

# DIF



The DIF terminal filter housings have a double function: they are used as a housing for HEPA filters and to distribute the air in the room. This type of diffusers are directly installed in sterile rooms and clean rooms, thus the air is filtered at the purity level desired, and immediately diffused in the room.

### ADVANTAGES

Availability of several models with different diffusers to meet the requirements of the systems. Easy to install. Easy to test on site according to the ISO 14644-3 standard. Filter replaced directly in the room. Perfect filter seal on frame. Easy to connect with the false ceiling modules. Small in size in equipment room.

### MATERIAL AND FINISH

- DIF-P: Plenum in thermo-formed polystyrene and frame in extruded anodized aluminum. RAL 9010 painted frame (UPON REQUEST).
- DIF-A: Plenum and frame in extruded anodized aluminum. RAL 9010 painted frame (UPON REQUEST).
- DIF-K: Plenum and frame in steel RAL 9010 painted.
- DIF-S AISI 304 stainless steel plenum and frame. Available AISI 316L stainless steel version (UPON REQUEST).

### APPLICATION

Suitable in contamination controlled environments and clean rooms with EPA, HEPA and ULPA filters.

### VERSIONS

- Side (standard) or top (version T) air inlet.
- Suitable for EPA, HEPA and ULPA filters.
- DIF- standard versions for HEPA filters model A-, th. 68 mm.
- DLS- for installation of filters with reverse liquid seal (gel).
- DIF-2 optimised for LCC and suitable for assembling HEPA filters model MA- (th. 90mm) and DA- (th. 115mm).
- ATEX II 2 GD T6 in stainless steel.
- ATEX II 2 GD T6 with RAL 7021 dissipative paint for DIF-K.

### ACCESSORIES

- Adjustable damper from room (Version R).
- Iris adjustable damper (IRIS).
- Mechanical circular CAV regulator with built-in selector knob (RSVC-K see more info on our website).



Additional sizes and configurations available for this product range. Please refer to detailed relevant catalogue.

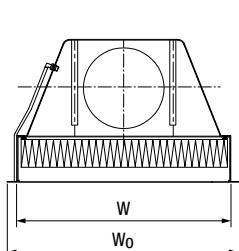
## DIMENSIONS AND TECHNICAL DATA

### DIF-P

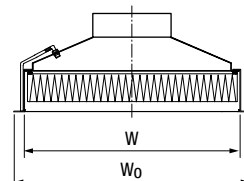
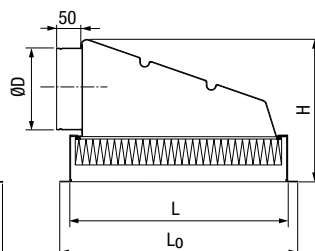
Code	Dimensions [mm]					Collar [mm]	Nominal air flow rate Q			Weight [Kg]	Diffuser			
	W	L	W <sub>0</sub>	L <sub>0</sub>	H		Ø	[m³/h]	[l/s]		[cfm]	FL	WT	WS
											€	€	€	€
3	334	334	382	382	345	175	150	42	88	3,7			-	*
42	334	639	382	687	345	175	300	83	176	5,4			-	-
43	486	486	534	534	345	175	340	94	200	5,3				*
44	544	544	590	590	365	200	450	125	265	6,8				*
4X	639	639	687	687	415	250	600	167	353	9,4				*
8X	639	943	687	991	477	315	900	250	530	12,3	*	*	*	*
9X	639	1248	687	1296	510	315	1200	333	706	16,7			-	-

\* Price upon request

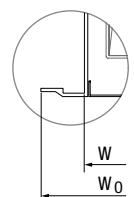
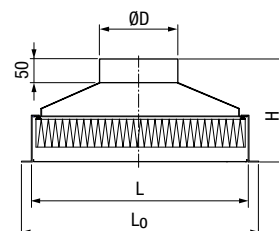
Prices include terminal housing and diffuser. For filters please refer to their price tables



Side air inlet for DIF-P version



Top air inlet for DIF-PT version  
For further technical information about version T, please refer to the product catalogues.



DIF-P/DIF-A (all versions)

## DIF

## DIMENSIONS AND TECHNICAL DATA

## DIF-2A

Code	Dimensions [mm]					Collar [mm]	Nominal air flow rate Q			Weight [Kg]	Diffuser			
											FL	WT	WS	EE
	W	L	W <sub>0</sub>	L <sub>0</sub>	H		Ø	[m <sup>3</sup> /h]	[l/s]		[cfm]	€	€	€
3	334	334	382	382	395	175	150	42	88	8,7			-	-
3	334	334	382	382	395	175	300	83	176	8,7	-	-	-	-
42	334	639	382	687	395	175	300	83	176	12		-	-	-
43	486	486	534	534	395	175	340	94	200	13				-
43L	486	486	534	534	465	250	680	189	400	13	-	-	-	-
44	544	544	590	590	420	200	450	125	265	15,6				-
44L	544	544	590	590	540	315	900	250	529	15,6	-	-	-	-
4X	639	639	687	687	465	250	600	167	353	19,4				-
4L	639	639	687	687	540	315	1200	333	706	19,4	-	-	-	-
9X	639	1248	687	1296	540	315	1200	333	706	34,4		-	-	-
71X	791	791	839	839	540	315	950	264	559	28			-	-

## DIF-K

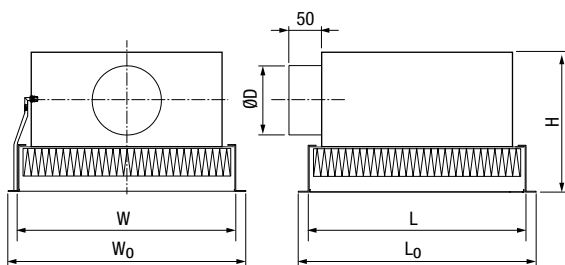
Code	Dimensions [mm]					Collar [mm]	Nominal air flow rate Q			Weight [Kg]	Diffuser			
											FL	WT	WS	ID
	W	L	W <sub>0</sub>	L <sub>0</sub>	H		Ø	[m <sup>3</sup> /h]	[l/s]		[cfm]	€	€	€
3	348	348	415	415	340	175	150	42	88	13,5			-	*
42	348	653	415	720	340	175	300	83	176	16		-	-	-
43	500	500	567	567	340	175	340	94	200	18				*
44	558	558	590	590	370	200	450	125	265	21				*
4X	653	653	720	720	420	250	600	167	353	26,5				*
8X	653	958	720	1025	470	315	900	250	530	32	*	*	*	*
9X	653	1262	720	1329	470	315	1200	333	706	46		-	-	-

\* Price upon request

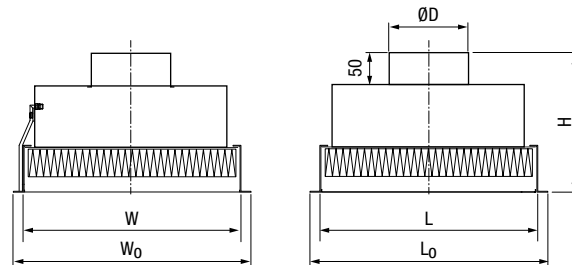
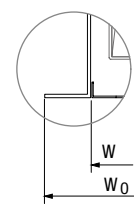
## DIF-2K

Code	Dimensions [mm]					Collar [mm]	Nominal air flow rate Q			Weight [Kg]	Diffuser			
											FL	WT	WS	EE
	W	L	W <sub>0</sub>	L <sub>0</sub>	H		Ø	[m <sup>3</sup> /h]	[l/s]		[cfm]	€	€	€
3	348	348	415	415	445	175	150	42	88	16			-	-
3	348	348	415	415	445	175	300	83	176	16	-	-	-	-
42	348	653	415	720	445	175	300	83	176	22		-	-	-
43	500	500	567	567	445	175	340	94	200	24,5				-
43X	500	500	567	567	525	250	680	189	400	24,5	-	-	-	-
44	558	558	590	590	475	200	450	125	265	31,4				-
44L	558	558	590	590	575	315	900	250	529	31,4	-	-	-	-
4X	653	653	720	720	525	250	600	167	353	39				-
4L	653	653	720	720	575	315	1200	333	706	39	-	-	-	-
9X	653	1262	720	1329	575	315	1200	333	706	67,6		-	-	-

Prices include terminal housing and diffuser. For filters please refer to their price tables



Side air inlet for DIF-A, DIF-K and DIF-S versions

Top air inlet for DIF-AT, DIF-KT and DIF-ST versions  
For further technical information about version T, please refer to the product catalogues.DIF-K/DIF-S  
(all versions)

# Air diffusers for terminal filter housings

## Swirl diffuser with adjustable blades

### WT



- Available in the same materials and finishes as the selected terminal (anodized aluminum or painted, stainless steel or painted).
- Fibre glass-filled nylon blades that can be adjusted manually to change the airflow direction.
- High induction ratio.
- Horizontal or vertical airflow.
- Temperature differential up to 12 K when cooled and 15 K when heated.
- Suitable for VAV systems, with airflow reduced up to 50%, also for CAV systems.
- Maximum 30 Vol/h

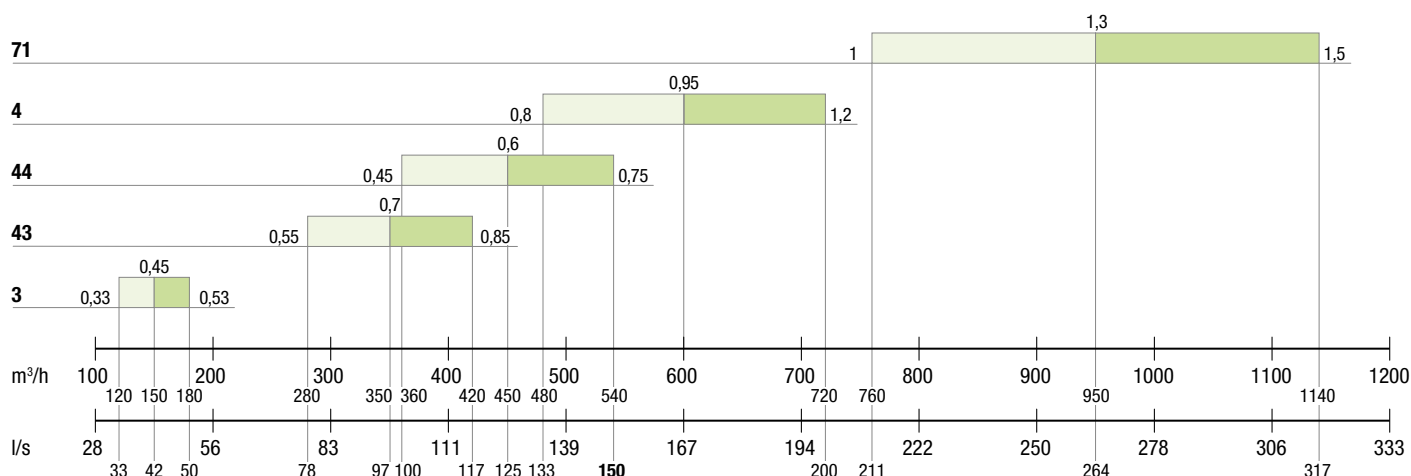


Class accord. to ISO 14644 **8**

	Q. min	Q. max
NR	19	39

	$\Delta p_{min}$	$\Delta p_{max}$
Pressure drop [Pa]	12	50

nominal		
Throw with Q [m]	min	max



## Fixed blades swirl diffuser with omnidirectional throw

### WS



- Available in anodized or painted aluminum.
- Diffusion by high induction helical jets with rapid temperature equalisation.
- High induction with Coanda effect.
- Temperature differential up to 12 K.
- Suitable for VAV systems, with airflow reduced up to 50%.
- Maximum 45 Vol/h.

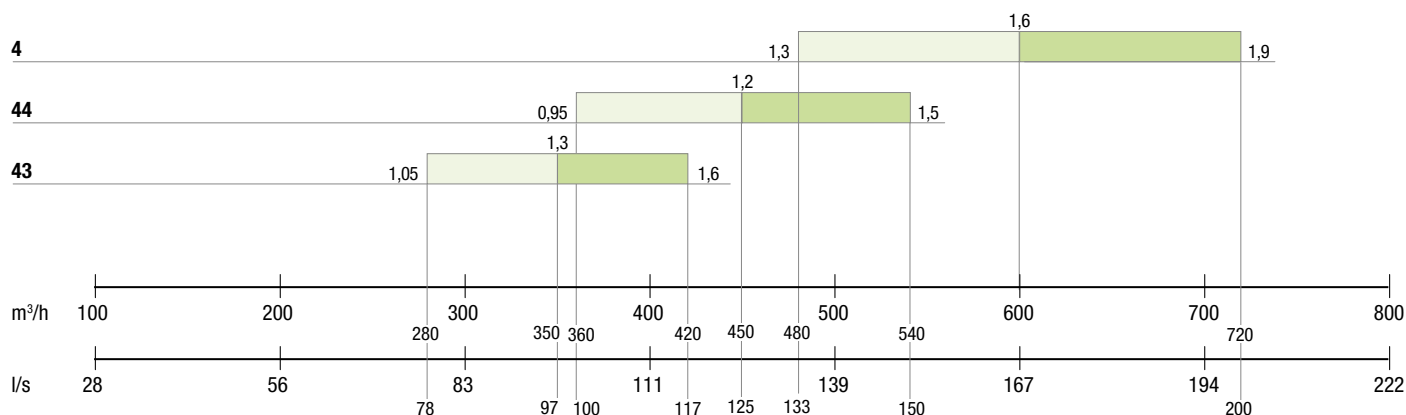


Class accord. to ISO 14644 **7**

	Q. min	Q. max
NR	22	42

	$\Delta p_{min}$	$\Delta p_{max}$
Pressure drop [Pa]	9	60

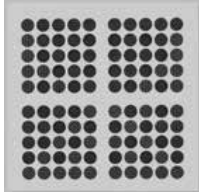
nominal		
Throw with Q [m]	min	max



# Air diffusers for terminal filter housings

## High induction diffuser with micro elements

### INDUDRALL



- Available in the same materials and finishes as the selected terminal (anodized or painted aluminum, stainless steel or painted).
- ABS deflectors with circular micro elements.
- Studied for rooms with high V/h exchanges.
- Temperature differences up to -14 K
- Total absence of currents in the occupied zone.
- Suitable for variable airflow (VAV) systems, with airflow reduced up to 20%.
- Ideal for places where the design specifications are critical.
- Maximum uniformity of temperature in the occupied zone.

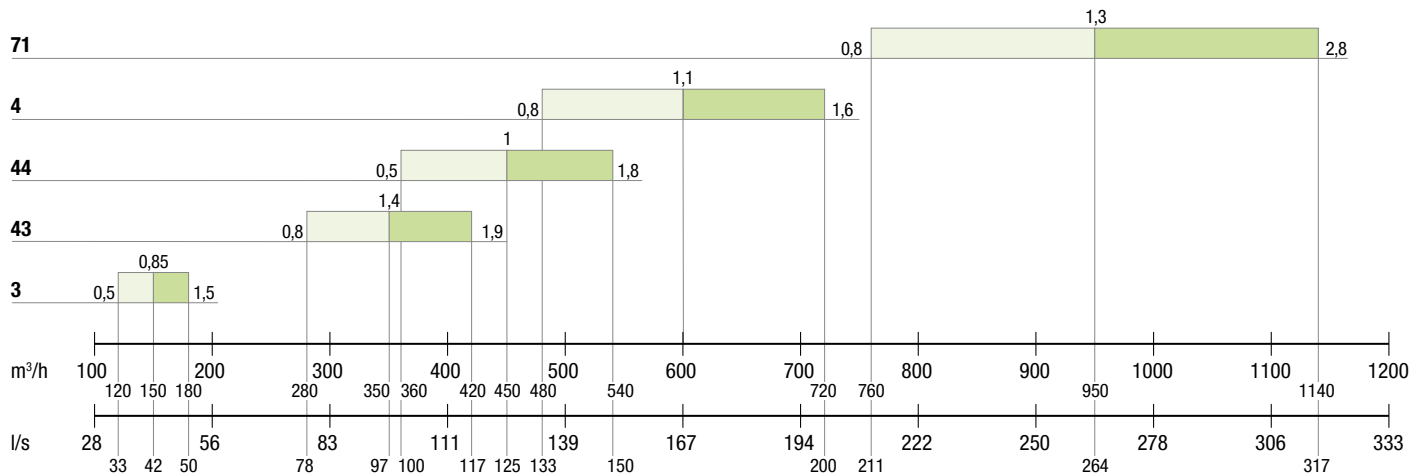


Class accord. to ISO 14644 **7**

	$\Delta p_{min}$	$\Delta p_{max}$
Pressure drop [Pa]	12	50

Diffuser throw calculated with a 0.17 m/s residual velocity in the occupied zone

Throw with Q [m]	nominal	
	min	max



## Diffuser for high flow rates

### EE



- 4-way diffusers.
- UPON REQUEST available in different configurations.
- Available in the same materials and finishes as the selected terminal (anodized aluminum or painted).
- Diffusion of the tangential air with an induction ratio that allows 12 exchanges/hour, low residual velocities and moderate noise levels to be achieved.
- Ideal for high flow rates.

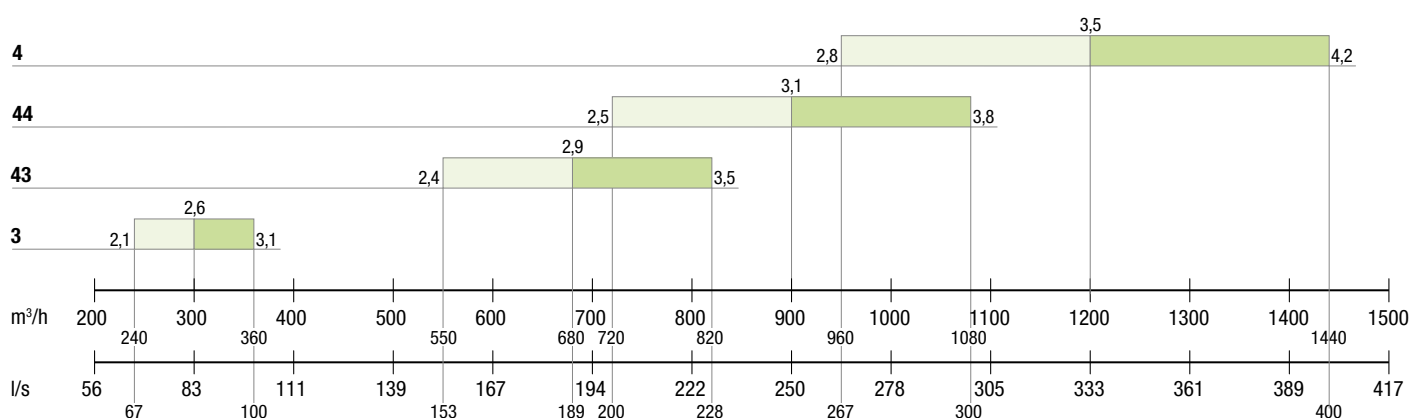


Class accord. to ISO 14644 **8**

	Q. min	Q. max
NR	31	>45

	$\Delta p_{min}$	$\Delta p_{max}$
Pressure drop [Pa]	7	72

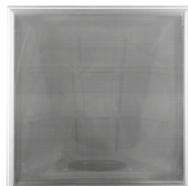
Throw with Q [m]	nominal	
	min	max



# Air diffusers for terminal filter housings

## Unidirectional flow diffuser

### FL



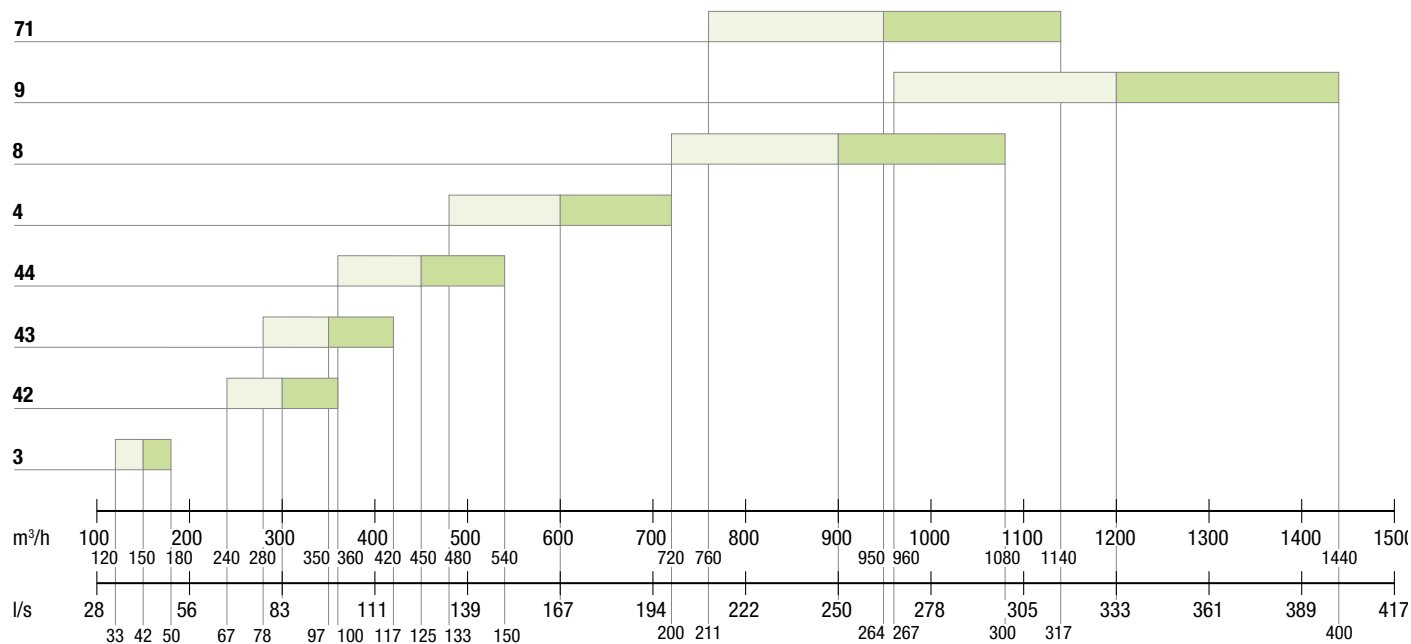
- Diffusers made of aluminum or steel upon request.
- Unidirectional flow diffuser with perforated panel.
- 30% empty / full supply.
- 55% empty / full return.

## Equalizer membrane diffuser

### LV

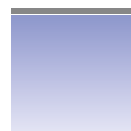


- Diffusers with equalizer membrane that guarantees uniform unidirectional flow at low velocity.
- It keeps the velocity accurate inside  $\pm 5\%$  of the average value.



For the FL and LV diffusers, the throw is not specified in so far as they work with unidirectional flow, which implies a downward piston effect of the air.

For more complete technical information on the products shown here, please refer to the specific catalogues.



Class accord. to ISO 14644				<b>5</b>
	<b>m/s<sub>min</sub></b>	<b>m/s<sub>average</sub></b>	<b>m/s<sub>max</sub></b>	
V <sub>f</sub> [m/s]	0,36	0,45	<b>0,54</b>	
	<b>Δp<sub>min</sub></b>	<b>Δp<sub>average</sub></b>	<b>Δp<sub>max</sub></b>	
Pressure drop [Pa]	3	5	8	