



DPE
External Louvre

Venues Breathe with DOGU HVAC Systems!

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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.



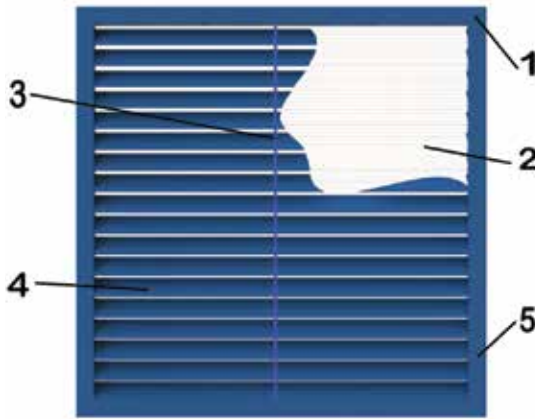


DPE - EXTERNAL LOUVRE

- DPE - External Air Louvre is used to provide fresh air intake in ventilation systems and to prevent rain, snow, foreign matter and living creatures from entering the system at exhaust air discharge points.
- It can be produced in one piece from 100 mm x 100 mm to 2300 mm x 2100 mm. Group assembly is made in higher sizes.
- Casing and blades are produced from aluminum profile.
- There is a standard 10 mm x 10 mm bird wire in the louver throat.
- Painted with RAL 9010 electrostatic powder paint as standard. It can also be painted in different RAL codes or coated with matte aluminum eloxal upon the request of the customer. It has high corrosion resistance.

MATERIAL

DPE – The casing and blades of the **External Air Louvre** are produced from aluminum profile. There is 10 mm x 10 mm bird wire made of galvanized steel as standard in the shutter throat. Production is also made wirelessly in line with the customer preference.



- 1. Frame
- 2. 10 mm x 10 mm bird wire
- 3. W>1000' den itibaren kullanılan dikme
- 4. Louver Blade
- 5. Mounting holes

SELECTION PARAMETERS

Table 1. Effective Area

Effective Area[m ²]	H [Height] (mm)																
	100	200	300	400	500	600	700	800	900	1000	1100	1300	1500	1700	1900	2100	
W [Width] (mm)	100	0.004	0.013	0.017	0.026	0.034	0.043	0.051	0.055	0.064	0.072	0.081	0.098	0.111	0.128	0.141	0.158
	200	0.009	0.026	0.034	0.051	0.068	0.085	0.102	0.111	0.128	0.145	0.162	0.196	0.222	0.256	0.281	0.315
	300	0.013	0.038	0.051	0.077	0.102	0.128	0.153	0.166	0.192	0.217	0.243	0.294	0.332	0.383	0.422	0.473
	400	0.017	0.051	0.068	0.102	0.136	0.170	0.204	0.222	0.256	0.290	0.324	0.392	0.443	0.511	0.562	0.630
	500	0.021	0.064	0.085	0.128	0.170	0.213	0.256	0.277	0.320	0.362	0.405	0.490	0.554	0.639	0.703	0.788
	600	0.026	0.077	0.102	0.153	0.204	0.256	0.307	0.332	0.383	0.435	0.486	0.588	0.665	0.767	0.843	0.946
	700	0.030	0.089	0.119	0.179	0.239	0.298	0.358	0.388	0.447	0.507	0.567	0.686	0.775	0.895	0.984	1.103
	800	0.034	0.102	0.136	0.204	0.273	0.341	0.409	0.443	0.511	0.579	0.648	0.784	0.886	1.022	1.125	1.261
	900	0.038	0.115	0.153	0.230	0.307	0.383	0.460	0.498	0.575	0.652	0.728	0.882	0.997	1.150	1.265	1.419
	1000	0.043	0.128	0.170	0.256	0.341	0.426	0.511	0.554	0.639	0.724	0.809	0.980	1.108	1.278	1.406	1.576
	1100	0.047	0.141	0.187	0.281	0.375	0.469	0.562	0.609	0.703	0.797	0.890	1.078	1.218	1.406	1.546	1.734
	1200	0.051	0.153	0.204	0.307	0.409	0.511	0.613	0.665	0.767	0.869	0.971	1.176	1.329	1.534	1.687	1.891
	1300	0.055	0.166	0.222	0.332	0.443	0.554	0.665	0.720	0.831	0.941	1.052	1.274	1.440	1.661	1.828	2.049
	1400	0.060	0.179	0.239	0.358	0.477	0.596	0.716	0.775	0.895	1.014	1.133	1.372	1.551	1.789	1.968	2.207
	1500	0.064	0.192	0.256	0.383	0.511	0.639	0.767	0.831	0.959	1.086	1.214	1.470	1.661	1.917	2.109	2.364
	1600	0.068	0.204	0.273	0.409	0.545	0.682	0.818	0.886	1.022	1.159	1.295	1.568	1.772	2.045	2.249	2.522
	1700	0.072	0.217	0.290	0.435	0.579	0.724	0.869	0.941	1.086	1.231	1.376	1.666	1.883	2.173	2.390	2.680
	1800	0.077	0.230	0.307	0.460	0.613	0.767	0.920	0.997	1.150	1.304	1.457	1.764	1.994	2.300	2.530	2.837
	1900	0.081	0.243	0.324	0.486	0.648	0.809	0.971	1.052	1.214	1.376	1.538	1.862	2.104	2.428	2.671	2.995
	2000	0.085	0.256	0.341	0.511	0.682	0.852	1.022	1.108	1.278	1.448	1.619	1.960	2.215	2.556	2.812	3.152
2100	0.089	0.268	0.358	0.537	0.716	0.895	1.074	1.163	1.342	1.521	1.700	2.058	2.326	2.684	2.952	3.310	
2200	0.094	0.281	0.375	0.562	0.750	0.937	1.125	1.218	1.406	1.593	1.781	2.156	2.437	2.812	3.093	3.468	
2300	0.098	0.294	0.392	0.588	0.784	0.980	1.176	1.274	1.470	1.666	1.862	2.254	2.547	2.939	3.233	3.625	

Table 2. Quick Selection According to 3 m/s Air Velocity

m ³ /h		H (Height) (mm)															
		100	200	300	400	500	600	700	800	900	1000	1100	1300	1500	1700	1900	2100
W (Width) (mm)	100	46	138	184	276	368	460	552	598	690	782	874	1058	1196	1380	1518	1702
	200	92	276	368	552	736	920	1104	1196	1380	1564	1748	2116	2392	2760	3037	3405
	300	138	414	552	828	1104	1380	1656	1794	2070	2346	2622	3175	3589	4141	4555	5107
	400	184	552	736	1104	1472	1840	2208	2392	2760	3129	3497	4233	4785	5521	6073	6809
	500	230	690	920	1380	1840	2300	2760	2991	3451	3911	4371	5291	5981	6901	7591	8511
	600	276	828	1104	1656	2208	2760	3313	3589	4141	4693	5245	6349	7177	8281	9110	10214
	700	322	966	1288	1932	2576	3221	3865	4187	4831	5475	6119	7407	8373	9662	10628	11916
	800	368	1104	1472	2208	2945	3681	4417	4785	5521	6257	6993	8465	9570	11042	12146	13618
	900	414	1242	1656	2484	3313	4141	4969	5383	6211	7039	7867	9524	10766	12422	13664	15321
	1000	460	1380	1840	2760	3681	4601	5521	5981	6901	7821	8742	10582	11962	13802	15183	17023
	1100	506	1518	2024	3037	4049	5061	6073	6579	7591	8603	9616	11640	13158	15183	16701	18725
	1200	552	1656	2208	3313	4417	5521	6625	7177	8281	9386	10490	12698	14354	16563	18219	20428
	1300	598	1794	2392	3589	4785	5981	7177	7775	8972	10168	11364	13756	15551	17943	19737	22130
	1400	644	1932	2576	3865	5153	6441	7729	8373	9662	10950	12238	14815	16747	19323	21256	23832
	1500	690	2070	2760	4141	5521	6901	8281	8972	10352	11732	13112	15873	17943	20704	22774	25534
	1600	736	2208	2945	4417	5889	7361	8834	9570	11042	12514	13986	16931	19139	22084	24292	27237
	1700	782	2346	3129	4693	6257	7821	9386	10168	11732	13296	14861	17989	20336	23464	25810	28939
	1800	828	2484	3313	4969	6625	8281	9938	10766	12422	14078	15735	19047	21532	24844	27329	30641
	1900	874	2622	3497	5245	6993	8742	10490	11364	13112	14861	16609	20105	22728	26225	28847	32344
	2000	920	2760	3681	5521	7361	9202	11042	11962	13802	15643	17483	21164	23924	27605	30365	34046
2100	966	2899	3865	5797	7729	9662	11594	12560	14493	16425	18357	22222	25120	28985	31884	35748	
2200	1012	3037	4049	6073	8097	10122	12146	13158	15183	17207	19231	23280	26317	30365	33402	37451	
2300	1058	3175	4233	6349	8465	10582	12698	13756	15873	17989	20105	24338	27513	31746	34920	39153	

Table 3. Weight Table

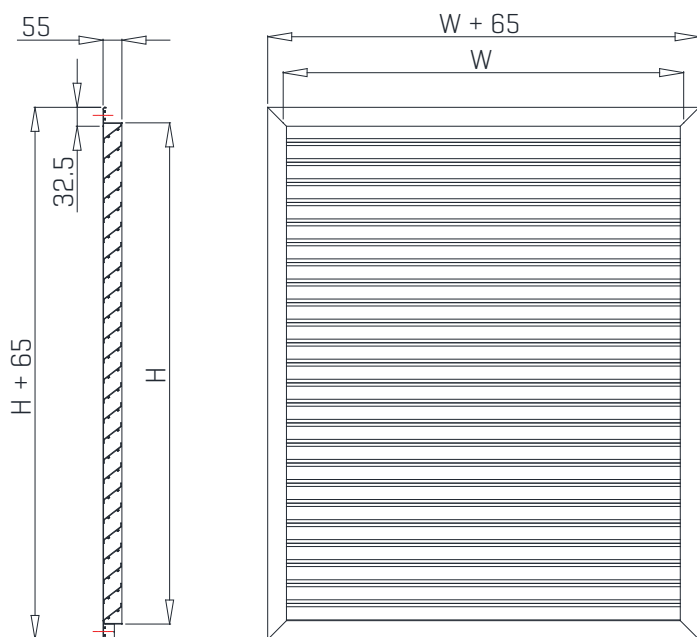
kg		H (Height) [mm]															
		100	200	300	400	500	600	700	800	900	1000	1100	1300	1500	1700	1900	2100
W (Width) [mm]	100	0.26	0.42	0.55	0.72	0.88	1.05	1.21	1.34	1.50	1.67	1.83	2.16	2.45	2.78	3.07	3.40
	200	0.42	0.66	0.82	1.05	1.28	1.51	1.74	1.91	2.14	2.37	2.60	3.06	3.46	3.92	4.31	4.78
	300	0.59	0.89	1.08	1.38	1.68	1.98	2.28	2.47	2.77	3.07	3.37	3.96	4.46	5.06	5.55	6.15
	400	0.75	1.12	1.35	1.71	2.08	2.44	2.81	3.04	3.41	3.77	4.14	4.87	5.46	6.19	6.79	7.52
	500	0.92	1.35	1.61	2.05	2.48	2.91	3.34	3.61	4.04	4.47	4.91	5.77	6.47	7.33	8.03	8.89
	600	1.08	1.58	1.88	2.38	2.88	3.38	3.88	4.17	4.67	5.17	5.67	6.67	7.47	8.47	9.27	10.27
	700	1.24	1.81	2.14	2.71	3.28	3.84	4.41	4.74	5.31	5.88	6.44	7.58	8.47	9.61	10.51	11.64
	800	1.41	2.04	2.41	3.04	3.67	4.31	4.94	5.31	5.94	6.58	7.21	8.48	9.48	10.75	11.75	13.01
	900	1.57	2.27	2.67	3.37	4.07	4.78	5.48	5.88	6.58	7.28	7.98	9.38	10.48	11.88	12.98	14.39
	1000	1.73	2.50	2.94	3.70	4.47	5.24	6.01	6.44	7.21	7.98	8.75	10.28	11.49	13.02	14.22	15.76
	1100	1.90	2.73	3.20	4.04	4.87	5.71	6.54	7.01	7.84	8.68	9.52	11.19	12.49	14.16	15.46	17.13
	1200	2.06	2.97	3.47	4.37	5.27	6.17	7.08	7.58	8.48	9.38	10.28	12.09	13.49	15.30	16.70	18.51
	1300	2.23	3.20	3.73	4.70	5.67	6.64	7.61	8.14	9.11	10.08	11.05	12.99	14.50	16.44	17.94	19.88
	1400	2.39	3.43	3.99	5.03	6.07	7.11	8.14	8.71	9.75	10.78	11.82	13.90	15.50	17.57	19.18	21.25
	1500	2.55	3.66	4.26	5.36	6.47	7.57	8.68	9.28	10.38	11.49	12.59	14.80	16.50	18.71	20.42	22.63
	1600	2.72	3.89	4.52	5.70	6.87	8.04	9.21	9.84	11.02	12.19	13.36	15.70	17.51	19.85	21.66	24.00
	1700	2.88	4.12	4.79	6.03	7.27	8.50	9.74	10.41	11.65	12.89	14.13	16.60	18.51	20.99	22.89	25.37
	1800	3.05	4.35	5.05	6.36	7.66	8.97	10.28	10.98	12.28	13.59	14.90	17.51	19.51	22.13	24.13	26.75
	1900	3.21	4.58	5.32	6.69	8.06	9.44	10.81	11.54	12.92	14.29	15.66	18.41	20.52	23.26	25.37	28.12
	2000	3.37	4.81	5.58	7.02	8.46	9.90	11.34	12.11	13.55	14.99	16.43	19.31	21.52	24.40	26.61	29.49
2100	3.54	5.04	5.85	7.35	8.86	10.37	11.88	12.68	14.19	15.69	17.20	20.22	22.53	25.54	27.85	30.86	
2200	3.70	5.28	6.11	7.69	9.26	10.83	12.41	13.25	14.82	16.39	17.97	21.12	23.53	26.68	29.09	32.24	
2300	3.86	5.51	6.38	8.02	9.66	11.30	12.94	13.81	15.45	17.10	18.74	22.02	24.53	27.82	30.33	33.61	

Note: The weight values given are ± 10%.

Table 4. Pressure Loss and Noise Intensity

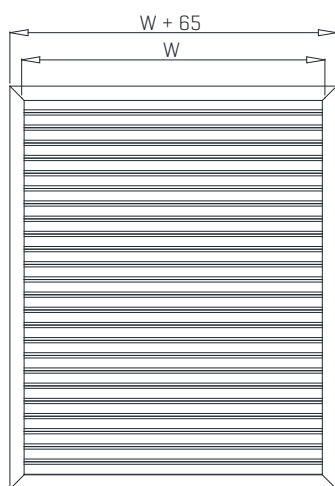
		Air Velocity [m/s]							
		1.5	2	3	4	5	6	7	8
Fresh Air	Pressure Drop [Pa]	17	28	54	96	148	208	264	349
	Sound Level [dB]	34	43	56	65	>70	>70	>70	>70
Exhaust Air	Pressure Drop [Pa]	10	20	45	80	125	180	245	320
	Sound Level [dB]	30	40	51	60	70	>70	>70	>70

MEASUREMENT

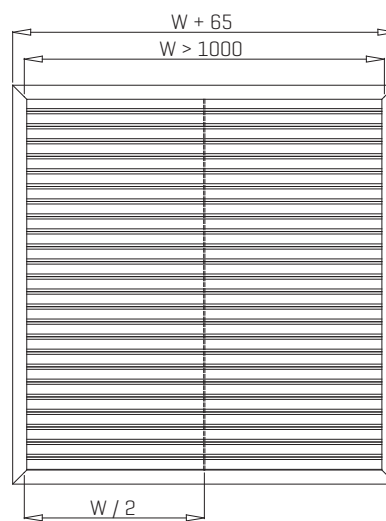


W (mm)	H (mm)
100	100
200	200
300	300
400	400
500	500
600	600
700	700
800	800
900	900
1000	1000
1100	1100
1300	1300
1500	1500
1700	1700
1900	1900
2100	2100
2300	

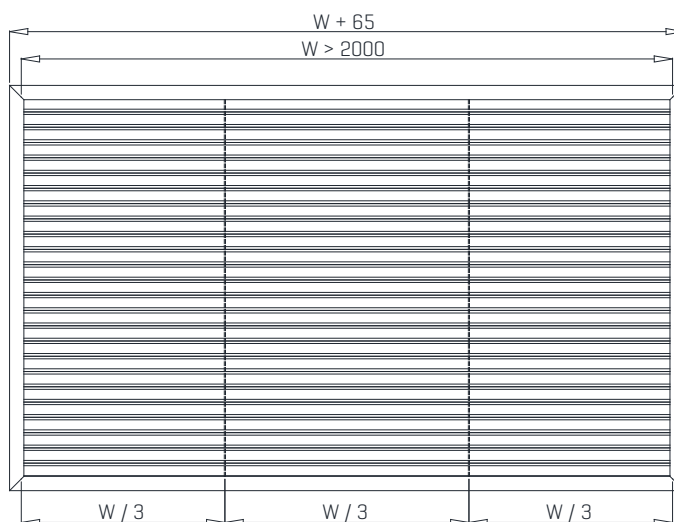
Support details are described in the drawings below.



$W \leq 1000$ Unsupported



Single Support Between $1000 < W \leq 2000$



Double Support Between $2000 < W \leq 2300$

TYPES OF MOUNTING

DPE – The assembly of the **External Weather Louvre** is done by screwing it to the wall or the blind casing with mounting screws from the curb surface. **[Figure 1]**

The assembled surface must be smooth and flat.

Note: Mounting screws are painted and shipped in the color of the shutter.

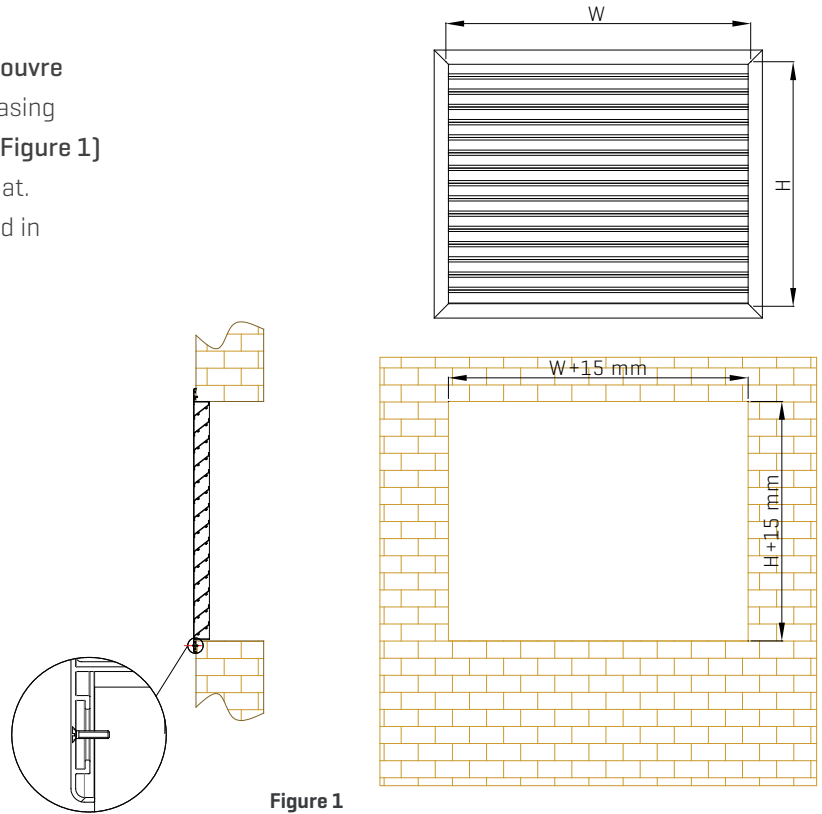


Figure 1

In the case of $W \leq 2300$ – $H \geq 2100$, the louvers are divided from the H dimension and produced as modules. During the installation, a profile should be placed at the module junction as shown in **Figure 2**. You can use 30 mm x 60 mm profile in module assemblies.

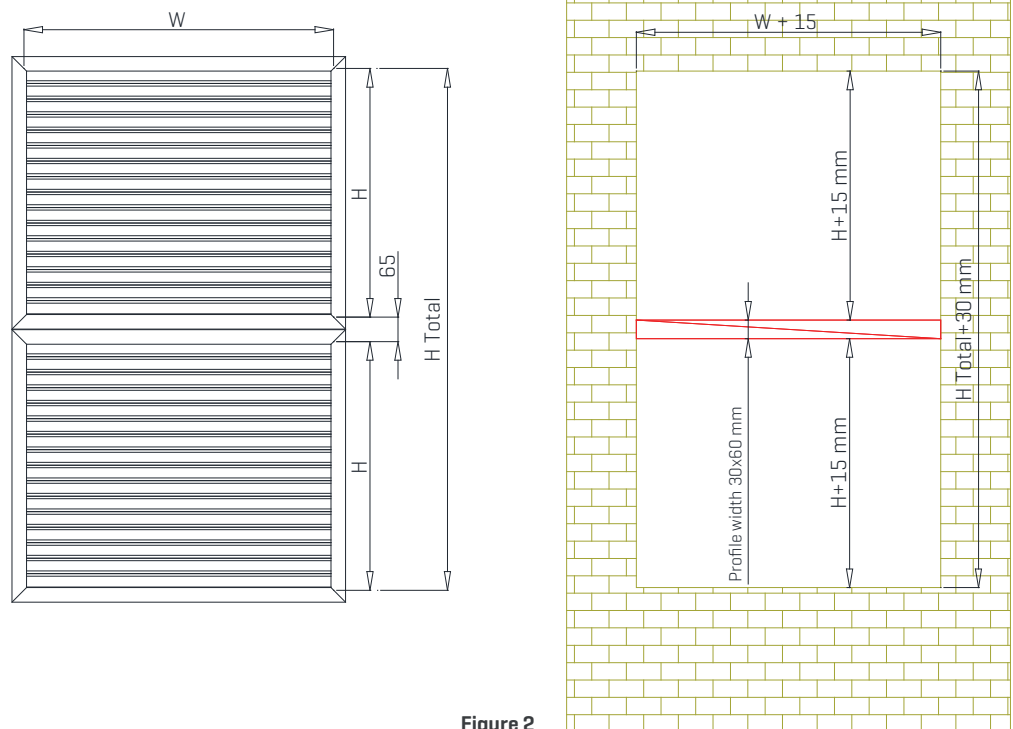


Figure 2

In case of $W \geq 2300 - H \leq 2100$, the louvers are divided in W dimensions and produced as modules.

During the assembly, a profile must be placed at the module junction as shown in **Figure 3**.

You can use 30 mm x 60 mm profile in module assemblies.

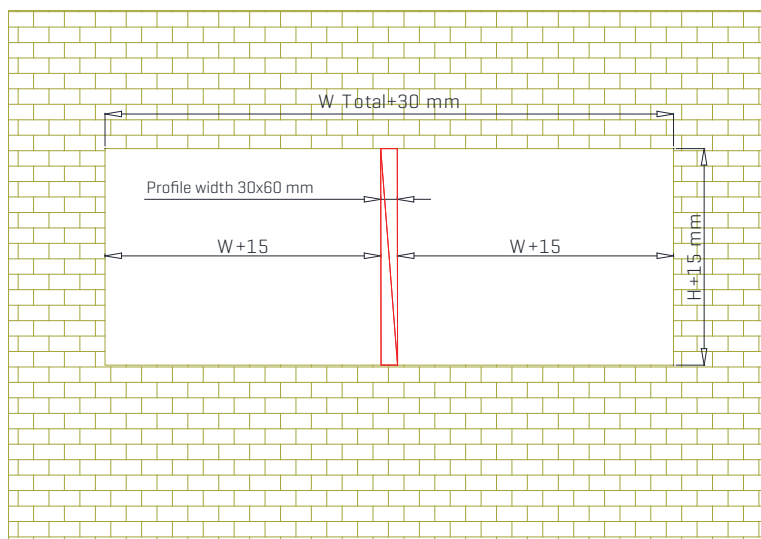
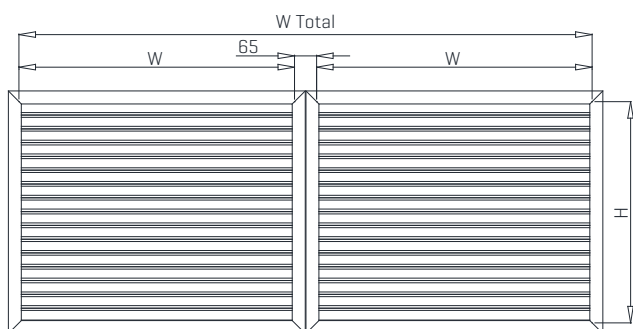


Figure 3

In the case of $W \geq 2300 - H \geq 2100$, the louvers are divided in both W and H dimensions and produced as modules.

During the assembly, a profile must be placed at the module junction as shown in **Figure 4**.

You can use 30 mm x 60 mm profile in module assemblies.

Note: $W \text{ Total} = W \times n + (n-1) \times 65 \text{ mm}$

W Total: Module louver throat size

W: Horizontal size for 1 module [specified in the offer.]

n: Number of modules [specified in the offer.]

Example:

What is the module size and mounting hole size of the 3600 mm x 3000 mm louver?

$W \text{ Total} = 3600 \text{ mm}$

$3600 \text{ mm} = W \times n + (n-1) \times 65 \text{ mm}$

$n = 2$ [Will be specified in the offer.]

It is found as $W = 1768 \text{ mm}$.

$H \text{ Total} = 3000 \text{ mm}$

$3000 \text{ mm} = H \times n + (n-1) \times 65 \text{ mm}$

$n = 2$ [Will be specified in the offer.]

It is found as $H = 1468 \text{ mm}$.

1 Module Size = $1768 \text{ mm} \times 1468 \text{ mm}$ [W x H]

Hole Size = $3615 \text{ mm} \times 3015 \text{ mm}$ [W total + 15 mm x H total + 15 mm]

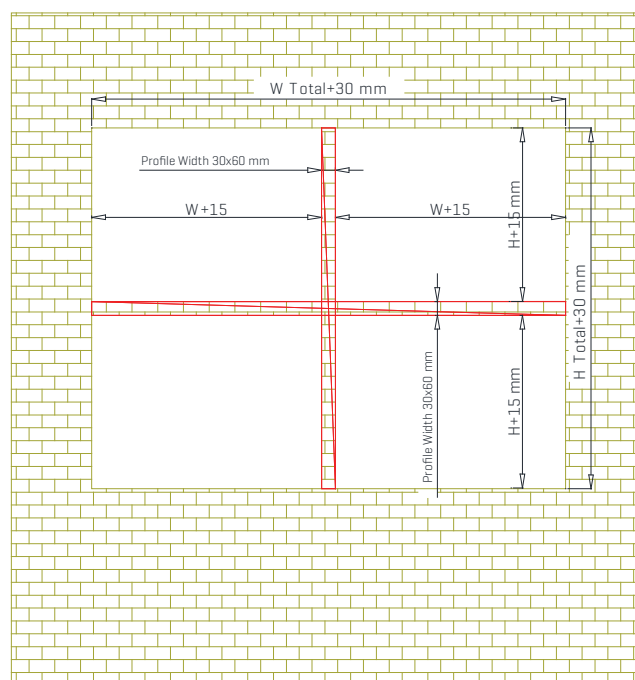
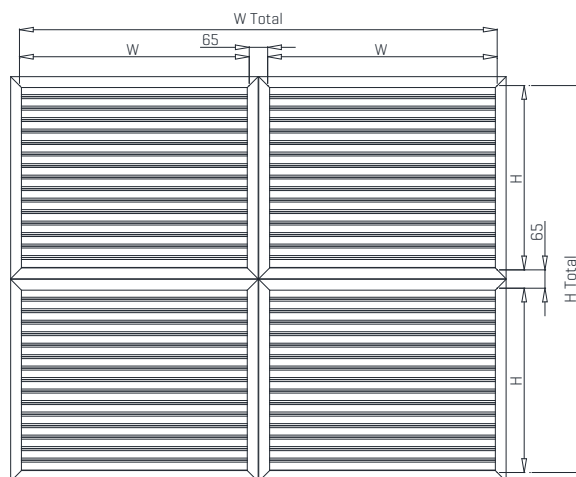
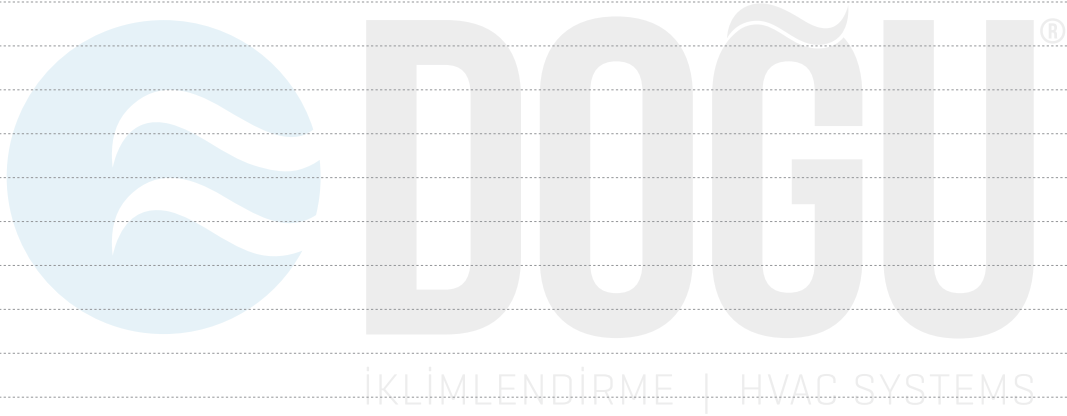


Figure 4

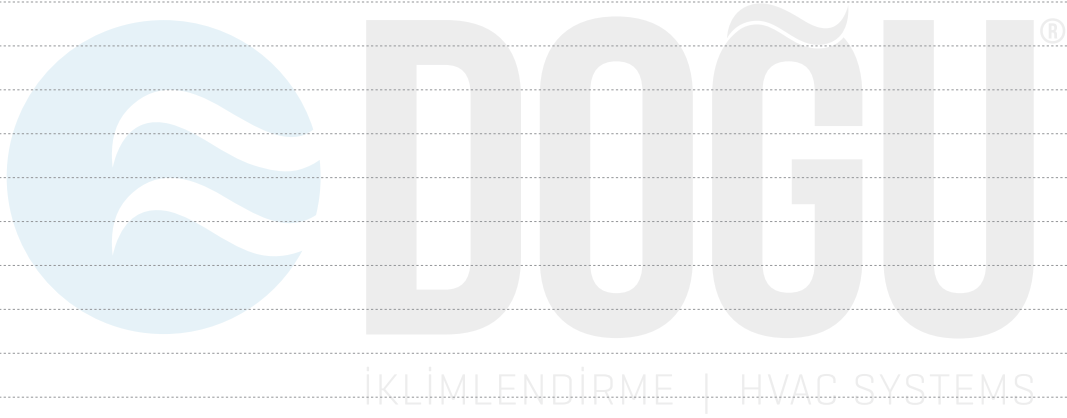
NOTES



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