

PURGE VENTILATION AND VENTILATIVE COOLING

Efficient cooling in a natural and energy-saving way



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Purge ventilation

Today's homes, schools and offices are very well insulated. That is good news for the energy bills, but at the same time there is a lack of sufficient supply of **fresh** and **cool air**.

Purge ventilation is a must

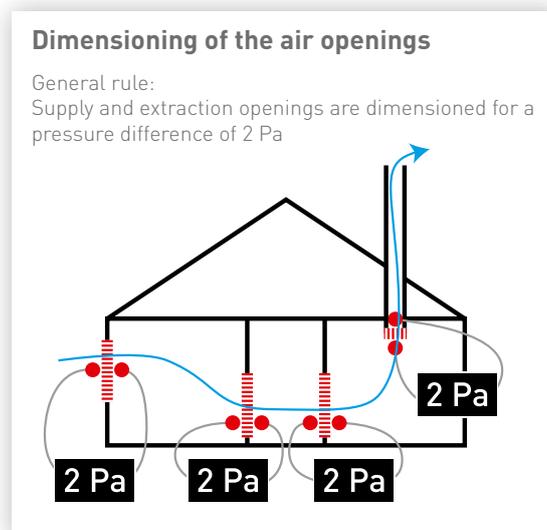
A healthy indoor climate is very important. This has become quite clear in recent years. Supply of sufficient fresh air and extraction of polluted air not only improves concentration but also reduces the risk of COVID-19 spreading. The use of ventilation hatches with high air passage provides the solution. This is because purge ventilation removes floating infectious particles. Natural air currents thus wash fresh air in and limit the spread of the virus

Ventilative cooling

'Free cooling' by means of purge ventilation

With the last hot summers in mind, keeping buildings cool in an energy-efficient way is becoming more challenging. **Summer comfort** is therefore increasingly being incorporated into design requirements. By using **(controlled) wall and window louvres** or **louvre wall systems** with large flows of outside air, a building can be perfectly cooled. Please take into account **some guidelines**:

- ✓ Always apply ventilative cooling **combined** with good **exterior solar shading**.
- ✓ When designing the building, bear in mind the **presence** of sufficient **thermal mass** in the building to store the outside air.
- ✓ Use the **correct pressure drop** when sizing the supply grilles.



Smart control

Thoughtful control for night cooling and ventilation works on the basis of:

- ✓ **Time:** season, day of the week, hour of the day/night
- ✓ **Presence:** motion sensor
- ✓ **Temperature:** indoor temperature above a certain value, temperature difference inside compared to outside
...
- ✓ **Air quality:** CO₂ measurement

Please note that the automatic operation can always be overruled by input via a remote control. After a predetermined lapse of time, a reset to automatic operation is recommended

For each project, also take into account signals from:

- Fire alarm
- Heaters
- Hygienic ventilation
- Maintenance
- Specific weather conditions (storm)
- ...

We would like to highlight two products that can be used perfectly within the whole strategy of ventilative cooling:

DucoGrille NightVent



DucoGrille Close 105



■ DucoGrille NightVent Glass-replacing ventilation hatch

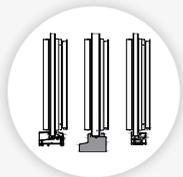


The DucoGrille NightVent is a glass replacement ventilation shutter (for glass thicknesses from 24 to 48 mm) that provides efficient cooling and ventilation of any building thanks to the supply of **large ventilation flow rates** (369 l/s*m² at 2 Pa pressure difference).

Although the ventilation hatch consists of one **single module**, it contains **two essential components**. From outside, the DucoGrille NightVent is protected by a **window louvre** with perforated louvre blades that act as an insect screen. The grille has also been tested against the applicable European regulations in **intensive tests** to measure wind and water resistance. It is also possible to obtain the external louvre grille in a vandal-proof or burglary-resistant version up to **RC2 class** (according to NEN 5096 & EN 1627:2011).

From the inside, the insulated, flush-finished **inner panel** ensures effortless integration into the interior. In addition, the **acoustic damping** ensures that the thermal value of the ventilation hatch is comparable to that of a closed window.

The ventilation hatch can either be operated **manually (with a handle) or motorised**. In addition, the DucoGrille NightVent can be linked to the building management system (BMS). In this way, the ventilation hatch can be opened at any time, even if no one is in. Based on time control, classrooms and offices can be ventilated during breaks or during busy periods.



Applicable for aluminium,
wooden and plastic window
frames

The DucoGrille NightVent is available motorised
and manual.



DucoGrille Close 105

Multileaf damper for customised purge ventilation

The DucoGrille Close 105 is a **motorised multileaf damper** with large air passage, tailor-made for offices and schools. The multileaf damper can serve as a supply, transit or exhaust grille. The DucoGrille Close 105 can be built into a **wall or curtain wall** and a wall louvre on both sides, which may or may not be burglary-resistant, ensures an aesthetic finish. With a limited depth of just 105 mm, the multileaf damper can easily be installed in smaller spaces, both horizontally and vertically.

Moreover, the multileaf damper can also serve as an **adjustable central exhaust unit**, for example in combination with DUCO's roof turrets. Thanks to its large airflow, the DucoGrille Close 105 is also ideal for use in providing intensive ventilation or as part of the **(night) cooling systems** of a building.

The DucoGrille Close 105 can be equipped with **various types of motor** (also including **Spring Return** motors).



CONCRETE PROJECT?

Make an appointment for a no-obligation consultation or request your brochure online.



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Technical specifications

	DucoGrille NightVent	DucoGrille Close 105
Dimensions	min. 300 mm, max. 2500 mm Width and height depend on each other, see technical sheet at www.duco.eu	min. 258 mm to max. 3000 mm (incremental per 1 mm) Width and height depend on each other, see technical data sheet at www.duco.eu
Depth	115 mm	105 mm
Airflow intake	261 l/s/m ² (at 1Pa) 369 l/s/m ² (at 2Pa)	805 l/s/m ² (at 1Pa) 1138 l/s/m ² (at 2Pa)
Acoustic damping value (in closed condition)	R _w (C;Ctr) = 33 (-1,-4) dB	R _w (C;Ctr) = 21 (-2, -2) dB R _w (C;Ctr) = 27 (-1,-4) dB*
Burglary resistance	Optional up to RC2 class	Optional up to RC2 class**
Insulation value	U = 1,5 W/m ² K	U < 1 W/m ² K
Operation	Motorised / manual	Motorised
Material	Inside and outside: Aluminium Al Mg Si 0.5 Thermal break: PVC Insulation: PIR	Aluminium: Al Mg Si 0.5 Treatment: enamelled polyester powder coating (60-80 µm) Louvre: HD PVC
Colours	All RAL colours possible	Internal and external grille recessed: all RAL colours possible Intermediate damper: All RAL colours (standard RAL 9005 gloss 70)

* Value with Solid 30Z P1 + DucoGrille Close 105 + 2 x Duco Acoustic Module 150 + Solid 30Z P2

** In combination with DucoGrille Solid ++ 30Z

call +32 58 33 00 66 or mail to info@duco.eu

We will be happy to provide you with any further information on our products and new developments.

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