



GF·SOL·AIR
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Planningsupport:

Comfort Ventilation System CVS®robusto

Scope: De-central airing equipment with recuperative heatexchanger of high efficiency.

Term ‘De-central’: In contrary to central equipments, there are small airing units distributed into single rooms, and installed inside at its outer wall. The air exchange is done via 2 thin thruholes (diam. 62 mm), containing tubes of 50 mm, foamed.

Advantages:

- Instead of long tubes thru all rooms, just short connections thru the wall.
- Minimal loss of roomspace.
- Fast installation-therefore lowest add-on costs.
- Everywhere to supplement (new/old buildings)
- Individual adjustability of airing volumina and in consequence the internal clima, staying the main time in a field of convenience (ideal humidity).
- Freedom from mould fungus, reduction of growth of mites.
- Fewer risks to illness, allergies.
- No contamination of in/out air stream to each other.
- No telephony effects (security of intimacy).
- Free of draught (vertical air stream at the wall).
- Excellent noise damping from outside.
- Protection against insects, dust and pollen.
- Well distribution of heat because of controlled airing, even temperatures in whole room.
- Best qualified also for bathrooms, cellar rooms aso.
- Low voltage supply (12V), everybody is allowed to install the CVS.
- Easy to maintain and clean, the heat exchanger can be removed and washed if necessary.
- Simple exchangeability of filters.
- Excellent efficiency of heat regain, therefore big savings of heating costs.
- Also excellent cooling effects during hot season, with zero energy costs!

Usability: In all rooms of dwelling-houses, social flats, appartements, office buildings, ateliers, workshops, sick-rooms in hospitals (highest degree of non-contamination!), rooms for seniors, waiting-rooms, rooms for medical treatments, aso.
Houses of any structure.

Roomsize: Per equipment CVS approx. 12-18 m² base area (at std. height) and dominate present residents (1 to 2,5 persons). Greater rooms need more CVS's accordingly.

Airing volumina: Performance A: 3 steps and filter type EU3 8/ 14 and 20 m³ / hour.
Silent-room-performance B: 3 steps and filter type EU3 6/ 10 and 14 m³ /hour.

Power consumption: 12V, 1 to max 4 W (perf. A), 0.5 to 1.8W (perf. B)

Acoustic noise emission: perf. A: 26 to 39 dBa ref. air volume, perf. B: 22 to 32 dBa , ref. air volume.

Acoustic noise immission attenuation >48 dB (best traffic noise decoupling)

Dimensions: HWD (height-width-depth) 44x28x11 cm³, weight 3.2 kg (w/o PS)

Set: Contains all components for complete installation., except foam

Equipment: Pack of counter-stream heat-exchanger of PVC-hard-foils achieving 90% heat regain (actual), 2 axial fan motors of type ECM, manual controlled mixing flap at frost temperatures, filters, front cover with stainless flygates, power supply (s.b.).

The condenser water runoff is performed via exit tube, frosting is eliminated by mixing the fresh air with warm room-air via manual control of a flap (width of opening), depending on outside temperature.

Power supplies offered:

- a) standard option: wall-plug power supply switcher type with 1.5m cable low voltage 12V.
- b) Alternative 1: concealed wire-PS, switcher type w. high efficiency rate, short circuit proof, ca. 0,25 m wires (low voltage),. color anthrazit, **add-on priced**, flush socket installed behind CVS device, buried wiring required.
- c) Alternative 2: Common PS installed in a fuse box for up to 12 CVS by concealed wiring. (only low voltage!). **Separate pricing**, the unused standard PS's will be credited.

Installation recommendation: Beside a window (or balkony-door) in about half height of room (0,2 bis 0,75 x height recomb.). Several CVS's in a large room, should be arranged adequately. Application on vertical walls is preferred (Roof-mansarde, gablewall, kneestock). Roof thruholes should be avoided (waterproofing is difficult and not reliable enough for longterm). Device can be submerged into the wall partly (6cm), reduces roomloss.

Tools: Dry drilling of wall-thruholes via diamond-/hardmetall-/SiC- equipped drillcrowns max. 68 mm Ø, dust exhauster obligatory , see also alternate drilling method on web-infosite.

Drilling-template (steal), drilling support in offer (s. manual), drilling-template in paper associated with every CVS unit.

Maintainance: minimum twice a year, better 4 to 6 times.

Filter exchange/ cleaning: depends on quantity of dust and pollen, every 2 to 4 month.

Filtercategories: G3, G4, F5 and F7 in offer.

Warranty: 2 years for production dependent failures (not valid for wear parts, illegal applications, misuse and wrong installation).

Lifetime: due to extended life tests we expect life times of 2 to 3 decades of years, fan motors ca. 5-12 years.

Special applications:

A) Usages in windowless bathrooms w/o separate inlet/outlet ventilating shafts are not allowed. Ventilating shafts must have a 5-fold diameter of the exit tubes (> 100 cm² x number of connected bathrooms). The shafts should be preferable plastics profiles including/equipped with a heat insulation, a runoff for condense water must be provided. Roof-sided outlet/inlet must have sufficient distance to each other (ca. 0,4 m).

From inlet shaft to CVS a bended tube is required. Material is available from construction market.

B) At house front walls with high esthetical demands (i.e. monuments, historical buildings.) the wall thruholes may be redirected to the outside window sides.

Noise emissions: perform. A: 26 to 39 dBa depends on volume, perform. B: 20 to 31 dBa , depend..on volume.

Noise immission damping ratio: >48 dB (confirmed by TU Stuttgart)

