



**DGK**  
Door Gate Grille

# Venues Breathe with DOGU HVAC Systems!

DOGU HVAC founded in 1999, and ever since has been manufacturing Energy-and Cost-Efficient products as Air Handling Units, Air Distribution & Management & Movement Systems [HVAC Components] and constantly enhancing to provide an integrated solution for well-being. DOGU HVAC's core business products which are subsumed under 4 major groups as Air Handling Units, Heat/Energy Recovery Units, Air Distribution & Management Products and Kitchen Ventilation Equipment are all produced under the compliance with EU standarts. Particularly AHU and HRU-ER units are entitled under the "FOUR SEASONS" brand name for domestic and foreign markets. DOGU HVAC's, headquarter in Izmir/Turkey, operates in a large-sized plant spread over 2 factories, in total area of 45.000 sqm in which 25.000 sqm indoor space that enables DOGU HVAC manufactures 140 various type of products. Additionally, DOGU HVAC has a powerful sales network with 3 sales offices located in Istanbul, Ankara and Antalya in Turkey as well as authorized dealers in many other countries for sales and after sales operations. DOGU HVAC has been exporting to more than 50 countries.

Thanks to our "Customer Satisfaction", "Zero-Defect Policy" motto and reinforced by complete certified products, more than 250 employees. DOGU HVAC R&D center developed exclusive products, such as Double Skin Make-Up Kitchen Hood, Recirculated Laminar Airflow Unit, Single Piece Square Ceiling Diffuser and Ecology Units, for the first time have brought to the sector. DOGU HVAC R&D has the ability to make customized production which can meet the requirement of the customers by means of special software such as "ANSYS FLUENT". DOGU HVAC guaranteed its quality of management by having advantages of ISO 9001, ISO 14001, ISO 18001 certifications. Air Handling Units have EUROVENT, TUV Hygiene [in accordance with DIN1946-4, VDI 6022-1, DIN EN 13053 standarts], CE, TSEK, GOST-R certifications; Fire Dampers have EN 1366-2 and EN 13501-3 CE certifications; Smoke Control Dampers have EN 1366-10 and 12101-8 CE certifications; Kitchen Ventilation Products have TSE, CE and GOST-R quality certifications.



- ☞ DGK – Door Transfer Grille is a transfer grille with wings that offer low pressure loss with its aesthetic appearance.
- ☞ It has a double-sided structure.
- ☞ It is used in situations where air distribution is desired with pressure difference between spaces. Used for positioning on doors, since it consists of V-shaped wing group, it prevents visible light passage.



## MATERIAL

- ☞ Frame and blades made of aluminum 6063 extruded profile

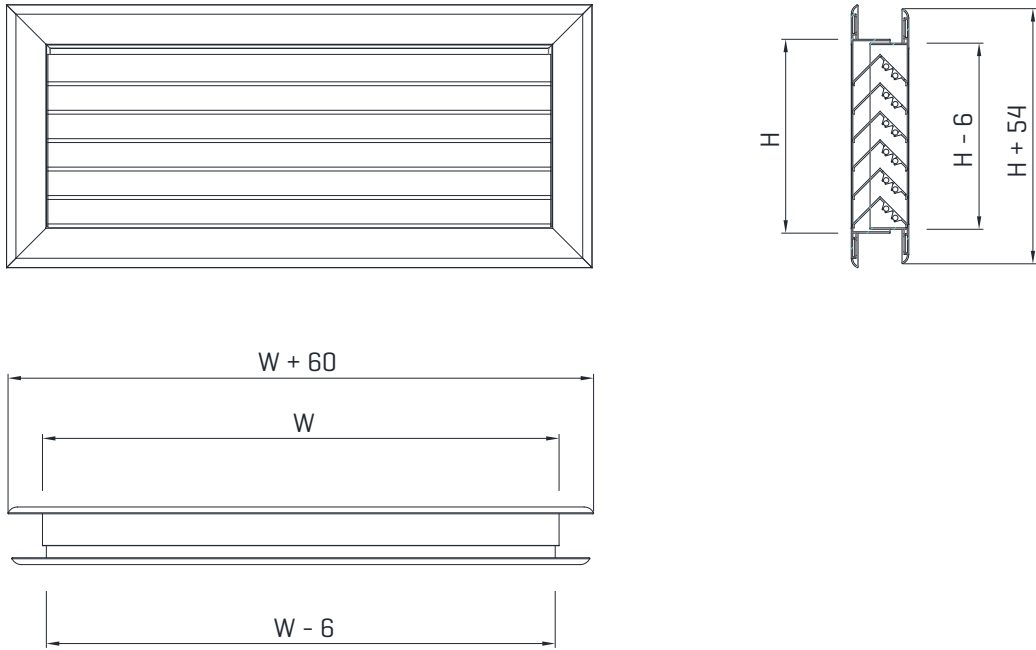
## SURFACE COATING

- ☞ RAL 9010 or RAL 9016 electrostatic powder paint as standard.
- ☞ Optional
  - Different RAL color codes
  - Matt Aluminum anodized finish for matte and metallic look
  - Unpainted manufacturing

## MOUNTING OPTIONS

- ☞ Screw System
- ☞ Without Mounting Hole

## STANDARD DIMENSIONS



**Table 1.** Standard Sizes

<b>W (mm) (Width)</b>	200 - 300 - 400 - 500 - 600 - 700 - 800 - 900 - 1000 - 1100 - 1200
<b>H (mm) (Height)</b>	100 - 200 - 300 - 400 - 500 - 600 - 700 - 800 - 900

## PERFORMANCE DATA

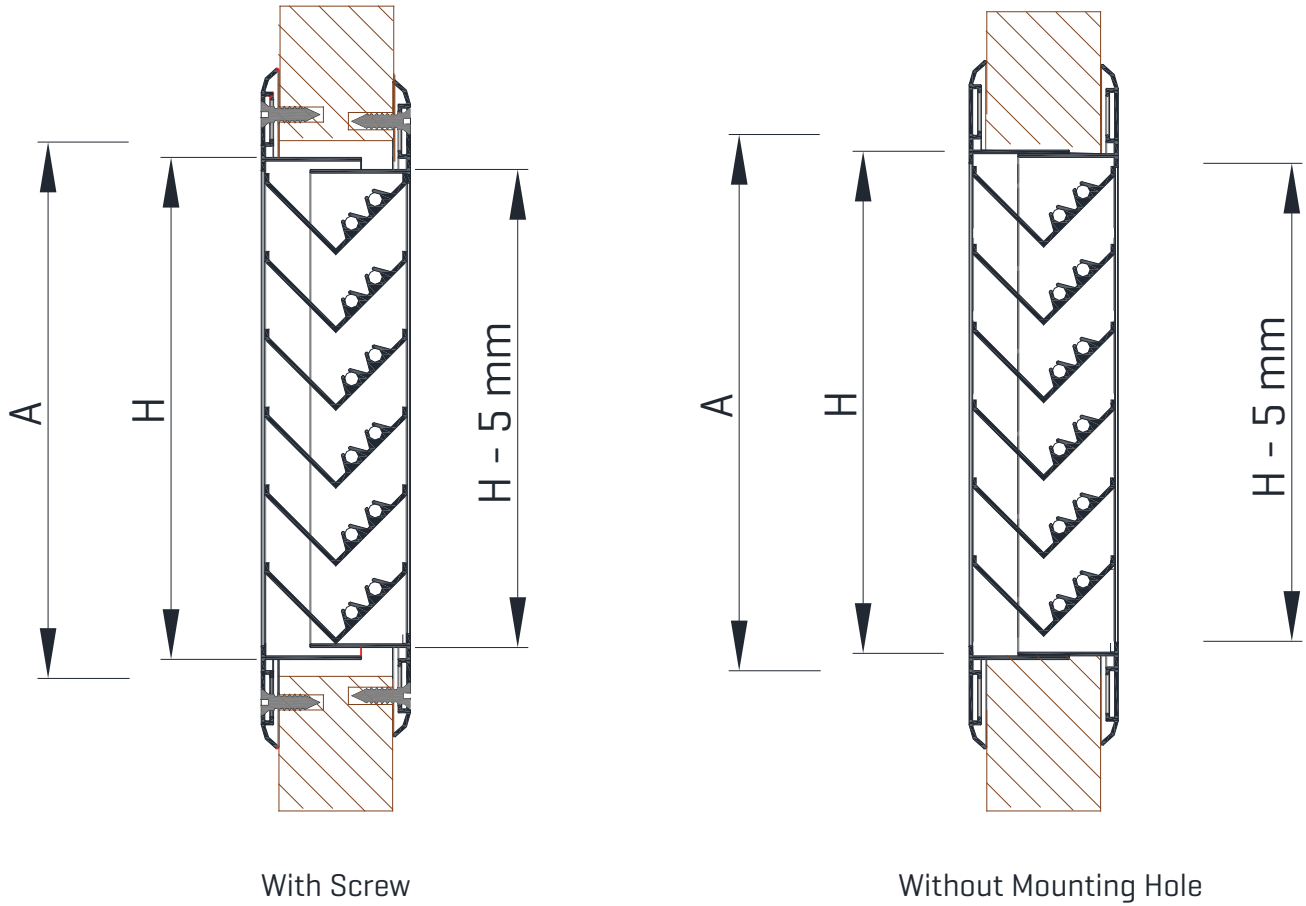
**Table 2.** Effective Areas

Effective Areas (m <sup>2</sup> )		H (mm)												
		100	150	200	250	300	350	400	450	500	600	700	800	900
W (mm)	W x H													
	200	0.020	0.029	0.039	0.048	0.056	0.065	0.074	0.083	0.091	0.108	0.125	0.142	0.158
	250	0.025	0.036	0.048	0.059	0.070	0.080	0.091	0.102	0.112	0.133	0.154	0.175	0.195
	300	0.029	0.043	0.056	0.070	0.083	0.095	0.108	0.121	0.133	0.158	0.183	0.207	0.231
	350	0.034	0.050	0.065	0.080	0.095	0.110	0.125	0.140	0.154	0.183	0.211	0.240	0.267
	400	0.039	0.056	0.074	0.091	0.108	0.125	0.142	0.158	0.175	0.207	0.240	0.271	0.303
	450	0.043	0.063	0.083	0.102	0.121	0.140	0.158	0.177	0.195	0.231	0.267	0.303	0.339
	500	0.048	0.070	0.091	0.112	0.133	0.154	0.175	0.195	0.215	0.256	0.295	0.335	0.374
	550	0.052	0.076	0.100	0.123	0.146	0.169	0.191	0.213	0.236	0.279	0.323	0.366	0.409
	600	0.056	0.083	0.108	0.133	0.158	0.183	0.207	0.231	0.256	0.303	0.350	0.397	0.443
	700	0.065	0.095	0.125	0.154	0.183	0.211	0.240	0.267	0.295	0.350	0.405	0.459	0.512
	800	0.074	0.108	0.142	0.175	0.207	0.240	0.271	0.303	0.335	0.397	0.459	0.520	0.581
	900	0.083	0.121	0.158	0.195	0.231	0.267	0.303	0.339	0.374	0.443	0.512	0.581	0.649
1000	0.091	0.133	0.175	0.215	0.256	0.295	0.335	0.374	0.413	0.490	0.566	0.641	0.716	
1200	0.108	0.158	0.207	0.256	0.303	0.350	0.397	0.443	0.490	0.581	0.671	0.761	0.850	

Table 3. Performance Data

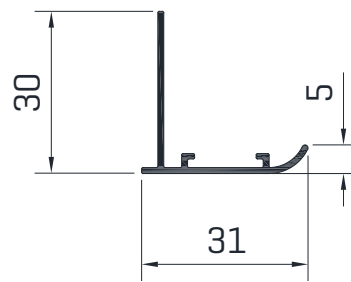
Flow Rate [m³/h]		Effective Speed [m/s]					
		0.5	1.0	1.5	2.0	2.5	3.0
50	Effective Area [m²]	0.0278					
	Pressure Drop [Pa]	5					
	Sound Pressure Level [dB(A)]	<15					
100	Effective Area [m²]	0.0556	0.0278				
	Pressure Drop [Pa]	5	18				
	Sound Pressure Level [dB(A)]	<15	<15				
200	Effective Area [m²]	0.111	0.056	0.037	0.028	0.022	
	Pressure Drop [Pa]	4	18	40	71	112	
	Sound Pressure Level [dB(A)]	<15	16	26	34	40	
300	Effective Area [m²]	0.167	0.083	0.056	0.042	0.033	0.028
	Pressure Drop [Pa]	4	17	39	70	110	158
	Sound Pressure Level [dB(A)]	<15	17	28	35	41	46
400	Effective Area [m²]	0.222	0.111	0.074	0.056	0.044	0.037
	Pressure Drop [Pa]	4	17	39	69	108	156
	Sound Pressure Level [dB(A)]	<15	18	29	36	42	47
500	Effective Area [m²]	0.278	0.139	0.093	0.069	0.056	0.046
	Pressure Drop [Pa]	4	17	38	68	107	154
	Sound Pressure Level [dB(A)]	<15	19	30	37	43	48
600	Effective Area [m²]	0.333	0.167	0.111	0.083	0.067	0.056
	Pressure Drop [Pa]	4	17	38	67	106	153
	Sound Pressure Level [dB(A)]	<15	20	30	38	44	49
700	Effective Area [m²]	0.389	0.194	0.130	0.097	0.078	0.065
	Pressure Drop [Pa]	4	17	37	67	105	151
	Sound Pressure Level [dB(A)]	<15	20	31	38	44	49
800	Effective Area [m²]	0.444	0.222	0.148	0.111	0.089	0.074
	Pressure Drop [Pa]	4	16	37	66	104	150
	Sound Pressure Level [dB(A)]	<15	21	31	39	45	50
900	Effective Area [m²]	0.500	0.250	0.167	0.125	0.100	0.083
	Pressure Drop [Pa]	4	16	37	66	103	149
	Sound Pressure Level [dB(A)]	<15	21	32	39	45	50
1000	Effective Area [m²]	0.556	0.278	0.185	0.139	0.111	0.093
	Pressure Drop [Pa]	4	16	37	65	103	148
	Sound Pressure Level [dB(A)]	<15	22	32	40	46	50
1250	Effective Area [m²]	0.694	0.347	0.231	0.174	0.139	0.116
	Pressure Drop [Pa]	4	16	36	65	101	147
	Sound Pressure Level [dB(A)]	<15	22	33	41	46	51
1500	Effective Area [m²]	0.833	0.417	0.278	0.208	0.167	0.139
	Pressure Drop [Pa]	4	16	36	64	100	145
	Sound Pressure Level [dB(A)]	<15	23	34	41	47	52
1750	Effective Area [m²]		0.486	0.324	0.243	0.194	0.162
	Pressure Drop [Pa]		16	36	64	100	144
	Sound Pressure Level [dB(A)]		24	34	42	48	53
2000	Effective Area [m²]		0.556	0.370	0.278	0.222	0.185
	Pressure Drop [Pa]		16	35	63	99	143
	Sound Pressure Level [dB(A)]		24	35	42	48	53
2500	Effective Area [m²]		0.694	0.463	0.347	0.278	0.231
	Pressure Drop [Pa]		15	35	62	98	141
	Sound Pressure Level [dB(A)]		25	36	43	49	54
3000	Effective Area [m²]		0.833	0.556	0.417	0.333	0.278
	Pressure Drop [Pa]		15	35	62	97	140
	Sound Pressure Level [dB(A)]		26	36	44	50	55
4000	Effective Area [m²]			0.741	0.556	0.444	0.370
	Pressure Drop [Pa]			34	61	95	138
	Sound Pressure Level [dB(A)]			37	45	51	56
5000	Effective Area [m²]				0.694	0.556	0.4630
	Pressure Drop [Pa]				60	94	136
	Sound Pressure Level [dB(A)]				46	52	56

## INSTALLATION



A: Installation Opening  $(W+10 \text{ mm}) \times (H+10 \text{ mm})$

## FRAME TYPE



31 mm Frame

## SIZE PARAMETERS

It has size limits of 200x100 mm and 1200x900 mm. Support is applied when the product width is longer than 600 mm.

**If  $0 < W \leq 600$ , without support**



**If  $600 < W \leq 1200$ , with 1 support**



## PRODUCT SELECTION

**Example:** The air flow to be transferred from the door at the site has been determined as 500 m<sup>3</sup>/h. Pressure loss below 20 Pa is requested. 1 door passage grille will be used. Make your product selection.

**Solution:** For 500 m<sup>3</sup>/h air flow, effective areas corresponding to the appropriate pressure loss, throw distance and flow rate values are selected from the performance data table [Table 3].

For example, in an effective area of 0.139 m<sup>2</sup>, the pressure loss is 17 Pa and the sound pressure is 19 dB(A). The appropriate grille size is selected from the effective area table [Table 2] as 800 mm x 200 mm, corresponding to the value of 0.139 m<sup>2</sup>.

## PRODUCT ORDER CODES

You can place your orders according to the following coding format.

**DGK.<A>.<B>.<C>.<D>.<E>.<F>**

<b>A</b>	<b>Raw Material Type</b>	
	ALM	Aluminum
	EAL	Eloxal Aluminum
<b>B</b>	<b>Frame Type</b>	
	05	31 mm Frame
<b>C</b>	<b>Type of Mounting</b>	
	VD	Screw System
	MD	Without Mounting Hole
<b>D</b>	<b>Width (W) [mm]</b>	
	0000	You can look at the standard sizes
<b>E</b>	<b>Height (H) [mm]</b>	
	0000	You can look at the standard sizes
<b>F</b>	<b>Paint</b>	
	00	Unpainted
	S1	Standard Painted - RAL 9010
	S2	Standard Painted - RAL 9016
	XX	Special Painted

**Sample Coding;** DGK.ALM.05.VD.1000.0900.S1













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