

### MARKET LEADING COMMERCIAL AND DOMESTIC VENTILATION WITH HEAT RECOVERY



... high performance for private homes

**NILAN** 

# Nilan Comfort

Passive heat recovery (air-to-air)



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## Domestic ventilation with heat recovery

(air-to-air)

\* NILAN

Comfort is a series of highly efficient heat recovery units designed for use in dwellings of up to  $600 \text{ m}^2$ .

### Function

The Nilan Comfort series consists of passive heat recovery units for extracting hot, humid air from kitchens, bathrooms, utility rooms, etc. Dust particles, moisture and smells are thus removed from the dwelling, ensuring a comfortable indoor climate.

The energy of the exhaust air is used to heat the inlet air. The units can be equipped with post-heating elements for connection to an electricity supply or water based heating system, allowing comfortable inlet air temperatures to be achieved on even the coldest of winter days.

Nilan Comfort units consist of two energy-saving EC fans for inlet and exhaust respectively, a counter flow heat exchanger and two flat filters for dust particle removal. The filters should be cleaned or replaced as necessary.

Nilan Comfort units are equipped with four-step EC fans capable of providing op to 800 m<sup>3</sup>/h (at 100 Pa). The units are operated via electronic CTS 600 controls.

### Benefits

Nilan Comfort units are compact counter flow heat exchangers designed for use in dwellings where highly efficient heat recovery ventilation is required. Comfort units help establish a comfortable and healthy indoor climate by preventing dampness, removing undesirable smells, reducing allergy problems, etc.

The Comfort series has been tested by the Danish Technological Institute and approved by the Danish authorities. The series has also been tested by the Swiss HTA, where it was demonstrated that Comfort ventilation units have an efficiency of up to 95%.





### Comfort control panel

Using a weekly program, the CTS 600 controls can be set for night setback, allowing the inlet air to bypass the exchanger ("free" cooling in summer), or any other wishes the user might have.



# Clear the air and recover the heat



### **Models**

### • Comfort 300 T w/EC

Capable of replacing up to 325 m<sup>3</sup> air per hour (at 100 Pa). An ideal model for installation in utility rooms where it can be mounted on the wall or in a standard cupboard. Powder coated in white.



### • Comfort 300 w/EC Capable of replacing up to 325 m<sup>3</sup>/h (at 100 Pa). Designed for loft installation.

### • Comfort 450 w/EC

Capable of replacing up to 450 m<sup>3</sup>/h (at 100 Pa). Designed for loft installation.

### • Comfort 600 w/EC Capable of replacing up to 600 m<sup>3</sup>/h (at 100 Pa). Designed for loft installation.

All of our Comfort models are available with integrated humidity sensor which secures an ideal air renewal in accordance with the humidity level in the home.

### Facts

- Heat recovery
- Dwellings of up to 600 m<sup>2</sup>
- Capable of replacing up to 800 m<sup>3</sup> air per hour (at 100 Pa)
- Inlet and exhaust
- Up to 95% efficiency
- Possibility of providing supplementary heat via water-based or electric heating system
- Possibility of allowing the inlet air to bypass the exchanger ("free" cooling in summer)
- Duct connections: Ø200 mm / Ø160 mm
- Dimensions: W60 x D50 x H90 cm for wall mounting, Comfort 300 T
- Dimensions: W49.3 x L107.3 x H55.2 cm for loft installation, Comfort 300
- Dimensions: W65 x L110 x H64 cm for loft installation, Comfort 450
- Dimensions: W95 x L127 x H63 cm for loft installation, Comfort 600

### **Benefits**

- No draughts as there are no outside openings in the dwelling (balanced ventilation out/in)
- No problems with moisture or smells
- Fresh air ventilation and stale air extraction
- Relief of allergy problems
- High heat recovery rates
- Units available for wall mounting in utility rooms or for installation in lofts



A pollen filter can be fitted to most Nilan units, allowing those who suffer from pollen allergy to keep their doors and windows closed while "airing" their homes via the Nilan system.

# Accessories















### Hygrostat

With a hygrostat you have the possibility of forced exhaust when the humidity level in the bathrooms is high.

### Filters

Standard filters for the Comfort series which secures cleaning of intake and exhaust air. Filters are classified as G3.

Туре

Hygrostat

Itemno.

3637

Туре	Itemno.		
Comfort 250	39163		
Comfort 300	3916		
Comfort 300 Top	39161		
Comfort 450	39165		
Comfort 600	39162		

Туре	Itemno.	
Comfort 300	3954	
Comfort 450	39541	
Comfort 600	3956	

Туре	Itemno.
All types	8527

Туре	ltemno.		
Comfort 300	768913		
Comfort 300 Top	768893		
(installed induct)			
Comfort 450	769062		
Comfort 600	769063		

Туре	ltemno.	
Vibritions absorbers	30451	

Туре	ltemno.		
Water seal	77481		

Туре	Itemno.		
Comfort 300, 450,	9204		
600			

### Pollenfilter (built-in)

Built-in pollenfilters for the Comfort series. The filters are to be placed after the intake-filter and are classified as F7.

### Pollenfilterbox, insulated

Insulated pollenfilterbox, Ø160 mm. the box should be placed at the inletduct just after the Comfort unit.

### **Heating surface**

The heating surfaces are to be built-in to the Comfort units (not Comfort 300 Top) and are to be connected to the central heating system. With these heating surfaces you have the possibility of increasing the inlet temperature and you are thus not restricted to the supplement from the heat recovery in the unit.

### Vibration absorbers

Vibration absorbers secure you against transference of noise from the unit to building parts.

### Water seal

The water seal ensures that the condensed water always can run freely.

### Installation kit

With an installation kit, consisting of 4 vibration absorbers and 1 water seal, you are ready to install your comfort unit.



Tecnical data:

## **Comfort series**

## System dimensions Comfort 300, 450 and 600 EC



к	L	M	0	WEIGH	
115	211	250	Ø160	45 kg	
145	253,5	323	Ø200	70 kg	
151	376	475	Ø200	90 kg	
	<b>K</b> 115 145 151	K L   115 211   145 253,5   151 376	K L M   115 211 250   145 253,5 323   151 376 475	K L M O   115 211 250 Ø160   145 253,5 323 Ø200   151 376 475 Ø200	K L M O WEIGH   115 211 250 Ø160 45 kg   145 253,5 323 Ø200 70 kg   151 376 475 Ø200 90 kg



Technical data:

# **Comfort series**

## System dimensions Comfort 300 Top







Comfort 300 · SEL (SFP) - (J/m<sup>3</sup>)



Comfort 300 Top EC · SEL (SFP) - (J/m<sup>3</sup>)





- Capacity curve --- SEL (SFP) - curve SEL (SFP) = Specific Fan Power (J/m<sup>3</sup>)

Conditions of capacity data Pt= Total external pressure Temperature = 20° C  $qv = Volume flow (m^3/h)$ P1 = Power consumption for both fans (W)  $P1 = SEL(J/m^3) \times qv(m^3/h)$ 3600



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### **Operating costs:**

When estimating operating costs for a Comfort unit, the ventilation requirement and operating time are important influencing factors.

# A standard Comfort 300 with EC fan will typically consume 350-550 kWh per annum under the following conditions:

- Modern 160 m<sup>2</sup> single-family home insulated to current standards
- Household of two adults and two children

This information has been checked and compared with standard consumption patterns before being used to estimate the above-mentioned operating costs.

The operating costs are therefore for guidance purposes only and may vary for individual households.

**Temperature efficiency** (balanced air renewal, room temperature +25 °C, RH 0 %, outside temperature +5 °C)

### Comfort 300





Comfort 600



### Nilan A/S

Nilanvej 2 DK-8722 Hedensted Tel. +45 76 75 25 00 Fax +45 76 75 25 25 nilan@nilan.dk www.nilan.dk

