DOĞU
İKLİMLENDİRME | HVAC SYSTEMS

DPS

Acoustic Louvre

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 180 various type of products. Additionally, DOGU HVAC has a powerful sales network with 4 sales offices located in İstanbul, Ankara, Antalya and Adana 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 55 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 TSEK, CE and GOST-R quality certifications.

DPS ACOUSTIC LOUVRE

- DPS – Acoustic Louvers are used at air duct outlets, generator rooms, machine rooms, and similar areas where acoustic insulation is required, in order to reduce noise transmission to the environment and prevent external noise from entering the space.
- To meet different performance requirements, three different models are available: DPS-150, DPS-300, and DPS-600 (Table 1).
- Thanks to its blade structure, it also provides rain protection.
- The product is coated with electrostatic powder paint and offers high corrosion resistance.
- A bird screen prevents foreign objects from entering the duct.

MODEL	DPS-150	DPS-300	DPS-600
			
Average Sound Reduction Index (Rw)	11	17	25

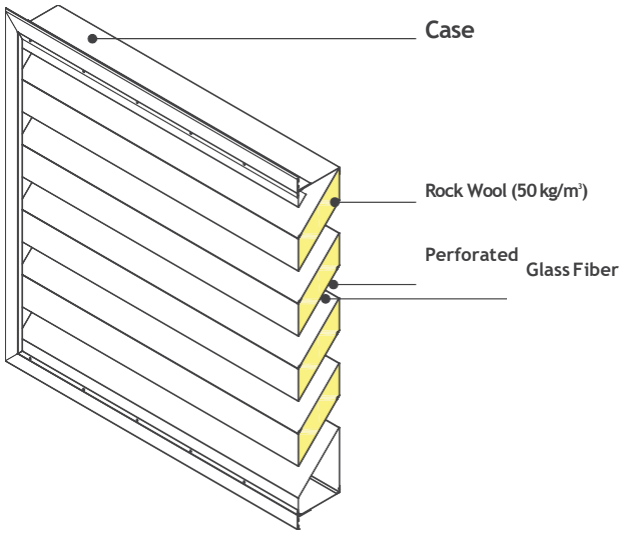
Table 1. Acoustic Louver Models – Sound Attenuation Comparison Table

MATERIAL

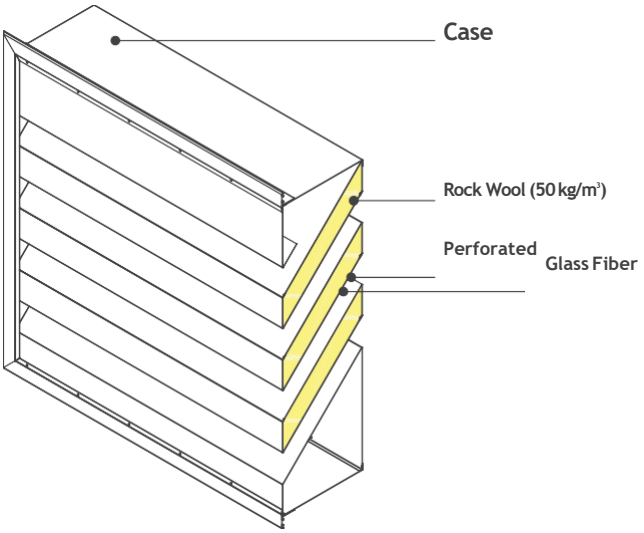
The casing and blades of all models of the DPS – Acoustic Louver are manufactured from galvanized sheet metal as standard. Rock wool insulation material with a density of 50 kg/m³ is used inside the blades. The surfaces of the rock wool that come into contact with air are covered with glass fiber in order to protect them against particle abrasion. The casing and blades can also be manufactured from stainless steel if required.

The product is painted in RAL9010 color with the Electrostatic Powder Coating process as standard. It can be painted in any desired RAL color according to customer preferences. Unless otherwise specified in the order, DPS is manufactured as standard.

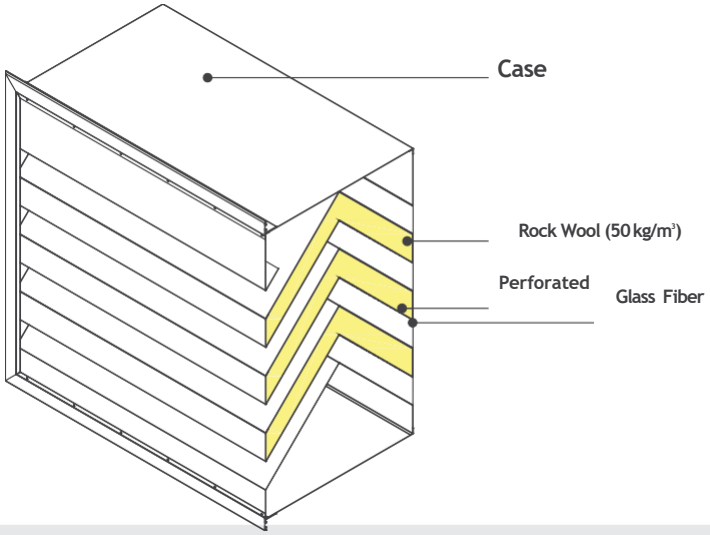
DPS-150



DPS-300



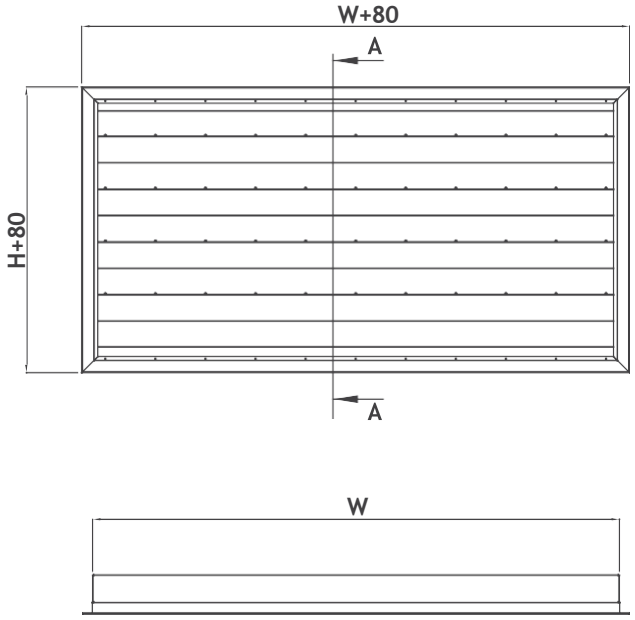
DPS-600

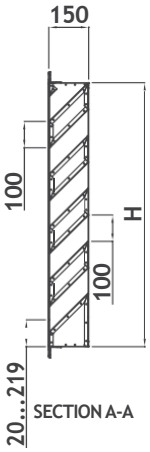


1. DPS-150

- Production is available in dimensions from min. 300 mm × 370 mm to max. 2000 mm × 1970 mm.
- It can be used in areas where lower sound attenuation is required.
- It is advantageous for locations with limited wall thickness.

DIMENSIONS





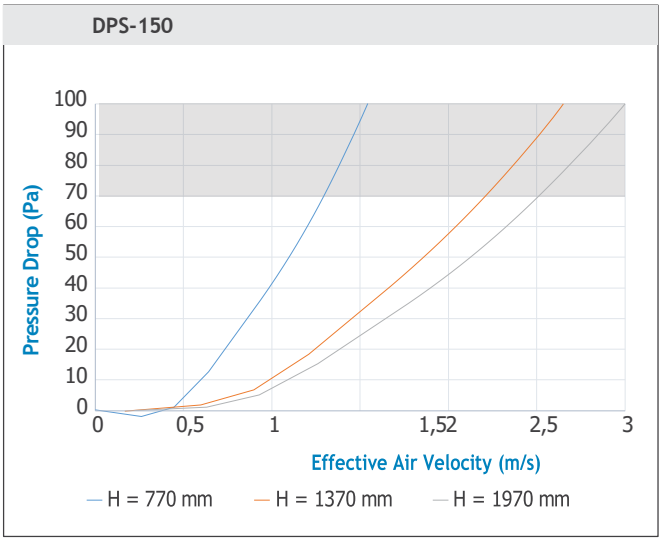
W (mm)	H (mm)
300	370
500	570
700	770
900	970
1100	1170
1300	1370
1500	1570
1700	1770
1900	1970
2000	

Note:

- The H dimension increases in standard increments of 200 mm. When intermediate dimensions are required, production is carried out by extending the length of the lower by-pass sheet.
- Dimensions larger than this range can be manufactured modularly.

SELECTION PARAMETERS

H (mm)	Number of Blades	Effective Area Ratio (%)
370...569	1	19...12
570...769	2	25...18
770...969	3	28...22
970...1169	4	29...24
1170...1369	5	30...26
1370...1569	6	31...27
1570...1769	7	32...28
1770...1969	8	32...29
1970	9	32



Graph 1. DPS-150 Pressure Drop Chart

Note:

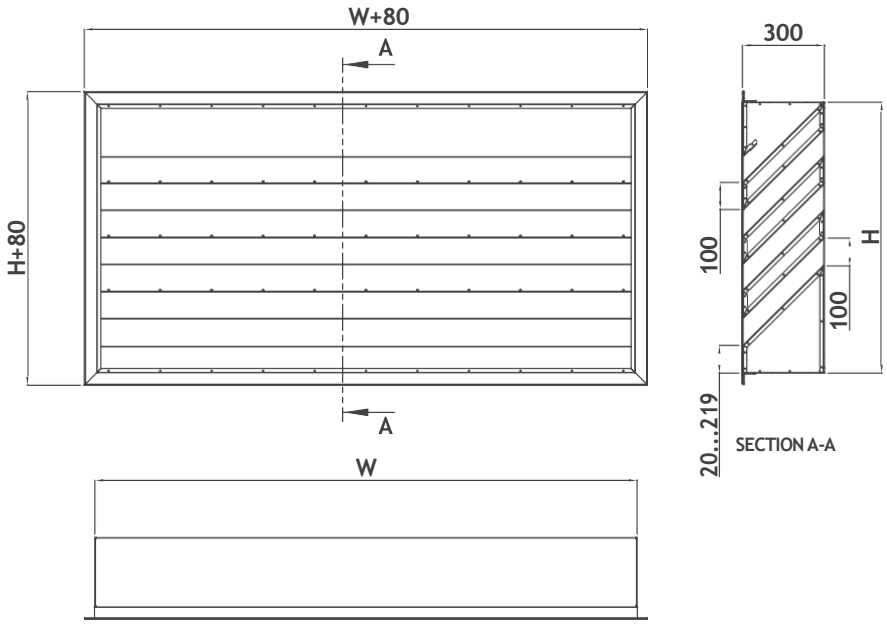
For DPS – Acoustic Louver selections, it is recommended that the pressure drop remains below 70 Pa. It is also recommended that the selected effective air velocity does not exceed 2–2.5 m/s.

DPS-150 Acoustic Performance Parameters								
Octave Band Center Frequencies (Hz)	63	125	250	500	1000	2000	4000	8000
Sound Reduction Index (dB)	4	4	6	8	11	11	11	10
Sound Power Level Generated by the Acoustic Louver at Effective Velocity of 1 m/s (dB)	48	41	34	35	30	22	13	12
Sound Power Level Generated by the Acoustic Louver at Effective Velocity of 2 m/s (dB)	66	58	51	51	50	47	41	28

2. DPS-300

- Production is available in dimensions from min. 400 mm × 520 mm to max. 2000 mm × 2120 mm.
- It can also be used as an acoustic panel.
- It has higher sound attenuation performance compared to DPS-150.

DIMENSIONS



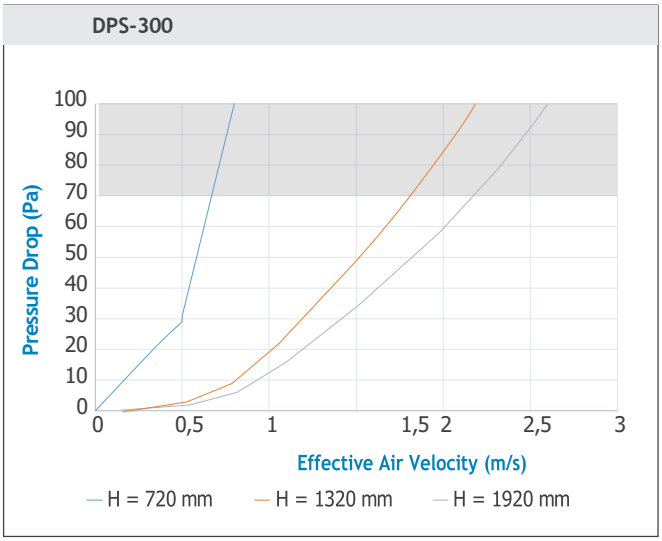
W (mm)	H (mm)
400	520
600	720
800	920
1000	1120
1200	1320
1400	1520
1600	1720
1800	1920
2000	2120

Note:

- The H dimension increases in standard increments of 200 mm. When intermediate dimensions are required, production is carried out by extending the length of the lower by-pass sheet.
- Dimensions larger than this range can be manufactured modularly.

SELECTION PARAMETERS

H (mm)	Number of Blades	Effective Area Ratio (%)
520...719	1	14...10
720...919	2	20...15
920...1119	3	23...19
1120...1319	4	25...22
1320...1519	5	27...23
1520...1719	6	28...25
1720...1919	7	29...26
1920...2119	8	30...27
2120	9	30



Graph 2. DPS-300 Pressure Drop Chart

Note:

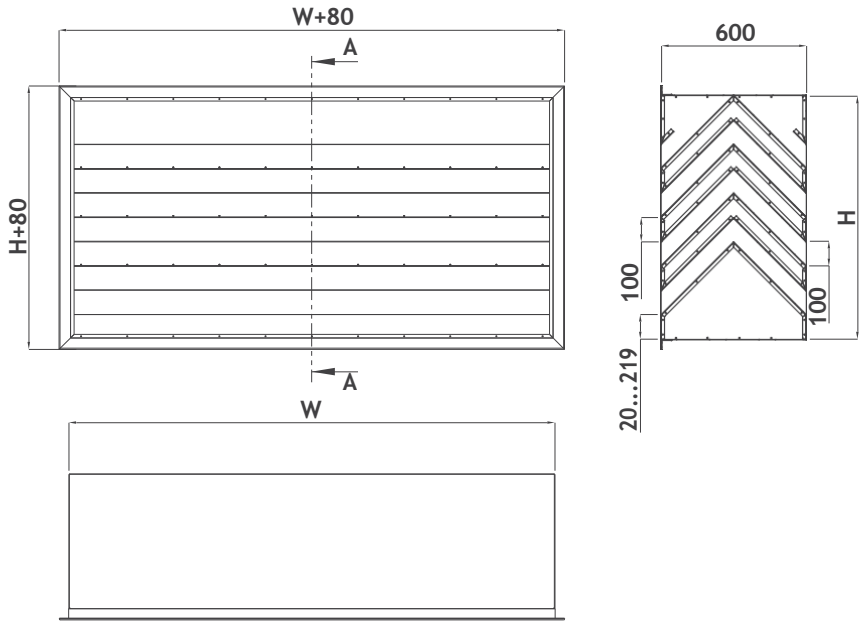
For DPS – Acoustic Louver selections, it is recommended that the pressure drop remains below 70 Pa. It is also recommended that the selected effective air velocity does not exceed 2–2.5 m/s.

DPS - 300 Acoustic Performance Parameters								
Octave Band Center Frequencies (Hz)	63	125	250	500	1000	2000	4000	8000
Sound Reduction Index (dB)	6	6	9	13	21	20	16	13
Sound Power Level Generated by the Acoustic Louver at Effective Velocity of 1 m/s (dB)	48	41	34	30	25	20	13	12
Sound Power Level Generated by the Acoustic Louver at Effective Velocity of 2 m/s (dB)	66	58	51	47	45	43	39	28

3. DPS-600

- Production is available in dimensions from min. 400 mm × 520 mm to max. 2000 mm × 2120 mm.
- It is the acoustic louver with the highest attenuation performance among acoustic louver models.
- It is used in areas with high noise levels such as generator rooms.

DIMENSIONS



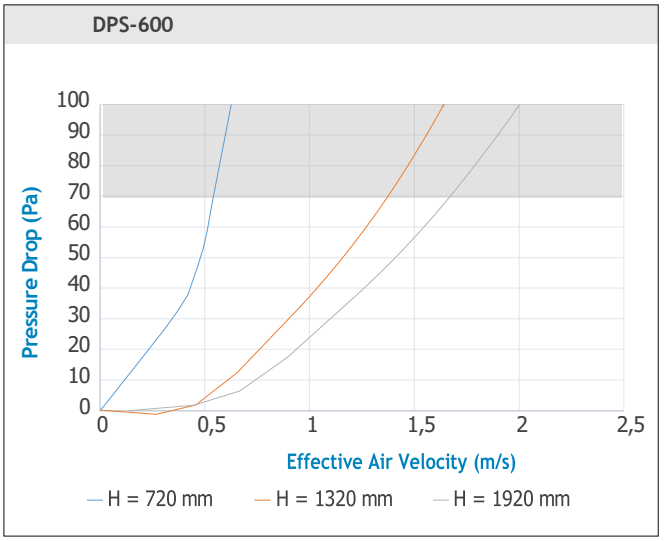
W (mm)	H (mm)
400	520
600	720
800	920
1000	1120
1200	1320
1400	1520
1600	1720
1800	1920
2000	2120

Note:

- The H dimension increases in standard increments of 200 mm. When intermediate dimensions are required, production is carried out by extending the length of the lower by-pass sheet.
- Dimensions larger than this range can be manufactured modularly.

SELECTION PARAMETERS

H (mm)	Number of Blades	Effective Area Ratio (%)
520...719	1	14...10
720...919	2	20...15
920...1119	3	23...19
1120...1319	4	25...22
1320...1519	5	27...23
1520...1719	6	28...25
1720...1919	7	29...26
1920...2119	8	30...27
2120	9	30



Graph 3. DPS-600 Pressure Drop Chart

Not:

For DPS – Acoustic Louver selections, it is recommended that the pressure drop remains below 70 Pa. It is also recommended that the selected effective air velocity does not exceed 2–2.5 m/s.

DPS - 600 Acoustic Performance Parameters								
Octave Band Center Frequencies (Hz)	63	125	250	500	1000	2000	4000	8000
Sound Reduction Index (dB)	7	8	13	23	37	33	29	29
Sound Power Level Generated by the Acoustic Louver at Effective Velocity of 1 m/s (dB)	54	46	37	32	28	24	15	12
Sound Power Level Generated by the Acoustic Louver at Effective Velocity of 2 m/s (dB)	71	66	57	50	47	46	41	30

INSTALLATION

The DPS – Acoustic Louver is installed by fastening it to the wall or to a blind frame using mounting screws through the flange surface (Figure 1). The mounting surface must be smooth and flat.

In cases where the portion of the acoustic louver protruding from the wall exceeds 150 mm, support profiles must be installed as shown in Figure 2.

It can also be used as an acoustic barrier around exposed machinery or in cooling towers (Figure 3). For this purpose, the products must be specified during the order stage.

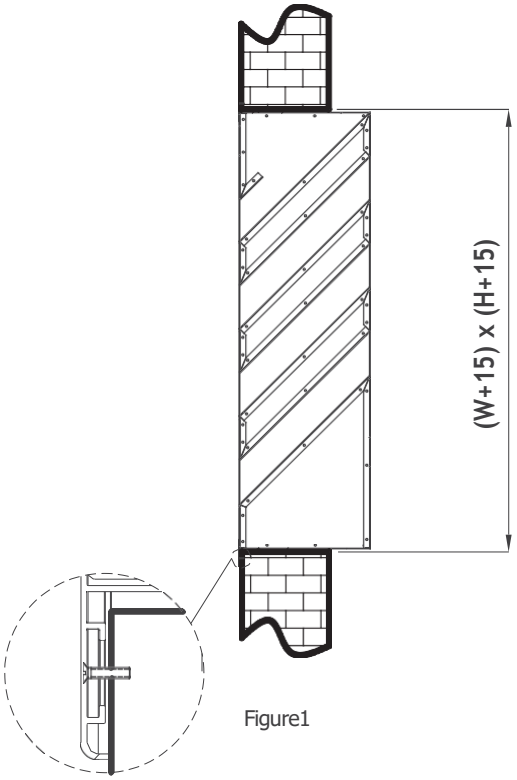


Figure1

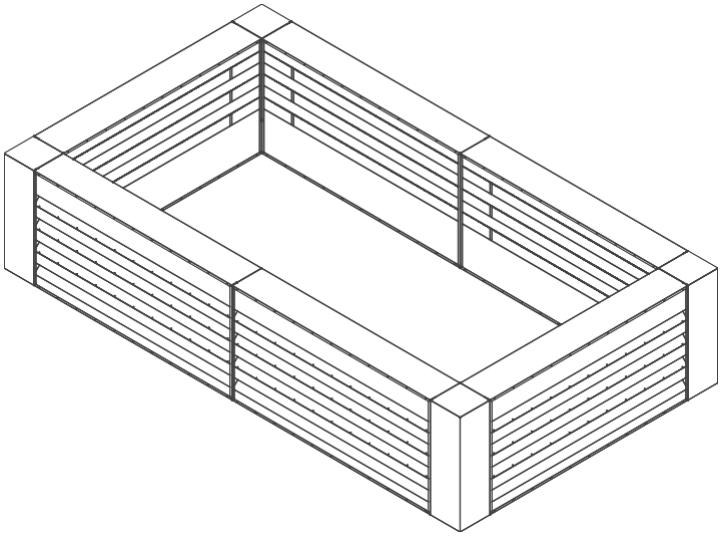


Figure 3

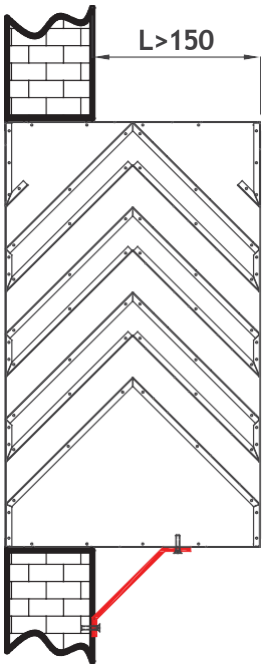


Figure 2

NOTES

NOTES


PLEASE HANDLE WITH CARE. DO NOT THROW
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140 different types of products.
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