Proper air exchange is a fundamental prerequisite of occupant comfort in modern residential buildings. Unlike the old days when ventilation system designs were based on the assumption of outdoor air supply through numerous cracks in the window frames, today most windows are built to be airtight forcing to seek other solutions. A window ventilator is a passive device which ensures natural flow of fresh air through the otherwise airtight window frames.

Window ventilator PO 400 is a continuous supply unit designed to deliver fresh air into residential and non-residential spaces. Such ventilators can be integrated into frames of various sizes in flats, detached houses and office buildings. A supply air unit eliminates the need of opening windows ensuring a consistent flow of fresh air without creating drafts and letting in street noise. Due to a purpose design the ventilator is very user-friendly while the integral dust filter keeps the indoor air free from impurities.

Ensuring Proper Air Exchange

The following example illustrates ventilation of a flat in a multi-storey residential block. Mechanical exhaust ventilation systems with natural fresh air flow are designed to rely on exhaust fans installed in the kitchen and the bathroom. The fresh air is supplied to the habitable inner spaces (i.e. bedroom and living room) through the window frame ventilators. As the air gets dirty it gradually drifts into the bathroom and kitchen through the internal doors and then is removed outside by the exhaust fans.

Ventilator Design

The ventilator consists of an external deflector, filter and an adjustable indoor grille. The outdoor deflector prevents water ingress into the premises and has a mosquito screen for insect control. The filter removes dust and contamination from the supply air, retains excess moisture and partially blocks off the street noise. The adjustable-position indoor grille allows varying the supply air volume and flow direction.

Filter maintenance (3-4 times per year)

Dirty filters increase air resistance in the system and reduce supply air volume. The filters require cleaning not less than 3-4 times per year. Vacuum cleaning is allowed. After two consecutive cleanings filters must be replaced.

Setup

The PO 400 is installed into the upper part of the window frame. Each window ventilator is capable of supplying up 20-40 m³/h.

Packaging

Colour Options

White

Brown
The ventilator is equipped with a regulator allowing various combinations of air flow intensity and direction so that the resulting microclimate offers maximum occupant comfort.

**Air Flow Intensity and Direction Adjustment**

- Max Open Position
- Open Down Position
- Open Up Position
- Closed Position

**Overall Dimensions**

![Overall Dimensions Diagram](image)

**Technical Specifications**

<table>
<thead>
<tr>
<th>Pressure differential $\Delta P$ [Pa]</th>
<th>Air stream $[m^3/h]$</th>
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Exhaust Fan VN

Window Ventilator PO 400

Exhaust Fan VN