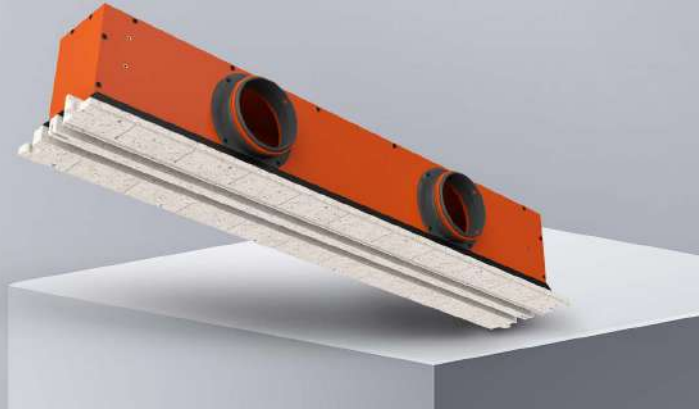
ERGOVENT

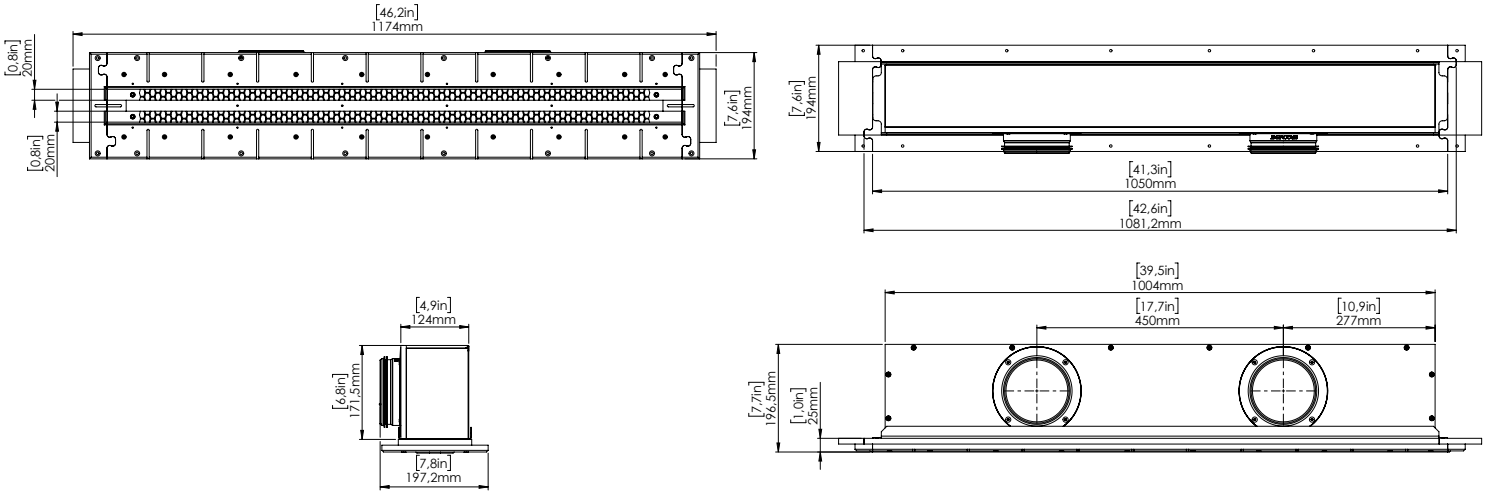


LINEO PRO PUZZLE 125

Hidden ventilation diffusers for air conditioning

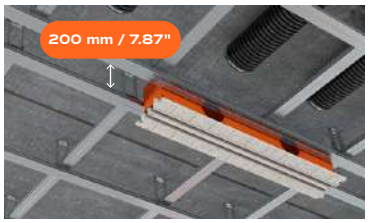
125 mm connections / 2 slots × 1050 mm × 20 mm / with damper

A two-slot, plaster-in linear diffuser designed for **air conditioning and ventilation systems**, intended for installation into gypsum board ceilings. After installation, the diffuser is plastered and painted together with the ceiling, leaving only the two slots visible - stylish yet invisible, seamlessly blending into the interior. The diffuser can be connected with other PUZZLE lock diffusers (75 mm, 90 mm, or 125 mm), enabling the combination of air conditioning and ventilation into one continuous line. The housing is made of a 10 mm thermo-insulating PVC board.





Installation width between profiles:
135 mm / ≈ 5,31"



Minimum installation height:
200 mm / ≈ 7.87"

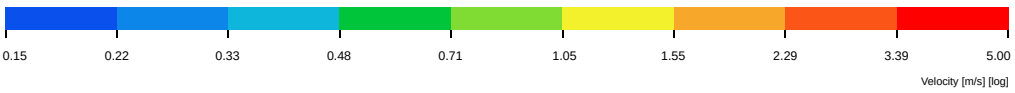


Patented technical solution: the PUZZLE LOCK system allows diffusers to be connected.

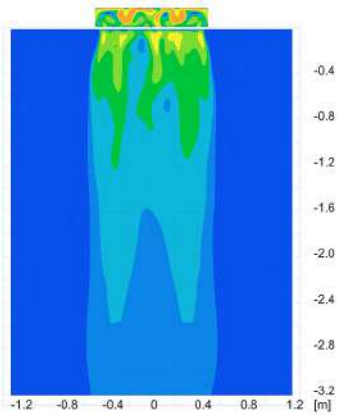


Important: During installation, **all fixing screws** must be fully tightened.

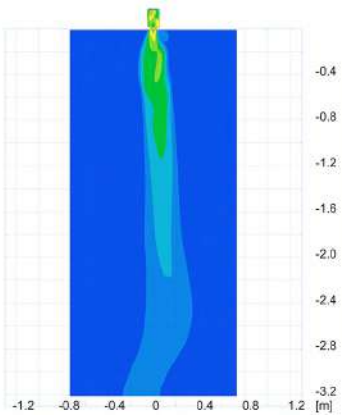
THROW DISTANCE



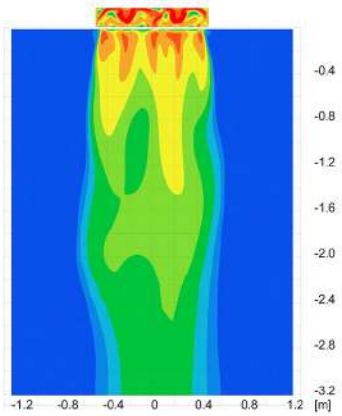
190 m³/h



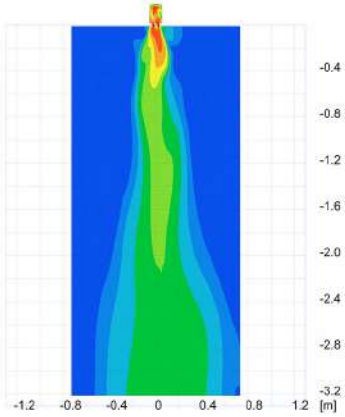
190 m³/h



400 m³/h



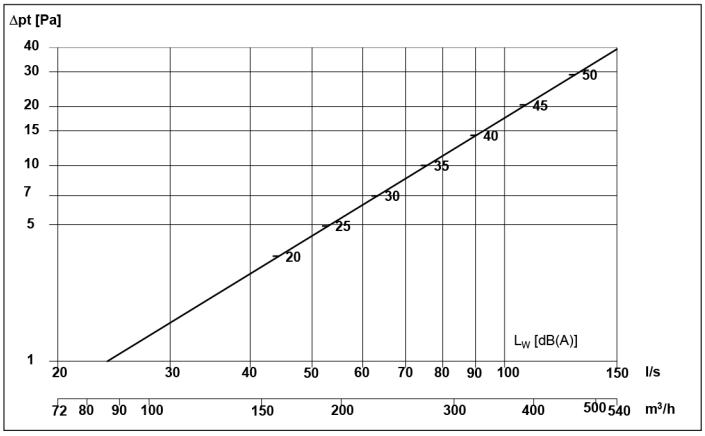
400 m³/h



FLOW NOISE (in accordance with ISO 3741) and PRESSURE DROP test report

SUPPLY

Diagram for pressure and flow noise:



L_{Woct} [dB] = L_{WA} + K_{oct}

q [l/s]	Dp_t [Pa]	L_{WA} [dBA]			63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
-	-	33		K_{oct}	-37	-1	-1	1	-6	-13	-22	-23

Octave correction factors to the diagram are calculated at the listed value of either q, Δp_t or L_{WA}/L_{pA}

Calculation of pressure and sound effect according to flow:

Sound effect: $L_{W(oct\ or\ A)} = k \cdot \log(q) + L_0$

Total pressuredrop: $\Delta p_t = c_{pt} \cdot q^2$

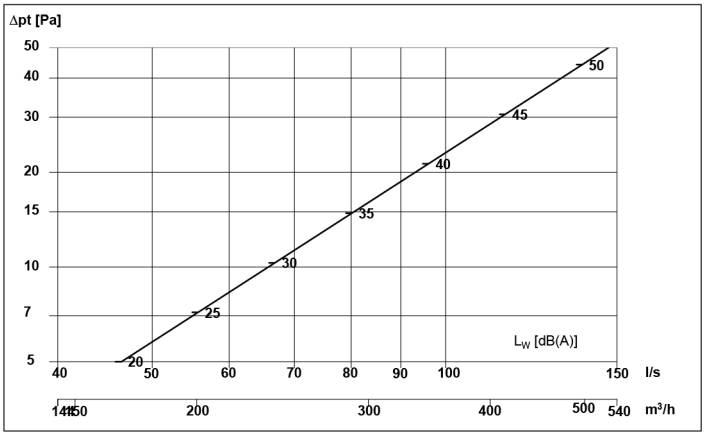
Balancing: $q = K_{factor} \cdot \sqrt{p_i}$

L_W - sound effect [dB]
k - factor, sound effect [-]
L_0 - addend, sound effect [-]
Δp_t - total pressuredrop [Pa]
c_{pt} - factor, total pressuredrop [Pa·s²/l²]
q - flow [l/s]
K_{factor} - factor, balancing [l/(s·√Pa)]
p_i - pressuredifference, balancing [Pa]

	Total p c_{ptot}	Balancing K-factor		LwA	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
	0.0017	Not measured	k	64.7	76.6	63.3	58.2	73.2	77.7	89.5	30.6	31.1
			Lo	-86.6	-105.0	-80.0	-69.4	-104.0	-119.2	-149.8	-41.5	-41.8

EXTRACT

Diagram for pressure and flow noise:



L_{Woct} [dB] = L_{WA} + K_{oct}

q [l/s]	Dp_t [Pa]	L_{WA} [dBA]			63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
-	-	33		K_{oct}	6	5	6	-4	-11	-18	-19	-20

Octave correction factors to the diagram are calculated at the listed value of either q, Δp_t or L_{WA}/L_{pA}

Calculation of pressure and sound effect according to flow:

Sound effect: $L_{W(oct\ or\ A)} = k \cdot \log(q) + L_0$

Total pressuredrop: $\Delta p_t = c_{pt} \cdot q^2$

Balancing: $q = K_{factor} \cdot \sqrt{p_i}$

L_W - sound effect [dB]
k - factor, sound effect [-]
L_0 - addend, sound effect [-]
Δp_t - total pressuredrop [Pa]
c_{pt} - factor, total pressuredrop [Pa·s²/l²]
q - flow [l/s]
K_{factor} - factor, balancing [l/(s·√Pa)]
p_i - pressuredifference, balancing [Pa]

	Total p c_{ptot}	Balancing K-factor		LwA	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
	0.0023	Not measured	k	63.4	46.4	63.1	60.6	63.0	74.8	82.8	62.6	63.3
			Lo	-85.7	-47.8	-80.1	-74.3	-88.5	-117.6	-140.0	-103.3	-105.0