DF-47-NARROW-TR-KOANDA

Thermo-adjustable linear diffuser with variable geometry

Product description

Medium-to-long throw high induction linear diffuser thermo-adjustable for ceiling installation, **Koolair** brand, model **DF-47-NARROW-TR-KOANDA**, slot (10-15-20) mm air passage and length __ mm. Due to its special aerodynamics and the integration of the self-contained mechanism, automatically depends on the supply air temperature without power consumption. It can be used on ceilings with installation heights H>=3.5 m for vertical supply or with some inclination in heating mode (Temp>=28ºC). When horizontal with Coanda effect (air vein adhered to the ceiling) and for cooling or ventilation (Temp<=25ºC), avoiding hot air in the room and annoying air currents in the in the occupied zone.

Its linear appearance combined with the possibility of forming continuous lines of a certain length, provides a high aesthetic level in the installation. Depending on the design of the installation, this air diffusion unit, can cover high horizontal (approx. 15 m) and vertical ranges (approx. up to 12 m maximum installation height). It is made entirely out of extruded aluminum profiles. It incorporates a removable plenum, side or top connection made of galvanized steel sheet, with manual control damper accessible from the room. And the air flow rate per linear meter is between 150 and 900 m^3/h, depending on the needs of the installation.

Other models

DF-47-NARROW-KOANDA. Linear diffuser to be included in a continuous line formation as a decorative function or for conducted air return with galvanized steel sheet plenum, insulated or not (return to plenum). This model could also be applied in pieces or independent lines for air return.

Accessories

MM. With mounting frame.

T. With screw fixing holes.

PM. With mounting bridge.

PM-PDL. With galvanized steel sheet, side connection plenum, removable through mounting bridge.

MM-PDL. With galvanized steel sheet, side connection plenum, removable through attachment clips.

PM-PDS. With galvanized steel sheet, upper connection plenum, removable through mounting bridge.

MM-PDS. With galvanized steel sheet, upper connection plenum, removable through attachment clips.

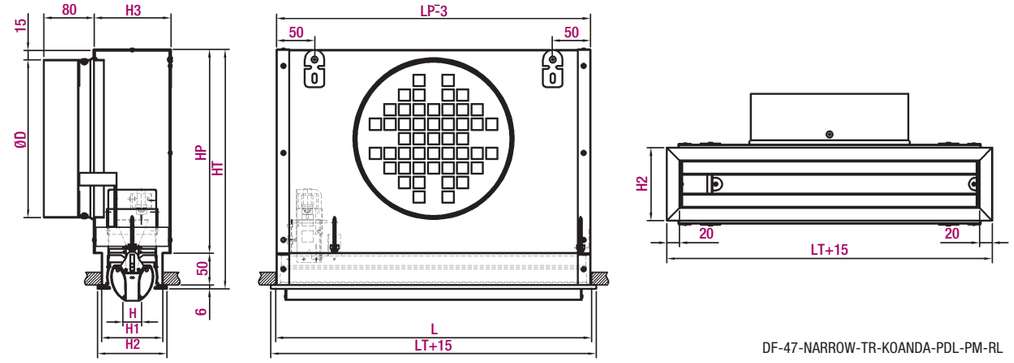
-A. Internal plenum insulation.

-RL. Control damper accessible from the room, integrated in the plenum box connection opening.

O. Volume flow control damper painted in black with opposed blade closing.

PR. With decorative perforated metal sheet, painted in black to prevent the interior vision of the diffuser sections without plenum (decorative or return).

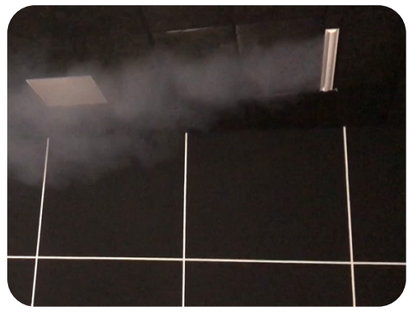
General dimensions



DF-47-NARROW-TR-KOANDA-PDL-PM-RL

H	H1	H2	H3	ØD	HP	HT
10	85	100	110	198	275	331
15	90	105	115	198	275	331
20	95	110	120	248	325	381

Unit in mm.



Horizontal for cooling.

Vertical for heating.

Selection table

						Horizontal			Vertical
Slot width	Length	Q (m^3/h)	L_{wA} [dB(A)]	Pa	V_k (m/s)	$X_{0,3}$	$X_{0,5}$	$X_{1,0}$	Y_{max}
10	1000	220	24	17	6.9	8.8	5.3	2.6	5.01
		320	32	36	10.1	12.8	7.7	3.8	7.3
		450	40	72	14.2	18	10.8	5,4	10.3
15	1000	310	24	24	8	11.2	6.7	3,4	6.06
		450	32	51	11.6	16.2	9.7	4.9	8.8
		650	40	107	16.7	23.5	14.1	7	12.7
20	1000	380	24	19	7.4	11.9	7.1	3.6	6
		550	32	40	10.7	17.2	10.3	6	8.7
		820	40	89	15.9	25.7	15.4	7.7	13

(Flow rate per linear metre of diffuser)

LEGEND

Q (m^3/h): Air flow.

L_{wA} [dB(A)]: Sound power level.

ΔP_t (Pa): Total pressure loss.

$X_{0,3}$-$X_{0,5}$-$X_{1,0}$ (m): Throw for terminal velocity of the air stream of 0.3, 0.5, and 1.0 m/s, respectively, in isothermal conditions (ΔT = 0ºC).

V_k (m/s): Effective velocity.

Y_{max} (m): Maximum vertical penetration at ΔT = +10ºC (heating).