ERGOVENT

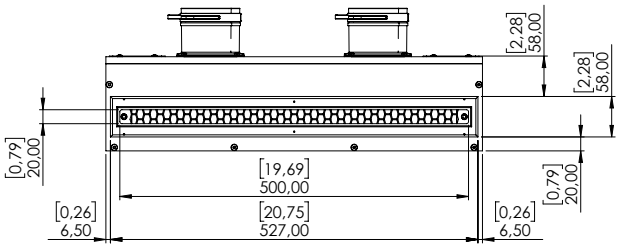
LINEO-500

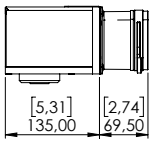
Hidden linear ventilation diffuser

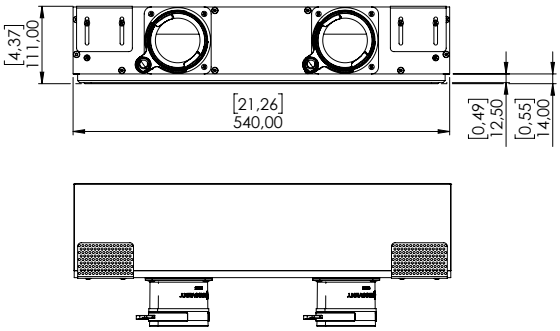
DESIGNED FOR INSTALLATION BETWEEN 600 MM-SPACED STUDS/JOISTS (CENTERS)

75 mm connections*2pcs / 1 slot × 500mm × 20mm / with damper

Designed for seamless integration, ERGOVENT LINEO-500 frameless diffuser installs into plasterboard ceilings and walls, blending in with a discreet, paintable slit. Diffuser slot length: 500 mm (fixed length without connection option). Minimum installation space: **only 12 cm** is required!



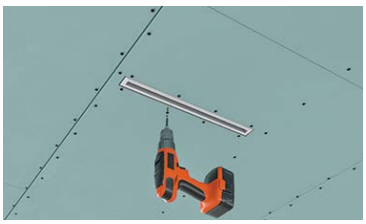




For installation in gypsum board (drywall) ceilings and walls.

75 mm plastic duct system.

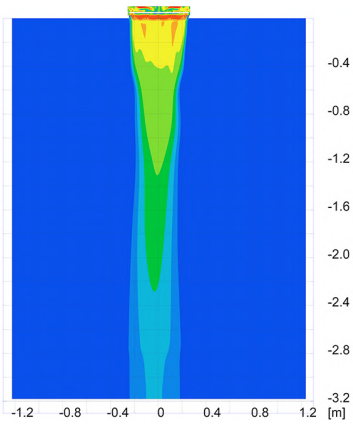
Minimum installation height: 120 mm (4.72").



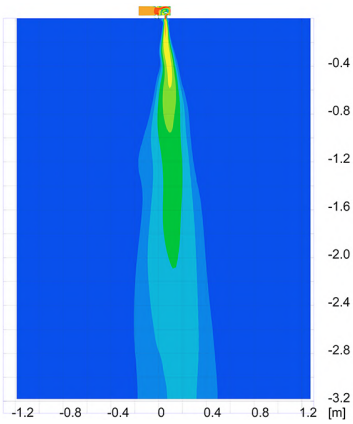
Important: During installation, all fixing screws must be fully tightened.

THROW DISTANCE

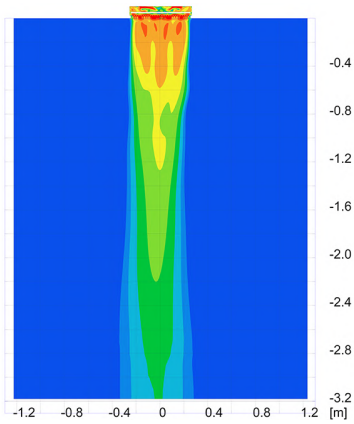
65 m³/h



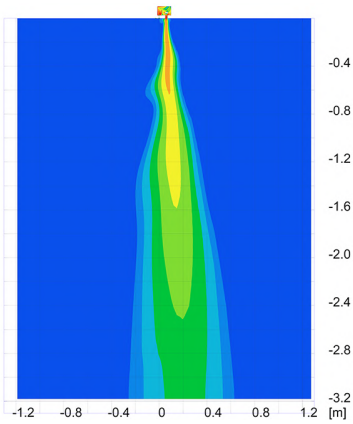
65 m³/h



95 m³/h



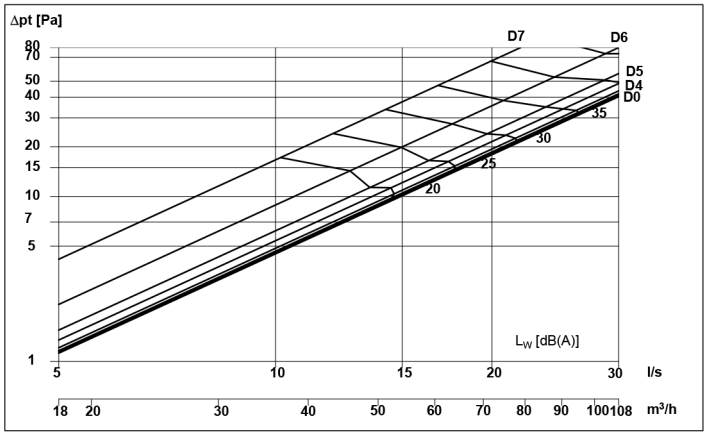
95 m³/h



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

AIR 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	-6	-2	-2	-3	-12	-21	-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
D0	0.0448	Not measured	**k**	65.0	39.9	66.7	57.5	58.0	99.8	109.5	57.0	58.0
			Lo	-58.0	-26.5	-59.1	-45.6	-46.8	-117.5	-140.0	-67.4	-68.3
D1	0.0457	Not measured	**k**	64.0	76.0	38.2	47.2	64.7	82.5	100.4	55.4	56.6
			Lo	-56.5	-80.0	-18.6	-30.7	-56.6	-91.5	-126.0	-65.1	-66.2
D2	0.0466	Not measured	**k**	57.9	58.2	61.3	53.7	51.8	69.3	93.2	90.2	91.1
			Lo	-47.3	-49.4	-51.7	-39.0	-37.9	-71.7	-114.7	-116.5	-120.3
D3	0.0485	Not measured	**k**	59.3	27.5	61.3	64.8	46.9	84.9	101.7	59.2	60.0
			Lo	-49.1	-4.6	-51.1	-55.0	-30.8	-94.0	-126.6	-69.4	-70.6
D4	0.0539	Not measured	**k**	62.7	60.8	78.2	61.5	58.0	73.0	101.2	43.9	44.9
			Lo	-52.8	-50.8	-73.6	-48.8	-45.8	-75.4	-123.5	-46.0	-45.9
D5	0.0620	Not measured	**k**	61.4	43.8	56.3	50.2	59.1	72.5	91.8	63.6	64.1
			Lo	-49.5	-29.3	-40.4	-31.3	-46.3	-72.4	-107.3	-71.4	-74.7
D6	0.0887	Not measured	**k**	70.4	51.8	72.8	62.3	68.7	80.8	87.6	64.3	65.1
			Lo	-57.7	-33.9	-57.7	-44.7	-55.7	-78.7	-94.9	-68.1	-68.1
D7	0.1666	Not measured	**k**	68.5	37.9	42.8	77.6	59.6	54.9	92.9	95.4	96.0
			Lo	-49.1	-15.6	-17.3	-60.3	-39.6	-37.2	-88.9	-97.0	-105.6

AIRFLOW BALANCING

The diffuser is equipped with an airflow balancing damper. The **aerodynamic damper** is located inside the diffuser and is conveniently adjustable from the outside.

Setting the damper position with the gauge*:

- Insert the gauge through the diffuser grille until it contacts the balancing damper.
- Take the reading relative to the ceiling line.
- Damper positions are indicated on the gauge.

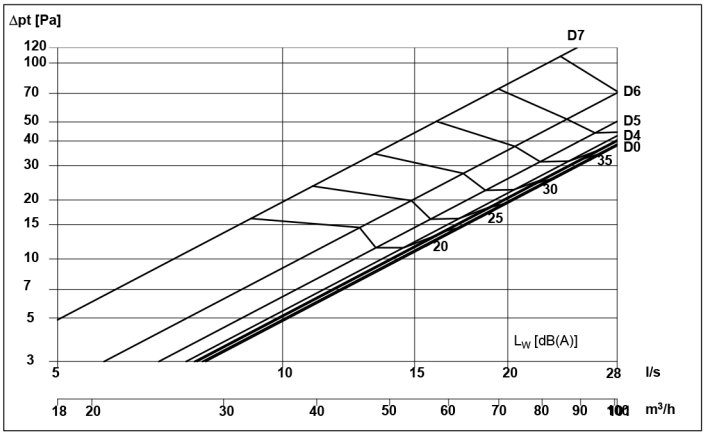
* The damper-position gauge is supplied with the diffuser.

D0 – damper fully open.
D7 – damper fully closed.

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

AIR EXHAUST

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}	-3	0	5	0	-10	-19	-21	-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
D0	0.0482	Not measured	**k**	68.4	45.1	41.3	63.9	79.0	77.8	85.3	30.4	31.0
			Lo	-61.5	-35.4	-22.8	-48.5	-79.2	-87.7	-108.2	-30.5	-28.3
D1	0.0492	Not measured	**k**	79.8	43.1	45.6	75.8	78.5	109.1	83.8	27.8	28.5
			Lo	-78.3	-30.1	-29.1	-66.3	-78.3	-132.9	-105.9	-26.5	-23.6
D2	0.0508	Not measured	**k**	81.7	27.7	60.7	84.6	77.2	94.9	77.9	37.9	38.7
			Lo	-79.6	-7.4	-50.7	-77.2	-75.5	-111.2	-96.1	-41.1	-38.4
D3	0.0517	Not measured	**k**	68.9	45.5	50.8	53.4	77.3	81.3	92.5	59.8	60.4
			Lo	-62.8	-31.8	-37.2	-35.5	-75.1	-91.0	-116.6	-73.0	-72.7
D4	0.0544	Not measured	**k**	67.9	43.2	74.2	66.6	67.8	77.4	89.1	37.2	37.7
			Lo	-58.9	-28.2	-68.2	-53.4	-58.3	-82.9	-108.7	-38.1	-35.5
D5	0.0643	Not measured	**k**	68.2	50.7	72.2	63.0	66.2	83.8	99.9	69.6	70.2
			Lo	-56.7	-37.8	-63.2	-46.3	-53.6	-87.3	-118.3	-80.9	-81.1
D6	0.0900	Not measured	**k**	72.2	39.5	42.2	60.6	70.9	80.1	102.8	93.9	94.9
			Lo	-59.6	-22.8	-22.4	-40.9	-57.9	-77.9	-115.7	-108.1	-116.9
D7	0.1959	Not measured	**k**	60.4	50.6	98.9	83.7	46.5	52.5	81.9	88.6	89.0
			Lo	-37.8	-30.7	-89.6	-69.0	-21.9	-33.1	-72.8	-88.7	-94.0

AIRFLOW BALANCING

The diffuser is equipped with an airflow balancing damper. The **aerodynamic damper** is located inside the diffuser and is conveniently adjustable from the outside.

Setting the damper position with the gauge*:

- Insert the gauge through the diffuser grille until it contacts the balancing damper.
- Take the reading relative to the ceiling line.
- Damper positions are indicated on the gauge.

* The damper-position gauge is supplied with the diffuser.

D0 – damper fully open.
D7 – damper fully closed.