

Wentyle version 5.0 ENG

AutoCAD application supporting the drawing
and calculations of ventilation installation

Design specification Using the elements from DOSPEL offer

Fans

If the project installation was computed (pressure drops) - using the „dPa calculation” command, then in case of any fan selected from the database, the “more” button in the insertion window will display:

- Installation requirements (fan capacity [m³/h] Static pressure [Pa])
- Static pressure for the capacity required by the installation, taken from fan specification.

Comparing these two pressure values allows you to check whether the fan will meet the requirements of the installation.

The next version of the program is supposed to have a command listing all fans in the database that meet the requirements of a calculated installation.

Important when calculating the installation

Fans are two-point objects (they have an inlet and an outlet).

These two points can overlap on the drawing view of the fan, because they determine the elementary direction, this is why, for example, on the wall fan view from the front one of these points is located in the symmetry axes intersection point and the other point (inlet) is at the end of a specially added through line.

Should there be any problem with finding the points of contact, you must use the „Snap to Node” option for AutoCAD points, because AutoCAD points are inserted in the points of contact for every element in the database.

Note: On the wall fan section the inlet point is moved beyond the fan and shown in the form of a dot - this is the point you must indicate in order to find out the inlet capacity using the “Declare inlet/capacity” command.

Heat recovery unit from the computation side

The ECONOMIC heat recovery unit is an untypical object; it contains two independent elementary directions, which logically belong to different installations.

In the recovery unit dialog window, on the “Insertion points” icons, you can select two different “passages” through the unit – blue arrow in front and top views.

You can assign the recovery unit to a selected installation and give it a number, for example „Naw-12” and when you will be calculating this installation, you must select the “Insertion point”, which will activate the “passage” through the recovery unit that is appropriate for the selected installation.

If you want to completely calculate the other installation going through the recovery unit you must first edit the assigning of recovery unit to an installation to „Wyw-25”, for example, and also edit the “Insertion point” to the “passage” appropriate for the other installation. Now you can calculate the other installation.

DospelSystem Installations

The system provides two diameters of circular ducts: $\Phi 100$ and $\Phi 104$ and one rectangular duct: 110x55mm.

In some cases different sections connect to a given fitting from different sides, the fitting symbol provides the information regarding those sections, e.g. **DKLZ 104-110x55** connects the **$\Phi 104$** section with the **110x55** section.

Because there are two duct diameters $\Phi 100$ and $\Phi 104$ they can be joined with a telescopic connection (one into another). But they can also be connected on the contact surfaces (the same diameter) using an additional fitting.

Side duct insertion window allows for those two methods: the upper row of "Insertion point" icons is for insertion on contact surface.

The bottom row of icons allows inserting a duct, in which the axis is shorter than the length of duct itself.

Inserting another duct on the endpoint of this axis will cause this duct to be inserted into duct with the "shorter axis".

Note that the two ducts connected telescopically must be of different diameters ($\Phi 100$ i $\Phi 104$). This can be checked by zooming the duct connection view or check with the duct description in the specification.

Note: Unlike with other systems of ducts from a database in the DospelSystem some elements have concealed flanges connecting them with adjacent ducts. Thanks to this the fitting characteristics are more visible on the drawing.

Make sure the duct reaches the fitting in its actual point of contact, and not the end of retractable flange.

Dospel Grills

From the viewpoint of Wentyle program logic two types of grills can be distinguished in the Dospel grill database:

- Grills assembled to the endings of elements, e.g. KR grill
- Grills assembled to the endings of elements or to duct side, e.g. DLRW grill