



GFP  
HEPA FILTER BOX

**FOUR  
SEASONS**<sup>®</sup>

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Doğu İklimlendirme A.Ş.

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 standards. 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 130 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 40 countries.

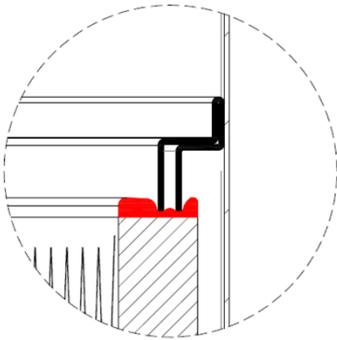
Thanks to our "Customer Satisfaction","Zero-defect policy" motto and reinforced by complete certified products, more than 250 employees, DOGU HVAC R&D center developed exclusive products, such as Double Skin Make-Up Kitchen Hood, Recirculated Laminar Airflow Unit, Single Piece Square Ceiling Diffuser 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 standards], 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.



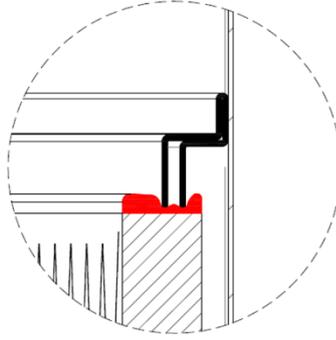
- GFP - Hepa Filter Box is designed for sterile rooms, operating rooms and clean rooms (pharmaceutical, chemical, food industries).
- All Hepa filter boxes are tested according to DIN 1946/4 during production with 100% leakage guarantee.
- GFP fully responds to application requirements with its wide product range.
- GFP has differential pressure measuring tips to measure filter contamination.
- The inside of the box is resistant to disinfection.

## MATERIAL

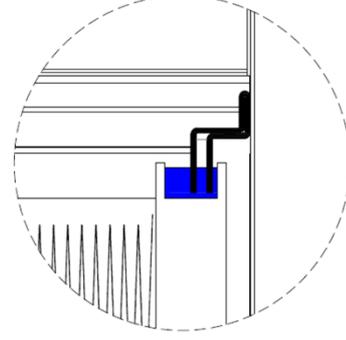
- Hepa filter box is produced from sheet steel or optional AISI 304 quality stainless sheet.
- All accessories are corrosion resistant.
- Flat profile type in hepa filter is compatible with both EPDM and Gel type seals.



Aluminium Filter Case with EPDM Sealing



MDF Filter Case with EPDM Sealing



Aluminium Filter Case filled with Gel

- MDF and Aluminum options are available for the frame of the Hepa filter. At the same time, the filter pile heights can be chosen 50 mm or 125 mm depending on the dimensions of the Hepa filter.

## COLOR

- RAL 9010 or RAL 9016 Electrostatic powder paint
- Optional
  - Different RAL Codes

## INSTALLATION

- Center Support Installation
- Corner Screw System Installation

## DIMENSIONS

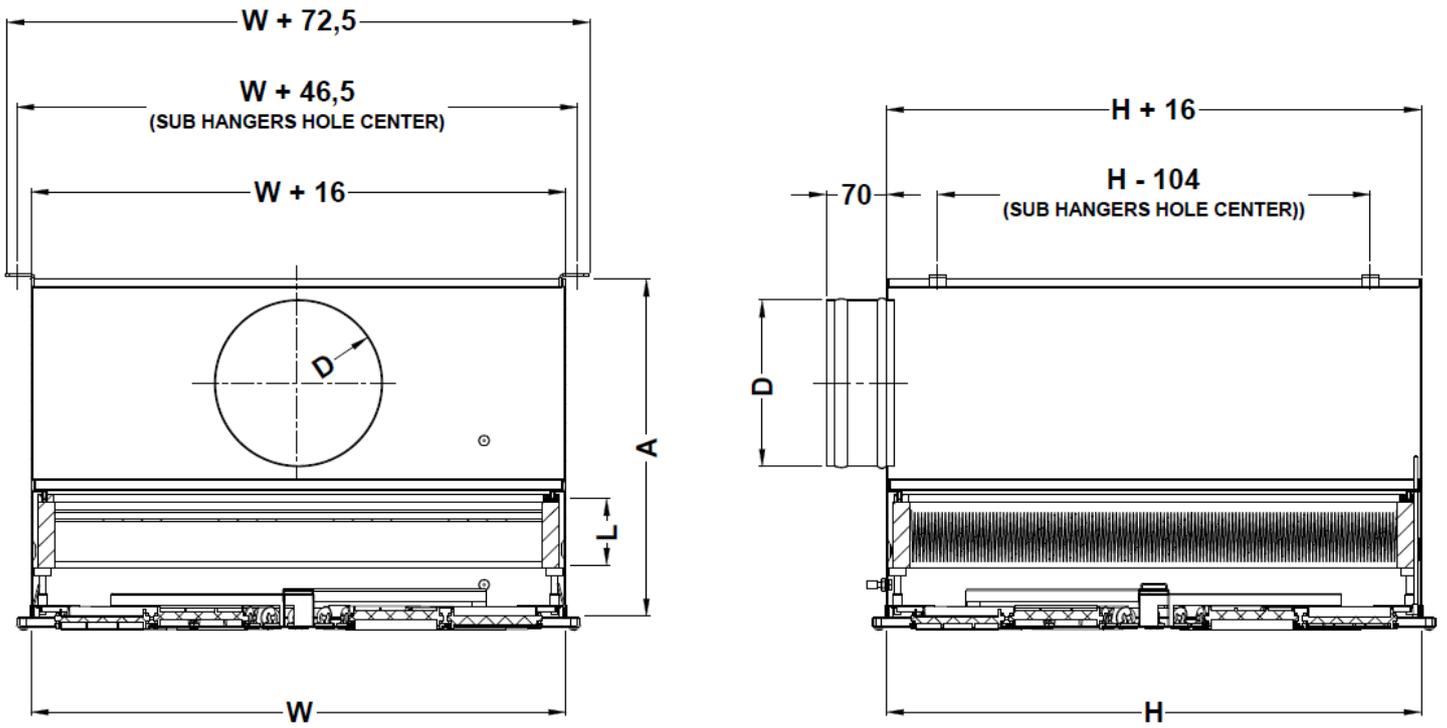


Table 1. Dimensions Table

Dimensions [W x H x Filter Height] [mm x mm x mm]	
305 x 305 x 78	305 x 305 x 149
305 x 610 x 78	305 x 610 x 149
457 x 457 x 78	457 x 457 x 149
457 x 610 x 78	457 x 610 x 149
535 x 535 x 78	535 x 535 x 149
575 x 575 x 78	575 x 575 x 149
610 x 610 x 78	610 x 610 x 149
762 x 762 x 78	762 x 762 x 149

- When L [Filter height] is 78 mm, A [Box height] =  $D + 190$ .
- When L [Filter height] is 149 mm, A [Box height] =  $D + 270$ .

## PERFORMANCE DATA

Table 2. Performance Data

Dimensions [mm x mm x mm]	Pile Height [mm]	Flow rate [m³/h]	Clean Filter Pressure Loss [Pa]		Dirty Filter Pressure Loss [Pa]		Recommended Flexible Pipe Diameter [mm]
			H13	H14	H13	H14	
305 x 305 x 78	50	150	100	125	200	250	Ø125
305 x 610 x 78	50	300	100	125	200	250	Ø160
457 x 457 x 78	50	340	100	125	200	250	Ø160
457 x 610 x 78	50	450	100	125	200	250	Ø180
535 x 535 x 78	50	465	100	125	200	250	Ø180
575 x 575 x 78	50	535	100	125	200	250	Ø200
610 x 610 x 78	50	600	100	125	200	250	Ø200
762 x 762 x 78	50	940	100	125	200	250	Ø250
305 x 305 x 149	125	150	55	70	110	140	Ø125
305 x 610 x 149	125	300	55	70	110	140	Ø160
457 x 457 x 149	125	340	55	70	110	140	Ø160
457 x 610 x 149	125	450	55	70	110	140	Ø180
535 x 535 x 149	125	465	55	70	110	140	Ø180
575 x 575 x 149	125	535	55	70	110	140	Ø200
610 x 610 x 149	125	600	55	70	110	140	Ø200
762 x 762 x 149	125	940	55	70	110	140	Ø250

**Not:** The values in the table are valid when the filter face velocity is 0.45 m/s

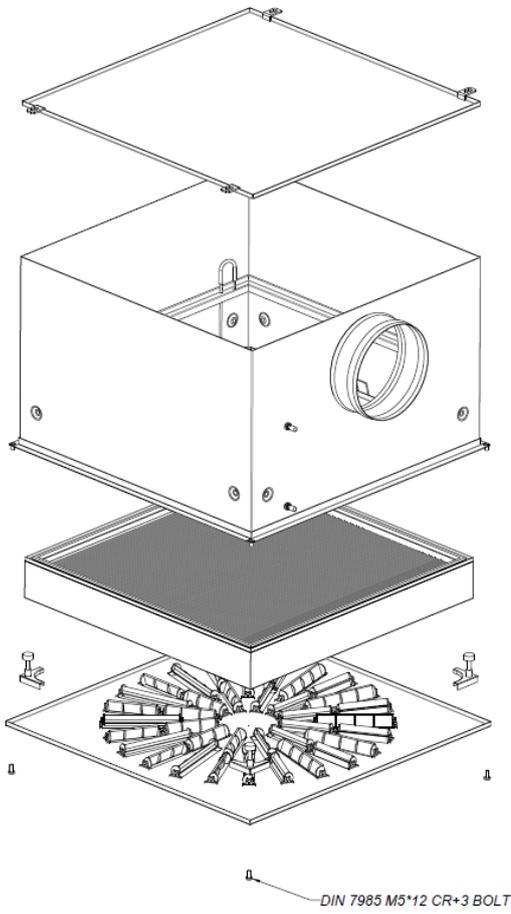
## AIR DISTRIBUTOR DATA

Table 3. Air Distributor Data

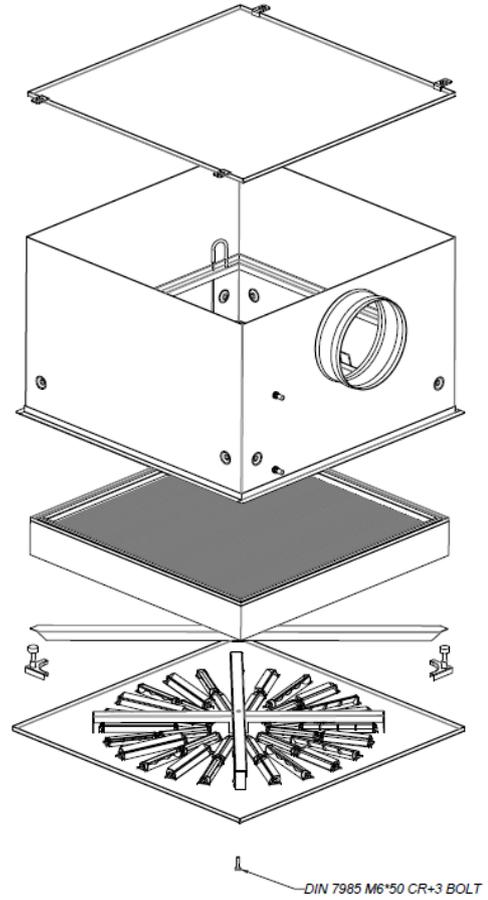
Hepa Filter Box Dimensions [mm x mm]	Air Distributor	Air Distributor Dimensions [mm x mm]	Maximum Flow Rate [m³/h]	Pressure Loss [Pa]
305x305	OSB - Prismatic Swirl Diffuser	355x355	150	20
	OAK - Square Ceiling Diffuser	201x201		3
305x610	OSB - Prizmatik Swirl Difüzör	355x660	300	38
	OAP - Prismatic Ceiling Diffuser	201x506		4
457x457	OSB - Prismatic Swirl Diffuser	507x507	340	14
	OAK - Square Ceiling Diffuser	353x353		2
457x610	OSB - Prizmatik Swirl Difüzör	507x660	450	25
	OAP - Prismatic Ceiling Diffuser	353x506		2
535x535	OSB - Prismatic Swirl Diffuser	585x585	465	13
	OAK - Square Ceiling Diffuser	431x431		2
575x575	OSB - Prismatic Swirl Diffuser	625x625	535	18
	OAK - Square Ceiling Diffuser	471x471		2
610x610	OSB - Prismatic Swirl Diffuser	660x660	600	23
	OAK - Square Ceiling Diffuser	506x506		2
762x762	OSB - Prismatic Swirl Diffuser	812x812	940	20
	OAK - Square Ceiling Diffuser	658x658		4

# INSTALLATION

## EXPLODED VIEW

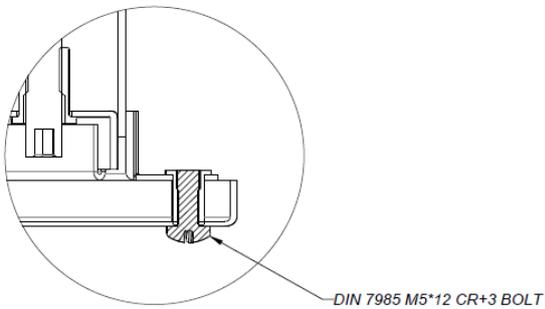


**Figure 1.** Corner Screw System Installation

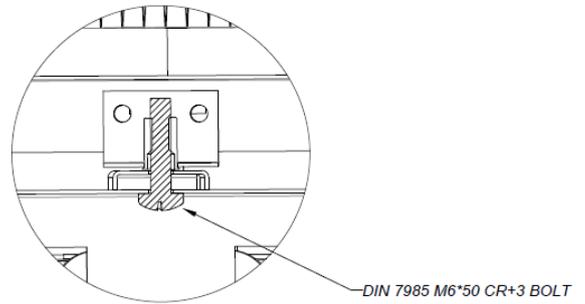


**Figure 2.** Center Support Installation

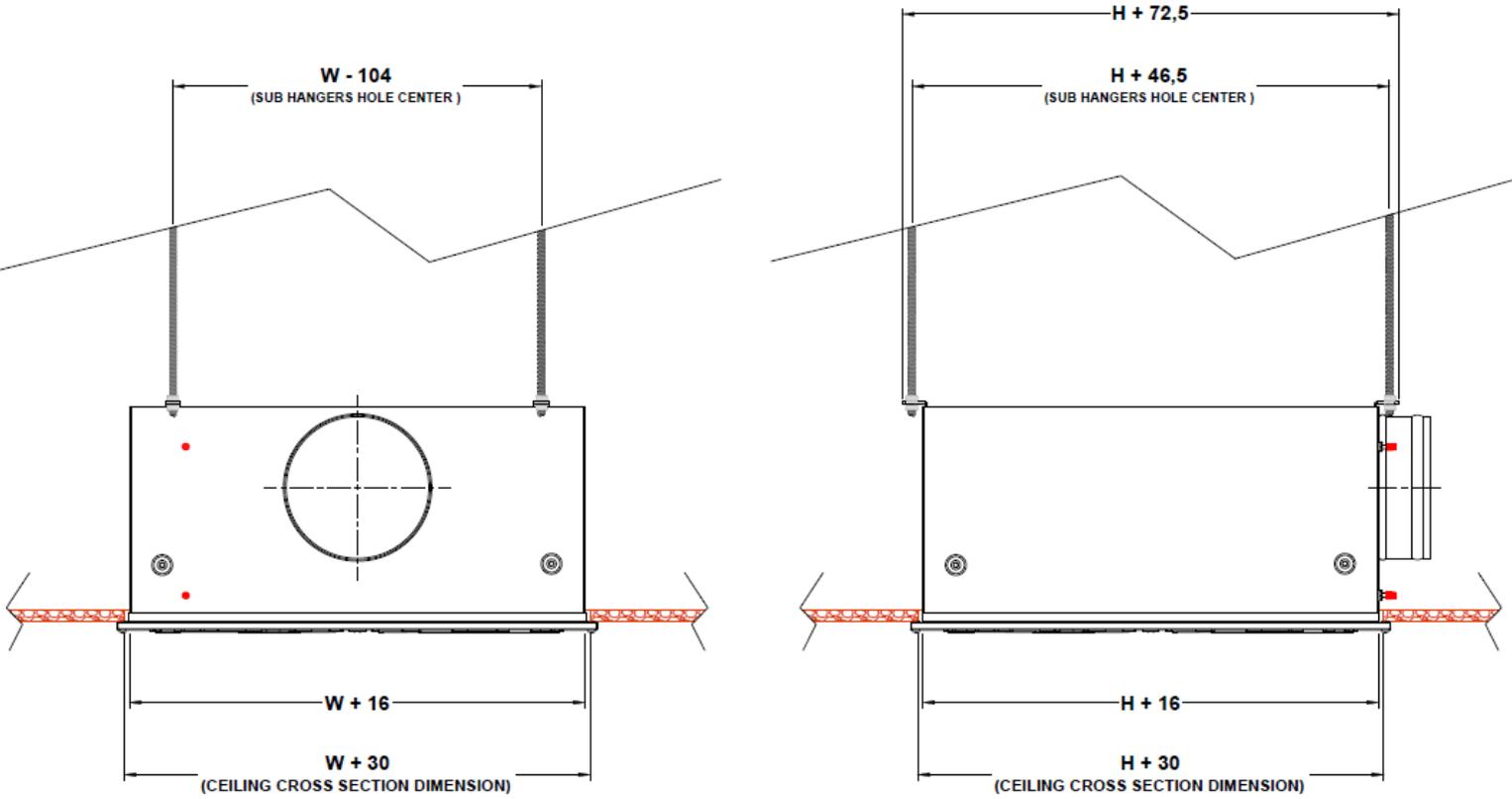
### Corner Screw System Installation Detail



### Center Support Installation Detail



## Hanging Lugs Installation Detail



### PRODUCT SELECTION

**Example:** Supply flow rate of Hepa filter is determined as 450 m<sup>3</sup>/h. H13 filter type with a pleat height of 50 mm will be selected. Swirl diffuser will be used as air distribution equipment.

**Solution:** From the performance data table [Table 3] for 450 m<sup>3</sup>/h flow rate, appropriate size:  
457 x 610 x 78

Corresponding clean filter pressure loss is 100 Pa.

For the air distributor data to be used in the product, the air distributor table [Table 4] is referenced. For the swirl diffuser, there is a pressure loss of 20 Pa at 450 m<sup>3</sup>/h air flow.

Total pressure loss = Filter Pressure Loss + Air Distributor Pressure Loss

Total pressure loss = 100 Pa + 20 Pa = 120 Pa.

## ORDER CODE

### FILTER ORDER CODE

Filter Type	Filter Frame	Filter Height [mm]	Dimensions [mm x mm]							
			305 x 305	305 x 610	457 x 457	457 x 610	535 x 535	575 x 575	610 x 610	762 x 762
H13	MDF Frame	78	F01	F09	F02	F94	F03	F04	F05	F20
	EPDM Sealing	149	F07	F48	F06	F94	F08	F14	F17	F20
	Aluminium Frame	78	F21	H11	F22	H13	F23	F43	F24	F89
	EPDM Sealing	149	H01	F46	H02	H17	F93	H03	F91	H19
	Aluminium Frame	78	F27	H21	F28	H22	F29	F30	F31	H23
	GEL Sealing	149	H24	H25	H26	H27	H28	H29	H30	H31
H14	MDF Frame	78	F60	F66	F61	H08	F62	F63	F64	F75
	EPDM Sealing	149	F68	H09	F69	H10	H04	F82	F65	F75
	Aluminium Frame	78	F97	H12	F96	H14	F95	F18	F15	H15
	EPDM Sealing	149	H05	H16	H06	H18	F88	H07	F25	H20
	Aluminium Frame	78	H32	H33	H34	H35	H36	H37	H38	H39
	GEL Sealing	149	H40	H41	H42	H43	H44	H45	H46	H47

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

GFP.<A>.<B>.<C>.<D>.<E>.<F>

<b>A</b>	<b>Material Type</b>	
	DKP	Sheet Steel
	PAS	AISI 304 Stainless Steel
<b>B</b>	<b>Filter</b>	
	F00	Without Filter
	XXX	See the filter order code table
<b>C</b>	<b>Installation</b>	
	GC	Center Support Installation
	KM	Corner Screw System Installation
<b>D</b>	<b>Width [W] [mm]</b>	
	0000	Standard Dimensions
<b>E</b>	<b>Height [H] [mm]</b>	
	0000	Standard Dimensions
<b>F</b>	<b>Flexible Pipe Diameter [Ø] [mm]</b>	
	100 - 125 - 150 - 160 - 180 - 200 - 229 - 250 - 255 - 280 - 300 - 315 - 350 - 356	

Example;

GFP.DKP.F03.KM.0535.0535.0078.180



We make the difference with  
130 different types of products.



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