DOĞU
İKLİMLENDİRME | HVAC SYSTEMS

DMT

Single Deflection Grille

FOUR SEASONS®

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.

- DMT – Single Deflection Grille, has one row independently adjustable aerodynamic blades for the advanced air direction control.
- Suitable for supply or extract air.

MATERIAL

- Aluminium 6063 extrusion profile production
- Optional AISI 304 quality stainless steel production

SURFACE COATING

- RAL 9010 or RAL 9016 electrostatic powder paint as standard
- Optional
  - Different RAL color codes
  - Matt aluminium eloxal finish for a matte and metallic look
  - Unpainted manufacturing

INSTALLATION OPTIONS

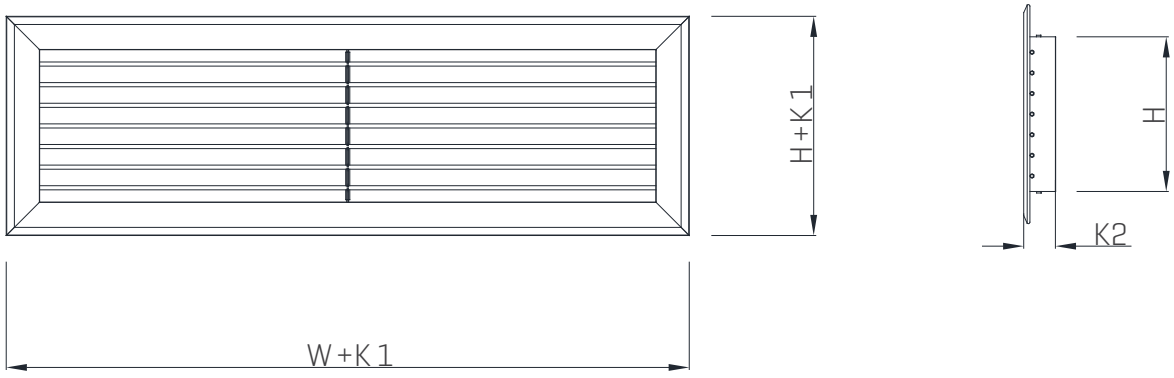
- Screw System
- Suspended Ceiling
- Clip-In Ceiling
- Mounting Bracket
- Without Mounting Hole
- Concealed
- Long Spring Clip
- Blind Frame Short Spring Clip

ACCESSORIES

- Optional
  - ZKD – Opposite Blade Air Adjustment Damper (Production from aluminum 6063 extrusion profile)

PRODUCT SELECTION

STANDARD DIMENSIONS



	K1 (mm)	K2 (mm)
22 mm Frame	42	31.8
32 mm Frame	62.6	31
Clip-in Frame	59.2	30
Stainless-Steel Frame	57.8	30

Table 1. Standard Dimesions

Standard Dimensions		H (Height) (mm)										
		50	100	200	300	400	500	600	700	800	900	1000
W (Width) (mm)	100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	200	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	300	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	400	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	500	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	600	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	700	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	800	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	900	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	1000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	1100	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	1200	✓	✓	✓	✓	✓	✓	✓				
	1300	✓	✓	✓	✓	✓	✓	✓				
	1400	✓	✓	✓	✓	✓	✓	✓				
	1500	✓	✓	✓	✓	✓	✓	✓				
	1600	✓	✓	✓	✓	✓	✓	✓				
	1700	✓	✓	✓	✓	✓	✓	✓				
	1800	✓	✓	✓	✓	✓	✓	✓				

Note: Maximum dimensions for stainless steel production are 1200 mm x 600 mm.

PERFORMANCE DATA

Table 2. Effective Area

Effective Area [m²]		H (Height) (mm)										
		50	100	200	300	400	500	600	700	800	900	1000
W (Width) (mm)	100	0.003	0.007	0.013	0.020	0.027	0.033	0.040	0.047	0.053	0.060	0.067
	200	0.007	0.013	0.027	0.040	0.053	0.067	0.080	0.093	0.106	0.120	0.133
	300	0.010	0.020	0.040	0.060	0.080	0.100	0.120	0.140	0.160	0.180	0.200
	400	0.013	0.027	0.053	0.080	0.106	0.133	0.160	0.186	0.213	0.240	0.266
	500	0.017	0.033	0.067	0.100	0.133	0.166	0.200	0.233	0.266	0.299	0.333
	600	0.020	0.040	0.080	0.120	0.160	0.200	0.240	0.280	0.319	0.359	0.399
	700	0.023	0.047	0.093	0.140	0.186	0.233	0.280	0.326	0.373	0.419	0.466
	800	0.027	0.053	0.106	0.160	0.213	0.266	0.319	0.373	0.426	0.479	0.532
	900	0.030	0.060	0.120	0.180	0.240	0.299	0.359	0.419	0.479	0.539	0.599
	1000	0.033	0.067	0.133	0.200	0.266	0.333	0.399	0.466	0.532	0.599	0.666
	1100	0.037	0.073	0.146	0.220	0.293	0.366	0.439	0.512	0.586	0.659	0.732
	1200	0.040	0.080	0.160	0.240	0.319	0.399	0.479				
	1300	0.043	0.087	0.173	0.260	0.346	0.433	0.519				
	1400	0.047	0.093	0.186	0.280	0.373	0.466	0.559				
	1500	0.050	0.100	0.200	0.299	0.399	0.499	0.599				
	1600	0.053	0.106	0.213	0.319	0.426	0.532	0.639				
	1700	0.057	0.113	0.226	0.339	0.453	0.566	0.679				
	1800	0.060	0.120	0.240	0.359	0.479	0.599	0.719				

Table 3. Supply Data

		Effective Speed (m/s)														
Flow Rate (m³/h)		0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0	8.0	9.0	10.0
50	Effective Area [m²]	0.0278	0.0139	0.009	0.007	0.006	0.005	0.0040	0.0035							
	Pressure Drop [Pa]	0	1	2	4	6	8	11	15							
	Throw Distance [m]	1	2	2	3	3	3	4	4							
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	<15	<15	<15							
100	Effective Area [m²]	0.0556	0.0278	0.019	0.014	0.011	0.009	0.008	0.007	0.006	0.006	0.005	0.0040	0.0035		
	Pressure Drop [Pa]	0	1	2	4	6	8	11	15	19	24	34	47	62		
	Throw Distance [m]	1	2	2	3	3	4	4	4	4	5	5	6	6		
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	<15	<15	17	20	23	28	32	35		
200	Effective Area [m²]	0.111	0.056	0.037	0.028	0.022	0.019	0.016	0.014	0.012	0.011	0.009	0.008	0.007	0.0062	0.0056
	Pressure Drop [Pa]	0	1	2	4	6	8	11	15	19	24	35	48	63	80	100
	Throw Distance [m]	1	2	2	3	3	4	4	4	5	5	5	6	9	7	7
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	<15	16	20	23	26	31	35	38	42	44
300	Effective Area [m²]	0.167	0.083	0.056	0.042	0.033	0.028	0.024	0.021	0.019	0.017	0.014	0.012	0.010	0.009	0.008
	Pressure Drop [Pa]	0	1	2	4	6	8	11	15	19	24	35	48	63	81	100
	Throw Distance [m]	1	2	3	3	3	4	4	4	5	5	5	6	6	7	7
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	<15	18	21	25	28	32	37	40	43	46
400	Effective Area [m²]	0.222	0.111	0.074	0.056	0.044	0.037	0.032	0.028	0.025	0.022	0.019	0.016	0.014	0.012	0.011
	Pressure Drop [Pa]	0	1	2	4	6	8	11	15	19	24	35	48	63	81	100
	Throw Distance [m]	1	2	3	3	3	4	4	4	5	5	5	6	6	7	7
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	<15	19	23	26	29	34	38	41	45	47
500	Effective Area [m²]	0.278	0.139	0.093	0.069	0.056	0.046	0.040	0.035	0.031	0.028	0.023	0.020	0.017	0.015	0.014
	Pressure Drop [Pa]	0	1	2	4	6	8	11	15	19	24	35	48	63	81	101
	Throw Distance [m]	1	2	3	3	3	4	4	4	5	5	6	6	6	7	7
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	16	20	24	27	30	35	39	42	46	48
600	Effective Area [m²]	0.333	0.167	0.111	0.083	0.067	0.056	0.048	0.042	0.037	0.0333	0.028	0.024	0.021	0.019	0.017
	Pressure Drop [Pa]	0	1	2	4	6	8	11	15	19	24	35	48	63	81	101
	Throw Distance [m]	1	2	3	3	3	4	4	4	5	5.0	6	6	7	7	7
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	17	21	25	28	31	36	40	43	46	49
700	Effective Area [m²]	0.389	0.194	0.130	0.997	0.078	0.065	0.056	0.049	0.043	0.0389	0.032	0.028	0.024	0.022	0.019
	Pressure Drop [Pa]	0	1	2	4	6	8	11	15	19	24	35	48	64	81	101
	Throw Distance [m]	1	2	3	3	3	4	4	4	5	5.0	6	6	7	7	7
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	18	22	25	28	31	36	40	44	47	50
800	Effective Area [m²]	0.444	0.222	0.148	0.111	0.089	0.074	0.064	0.056	0.049	0.0444	0.037	0.032	0.028	0.025	0.022
	Pressure Drop [Pa]	0	1	2	4	6	8	11	15	19	24	35	48	64	81	101
	Throw Distance [m]	1	2	3	3	3	4	4	4	5	5.0	6	6	7	7	7
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	18	22	26	29	32	37	41	45	48	51
900	Effective Area [m²]	0.500	0.250	0.167	0.125	0.100	0.083	0.071	0.063	0.056	0.0500	0.042	0.036	0.031	0.028	0.025
	Pressure Drop [Pa]	0	1	2	4	6	8	11	15	19	24	35	48	64	81	101
	Throw Distance [m]	1	2	3	3	3	4	4	5	5	5.1	6	6	7	7	7
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	19	23	26	30	32	37	41	45	48	51
1000	Effective Area [m²]	0.556	0.278	0.185	0.139	0.111	0.093	0.079	0.069	0.062	0.0556	0.046	0.040	0.035	0.031	0.028
	Pressure Drop [Pa]	0	1	2	4	6	8	11	15	19	24	35	48	64	81	101
	Throw Distance [m]	1	2	3	3	3	4	4	5	5	5.1	6	6	7	7	8
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	19	23	27	30	33	38	42	46	49	52
1250	Effective Area [m²]	0.694	0.347	0.232	0.174	0.139	0.116	0.099	0.087	0.077	0.0694	0.058	0.050	0.043	0.039	0.035
	Pressure Drop [Pa]	0	1	2	4	6	8	12	15	19	24	35	48	64	82	101
	Throw Distance [m]	1	2	3	3	4	4	4	5	5	5.1	6	6	7	7	8
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	15	20	24	28	31	34	39	43	46	50	52
1500	Effective Area [m²]		0.417	0.278	0.208	0.167	0.139	0.119	0.104	0.0926	0.0833	0.069	0.060	0.052	0.046	0.042
	Pressure Drop [Pa]		1	2	4	6	8	12	15	19	24	35	48	64	82	102
	Throw Distance [m]		2	3	3	4	4	4	5	4.9	5.1	6	6	7	7	8
	Sound Pressure Level [dB(A)]		<15	<15	<15	16	21	24	29	32	35	40	44	47	50	53
1750	Effective Area [m²]		0.486	0.324	0.243	0.194	0.162	0.139	0.122	0.1080	0.0972	0.081	0.069	0.061	0.054	0.049
	Pressure Drop [Pa]		1	2	4	6	8	12	15	19	24	35	49	64	82	102
	Throw Distance [m]		2	3	3	4	4	4	5	5	5	6	6	7	7	8
	Sound Pressure Level [dB(A)]		<15	<15	<15	17	22	26	29	33	35	40	44	48	51	54
2000	Effective Area [m²]		0.556	0.370	0.278	0.222	0.185	0.159	0.139	0.1235	0.1111	0.093	0.079	0.069	0.062	0.056
	Pressure Drop [Pa]		1	2	4	6	8	12	15	19	24	35	49	64	82	102
	Throw Distance [m]		2	3	3	4	4	4	5	5	5	6	6	7	7	8
	Sound Pressure Level [dB(A)]		<15	<15	<15	17	22	26	30	33	36	41	45	49	52	55
2500	Effective Area [m²]		0.694	0.463	0.347	0.278	0.232	0.198	0.174	0.1543	0.1389	0.116	0.099	0.087	0.077	0.069
	Pressure Drop [Pa]		1	2	4	6	8	12	15	19	24	35	49	64	82	102
	Throw Distance [m]		2	3	3	4	4	2	5	5	5	6	6	7	7	8
	Sound Pressure Level [dB(A)]		<15	<15	<15	17	23	27	31	34	37	42	46	50	53	56
3000	Effective Area [m²]			0.556	0.417	0.333	0.278	0.238	0.2083	0.1852	0.1667	0.139	0.119	0.104	0.093	0.0833
	Pressure Drop [Pa]			2	4	6	8	12	15	20	24	35	49	64	82	102
	Throw Distance [m]			3	3	4	4	4	5	5	5	6	6	7	7	8
	Sound Pressure Level [dB(A)]			<15	<15	18	24	28	32	35	38	43	47	50	54	56
4000	Effective Area [m²]			0.741	0.556	0.444	0.370	0.3968	0.2778	0.2469	0.2222	0.185	0.159	0.139	0.1235	0.1111
	Pressure Drop [Pa]			2	4	6	8	12	15	20	24	36	49	65	82	102
	Throw Distance [m]			3	3	4	4	4	5	5	5	6	6	7	7	8
	Sound Pressure Level [dB(A)]			<15	<15	20	25	30	33	36	39	44	48	52	55	58
5000	Effective Area [m²]				0.694	0.556	0.4630	0.595	0.3472	0.3086	0.2778	0.232	0.198	0.1736	0.1543	0.1389
	Pressure Drop [Pa]				4	6	8	12	15	20	24	36	49	65	83	103
	Throw Distance [m]				3	4	4	5	5	5	5	6	7	7	8	8
	Sound Pressure Level [dB(A)]				<15	21	26	32	34	37	40	45	49	53	56	59
7500	Effective Area [m²]						0.694	0.595	0.521	0.4630	0.4167	0.347	0.298	0.260	0.232	0.208
	Pressure Drop [Pa]						9	12	15	20	24	36	49	65	83	103
	Throw Distance [m]						4	5	5	5	5	6	7	7	8	8
	Sound Pressure Level [dB(A)]						28	32	36	39	42	47	51	54	58	60
10000	Effective Area [m²]								0.6944	0.6173	0.5556	0.463	0.397	0.347	0.309	0.2778
	Pressure Drop [Pa]								15	20	25	36	49	65	83	103
	Throw Distance [m]								5	5	6	6	7	7	8	8
	Sound Pressure Level [dB(A)]								37	40	43	48	52	56	59	62

Note: Data were obtained with the air distribution equipment when the ambient air temperature difference is T=8K
Throw distance is the distance between the point where the air leaving the dispenser equipment reaches a speed of 0.25 m/s, and the air dispenser equipment.

Table 4. Extract Data

		Effective Speed (m/s)														
Flow Rate (m³/h)		0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0	8.0	9.0	10.0
50	Effective Area [m²]	0.0278	0.0139	0.0093	0.0069	0.006	0.005	0.004	0.003							
	Pressure Drop [Pa]	0	1	2	3	5	7	10	13							
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	<15	<15	<15							
100	Effective Area [m²]	0.0556	0.0278	0.019	0.014	0.011	0.009	0.008	0.007	0.006	0.006	0.005	0.004	0.0035		
	Pressure Drop [Pa]	0	1	2	3	5	7	10	13	17	21	30	42	56		
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	<15	<15	15	18	21	26	30	34		
200	Effective Area [m²]	0.111	0.056	0.037	0.028	0.022	0.019	0.016	0.014	0.012	0.011	0.009	0.008	0.007	0.0062	0.0056
	Pressure Drop [Pa]	0	1	2	3	5	7	10	13	17	21	31	43	57	73	91
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	<15	<15	18	22	25	29	34	37	41	43
300	Effective Area [m²]	0.167	0.083	0.056	0.042	0.033	0.028	0.024	0.021	0.019	0.017	0.014	0.012	0.010	0.009	0.008
	Pressure Drop [Pa]	0	1	2	3	5	7	10	14	17	22	32	44	58	74	93
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	<15	17	20	24	26	31	36	39	42	45
400	Effective Area [m²]	0.222	0.111	0.074	0.056	0.044	0.037	0.032	0.028	0.025	0.022	0.019	0.016	0.014	0.012	0.011
	Pressure Drop [Pa]	0	1	2	3	5	7	10	14	18	22	32	44	59	75	94
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	<15	18	22	25	28	33	37	41	44	47
500	Effective Area [m²]	0.278	0.139	0.093	0.069	0.056	0.046	0.040	0.035	0.031	0.028	0.023	0.020	0.017	0.015	0.014
	Pressure Drop [Pa]	0	1	2	3	5	8	10	14	18	22	32	45	59	76	95
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	<15	19	23	26	29	34	38	42	45	48
600	Effective Area [m²]	0.333	0.167	0.111	0.083	0.067	0.056	0.048	0.042	0.037	0.0333	0.028	0.024	0.021	0.019	0.017
	Pressure Drop [Pa]	0	1	2	3	5	8	11	14	18	22	33	45	60	76	95
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	16	20	24	27	30	35	39	43	46	49
700	Effective Area [m²]	0.389	0.194	0.130	0.997	0.078	0.065	0.056	0.049	0.043	0.0389	0.032	0.028	0.024	0.022	0.019
	Pressure Drop [Pa]	0	1	2	3	5	8	11	14	18	22	33	45	60	77	96
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	17	21	24	28	31	35	40	43	47	49
800	Effective Area [m²]	0.444	0.222	0.148	0.111	0.089	0.074	0.063	0.056	0.049	0.0444	0.037	0.032	0.028	0.025	0.022
	Pressure Drop [Pa]	0	1	2	3	5	8	11	14	18	22	33	46	60	77	97
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	17	21	25	28	31	36	40	44	47	50
900	Effective Area [m²]	0.500	0.250	0.167	0.125	0.100	0.083	0.071	0.063	0.056	0.0500	0.042	0.036	0.031	0.028	0.025
	Pressure Drop [Pa]	0	1	2	3	5	8	11	14	18	23	33	46	61	78	97
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	18	22	26	29	32	37	41	45	48	51
1000	Effective Area [m²]	0.556	0.278	0.185	0.139	0.111	0.093	0.079	0.069	0.062	0.0556	0.046	0.040	0.035	0.031	0.028
	Pressure Drop [Pa]	0	1	2	3	5	8	11	14	18	23	33	46	61	78	97
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	<15	18	23	26	29	32	37	41	45	48	51
1250	Effective Area [m²]	0.694	0.347	0.232	0.174	0.139	0.116	0.099	0.087	0.077	0.0694	0.058	0.050	0.043	0.039	0.035
	Pressure Drop [Pa]	0	1	2	3	5	8	11	14	18	23	34	46	61	79	98
	Sound Pressure Level [dB(A)]	<15	<15	<15	<15	15	19	24	27	30	33	38	42	46	49	52
1500	Effective Area [m²]		0.417	0.278	0.208	0.167	0.139	0.119	0.104	0.0926	0.0833	0.069	0.060	0.052	0.046	0.0417
	Pressure Drop [Pa]		1	2	3	5	8	11	14	19	23	34	47	62	79	99
	Sound Pressure Level [dB(A)]		<15	<15	<15	15	20	25	28	31	34	39	43	47	50	53
1750	Effective Area [m²]		0.486	0.324	0.243	0.194	0.162	0.139	0.122	0.1080	0.0972	0.081	0.069	0.061	0.054	0.0486
	Pressure Drop [Pa]		1	2	3	5	8	11	15	19	23	34	47	62	80	100
	Sound Pressure Level [dB(A)]		<15	<15	<15	16	21	25	29	32	35	40	44	48	51	54
2000	Effective Area [m²]		0.556	0.370	0.278	0.222	0.185	0.159	0.139	0.1235	0.1111	0.093	0.079	0.069	0.062	0.0556
	Pressure Drop [Pa]		1	2	3	5	8	11	15	19	23	34	47	63	80	100
	Sound Pressure Level [dB(A)]		<15	<15	<15	17	22	26	30	33	36	41	45	48	52	54
2500	Effective Area [m²]		0.694	0.463	0.347	0.278	0.231	0.198	0.174	0.1543	0.1389	0.116	0.099	0.087	0.077	0.0694
	Pressure Drop [Pa]		1	2	3	6	8	11	15	19	24	35	48	63	81	101
	Sound Pressure Level [dB(A)]		<15	<15	<15	18	23	27	31	34	37	42	46	49	53	55
3000	Effective Area [m²]			0.556	0.417	0.333	0.278	0.238	0.2083	0.1852	0.1667	0.139	0.119	0.104	0.0926	0.0833
	Pressure Drop [Pa]			2	3	6	8	11	15	19	24	35	48	64	82	102
	Sound Pressure Level [dB(A)]			<15	<15	19	24	28	31	35	38	42	47	50	53	56
4000	Effective Area [m²]			0.741	0.556	0.444	0.370	0.3175	0.2778	0.2469	0.2222	0.185	0.159	0.1389	0.1235	0.1111
	Pressure Drop [Pa]			2	4	6	8	11	15	19	24	35	49	64	83	103
	Sound Pressure Level [dB(A)]			<15	<15	20	25	29	33	36	39	44	48	52	55	58
5000	Effective Area [m²]				0.694	0.556	0.4630	0.3968	0.3472	0.3086	0.2778	0.231	0.1984	0.1736	0.1543	0.1389
	Pressure Drop [Pa]				4	6	8	11	15	19	24	36	49	65	83	104
	Sound Pressure Level [dB(A)]				<15	21	26	30	34	37	40	45	49	53	56	59
7500	Effective Area [m²]						0.694	0.5952	0.5208	0.4630	0.4167	0.347	0.2976	0.2604	0.2315	0.2083
	Pressure Drop [Pa]						8	12	15	20	25	36	50	66	85	106
	Sound Pressure Level [dB(A)]						28	32	36	39	42	47	51	55	58	61
10000	Effective Area [m²]								0.6944	0.6173	0.5556	0.463	0.3968	0.3472	0.3086	0.2778
	Pressure Drop [Pa]								16	20	25	37	50	67	86	107
	Sound Pressure Level [dB(A)]								37	40	43	48	52	56	59	62

Note: Data were obtained with the air distribution equipment when the ambient air temperature difference is T=8K

Table 5. Throw Distance Correction

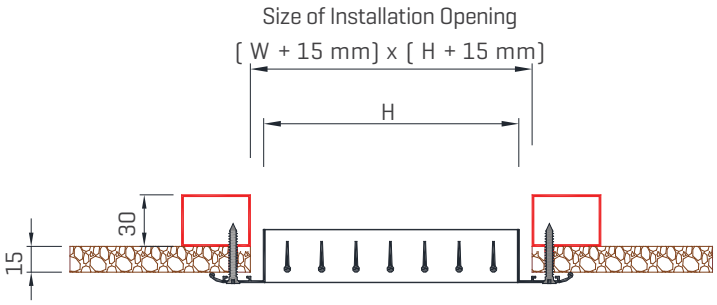
Heating Mode (ΔT)	4	6	8	10	12
Throw Distance Coefficient	1.07	1.02	1	0.90	0.83
Cooling Mode (ΔT)	4	6	8	10	12
Throw Distance Coefficient	1.31	1.36	1.42	1.48	1.54

Table 6. Damper Pressure Correction

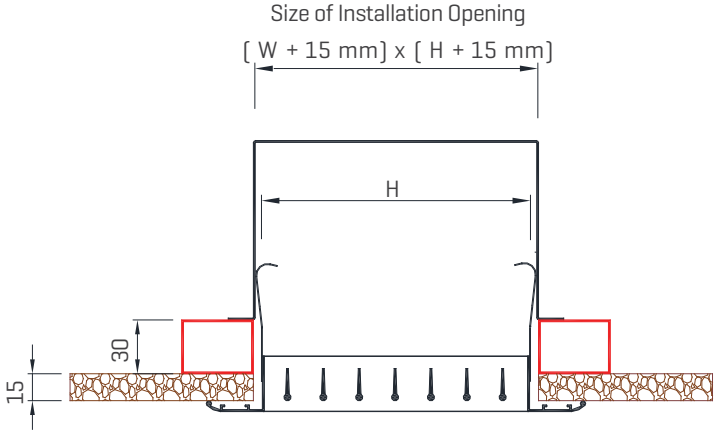
Damper Position	Pressure Correction Factor	Noise Generation (dB[A])
Open	1.1	+1
25% Closed	1.14	+4
50% Closed	2.48	+14
75% Closed	5.11	+29

INSTALLATION

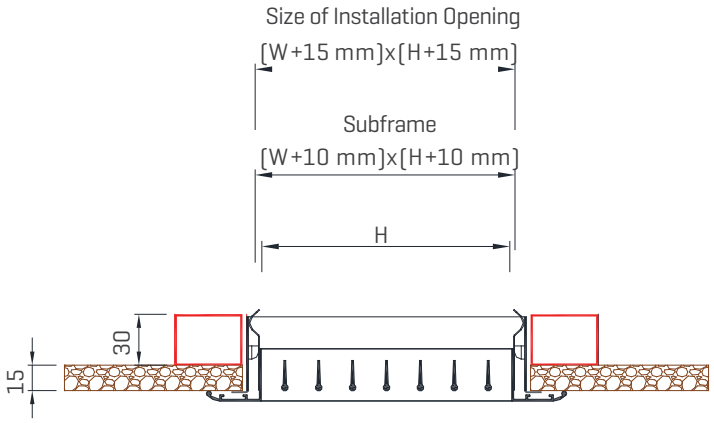
1. SCREW SYSTEM



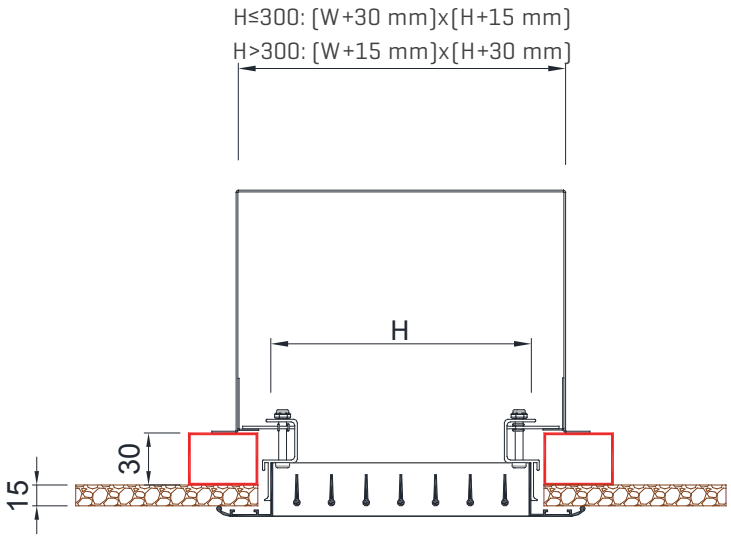
2. LONG SPRING CLIP



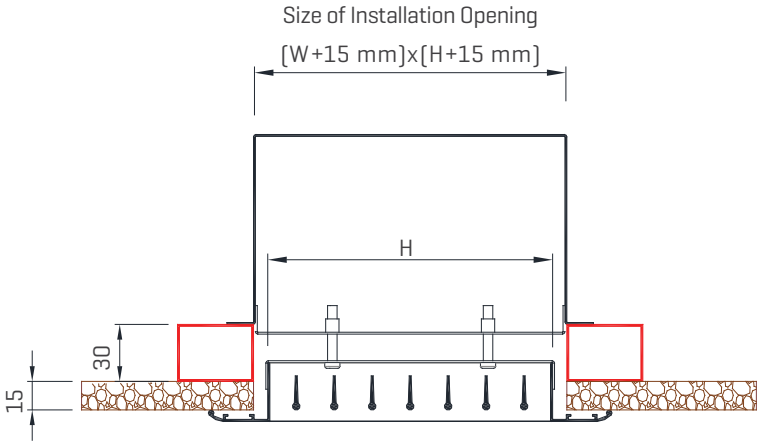
3. SHORT SPRING CLIP WITH SUBFRAME



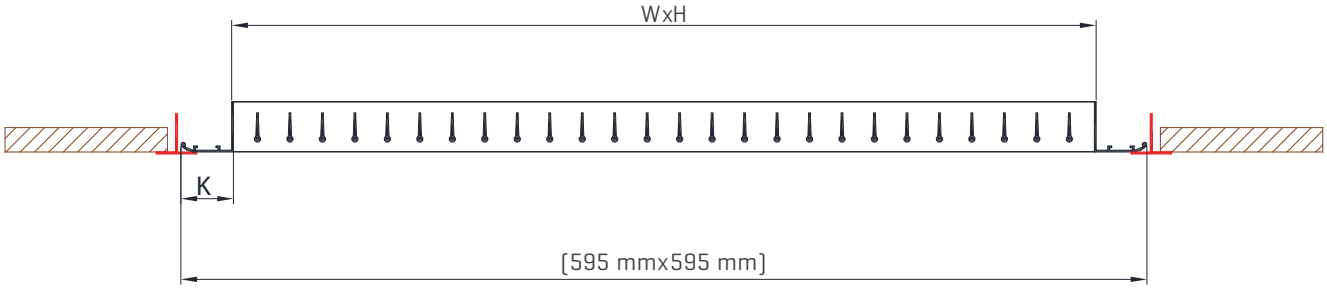
4. CONCEALED



5. MOUNTING BRACKED



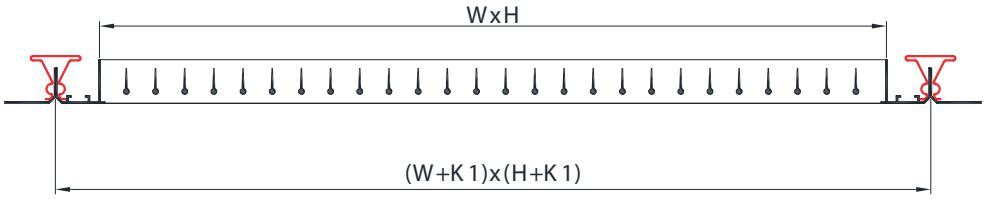
6. SUSPENDED CEILING



W and H dimensions that can be selected according to the frame sizes specified in the product selection, are shown in the adjacent table.

	W (mm)	H (mm)
22 mm Frame	553	553
32 mm Frame	532	532
Stainles-Steel Frame	537	537

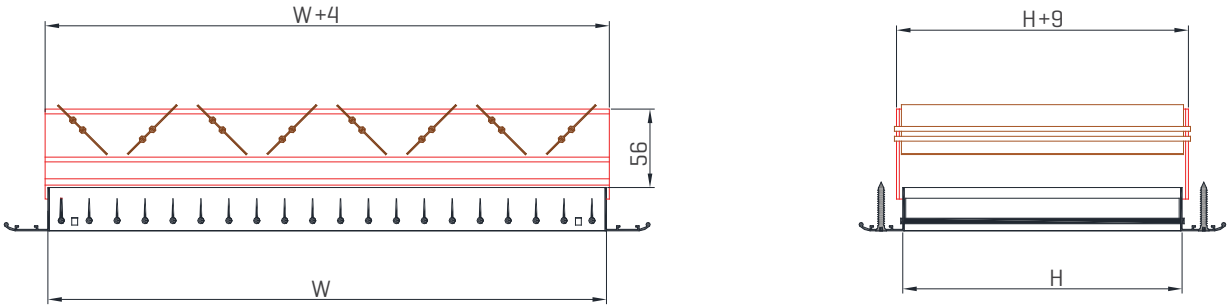
7. CLIP-IN CEILING



Clip-In Frame K1 = 59 mm	W (mm)	H (mm)
600x600	541	541
300x300	241	241

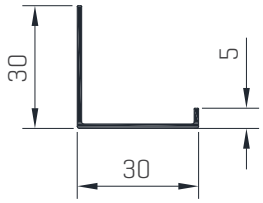
Note:
When the raw material of the product is selected as stainless steel, Clip-In assembly can not be done.

8. WITH DAMPER

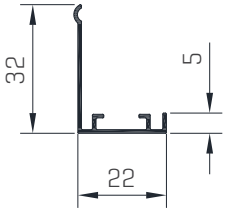


FRAME TYPES

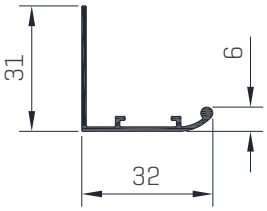
Stainless Steel Frame



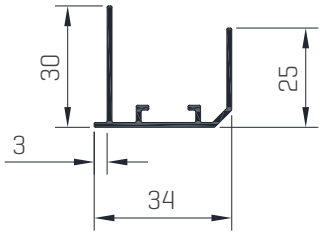
22 mm Frame



32 mm Frame



Clip-In Frame



SIZE PARAMETERS

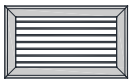
MAXIMUM MODULE SIZE

The standard dimensions of one module can be selected between 100 mmx50mm and 1800 mmx1000 mm. For the stainless-steel production, maximum module dimension is 1200 mmx600 mm. If the order dimension exceeds the module length, grilles will be produced by modular.

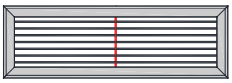
SUPPORT NUMBER PARAMETERS

The number of support used increases as the width of the grill increases. The maximum number of supports in a single piece products is 2 pieces.

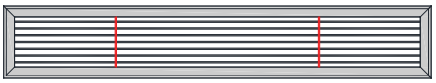
If W<600, without support



600≤W≤1200, with 1 support



If 1200<W≤1800, with 2 support



PRODUCT SELECTION

Example: Occupied zone air flowrate has determined 2500 m³/h. 5 pieces of Double Deflection Grille would be used for supply air. Heating temperature difference is 8K.

Solution: For one grille, flowrate is 2500/5 = 500 m³/h

From the section "Performance Data" (Table 3) the effective areas are corresponding the pressure drop, throw distance, noise generation and flowrate values. Convenient values will be picked.

For example, effective area 0.031 m², effective speed 4.5 m/s, pressure drop 19 Pa, throw distance 5 m and noise generation 27 dB(A).

Suitable grille dimension can be selected 500 mm x 100 mm with the 0.031 m² from "Effective Area" table (Table 2).

Throw Distance Correction Table

For example, the heating temperature difference is 10 K, the heating temperature at 8 K has found 8 m in the Performance Data table.

Throw distance correction table (Table 5), heating mode at 10 K throw correction factor is 0.9. So the new value of the throw distance is, Throw distance = 5 m x 0.9 = 4.5 m

Damper Condition

To determine pressure drop and noise generation with damper, the additional values needed from the "Damper Correction Table" (Table 6).

For example, damper level 50% closed, pressure correction factor would be multiplied to the performance table pressure value.

Likewise, noise generation value will be added to the performance table noise generation value.

For 50% closed damper condition,

Pressure correction factor is 2.48

Noise generation factor is +14 dB(A)

Total static pressure drop: 19x2.48=47.12 Pa

Total noise generation: 27+14=41 dB(A)

PRODUCT ORDER CODES

You can place your orders for aluminum or stainless products according to the coding style by looking at the seperate tables given below.

ALUMINUM PRODUCT ORDER CODE

DMT.ALM. < B > . < C > . < D > . < E > . < F >

A	Frame Type	
	03	22 mm Frame
	06	32 mm Frame
	09	Clip-In Frame
B	**Damper**	
	ZD	Opposite Blade Damper
	DZ	Without Damper
C	**Installation Type**	
	VD	Screw System
	KR	Suspended Ceiling
	KL	Clip-in Ceiling
	KP	Mounting Bracket
	MD	Without Mounting Hole
	MN	Concealed
	UK	Long Spring Clip
	KK	Bling Casing Short Spring Clip
D	**Horizontal Dimension (W) [mm]**	
	0000	You can view it from standard dimensions.
E	**Vertical Dimension (H) [mm]**	
	0000	You can view it from standard dimensions.
F	**Paint**	
	00	Unpainted
	S1	Standard Painted - RAL 9010
	S2	Standard Painted - RAL 9016
	XX	Special Painted

Sample Coding; DMT.ALM.01.DZ.VD.0100.0600.S1

STAINLESS-STEEL PRODUCT ORDER CODE

DMT.PAS.32. < A > . < B > . < C > . < D > . 00

A	Damper	
	ZD	Opposite Blade Damper
	DZ	Without Damper
B	**Installation Type**	
	VD	Screw System
	KR	Suspended Ceiling
	KP	Mounting Bracket
	MD	Without Mounting Hole
	MN	Concealed
	UK	Long Spring Clip
	KK	Bling Cased Short Spring Clip
C	**Horizontal Dimension (W) [mm]**	
	0000	You can view it from standard dimensions.
D	**Vertical Dimension (H) [mm]**	
	0000	You can view it from standard dimensions.

Sample Coding; DMT.PAS.32.DZ.VD.0100.0600.00

NOTES

NOTES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