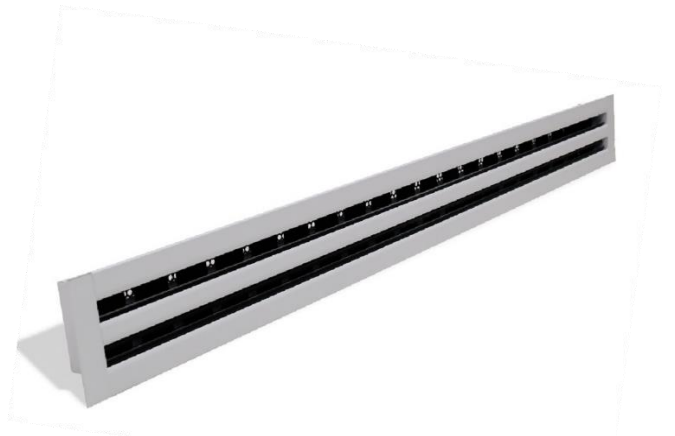


# LINEAR SLOT DIFFUSER



## Serie EDFL - EDFL/B

EDFL are linear slot diffusers with adjustable blades.

They can be used both in supply & return in environments with very large area, but with relatively limited heights. They are used for the air conditioning of offices, open spaces, banks, large hotel lobbies, business centres, shops, courts, etc.

The possibility to join them in free lengths solutions offers great design flexibility and have at the same time a very simple and refined design. EDFL is minimally invasive in internal architecture and can be easily combined with linear motifs of furnishings, walls and ceilings.

They are built using modular aluminium profiles whose particular design has been specifically designed to compose multiple slot solutions.

Profile special shape allow the assembly of the adjustable aluminium deflectors inside.

Slot diffuser with adjustable deflectors grant high induction ratios with the possibility of directing the air flow by moving the deflectors longitudinally. The set of the diffusers can also be made after installation so to optimize the air flow according to changes in the environments (change in furnishings, layouts, working positions, etc.). In return applications, EDFL diffusers can be supplied without deflectors, since there is no need to direct the throw; at the same time, it is possible to reduce pressure and increase the efficiency of the diffuser itself.

Deflectors are made of standard black painted aluminium.

The frame is made of anodized extruded aluminium profiles and is processed to obtain a highly aerodynamic and aesthetically design.

The diffuser can be painted with epoxy resin-based powders laid electrostatically and dried in oven. This type of painting is resistant to any impacts and abrasions, and keeps its aesthetic characteristics unchanged over time. Installation, adjustments and maintenance are simple to perform. The fixing to the plenum is carried out using lateral screws, with invisible mounting bridges.

The air flow distribution is adjusted by manually acting on the deflectors, equipped with a snap movement that allows the position to be maintained during operation.

## TECHNICAL FEATURES

The linear diffusers of the EDFL series are characterized by the possibility of directing vertical or horizontal throw according to installation needs and granting always a high induction. The main application is on supply, but it can also be used on return in the specific versions without deflectors. Ceiling installation generally involves a height varying between 2.5 and 3.1 m. The operating features are the effective speed, the total pressure drop, the sound level and the horizontal launch and are related to a 1-meter-long diffuser. They are reported in tables and change according airflows.

The isothermal horizontal launch is referred to a terminal velocity of 0.20 m/s. For non-isothermal launches, multiplicative correction coefficients are provided.

The sound level is expressed as the A-weighted sound power level (LWA) resulting from 1m length linear slot diffuser, without any environmental correction. For different diffuser lengths, consult the tabulated correction factors. To calculate the sound pressure level (LpA) in the environment, it is necessary to consider the location of the linear diffuser, the distance from the listening point and the acoustic characteristics of the environment in which the diffuser itself is installed.

## MODELS:

EDFL 10 return linear diffuser (without deflectors).

EDFL 20 supply linear diffuser with black deflectors

EDFL/B 20 supply linear diffuser with Ral9016 profile and Ral9016 deflectors

EDFL 30 return linear diffuser with sliding damper

EDFL 40 supply linear diffuser with black deflectors and sliding damper

EDFL/B 40 supply linear diffuser with Ral9016 profile, Ral9016 deflectors and sliding damper

EDFL 50 supply linear diffuser with black deflectors, sliding damper and equalizer.

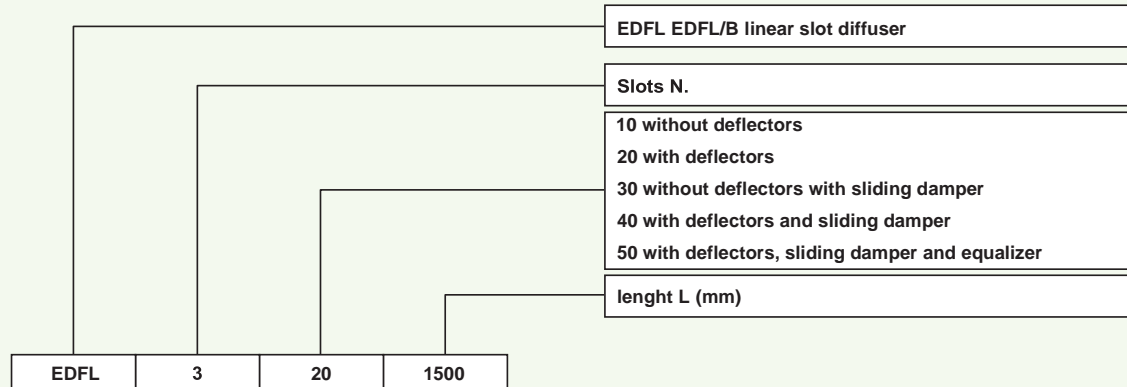
EDFL/B 50 supply linear diffuser with Ral9016 profile, Ral9016 deflectors, sliding damper and equalizer.

## ACCESSORIES

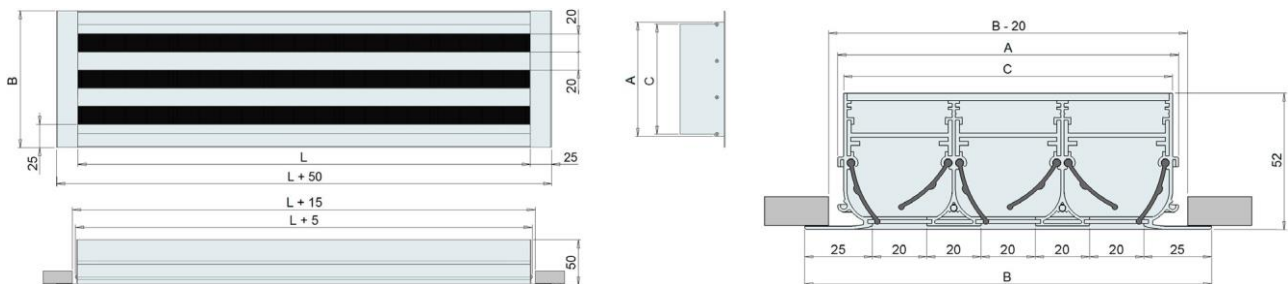
Corners are available for joining orthogonal sections of diffusers.

EDFL Serie diffusers are available with insulated or non-insulated plenum box, equipped with regulation damper and lateral connection(s) for flexible duct. Customised solution can be made upon request.

## CODES



## DIFFUSER DIMENSIONS



Slot N.	L	A	B	C	Mounting Bridges N.
1 slot	600	46	70	41	2
	800				2
	1000				2
	1200				2
	1500				2
	2000				2
2 slots	600	86	110	81	2
	800				2
	1000				2
	1200				2
	1500				2
	2000				2
3 slots	600	126	150	121	2
	800				2
	1000				2
	1200				2
	1500				2
	2000				3
4 slots	600	166	190	161	2
	800				2
	1000				2
	1200				2
	1500				2
	2000				3

**Material:** Aluminium

**Standard Finishing:** aluminium anodised

**Finishing on Demand:** White RAL9016 or other Ral-Colours

**Fixing:** with lateral screws to plenum box, with mounting bridges

**Installation High:** from 2,5 to 3,1 m

All dimensions are expression in mm

## PERFORMANCES

Model	Effective Section m <sup>2</sup>	Airflow						
		m <sup>3</sup> /h	70	105	140	175	210	245
EDFL 1 slot	0,0097	lancio	1.8	2.7	3.6	4.5	5.4	6.3
		m <sup>3</sup> /h	140	210	280	350	420	490
EDFL 2slots	0,0194	lancio	2.5	3.8	5	6.3	7.5	8.8
		m <sup>3</sup> /h	210	315	420	525	630	735
EDFL 3slots	0,0291	lancio	3	4.7	6	7.8	9.3	11
		m <sup>3</sup> /h	280	420	560	700	840	980
DFL 4slots	0,0388	lancio	3.5	5.4	7	9	11	12.6
		Vk	m/s	2	3	4	5	6
perdite di carico		Pa	8	15	26	40	55	70
rumorosità		dB(A)	<20	22	32	37	44	48

Data referring to 1m long diffusers, with a terminal throw velocity  $V_t=0.25$  m/s and with a temperature differential of 10/12°C, in ceiling installations and with lateral air throw.

Data referring to diffusers without damper or with open sliding damper.

Data referring to diffusers with deflectors in the working position with a 50% reduction of the air passage surface.

The position of the deflectors reduces the effective cross-section. When the deflectors are fully open or when the diffuser is used for air exhaust, the flow rates expressed in m<sup>3</sup>/h indicated in the table may be higher.

Vk: Effective Air Speed (m/s)

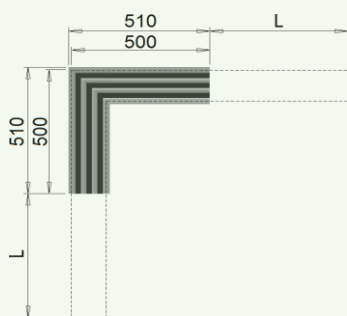
m<sup>3</sup>/h: Air volume

Pa: Pressure Drop

(m): Throw in m

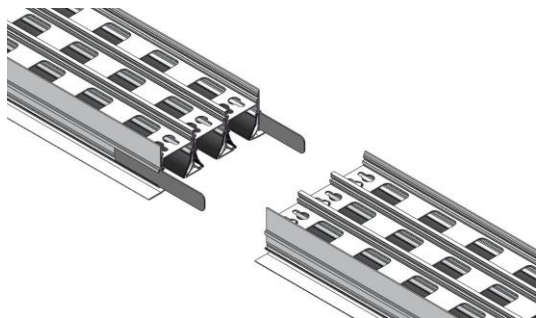
dB(A): Noise Level

## CORNER



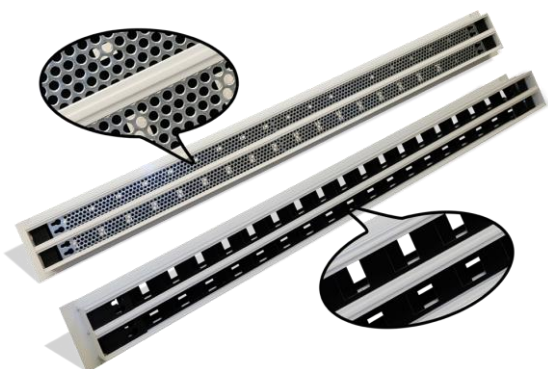
Aesthetic connection between two linear slot diffusers, having 90° and length 500 mm on each side. Corner has NO deflectors.

## CONTINUES LINE KIT



Continues Line kit is a necessary accessory to create continuous lines of linear diffusers longer than 2 metres. It consists of two junction plates that allow the alignment and connection of two components of the line.

## EQUALIZER AND SLIDING DAMPER



## CORRECTIVE FACTORS:

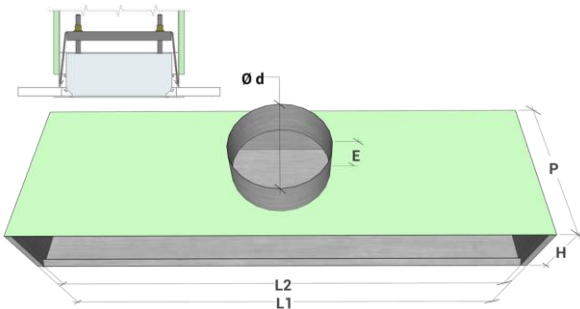
Additive factor correcting the sound

L [mm]	K [dB(A)]
500	-3
800	-1
1000	0
1500	2
2000	3
2500	4
3000	5
5000	7

Corrective multiplication factor for non-isothermal launch

$\Delta T [^{\circ}C]$	$K_{Tc}$
-10	0,85
0	1
10	1,2

## PLENUM BOX DIMENSION AND INSTALLATION WITH MOUNTING BRIDGE:



**Material:** galvanised steel

**Accessories:** Insulation, lateral connection for flex. duct

**Fixing:** with mounting bridges

Slot N.	L	Plenum Box Dimension						
		L1	L2	Connection N.	Ø d	P	H	E
1 slot	600	645	615	1	98	300	58	80
	800	845	815	1				
	1000	1045	1015	1				
	1200	1245	1215	2				
	1500	1545	1515	2				
	2000	2045	2015	2				
2 slots	600	645	615	1	148	300	98	80
	800	845	815	1				
	1000	1045	1015	1				
	1200	1245	1215	2				
	1500	1545	1515	2				
	2000	2045	2015	2				
3 slots	600	645	615	1	198	300	138	80
	800	845	815	1				
	1000	1045	1015	1				
	1200	1245	1215	2				
	1500	1545	1515	2				
	2000	2045	2015	2				
4 slots	600	645	615	1	198	300	178	80
	800	845	815	1				
	1000	1045	1015	1				
	1200	1245	1215	2				
	1500	1545	1515	2				
	2000	2045	2015	2				

## GENERAL DESCRIPTION

Linear slot diffuser with two adjustable longitudinal deflectors for each slot, in anodized aluminium or painted with epoxy oven-dried powders. Available in aluminium, standard white RAL 9016 colour or special colour on request.

Deflectors in extruded aluminium painted black RAL 9005, or white RAL9016 on white diffuser (EDFL/B series). Available with or without deflectors, complete with sliding damper, equalizer and corner joint.

## INSTALLATION

