



SL_ST HEAT RECUPERATIVE VENTILATION 4 in progress

SL_ST SL_ST

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Summary

Heat recovery ventilation

[Household](#) > [Other House Equipment](#)

Tags: [diy](#) [heat](#) [heatexchanger](#) [ventilation](#) [heatrecovery](#)

HEAT TRANSFER CFD https://www.simscale.com/projects/SLAVA/sl_st_heat_recuperative_ventilation_4_heat_transfer

CAD https://grabcad.com/library/sl_st-heat-recuperative-ventilation-1
CFD https://www.simscale.com/projects/SLAVA/sl_st_heat_recuperative_ventilation_4

The principle of operation.

Two oncoming streams pass through thin channels.

The only thing that separates the air flows is a **thin aluminum foil**. In this way, a constant temperature gradient is created and throughout the entire path, one stream cools, the other heats up. Theoretically, we will lose only a few degrees of our heat.

The structure consists of a layered structure of heat insulators (laser-cut plywood) and heat exchangers (aluminum foil, kitchen).

Cheap to manufacture and easy to operate design. On the model you can

see the direction of the flows. This design will keep your home warm or keep cool.

At the same time, you will calmly renew the air in the room. As for me, nothing can compare with the thermal conductivity of such a thin heat exchanger. I will be glad to hear your comments.

Model files



sl_st-heat-recuperative-ventilation-4-00.stl



wall-02.stl



wall-00.stl



wall-01.stl



cover-00.stl

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