



Product catalogue

CFU

Ceiling filtration unit

Air filtration

Version 1.0.3
Date: 19.12.2022



- ▼ [Riveted plenum boxes](#)
- ▼ [Welded plenum boxes](#)
- ▼ [Filters](#)
- ▼ [Diffusers](#)
- ▼ [Ordering key](#)
- ▼ [Installation](#)
- ▼ [Diagrams](#)



PRODUCT OVERVIEW

AIR FILTRATION

PRODUCT OVERVIEW

Ceiling filtration unit is designed for supply of clean and filtered air into the areas with high demands for hygiene and dust-free environment, like pharmaceutical, food, chemical, space industries etc.

DESIGN FEATURES

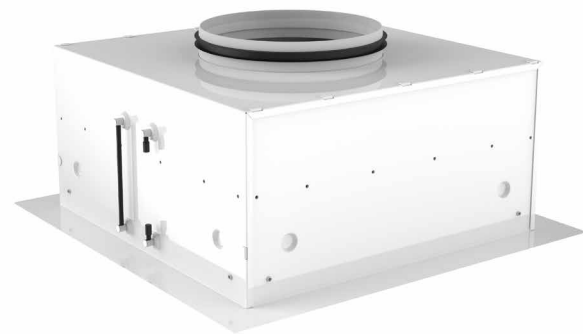
CFU-W offers a completely welded plenum design produced from steel sheet and powder-coated to RAL 9010, while CFU-R is a riveted plenum bod produced from galvanized steel sheet and powder-coated to RAL 9010. Tightness and robustness guaranteed. Immediate filter clamping without tools (multi-position mechanism at ± 3 mm). Two possible filter thicknesses (68 and 115 mm) with the same casing.

The integration of filters of different thickness is a considerable advantage in the event of a change in the flow rates of an existing installation or a reduction in energy consumption with the integration of thicker filters.

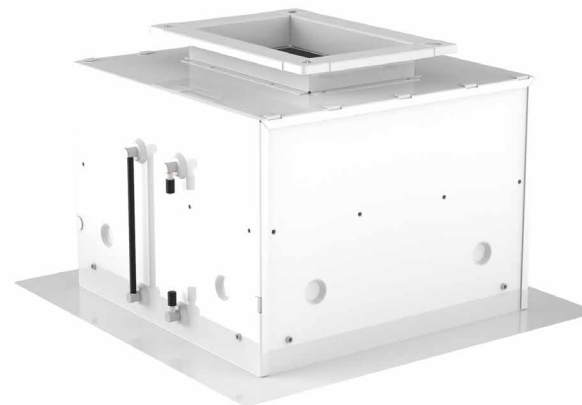


www.klimaoprema.com/cfu/dop

RIVETED PLENUM BOXES



 **CFU-R-VC**
Vertical cylindrical spigot connection



 **CFU-R-VR**
Vertical rectangular duct connection



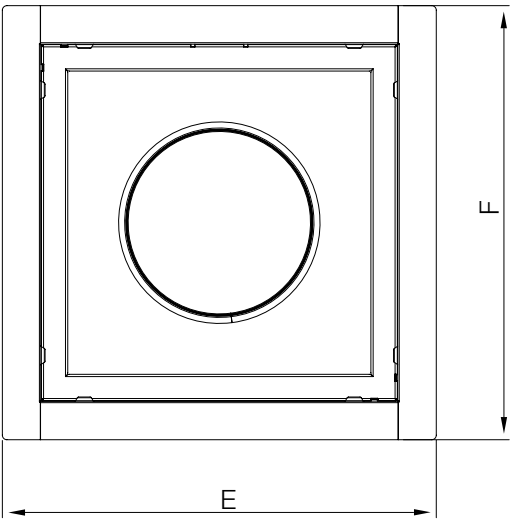
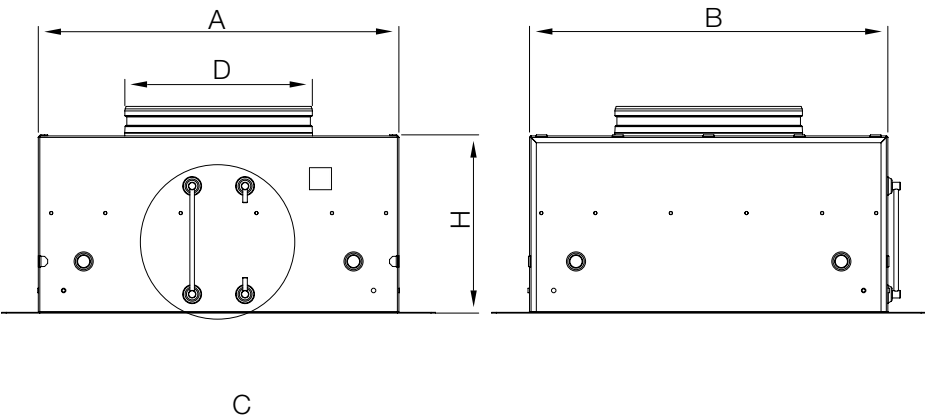
 **CFU-R-HC**
Dagard
Side cylindrical spigot connection



 **CFU-R-HP**
Side rectangular duct connection

- ▼ Riveted plenum boxes
- ▼ Welded plenum boxes
- ▼ Filters
- ▼ Diffusers
- ▼ Ordering key
- ▼ Installation
- ▼ Diagrams

 PRODUCT OVERVIEW



- ▼ [Riveted plenum boxes](#)
- ▼ [Welded plenum boxes](#)
- ▼ [Filters](#)
- ▼ [Diffusers](#)
- ▼ [Ordering key](#)
- ▼ [Installation](#)
- ▼ [Diagrams](#)

CFU-R-VC

New generation casing designed to adapt to filter thickness: 68 or 115 mm, thus offering scalability of filter performance (in flow rate and pressure drop) without changing casing

- Very high flexibility of use
- Supply / Exhaust
- Circular or rectangular duct connection
- Tightness validated to ± 700 Pa
- Local penetration at the joint plane $< 0.01\%$ (Emery

- 3004 test)
- Easy filter tightening without tools
- 6 plenum sizes
- Adaptable diffusers

OPTIONS

Diffuser closure by Push Pull system.
Possibility of stitching with a diameter of 315 mm for sizes 9.6 and 12.6.
Fastening system for sandwich panel (dagard ceiling).

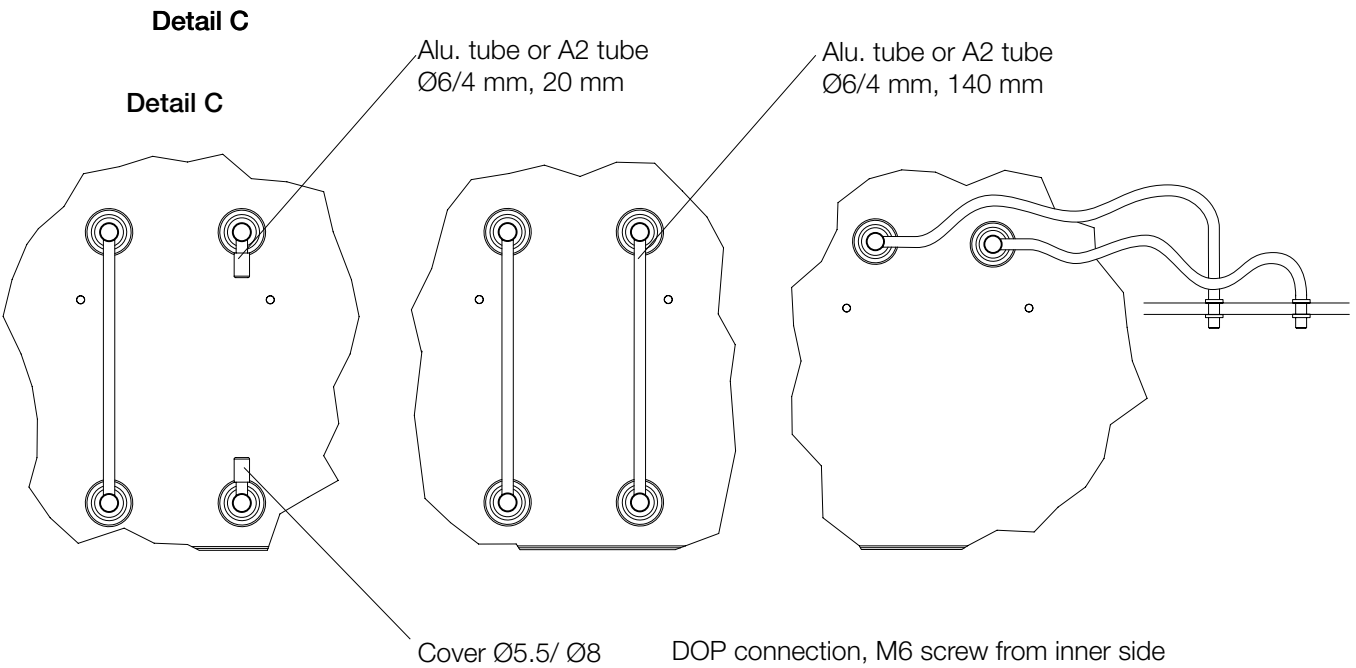


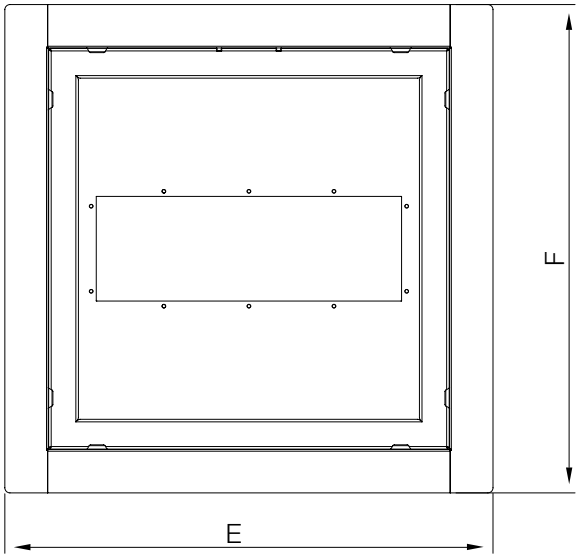
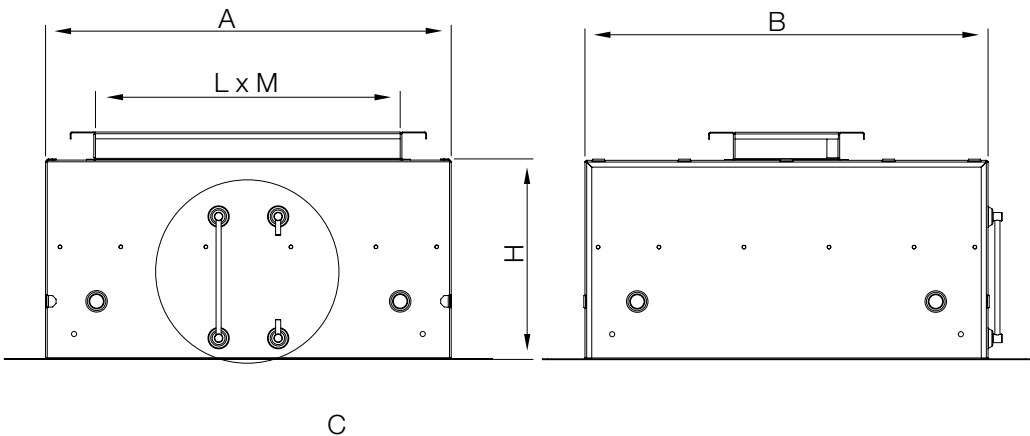
DIFFUSERS

AIR FILTRATION

DIMENSIONS

Characteristics		For CFU-R-VC						
		Overall		Reservation		High.	Diam.	Weight
Cut	Filter size (mm)	A (mm)	B (mm)	E (mm)	F (mm)	H (mm)	D (mm)	(kg)
3030	305 x 305 x 68	322	322	422	422	290	158	8
3060	305 x 610 x 68	322	627	422	727	290	248	11
4545	457x 457 x 68	474	474	574	574	290	248	12
AC	598 x 598 x 68	474	474	594	594	290	248	
6060	610 x 610 x 68	627	627	727	727	290	313	15
9060	915 x 610 x 68	932	627	1032	727	290	398	19
2AC	1196 x 598 x 68	1074	474	1337	727	290	398	
1260	1220 x 610 x 68	1237	627	1194	594	290	498	22





- ▼ Riveted plenum boxes
- ▼ Welded plenum boxes
- ▼ Filters
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- ▼ Ordering key
- ▼ Installation
- ▼ Diagrams

CFU-R-VR

New generation casing designed to adapt to filter thickness: 68 or 115 mm, thus offering scalability of filter performance (in flow rate and pressure drop) without changing casing

- Very high flexibility of use
- Supply / Exhaust
- Circular or rectangular duct connection
- Tightness validated to ± 700 Pa
- Local penetration at the joint plane $< 0.01\%$ (Emery

- 3004 test)
- Easy filter tightening without tools
- 6 plenum sizes
- Adaptable diffusers

OPTIONS

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Fastening system for sandwich panel (dagard ceiling).

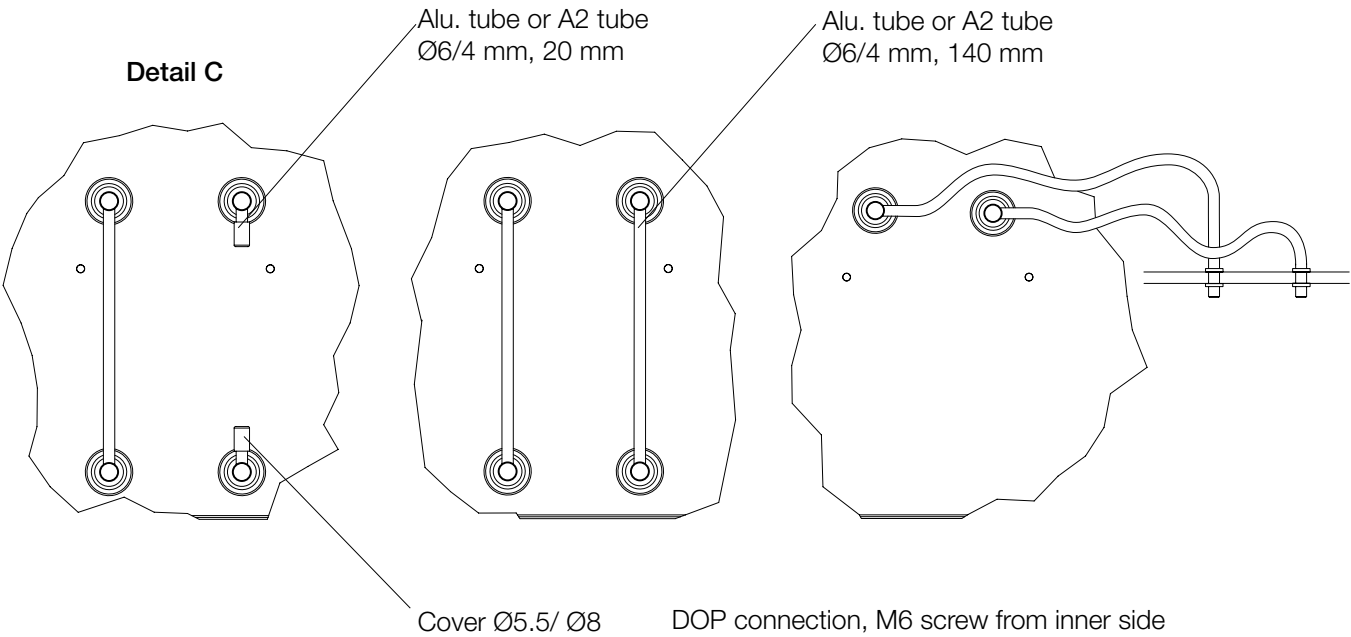


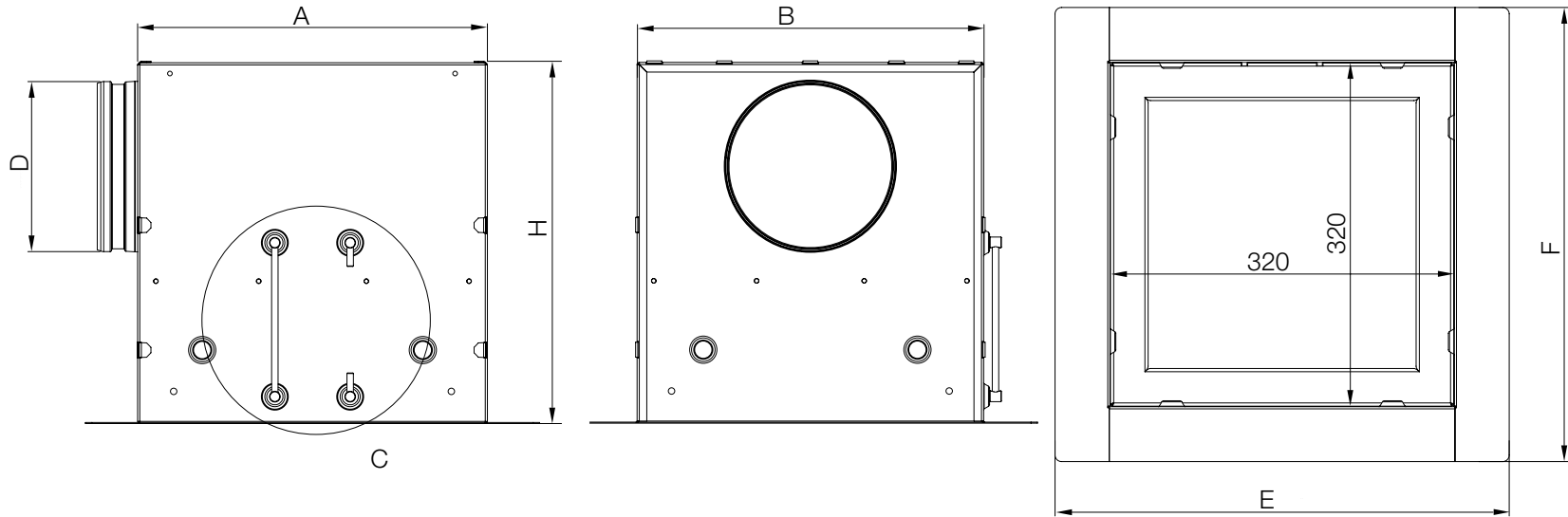
DIFFUSERS

AIR FILTRATION

DIMENSIONS

Characteristics		For CFU-R-VR						
		Overall		Reservation		High.	L x M	Weight
Cut	Filter size (mm)	A (mm)	B (mm)	E (mm)	F (mm)	H (mm)	(mm)	(kg)
3030	305 x 305 x 68	322	322	422	422	235.7	123 x 199	8,45
3060	305 x 610 x 68	322	627	422	727	235.7	123 x 399	12,02
4545	457x 457 x 68	474	474	574	574	235.7	123 x 359	12,16
AC	598 x 598 x 68	474	474	594	594	235.7	123 x 359	
6060	610 x 610 x 68	627	627	727	727	235.7	248 x 399	15,99
9060	915 x 610 x 68	932	627	1032	727	235.7	248 x 599	20,06
2AC	1196 x 598 x 68	1074	474	1194	594	235.7	248 x 799	
1260	1220 x 610 x 68	1237	627	1337	727	235.7	248 x 599	22,96





CFU-R-HC

New generation casing designed to adapt to filter thickness: 68 or 115 mm, thus offering scalability of filter performance (in flow rate and pressure drop) without changing casing

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- Local penetration at the joint plane $< 0.01\%$ (Emery

- 3004 test)
- Easy filter tightening without tools
- 6 plenum sizes
- Adaptable diffusers

OPTIONS

Diffuser closure by Push Pull system.
Possibility of stitching with a diameter of 315 mm for sizes 9.6 and 12.6.
Fastening system for sandwich panel (dagard ceiling).

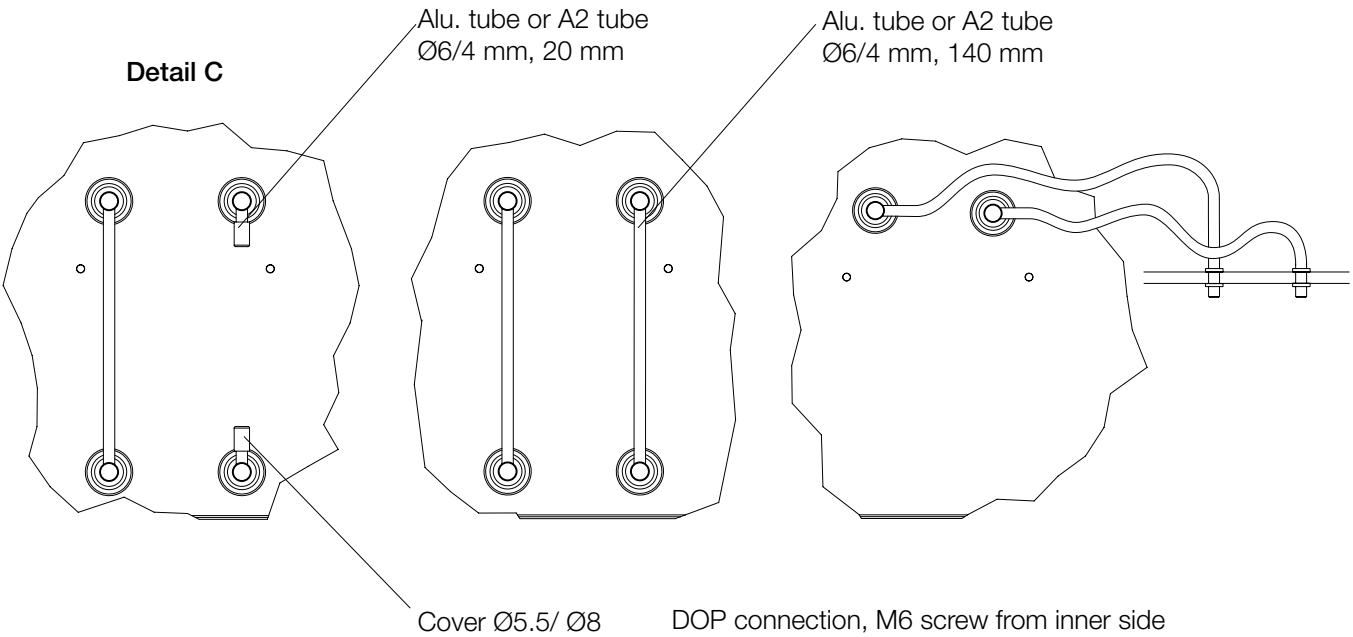
- ▼ [Riveted plenum boxes](#)
- ▼ [Welded plenum boxes](#)
- ▼ [Filters](#)
- ▼ [Diffusers](#)
- ▼ [Ordering key](#)
- ▼ [Installation](#)
- ▼ [Diagrams](#)

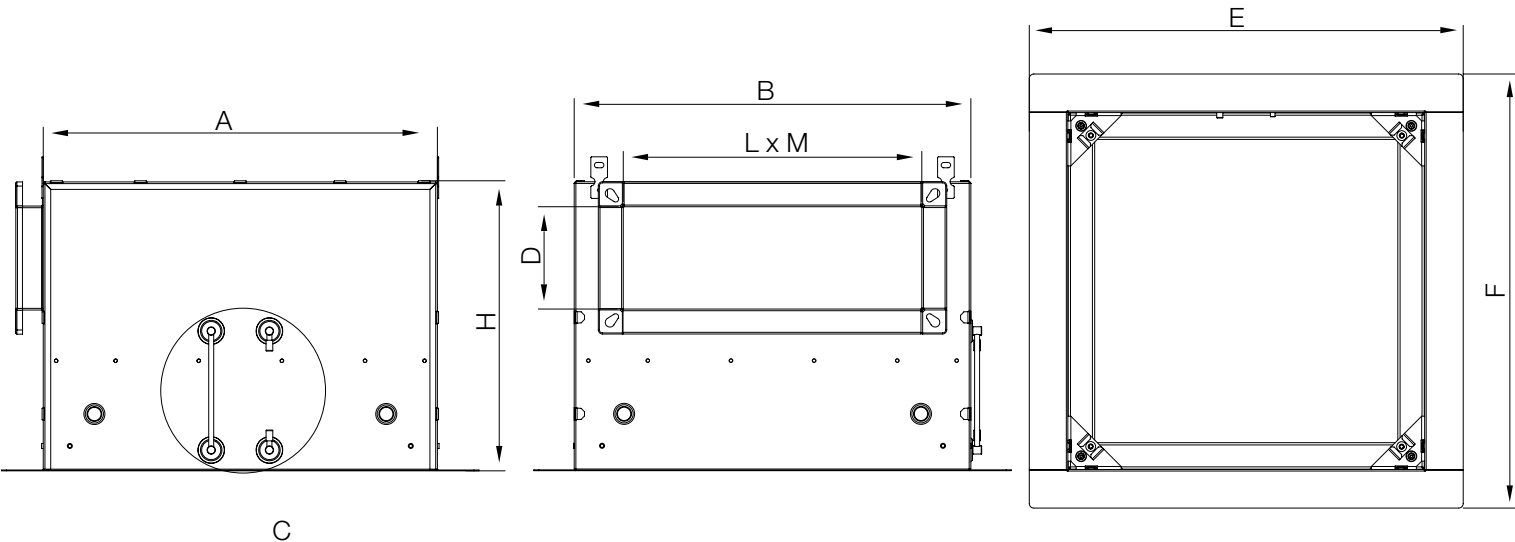


AIR FILTRATION

DIMENSIONS

Characteristics		For CFU-R-HC						
		Overall		Reservation		High.	Diam.	Weight
Cut	Filter size (mm)	A (mm)	B (mm)	E (mm)	F (mm)	H (mm)	D (mm)	(kg)
3030	305 x 305 x 68	322	322	422	422	3.487	123	10
3060	305 x 610 x 68	322	627	422	727	3.487	123	15
4545	457x 457 x 68	474	474	574	574	3.487	123	15
AC	598 x 598 x 68	474	474	594	594	3.487	123	
6060	610 x 610 x 68	627	627	727	727	4.757	248	22
9060	915 x 610 x 68	932	627	727	1032	4.757	248	29
2AC	1196 x 598 x 68	1074	474	594	1194	4.757	248	
1260	1220 x 610 x 68	1237	627	727	1337	4.757	248	38





CFU-R-HP

New generation casing designed to adapt to filter thickness: 68 and 115 mm, thus offering scalability of filter performance (in flow rate and pressure drop) without changing casing

- Very high flexibility of use
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- Circular or rectangular duct connection
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- Local penetration at the joint plane $< 0.01\%$ (Emery

- 3004 test)
- Easy filter tightening without tools
- 6 plenum sizes
- Adaptable diffusers

OPTIONS

Diffuser closure by Push Pull system.
Possibility of stitching with a diameter of 315 mm for sizes 9.6 and 12.6.
Fastening system for sandwich panel (dagard ceiling).

- ▼ [Riveted plenum boxes](#)
- ▼ [Welded plenum boxes](#)
- ▼ [Filters](#)
- ▼ [Diffusers](#)
- ▼ [Ordering key](#)
- ▼ [Installation](#)
- ▼ [Diagrams](#)

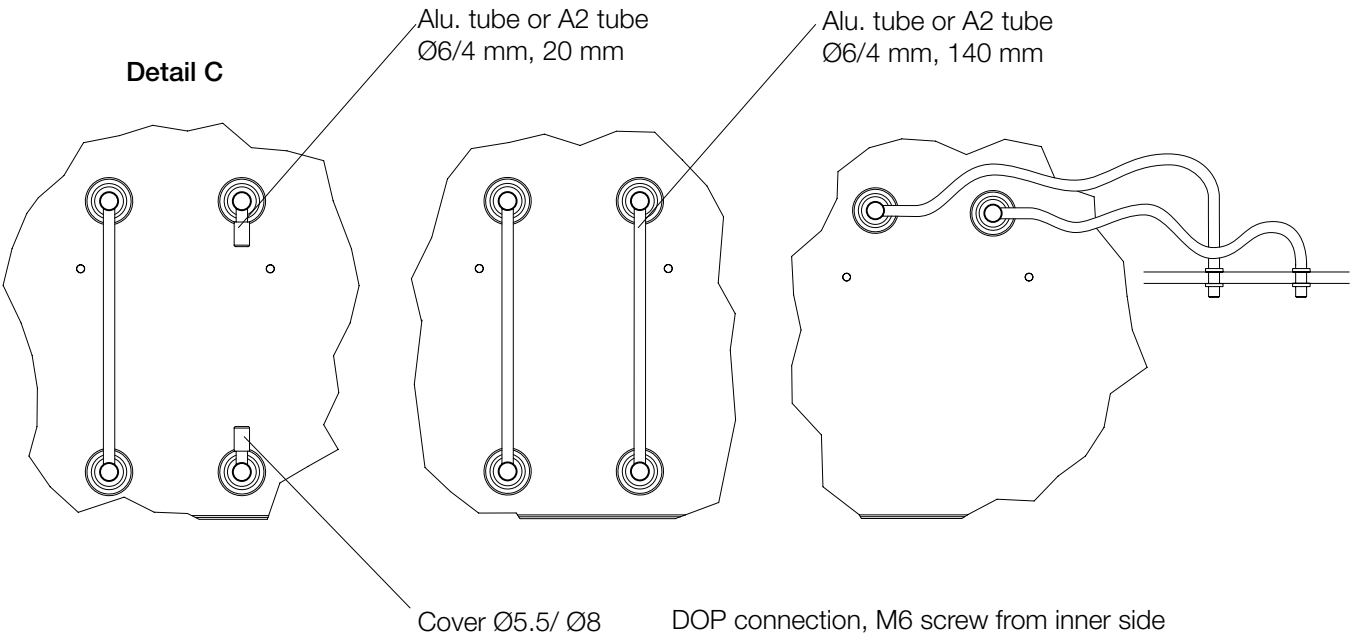


DIFFUSERS

AIR FILTRATION

DIMENSIONS

Characteristics		For CFU-R-HP						
		Overall		Reservation		High.	L x M	Weight
Cut	Filter size (mm)	A (mm)	B (mm)	E (mm)	F (mm)	H (mm)	(mm)	(kg)
3030	305 x 305 x 68	322	322	422	422	3.487	123 x 199	10
3060	305 x 610 x 68	322	627	422	727	3.487	123 x 399	14
4545	457x 457 x 68	474	474	574	574	3.487	123 x 359	14
AC	598 x 598 x 68	474	474	594	594	3.487	123 x 359	
6060	610 x 610 x 68	627	627	727	727	4.757	248 x 399	21
9060	915 x 610 x 68	627	932	727	1032	4.757	248 x 599	26
2AC	1196 x 598 x 68	474	1074	594	1194	4.757	248 x 599	
1260	1220 x 610 x 68	627	1237	727	1337	4.757	248 x 799	31



WELDED PLENUM BOX



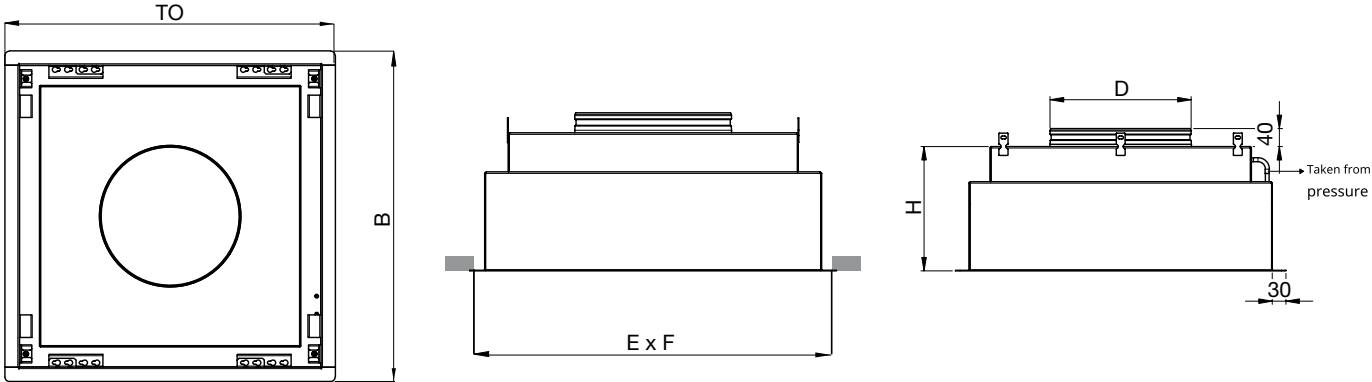
 **CFU-W-VC**
Vertical cylindrical spigot connection



 **CFU-W-HC**
Side cylindrical spigot connection

- ▼ Riveted plenum boxes
- ▼ Welded plenum boxes
- ▼ Filters
- ▼ Diffusers
- ▼ Ordering key
- ▼ Installation
- ▼ Diagrams

PRODUCT OVERVIEW



CFU-W-VC

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- ▼ [Riveted plenum boxes](#)
- ▼ [Welded plenum boxes](#)
- ▼ [Filters](#)
- ▼ [Diffusers](#)
- ▼ [Ordering key](#)
- ▼ [Installation](#)
- ▼ [Diagrams](#)

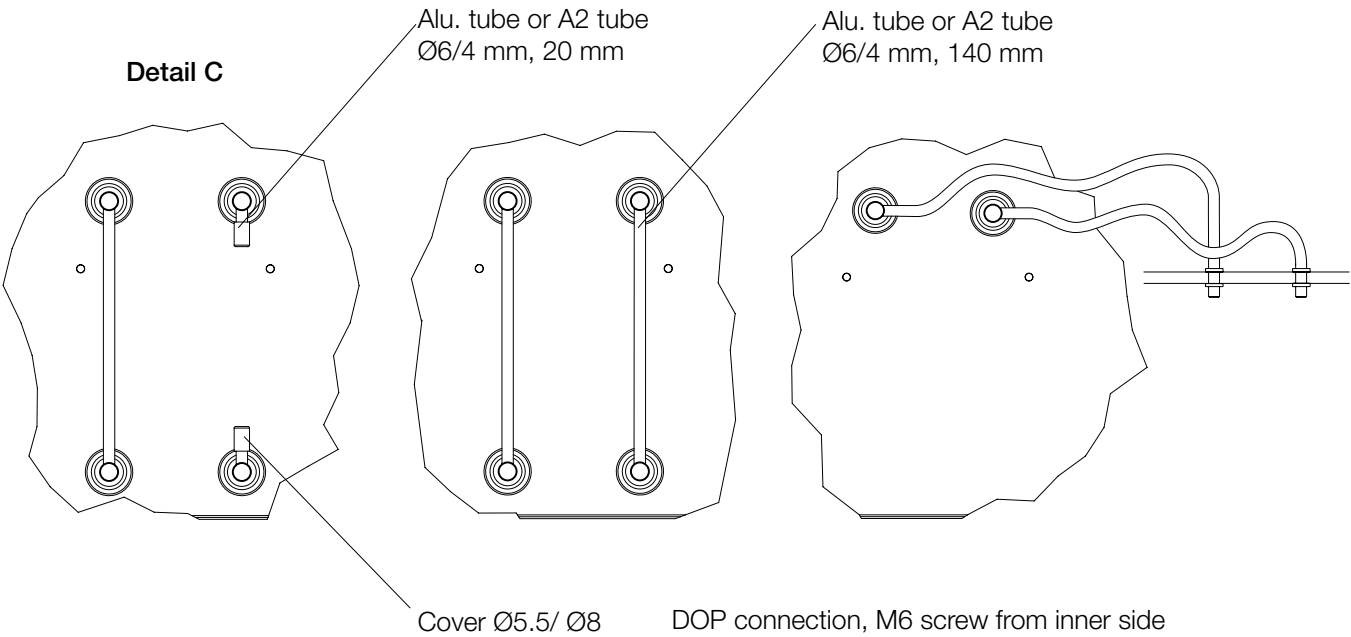


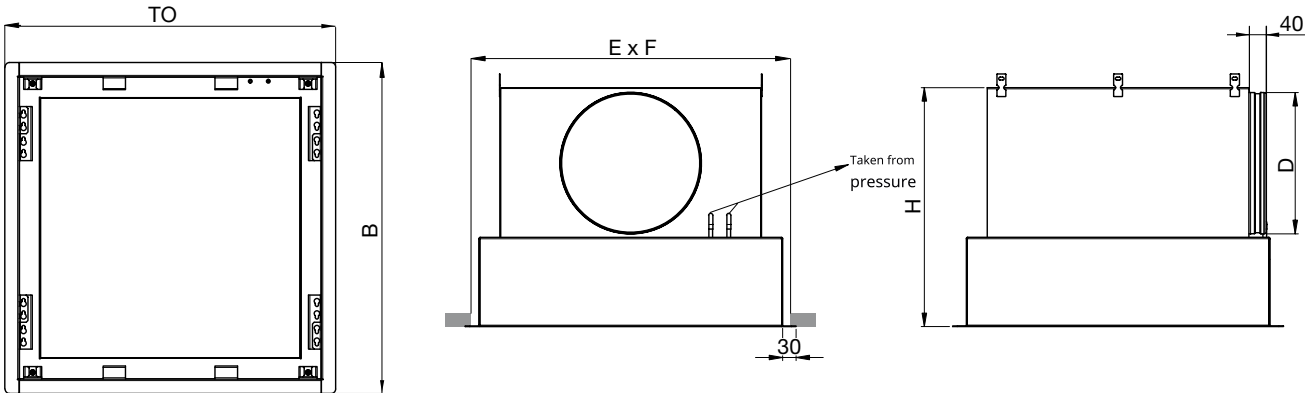
DIFFUSERS

AIR FILTRATION

DIMENSIONS

Characteristics		For CFU-W-VC						
		Overall		Reservation		High.	Diam.	Weight (kg)
Cut	Filter size (mm)	TO (mm)	B (mm)	E (mm)	F (mm)	H (mm)	D (mm)	
3030	305 x 305 x 68	430	430	390	390	277	158	7
3060	305 x 610 x 68	430	735	390	695	277	248	11
4545	457x 457 x 68	595	595	542	542	277	248	11
AC	598 x 598 x 68							
6060	610 x 610 x 68	735	735	695	695	277	313	15
9060	915 x 610 x 68	1040	735	1000	695	277	398	19
2AC	1196 x 598 x 68							
1260	1220 x 610 x 68	1345	735	1305	695	277	498	23





CFU-W-HC

New generation casing designed to adapt to filter thickness: 68 and 115 mm, thus offering scalability of filter performance (in flow rate and pressure drop) without changing casing

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- ▼ [Riveted plenum boxes](#)
- ▼ [Welded plenum boxes](#)
- ▼ [Filters](#)
- ▼ [Diffusers](#)
- ▼ [Ordering key](#)
- ▼ [Installation](#)
- ▼ [Diagrams](#)

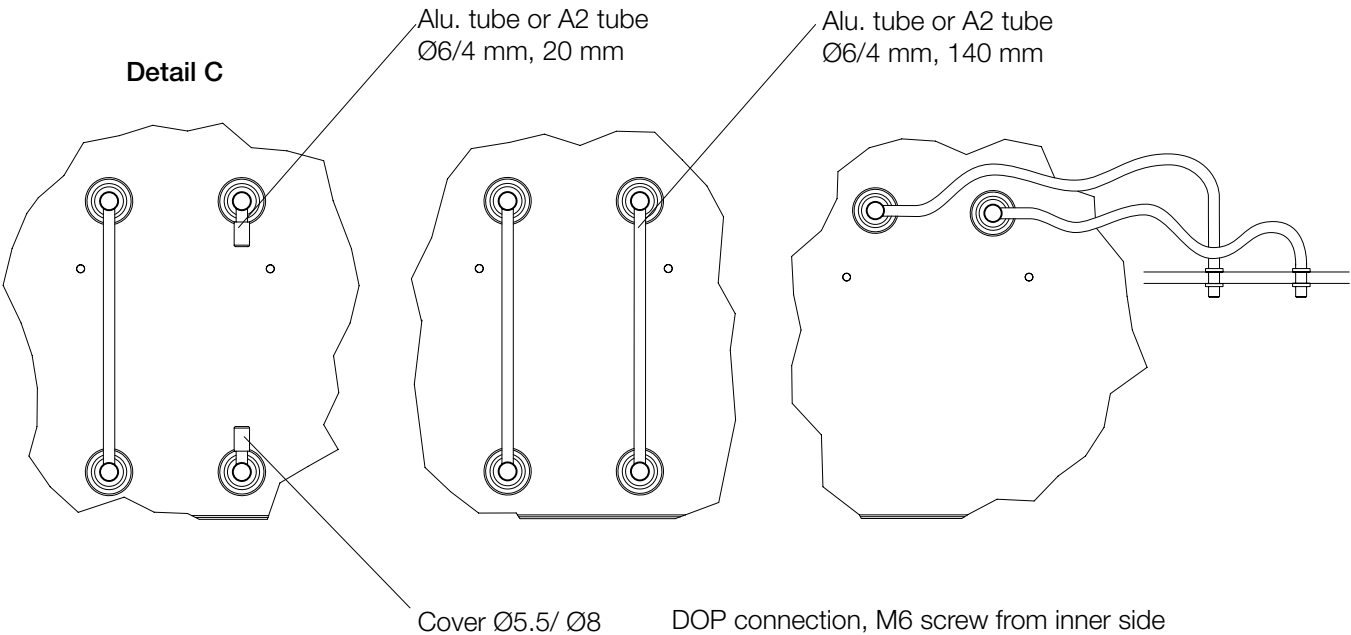


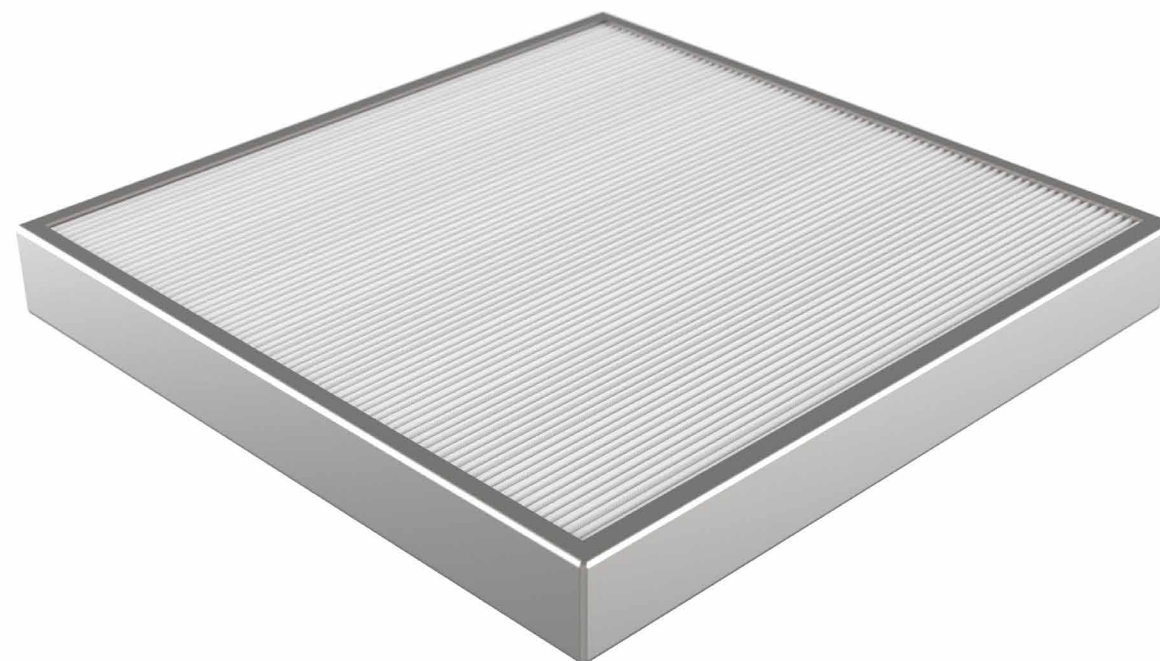
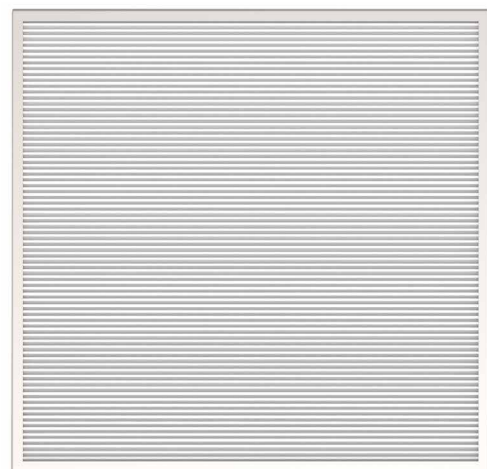
DIFFUSERS

AIR FILTRATION

DIMENSIONS

Characteristics		For CFU-W-HC						
		Overall		Reservation		High.	Diam.	Weight PLC (kg)
Cut	Filter size (mm)	TO (mm)	B (mm)	E (mm)	F (mm)	H (mm)	D (mm)	
3030	305 x 305 x 68	430	430	390	390	390	159	9
3060	305 x 610 x 68	430	735	390	695	480	248	14
4545	457 x 457 x 68	595	595	542	542	480	248	15
AC	598 x 598 x 68	595	595					
6060	610 x 610 x 68	735	735	695	695	545	313	22
9060	915 x 610 x 68	1040	735	1000	695	630	398	30
2AC	1196 x 598 x 68	1195	595					
1260	1220 x 610 x 68	1345	735	1305	695	730	498	41





- ▼ [Riveted plenum boxes](#)
- ▼ [Welded plenum boxes](#)
- ▼ [Filters](#)
- ▼ [Diffusers](#)
- ▼ [Ordering key](#)
- ▼ [Installation](#)
- ▼ [Diagrams](#)

Filters

They can be of type LF11, LF14 or LF15 of the Klimaoprema range. Note that all the filters in our range are filters of standardized sizes with the aim of simplifying maintenance replacement operations and in order not to lock users into a single manufacturer.



FILTERS

LF11, LF14 and LF15, thickness 68 mm

They consist of a frame in anodized aluminum profile 68 mm thick receiving the filter media (micro-fiber glass paper in mini-plies). A white lacquered metal grid protects the media on both sides during handling. The filters have been tested in accordance with EN 1822 and are effective, as desired:

- H11 ($\geq 95\%$ MPPS)
- H14 ($\geq 99.995\%$)
- H15 ($\geq 99.9995\%$ MPPS)

Each filter, delivered in individual plastic packaging, in a rigid cardboard box, is supplied with its individual test certificate according to EN 1822 (MPPS 100% scanning) which must be given to the future user. A polyurethane gasket (continuously cast on the aluminum frame) ensures tightness during the mechanical tightening of the filter on the underside of the self-supporting frame.

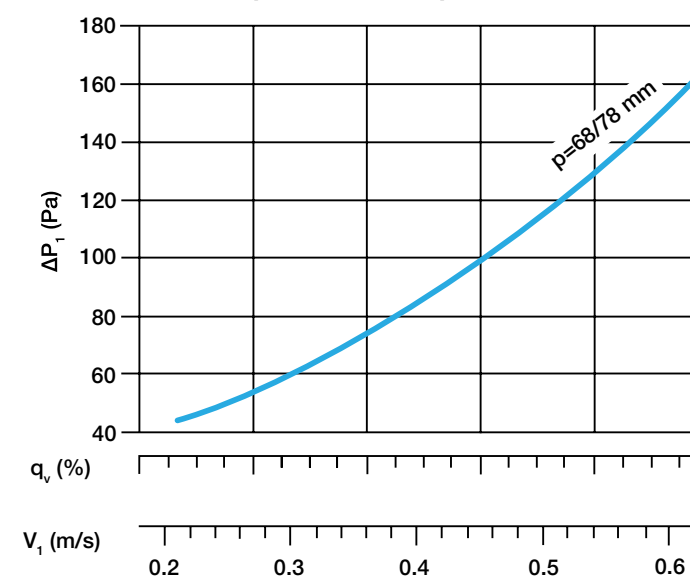
LF11 and LF14, thickness 115 mm

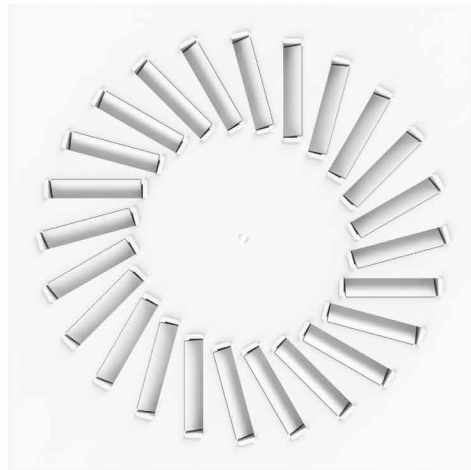
They consist of a frame in aluminum steel profile 115 mm thick receiving the filter media (micro-fiber glass paper in deep mini-plies). The filters have been tested in accordance with EN 1822 and are effective:

- H11 ($\geq 95\%$ MPPS)
- H14 ($\geq 99.995\%$)

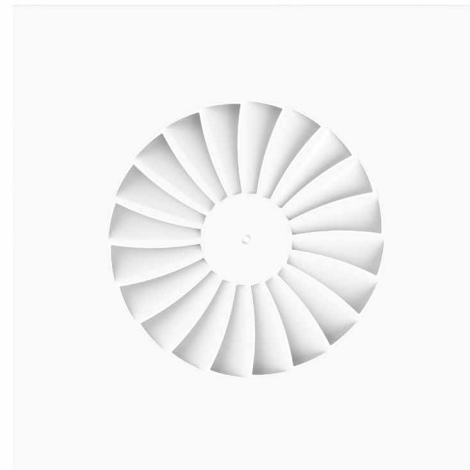
Each filter, delivered in individual plastic packaging, in a rigid cardboard box, is supplied with its individual test certificate according to EN 1822 (MPPS 100% scanning) which must be given to the future user. A polyurethane gasket (continuously cast on the frame) ensures tightness during the mechanical tightening of the filter on the underside of the self-supporting frame.

LF14- initial pressure drop

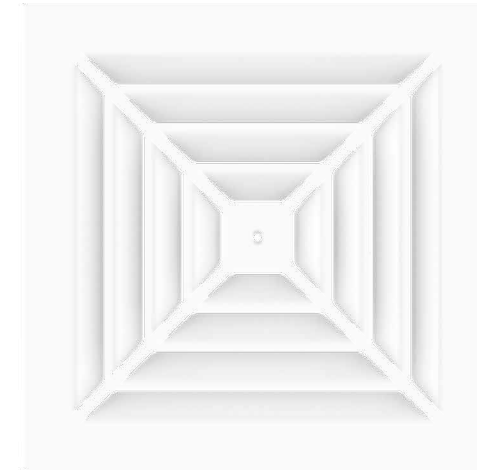




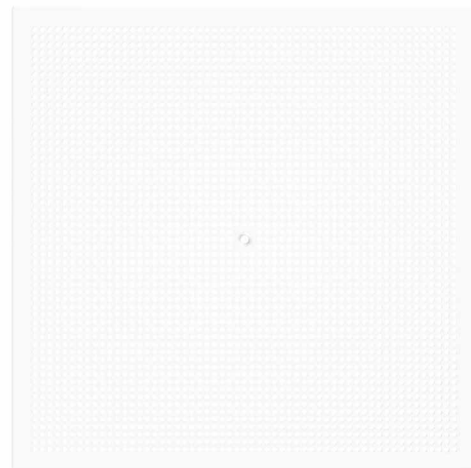
Adjustable swirl diffuser **DEV-Q / DEK-Q**



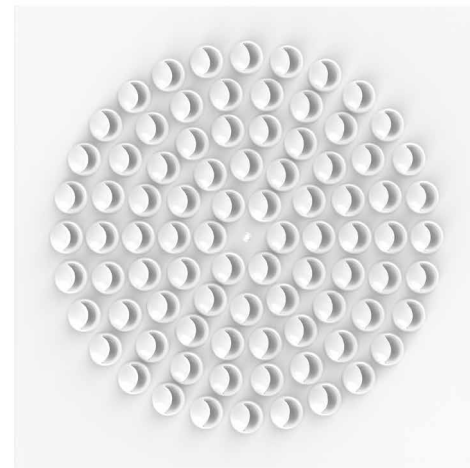
Adjustable ceiling diffuser **DVF-Q**



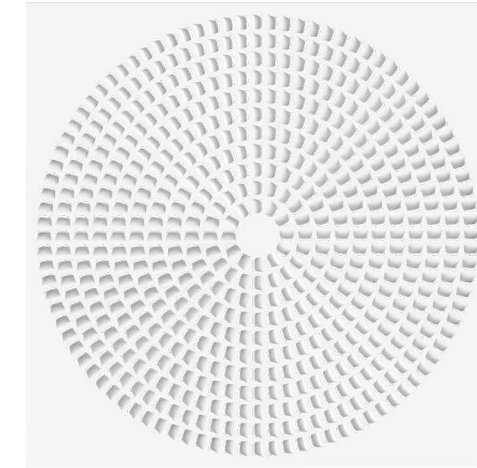
Four way diffuser **DFW-Q**



Ceiling swirl diffuser **DIP-Q**



Ceiling swirl diffuser **DOS-Q**



Perforated diffuser **DOR-Q**

-  Riveted plenum boxes
-  Welded plenum boxes
-  Filters
-  Diffusers
-  Ordering key
-  Installation
-  Diagrams

DIFFUSERS



SANDWICH PANEL CEILING



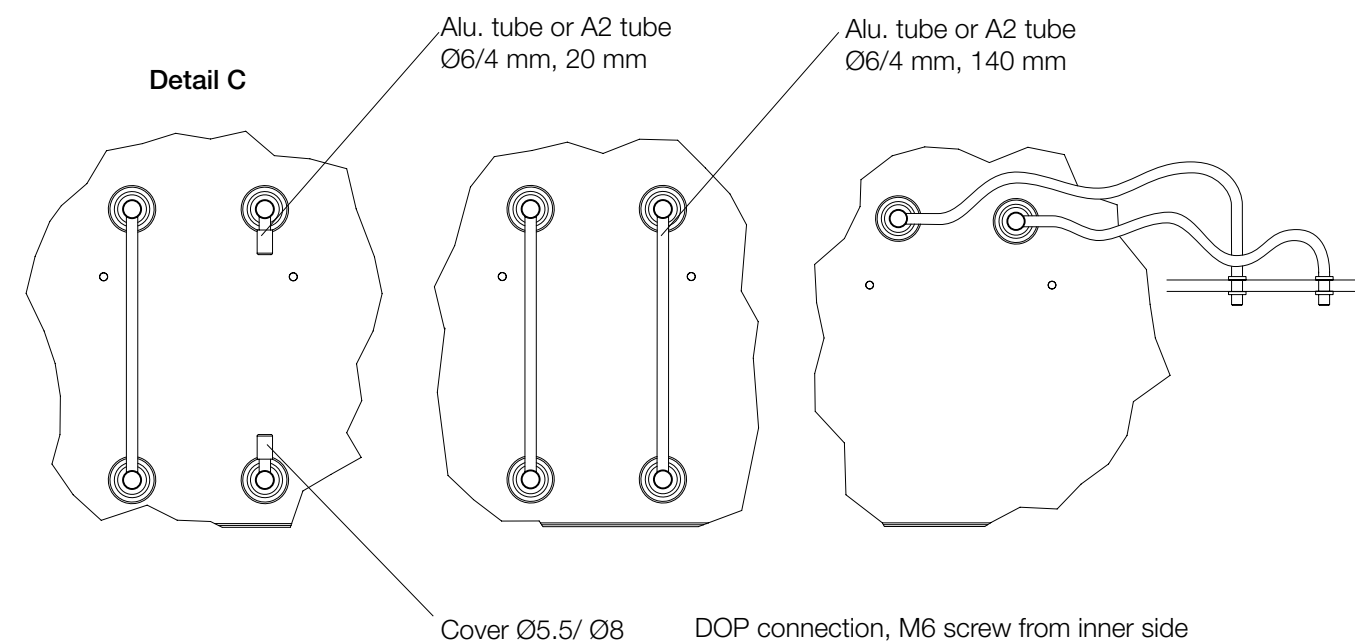
- ▼ [Riveted plenum boxes](#)
- ▼ [Welded plenum boxes](#)
- ▼ [Filters](#)
- ▼ [Diffusers](#)
- ▼ [Ordering key](#)
- ▼ [Installation](#)
- ▼ [Diagrams](#)



DIFFUSERS

AIR FILTRATION

DIMENSIONS





- ▼ [Riveted plenum boxes](#)
- ▼ [Welded plenum boxes](#)
- ▼ [Filters](#)
- ▼ [Diffusers](#)
- ▼ [Ordering key](#)
- ▼ [Installation](#)
- ▼ [Diagrams](#)



AIR FILTRATION

ORDERING KEY
FOR CFU

(1) Ceiling filter unit	(2) Plenum design	(3) Filter dimensions	(4) Connection	(5) Panel Ceiling
CFU	- W	- 3030	- HC	- D
(1) Ceiling filter unit: CFU		(4) Round top spigot connection VC Rectangular top spigot connection VP Round side spigot connection HC Rectangular side spigot connection HP		(5) Sandwich panel ceiling: D
(2) Welded plenum design: W Riveted plenum design: R				
(3) Filter dimensions: 305x305 3030 305x610 3060 457x457 4545 598x598 AC 610x610 6060 915x610 9060 1260x610 1260 1196x598 2AC				

ORDERING KEY
FOR FILTER

(1) Product type	(2) CFU dimensions	(3) HEPA filter type	(4) Thickness
CFU-A	- 3030	- LF14	- 68
(1) Accessories for ceiling filter unit: CFU-A		(3) Hepa filter type: LF11, LF14, LF15* *LF15 only with thickness 68	
(2) CFU dimensions: 305x305 3030 305x610 3060 457x457 4545 610x610 6060 915x610 9060 1260x610 1260		(4) Thickness: 68,115	

ORDERING KEY
FOR DIFFUSER

1) Product type	(2) Diffusor plate	(3) Diffusor shape	(4) Diffusor size / Pattern size	(5) Discharge elements color * only for DEV/DEK
CFU-A	- DOS	- QQ	- 6060	- B
(1) Accessories for ceiling filter unit: CFU-A DOR ceiling swirl diffusor		(3) QQ - rectangular shape / rectangular patern QR - rectangular shape / circulare patern		
(2) *DOS adjustable ceiling diffusor *DFW four way diffusor *DVF ceiling swirl diffusor *DEV adjustable swirl diffusor *DEK adjustable swirl diffusor DIP perforated diffusor *possible with these dimensions: 3030, 4545, 6060, AC		(4) 3030, 4040, 5050, 6060, 6090, 1260, AC, 2AC		(5) B - white discharge elements C - black discharge elements

Filter installation instructions

The 68 [mm] thick filter must be installed before installing the diffuser plate on the plenum. The filter is clamped using a support system in the each corner.

Standard filter sizes:

- LF11 - H11 class by EN 1822, thickness: **68 mm**
- LF14 - H14 class by EN 1822, thickness: **68 mm**
- LF15 - H15 class by EN 1822, thickness: **68 mm**

Available filter sizes:

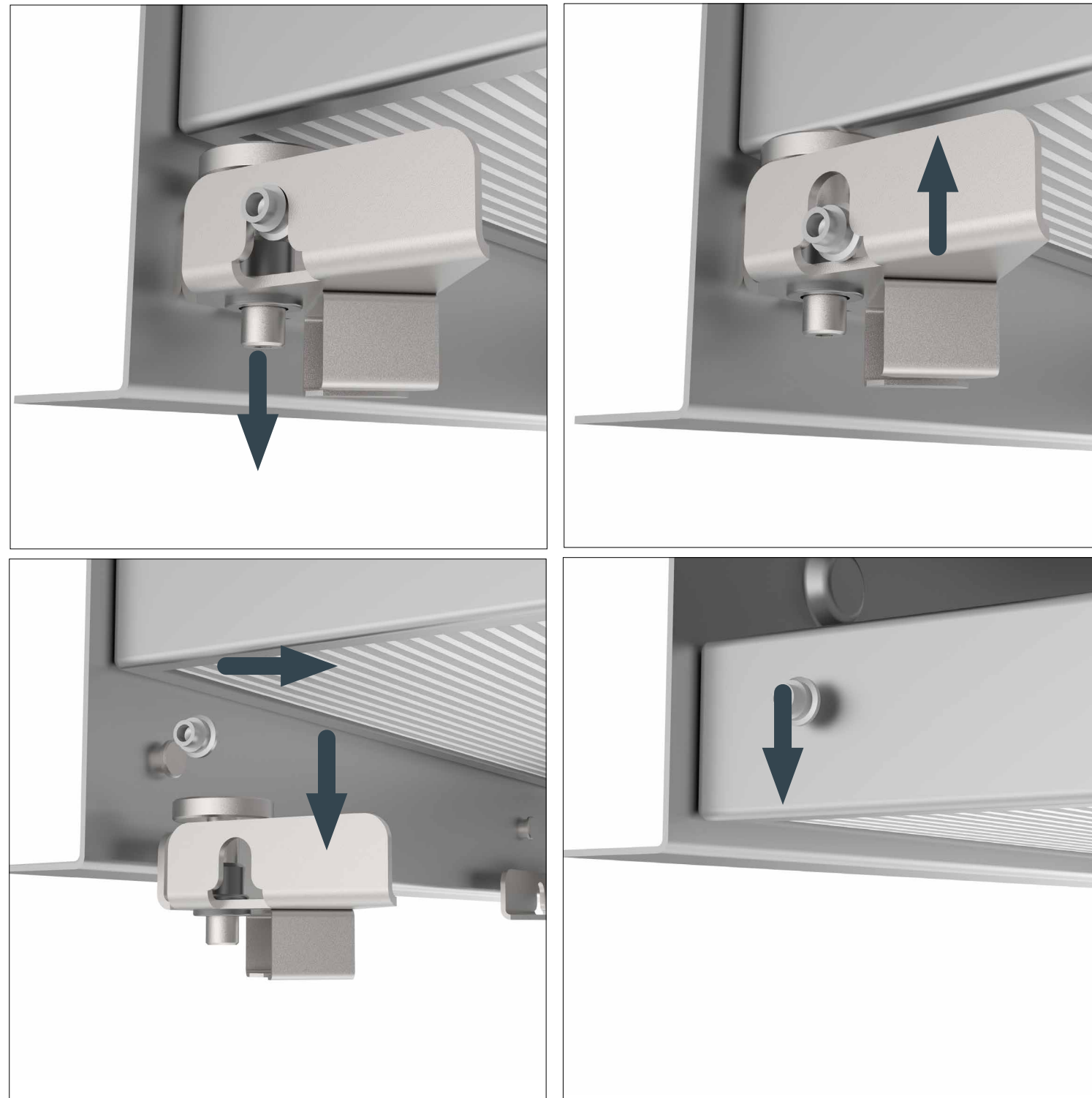
- LF11 - H11 class by EN 1822, thickness: **90, 110, 150 mm**
- LF14 - H14 class by EN 1822, thickness: **90, 110, 150 mm**
- LF15 - H15 class by EN 1822, thickness: **90, 110, 150 mm**

Assembly

Ceiling filtration unit meets waterproofing standards. Piercing the plenum during assembly can cause leaks that could invalidate EMERY integrity tests and particulate validations.

Installation

1. Unscrew the lower bolts in the each corner
2. Push the support systems up
3. Remove the support system
4. Remove the filter



- ▼ Riveted plenum boxes
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- ▼ Filters
- ▼ Diffusers
- ▼ Ordering key
- ▼ Installation
- ▼ Diagrams



Video instructions

ADDITIONAL TECHNICAL FEATURES

Options

- Stainless steel plenum and diffusers.
- RAL...

Additional instructions:

- Carefully unpack the filter and visually inspect for any defects.
- Carefully install the filters and secure the distributor plate to avoid damaging the plenum box.
- Unpacking and installation of distributors from below.
- Commissioning in the presence of an installer is recommended.

Space cleaning:

- It is necessary to clean the space in order to achieve the desired cleanliness. Be sure to clean all surfaces inside the room.

NOTE: fter the space is cleaned, no one should enter the space until the checks have been done.

- ▼ Riveted plenum boxes
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- ▼ Diffusers
- ▼ Ordering key
- ▼ Installation
- ▼ Diagrams



Quick selection table

CFU dimenison/ Filter dimension	$q_{v\ nom}$	ΔP_{LF11}	ΔP_{LF14}	ΔP_{LF15}	S_f	m
	(m ³ / h)	(Pa)	(Pa)	(Pa)	(m ²)	(Kg)
3030/68	150	60	100	130	2,8	1,3
3060/68	300	60	100	130	5,5	2,3
4545/68	335	60	100	130	6,3	2,5
6060/68	600	60	100	130	11,3	3,7
9060/68	900	60	100	130	16,9	4,9
1260/68	1200	60	100	130	22,5	6,5
3030/115	150	50	70	-	5,0	2,1
3060/115	300	50	70	-	9,9	3,7
4545/115	335	50	70	-	11,3	4,1
6060/115	600	50	70	-	20,3	6,2
9060/115	900	50	70	-	30,4	8,3
1260/115	1200	50	70	-	40,5	11,1

$q_{v\ nom}$ [m³/h] - nominal volume flow rate
 ΔP_{LF11} [Pa] - LF11 initial pressure drop (± 20 Pa) @ nominal volume flow rate
 ΔP_{LF14} [Pa] - LF14 initial pressure drop (± 20 Pa) @ nominal volume flow rate
 ΔP_{LF15} [Pa] - LF15 initial pressure drop (± 20 Pa) @ nominal volume flow rate
 $S_{f\ nom}$ [m²] - filtering area
m [kg] - weight

- ▼ Riveted plenum boxes
- ▼ Welded plenum boxes
- ▼ Filters
- ▼ Diffusers
- ▼ Ordering key
- ▼ Installation
- ▼ Diagrams

DIAGRAMS



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