

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.
- DIF-A: Plenum and frame in extruded anodized aluminum.
- DIF-K: Plenum and frame in steel painted with epoxy powder.
- DIF-S AISI 304 stainless steel plenum and frame.

APPLICATION

Suitable in contamination controlled environments and clean rooms.

VERSIONS

- DIF-S: AISI 316L stainless steel structure.
- DIF-P and DIF-A RAL 9010 painted.
- Side (standard) or top (version T) air inlet.
- Suitable for EPA, HEPA and ULPA filters.
- DIF standard versions for HEPA filters model AB, th. 68 mm.
- DLS for installation of filters with reverse liquid seal (gel).
- DIF 2 and DIF 2T optimised for LLC and suitable for assembling HEPA filters model MAB (th. 90 mm) and DAB (th. 115 mm).
- ATEX II 2 GD T6 for DIF-S.
- ATEX II 2 GD T6 with RAL 7021 dissipative paint for DIF-K.

ACCESSORIES

Adjustable damper from room (Version R).

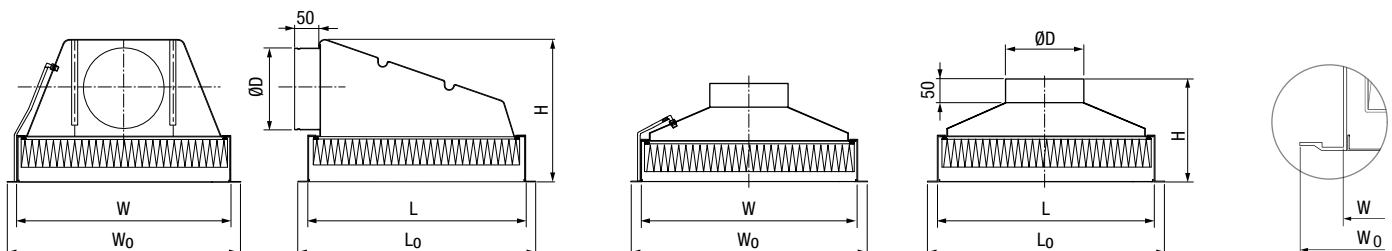
Iris adjustable damper (IRIS).

Self-balancing circular air flow regulator (RSVQ-K see more info on our website).

DIMENSIONS AND TECHNICAL DATA

DIF-P

Code	Dimensions [mm]					Collar [mm]	Nominal air flow rate Q			Weight [Kg]	FL €	WT €	WS €	ID €
	W	L	W ₀	L ₀	H		Ø	[m ³ /h]	[l/s]					
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				
9X	639	1248	687	1296	510	315	1200	333	706	16,7			-	



DIF-P

DIF

DIMENSIONS AND TECHNICAL DATA

DIF-2A

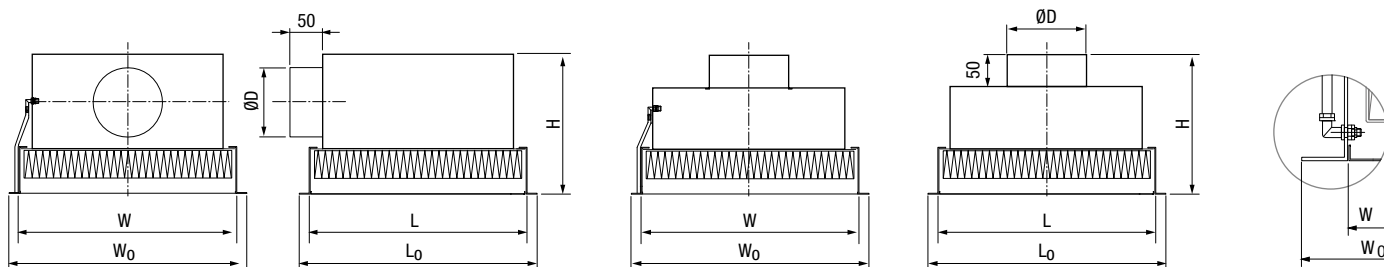
Code	Dimensions [mm]					Collar [mm] Ø	Nominal air flow rate Q			Weight [Kg]	FL €	WT €	WS €	EE €
	W	L	W ₀	L ₀	H		[m ³ /h]	[l/s]	[ft ³ /min]					
3	334	334	382	382	395	175	150	42	88	8,7	-	-	-	-
3	334	334	382	382	395	175	300	83	176	8,7	-	-	-	-
42	334	639	382	687	395	175	300	83	176	12	-	-	-	-
43	486	486	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] Ø	Nominal air flow rate Q			Weight [Kg]	FL €	WT €	WS €	ID €
	W	L	W ₀	L ₀	H		[m ³ /h]	[l/s]	[ft ³ /min]					
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	-	-	-	-
9X	653	1262	720	1329	470	315	1200	333	706	46	-	-	-	-

DIF-2K

Code	Dimensions [mm]					Collar [mm] Ø	Nominal air flow rate Q			Weight [Kg]	FL €	WT €	WS €	EE €
	W	L	W ₀	L ₀	H		[m ³ /h]	[l/s]	[ft ³ /min]					
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	-	-	-	-



DIF-2A / DIF-K / DIF-2K

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

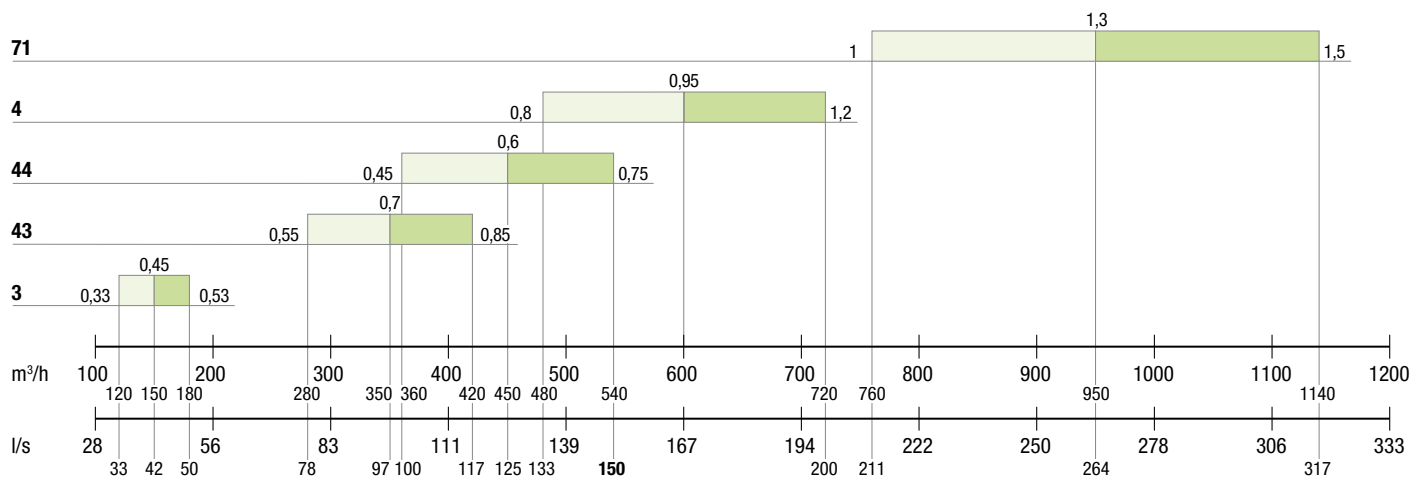


Class accord. to ISO 14644 **8**

	Q. min	Q. max
NR	19	39

	Δp_{min}	Δp_{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.

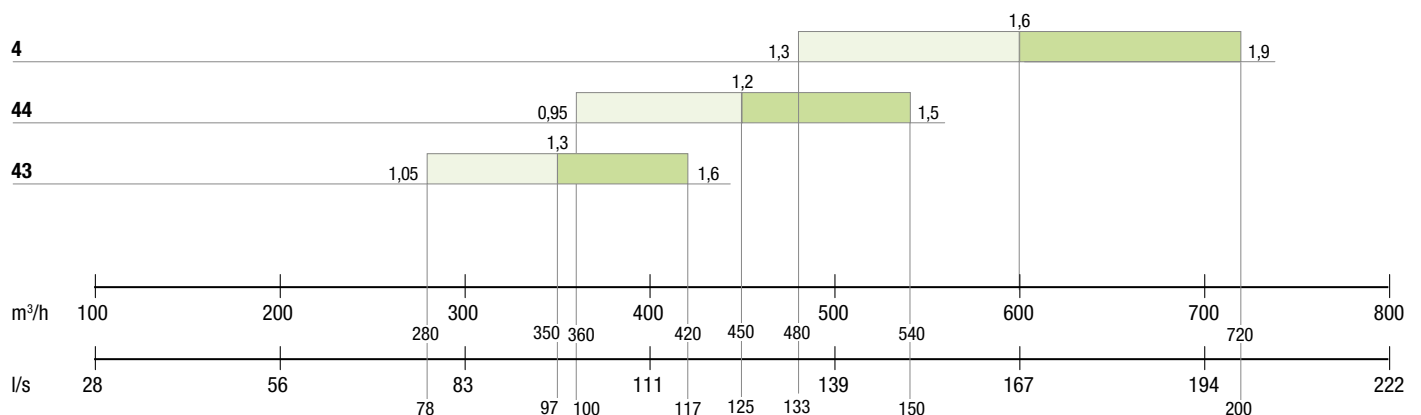


Class accord. to ISO 14644 **7**

	Q. min	Q. max
NR	22	42

	Δp_{min}	Δp_{max}
Pressure drop [Pa]	9	60

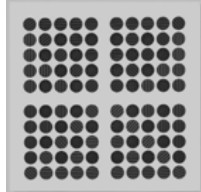
nominal		
Throw with Q [m]	min	max



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.

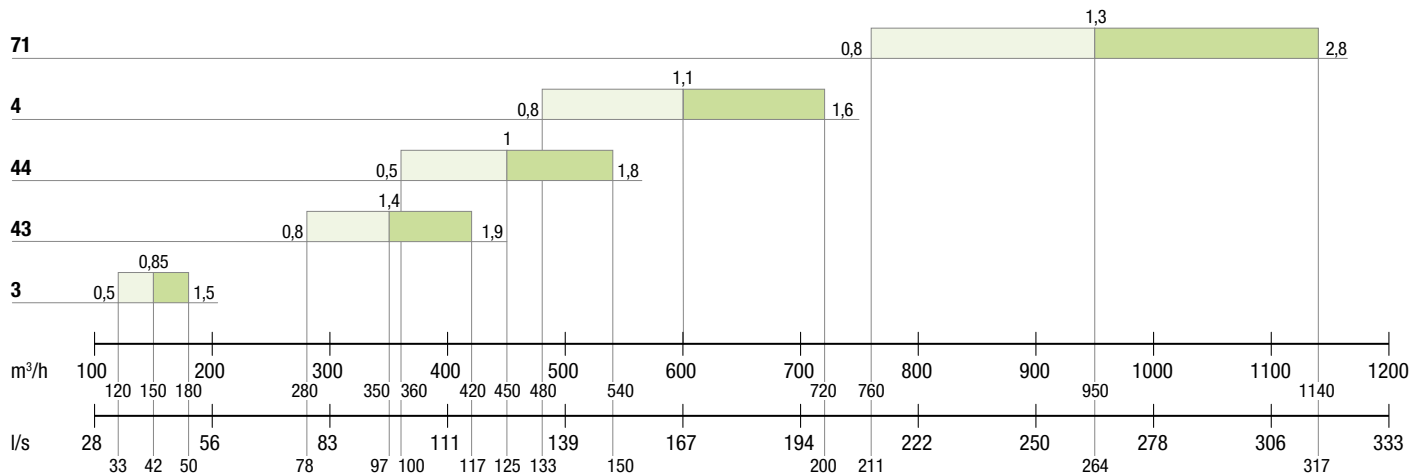


Class accord. to ISO 14644 **7**

	Δp_{min}	Δp_{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



- 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.
- Multidirectional diffusers with interchangeable central part.
- 4-way diffusers.

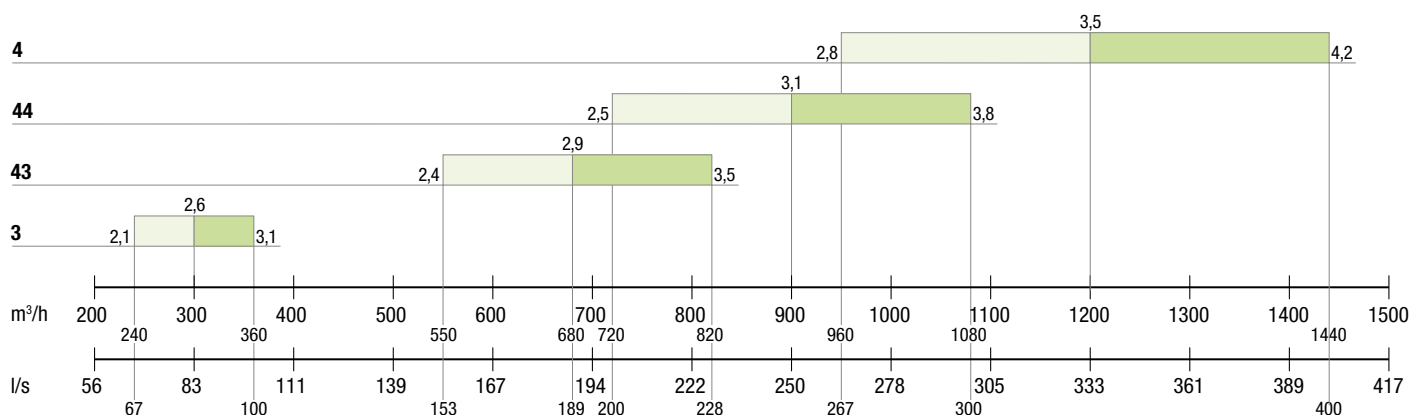


Class accord. to ISO 14644 **8**

	Q. min	Q. max
NR	31	>45

	Δp_{min}	Δp_{max}
Pressure drop [Pa]	7	72

Throw with Q [m]	nominal	
	min	max



Air diffusers for terminal filter housings

Unidirectional flow diffuser

FL



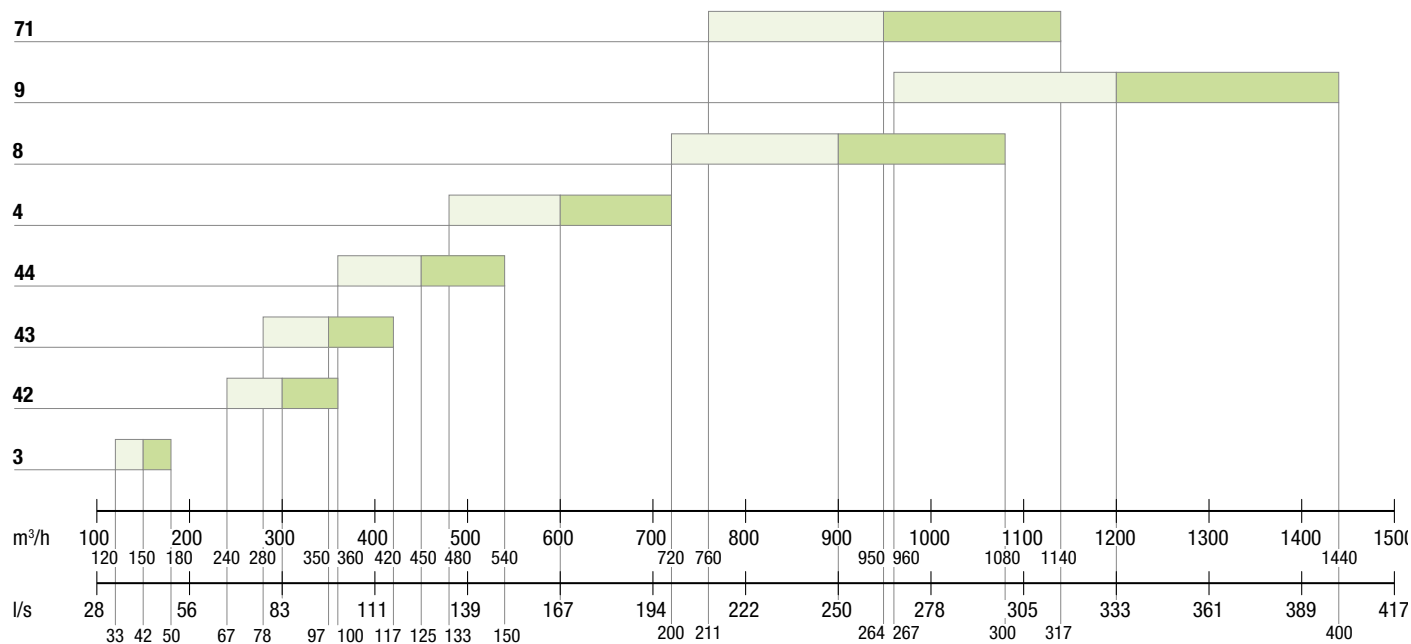
- Diffusers made of aluminum or steel upon request.
- Unidirectional flow diffuser with perforated panel.
- 30% empty / full supply.
- 55% empty / full return.

Equalizer membrane diffuser

LV

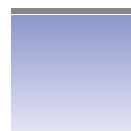


- Diffusers with equalizer membrane that guarantees uniform unidirectional flow at low velocity.
- It keeps the velocity accurate inside $\pm 5\%$ of the average value.



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				5
	m/s_{min}	m/s_{average}	m/s_{max}	
V _f [m/s]	0,36	0,45	0,54	
	Δp_{min}	Δp_{average}	Δp_{max}	
Pressure drop [Pa]	3	5	8	