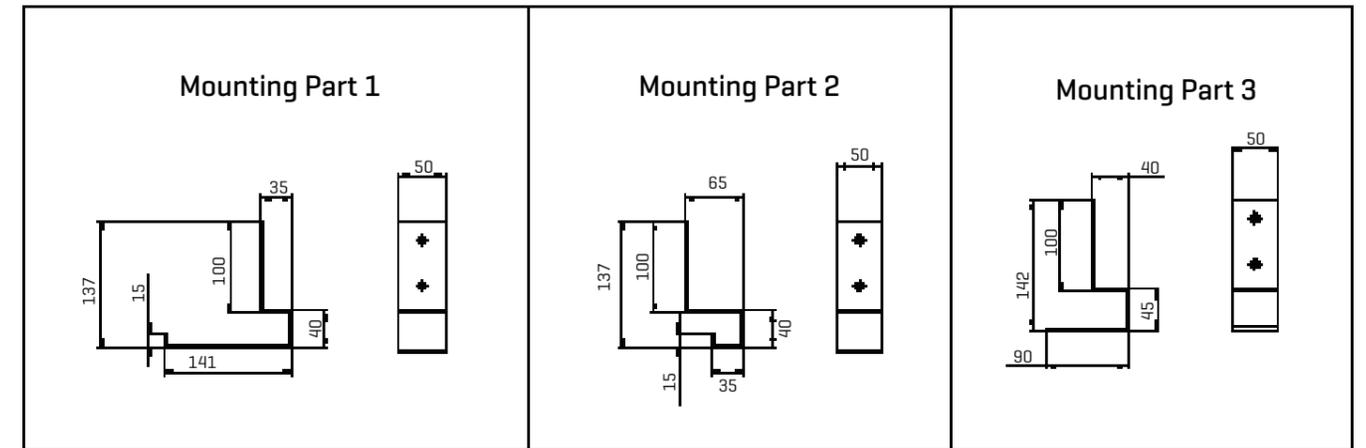
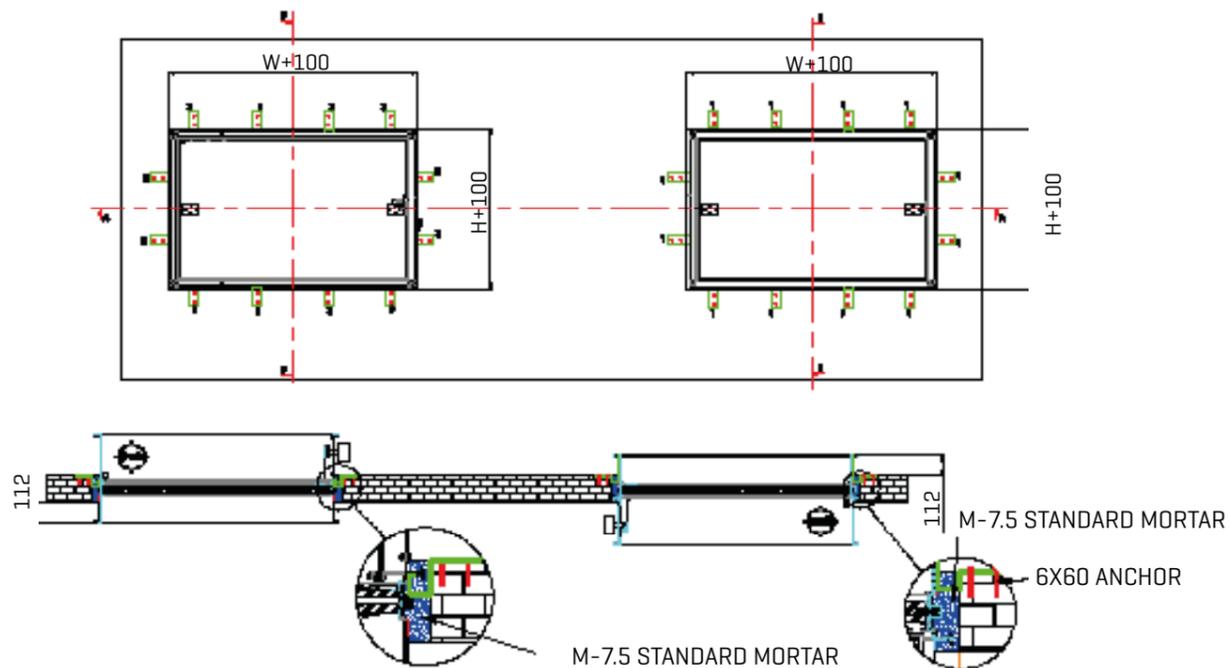
### 1. Vertical [Wall] Mounting

VGF is mounted on a 150 mm thick ytong wall with a density of 500 kg / m<sup>3</sup> high. A mounting hole is opened on the wall as the order size is W and H [W + 100 x H + 100]. The damper is mounted to the wall with the mounting parts and dowels in the following dimensions. M7.5 pressure resistant mortar is filled in the remaining spaces.

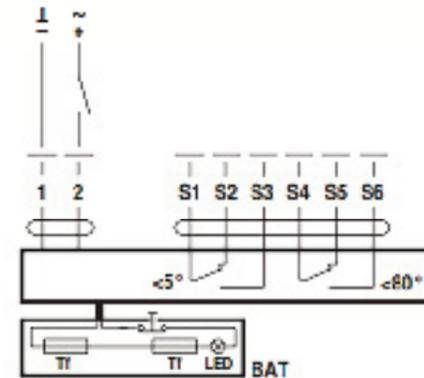


### 2. Horizontal [Ceiling] Installation

It is mounted on a 150 mm thick concrete wall. The mounting hole is drilled on the wall in order sizes W and H [W + 100 x H + 100]. The damper is mounted to the ceiling with the mounting parts and dowel in the following dimensions. M7.5 tant mortar is filled in the remaining spaces.



## ACTUATOR CONNECTION DIAGRAM



### Cable Colours

- 1= black
- 2= red
- S1= violet
- S2= red
- S3= white
- S4= orange
- S5= pink
- S6= grey
- Tf: Thermal fuse [see "Technical data"]

# SUSTAINABILITY SOLUTIONS AT DOGU HVAC



We offer supplementary health insurance to our employees to promote healthy living. We also plan health-focused initiatives such as smoking cessation programs.



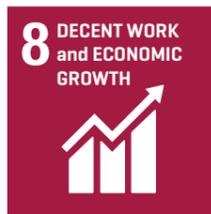
Through the DOGU HVAC CLUB project, we organize technical tours of our factory, participate in career events, and provide sponsorships to support the skill development of university and technical high school students.



In 2024, we increased female employment in our administrative and production departments. This step aims to contribute to gender equality by offering a workplace with equal rights for all employees.



Our R&D center's 2,500 m<sup>2</sup> solar panels and 0.6 MW annual capacity solar energy systems reduce our carbon footprint. We generate our electricity, ensuring a reliable, sustainable, and accessible clean energy source.



Decent Work and Economic Growth: As an employer brand, our primary goal is to protect our employees' rights and create a workplace founded on equality and justice for all employees.



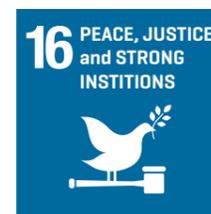
We enhance indoor air quality with environmentally friendly and energy-efficient products, ensuring adherence to European standards.



We minimize waste through lean production policies and emphasize recycling, simultaneously increasing efficiency in our production processes.



We support environmental protection through our eco-friendly, sustainable, energy-efficient product lines and R&D efforts focused on reducing waste that could contribute to climate change.



We value transparency and accountability, working with associations like ISKAV to prevent corruption and unfair competition, aligning with sectoral ethical values.



## Venues Breathe With Us



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