

Cupboard model, 400/500 m³/h

TemoVex[®] 480S

For excellent indoor environment and effective heat recovery

Field of Application

Office premises, houses, flats, shops etc.

Placing

Storage room, laundry, hall etc.

Maintenance

Easily carried out by the user.

Effective Heat Recovering

Counterflow heat exchanger with great heat recovering efficiency — on average 82%.

Excellent Indoor Environment

Lowers the level of air pollution, moisture and harmful gases which gives much improved air comfort.

Total Economy

Great heat recycling efficiency, simple installation and excellent indoor environment results in god total economy.

TemoVex 480S

The TemoVex 480S is a compact ventilation unit for effective ventilation and substantial heat recycling.

The central part of the 480S is a counterflow heat exchanger, which has an average efficiency on 82%. The Heat exchanger has totally separated air ducts which make pollution leakage between the ducts impossible.

The body is made of hot dipped galvanised sheet-iron with insulation between. Front and gables are powder coated in white. The door is provided with magnetic ledges.

The ventilation unit has a heat exchanger, 2 fans, electric or water after-heater, by-pass damper and complete electric equipment.

Installation

Compared with conventional ventilation units the installation of the 480S is very simple. The ventilation unit should be installed in a heated place such as laundry, storage room, hall etc. Placing the ventilation unit at an outer wall will simplify installation of the air ducts. All air duct connections are made on the top of the ventilation unit.

By-pass

A high indoor temperature can be lowered by letting the colder outdoor air into the room. This is easily done by activating the by-pass function. The by-pass can be activated manually or automatically (when the by-pass is activated the outdoor air won't pass the heat exchanger). In its standard design the 480S has a manual by-pass, but can be provided with an automatic by-pass which gives you maximum comfort.

Fans

Two high performance centrifugal fans can be individually set at 5 speed steps to provide the required air flow.

The fans are equipped with manual resetable overheating protection. To make service easy, the fans are of plug-in type.

Filter

The 480S is equipped with a EU 5 filter for the supply air and a EU 3 for the exhaust air. Changing and

checking of the filters is easy to carry out.

If you want even better air filtration, the ventilation unit can be provided with an external electrostatic air filter.

After-heating

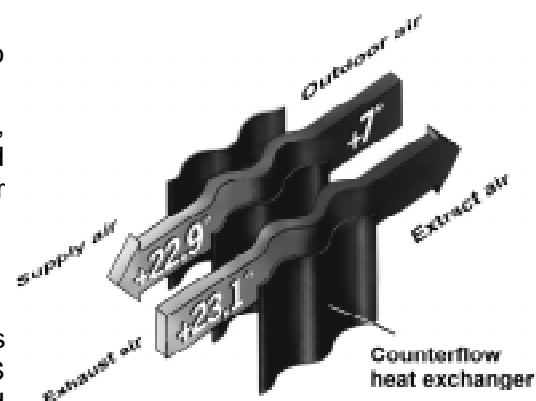
If the premises' heating system is correctly dimensioned, the 480S after-heating system doesn't need to be activated during most of the year. At unfavourable temperatures, the recycled heat isn't enough to heat the supply air. The after-heater is then activated to heat the supply air to the adjusted minimum temperature.

The TemoVex 480S comes in two versions. The first is equipped with an electric after-heater of 0,9 kW and an overheating protector. The second is equipped with a water after-heater of 1,1 kW.

Electric Equipment

The 480S is in its standard design intended for continuous operation. The ventilation unit can also be delivered with several control and operation functions e.g. operation/stop, high/low air flow controlled by internal or external time-switch, higher effect on the after-heater etc.

The Principle of Energy Recycling in the Heat Exchanger



The heat exchanger is made of thin corrugated aluminium sheets, which form ducts where the supply air is totally separated from the exhaust air.

The outgoing exhaust air gradually emits its heat to the incoming outdoor air.

Average Efficiency
82 %

Certificate No. 7912,87

Excerpt from the Swedish State Test Institution measure and calculation result for TemoVex 480S

| | | | | | | |
|--------------------|------|-------|-------|-------|-------|-------|
| Outdoor air | °C | 7,0 | 4,2 | 5,2 | 2,8 | -11,7 |
| Extract air | °C | 16,2 | 11,9 | 10,6 | 9,8 | 6,3 |
| Exhaust air | °C | 23,1 | 20,8 | 20,0 | 21,7 | 21,1 |
| Supply air | °C | 22,9 | 21,0 | 19,9 | 19,4 | 18,6 |
| Exhaust air filter | m³/h | 203,0 | 203,0 | 102,0 | 284,0 | 205,0 |
| Supply air flow | m³/h | 202,0 | 168,0 | 102,0 | 264,0 | 178,0 |

Note: Heat generated by the fans included in the above figure. For more information, please contact TemoVex. Test protocol No. 7912,87 can be obtained.

A Practical and an Economical Solution

The TemoVex 480S is a unique ventilation unit. In comparison with a conventional ventilation unit, an installation of the TemoVex 480S a practical and an economical solution.

Counterflow Heat Exchanger

The construction, which is built up according to the counterflow heat exchanger principle, gives high performance characteristics. This makes this heat exchanger one of the most effective exchangers available. Considerable energy savings are made and its separated air ducts provide a superior quality of air.



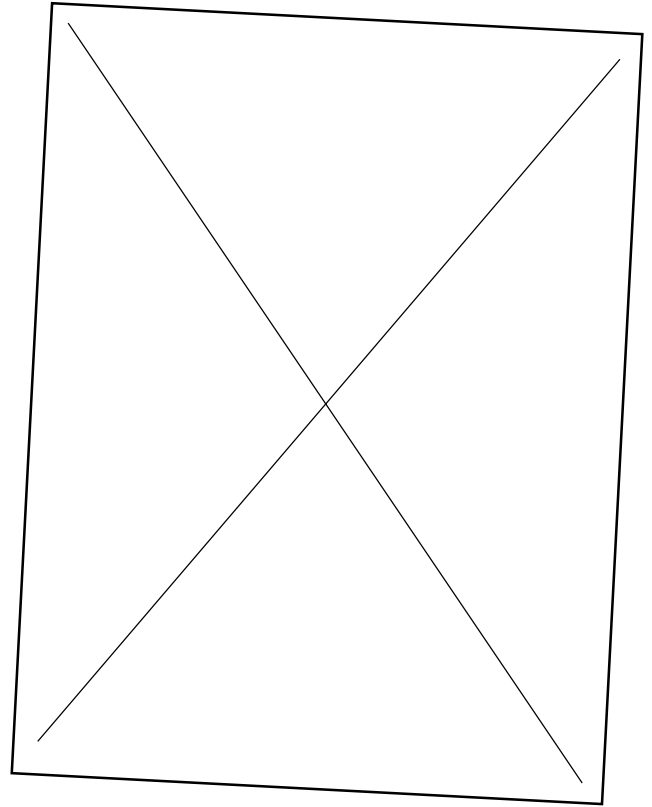
The TemoVex 480S needs very little space and is easily placed for example in the laundry. With its slender design and the low sound level, the 480S digest perfectly in the environment.

Example of Installation in a House

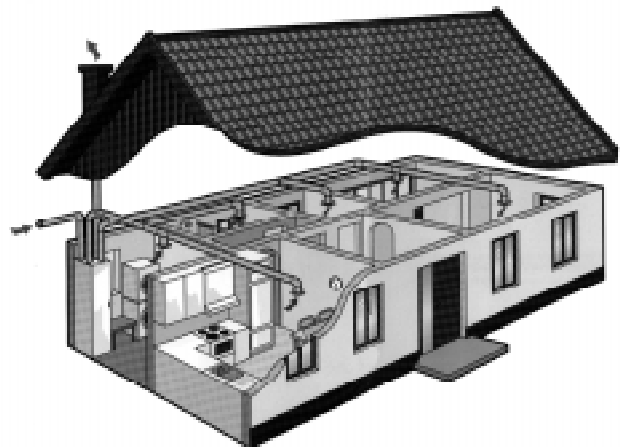
To meet the building code for ventilation in dwellings, a TemoVex 480S can be installed to advantage.

The ventilation unit supplies filtrated and tempered fresh air to bedrooms and living rooms, while it draws off polluted and moisturised air from places like the rest room, bathroom and kitchen.

The outdoor air is preheated in the heat exchanger by the hot, exhausted air. In this way the heat is recovered.



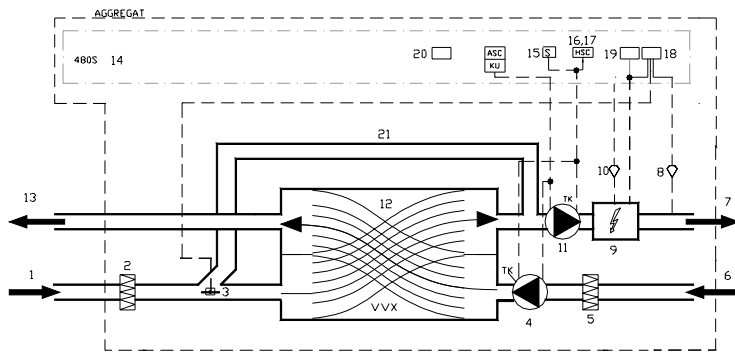
TemoVex 480S is well suited to an office environment, pantry, hall, wardrobe corner etc.



House with a TemoVex 480S installed.

Technical Specifications for TemoVex 480S

Functional Diagram for Electric Model



- | | | |
|---|---|--|
| 1. Outdoor air duct | 10. Overheating protection | 19. Switch — after-heater on/off |
| 2. Outdoor supply air filter | 11. Supply air fan | 20. Main switch - operation/stop |
| 3. By-pass manual / By-pass automatic motor damper* | 12. Counterflow heat exchanger | 21. By-pass air duct |
| 4. Exhaust air fan | 13. Extract air duct | |
| 5. Exhaust air filter | 14. Control panel A1 | HSC - Hand-operated speed control |
| 6. Exhaust air duct | 15. Air flow switch (max./normal) | TK - Overheating protection (manual reset) |
| 7. Supply air duct | 16. Air flow adjustment for supply air fan | ASC - Automatic speed control* |
| 8. Temperature giver | 17. Air flow adjustment for exhaust air fan | KU - Time-switch* |
| 9. After-heater | 18. Electronic thermostat | * Optional |

Technical Data

| | |
|------------------------|---|
| Fans | Centrifugal type with overheating protection |
| Capacity | 400 alt. 500 m³/h |
| Supply air filter | Class EU 5 (bag) |
| Exhaust air filter | Class EU 3 (bag) |
| Fire class | A15 |
| Air duct connection | See measurement |
| Weight | 90 kg |
| Colour | White |
| Dimensions (HxBxD) | 1900x430x600 |
| Electricity connection | 1x230V/10A (1.2 m cable with earthed plug) |

Controlling Equipment

Standard design

Manual by-pass
Air flow adjustment in 5 steps
(individually for each fan)
Switch for operation/stop
Switch for normal/max. air flow
Switch for after-heating on/off
Electronic thermostat

Optional features

Automatic by-pass
Operation/stop — internal or external control
Low/normal air flow — internal or external control
Amplified after-heater (1800 W)
Alarm output

After-heater

Electric: (standard design)
0,9 kW with overheating protection
Water: (note: external montage)
1,2 kW, water connection pipe Ø 10mm

Measurement

Air duct connections: Ø 160 mm

Recommended air duct dimensions:

Model 400 m³/h Ø 160 mm
Model 500 m³/h Ø 200 mm

Dimensioning Diagram

Available air pressure outside the ventilation unit

Location Guide

- Door with magnetic ledges
- Exhaust air filter
- By-pass damper
- Exhaust air fan
- Supply air fan
- Heat exchanger
- Outdoor air filter
- Access door
- Adjustable feet
- Condensation conductor
- Control panel
(see photograph)

Note: The picture shows a left model

Control Panel

Air flow switch for supply air and exhaust air
Fuse
Operation/stop switch
Electronic thermostat
Air flow switch normal/max.
After-heater on/off

Sound Power Level - Correction of Octave Band

| Centre frequency (Hz) | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
|-----------------------|-----|-----|-----|------|------|------|------|
| To air duct 400 m³/h | -34 | -12 | -10 | -8 | -6 | -5 | -8 |
| To air duct 500 m³/h | -36 | -18 | -11 | -4 | -6 | -7 | -12 |

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