



Conforme à VDI 6022

FSL-B-ZAS

Unités de soufflage et de reprise avec fonction d'air recyclé:

- Ventilation mécanique avec récupération de chaleur
- Conception modulaire intégrée à la façade:
- caisson de base pour montage pendant la phase de construction
- IÉléments modulaires pour une intégration ultérieure
- Assimilable au déplacement d'air
- Batterie pour chauffage et refroidissement
- Mode tout air neuf, mode mélange: air neuf/air recyclé et mode tout air recyclé possibles
- Ventilateur radial éco-énergétique
- Ventilateur à vitesse variable 3 positions
- Débit d'air frais régulé indépendamment de la pression du vent

Description produit



Les unités décentralisées en allège type FSL-B-ZAB apportent de l'air neuf climatisé aux bâtiments.

En plus de la ventilation avec récupérateur de chaleur et filtration de l'air, le chauffage et le refroidissement des espaces de bureaux sont garantis.

Technique



rectangular

Outside air:
16 - 33 l/s
60 - 120 m³/h

W: 1065 mm
H: 1065 mm
D: 195 mm

Cooling capacity up to 460 W
Heating capacity up to 800 W

INFORMATION TECHNIQUE

The fresh/outdoor air enters directly through an opening in the façade. There is a spring return motorised shut-off damper (11) located at the bottom of the unit in the outdoor air inlet(12), this closes the inlet when the unit is inactive or in the case of a power failure. The exhaust air damper is coupled to the outside air damper by means of a connecting shaft (16) and the system is operated by a single actuator.

The fresh air is cleaned using an F6 fine dust filter (2) and then passes through an automatic mechanical flow rate controller (21) which limits the fresh air flow rate to a set maximum. Then the air passes through a recuperative heat recovery unit (3) in which part of the heat energy from the extract air is transferred to the inlet fresh air. A radial supply fan (5) then discharges the air through a 4 pipe coil with heating and cooling capacity. The air is finally discharged into the room through an under sill slot with a displacement flow characteristic. The extract air is taken from the upper sill area then passes through a G3 coarse dust filter (1). After this the air passes through the recuperative heat recovery unit (3). When in energy saving mode, in a transitional period, or for anti icing protection, a motorised bypass damper (9) is opened which bypasses the heat recovery system (3). The exhaust air fan (6) produces the necessary pressure differentials for the extract system. The motorised shut-off damper (11) with spring return actuator closes the exhaust air outlet when the system is shut down or in the case of a power failure.

The type FSL-B-ZAU model Capricorn can provide three flow rates 60/90/120 m³/h. All three settings can operate on full recirculation or full fresh air (as described above). For full fresh air, to achieve this the BMS opens the inlet and exhaust air dampers (11) and closes the recirculation damper (8). The BMS operates the supply air and exhaust air fans in parallel at the required level.

For full recirculation the fresh air inlet and exhaust air dampers (11) are closed and the recirculation damper (8) is opened.

In this case the exhaust air fan is switched off by means of a relay and the supply air fan is operated by the BMS to provide three flow rates with full recirculation.

The units can additionally operate in an asynchronous balanced mode. To achieve this, the fresh air inlet and exhaust air dampers (11), as well as the recirculation damper (8), must be opened. In this mode a second relay which is integrated into the unit switches the exhaust air fan on, providing a constant flow rate independent of the BMS requirements, this is at speed one providing 60 m³/h. If the fan is activated from central control and operates at speeds two or three, this only effects the supply air fan. The result is that the exhaust air is at a constant flow rate of 60 m³/h and the fresh/outside air supply is at 60 m³/h and depending on the actual fan setting there is a recirculation air flow of 30 m³/h or 60 m³/h for fan speeds two and three respectively. If the minimum fresh/outdoor air is being used with fan speeds two and three this mixing operation can save substantially more energy in the heating or cooling modes than when in the full fresh air mode due to the benefits of thermal recovery.

Under sill ventilation units type FSL-B-ZAS with supply and exhaust functions are used for decentralized ventilation and for heating and cooling of rooms and buildings. The devices are manufactured according to specific project-site conditions. The ventilation units type FSL-B-ZAS consist of a solid base to be integrated into the façade with exterior and exhaust air dampers placed thereon, and the functional box.

Due to the use of ventilation devices type FSL-B-ZAS arise in the inner building design architecturally great freedom.

The integration of technology is possible with a minimal space requirement of only 200 mm lights installation depth.

This is particularly important for buildings with full-height glazing and traditional technology areas where it accounts.