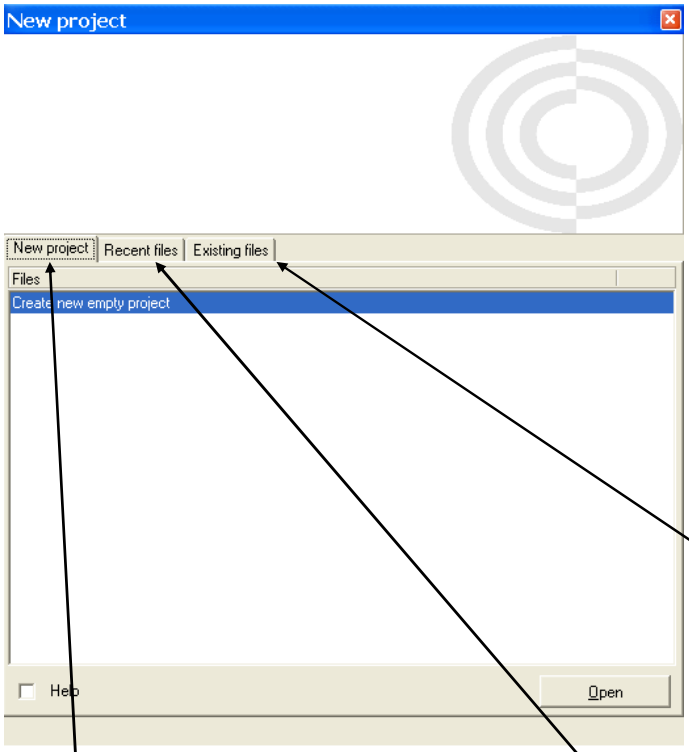
Step by step manual
DIMcomfort 4.0

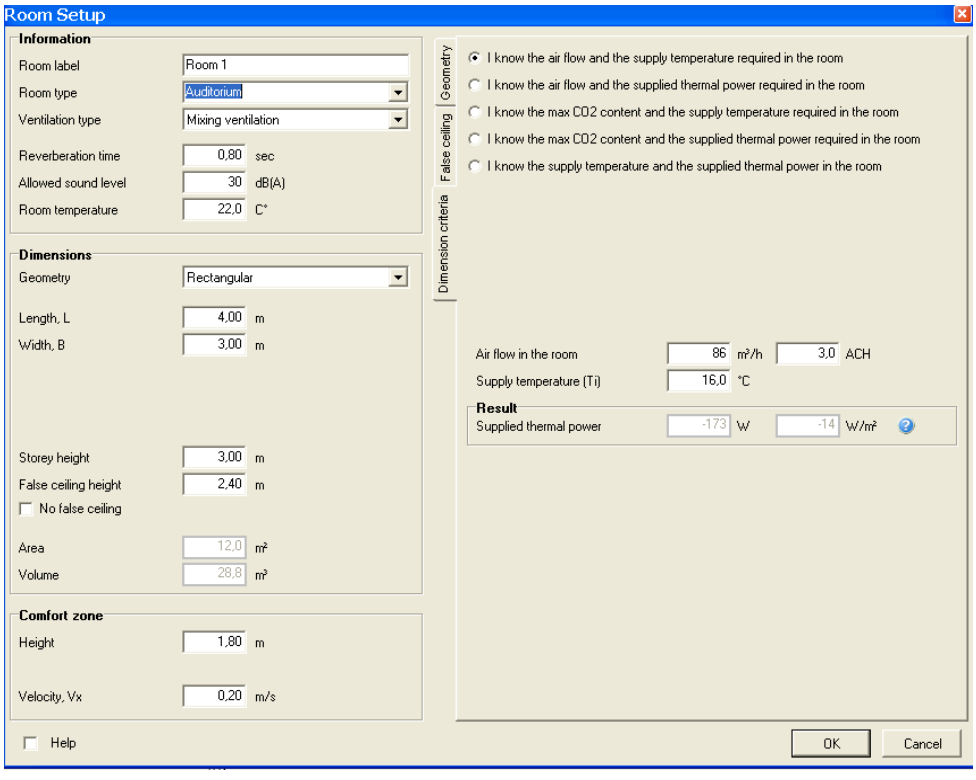
Contents

Start up DimComfort 4.0

When you start up DIMComfort you see the following screen:

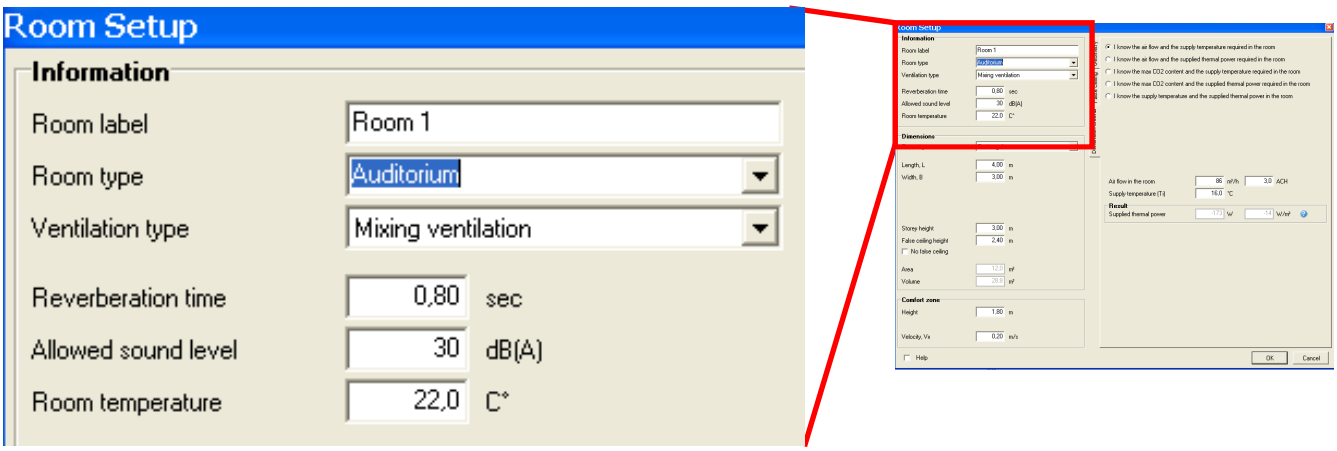


There are three possibilities. In the middle you can choose between the recent opened files, at right you can search in existing files and at left you can start up a new project. Click on ”New project” and press enter. Now you see the room criteria.



Room Setup

Room information



Room label:
The first room that is generated is named ”Room 1”. The name is changed by typing in the required name.

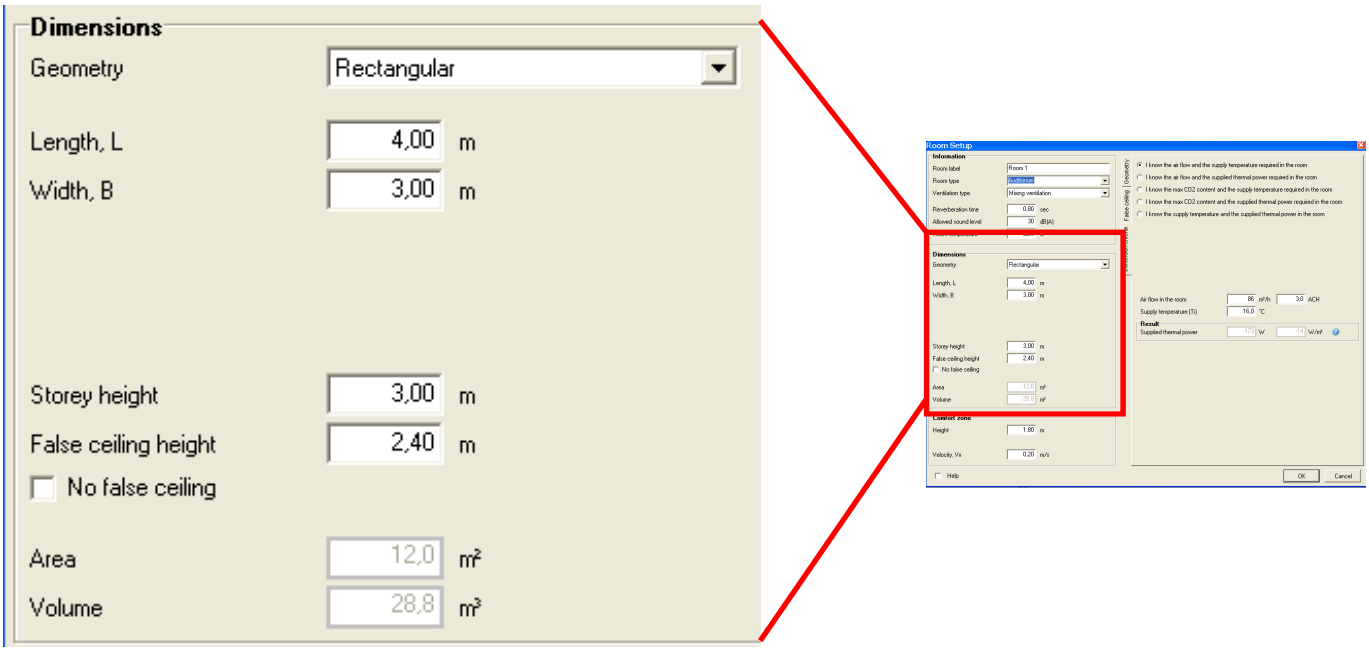
Room type:
Here you choose between the predefined room types. Your choice determine the values in Reverberation time and Allowed sound level. These values can be changed as you wish. It is also possible not to chose any Room type and set the values for Reverberation time and Allowed sound level your self.

Reverberation time: Default value of Room Type selection

Allowed sound level: Default value of Room Type selection

Room temperature: The Room temperature is set at 22°, but can be changed to meet your criteria.

Dimensions



Geometry:
Here you can choose between:

Rectangular: When rectangular is chosen the Length,L and the Width,B is typed in

Angle: When angle is chosen you must also type in Lv and Bv.

User-defined: When User-defined is chosen a drawing on the right side of the screen occurs, you draw in the room with your mouse.

Define room in AutoCad: Drawing can be imported from AutoCad.

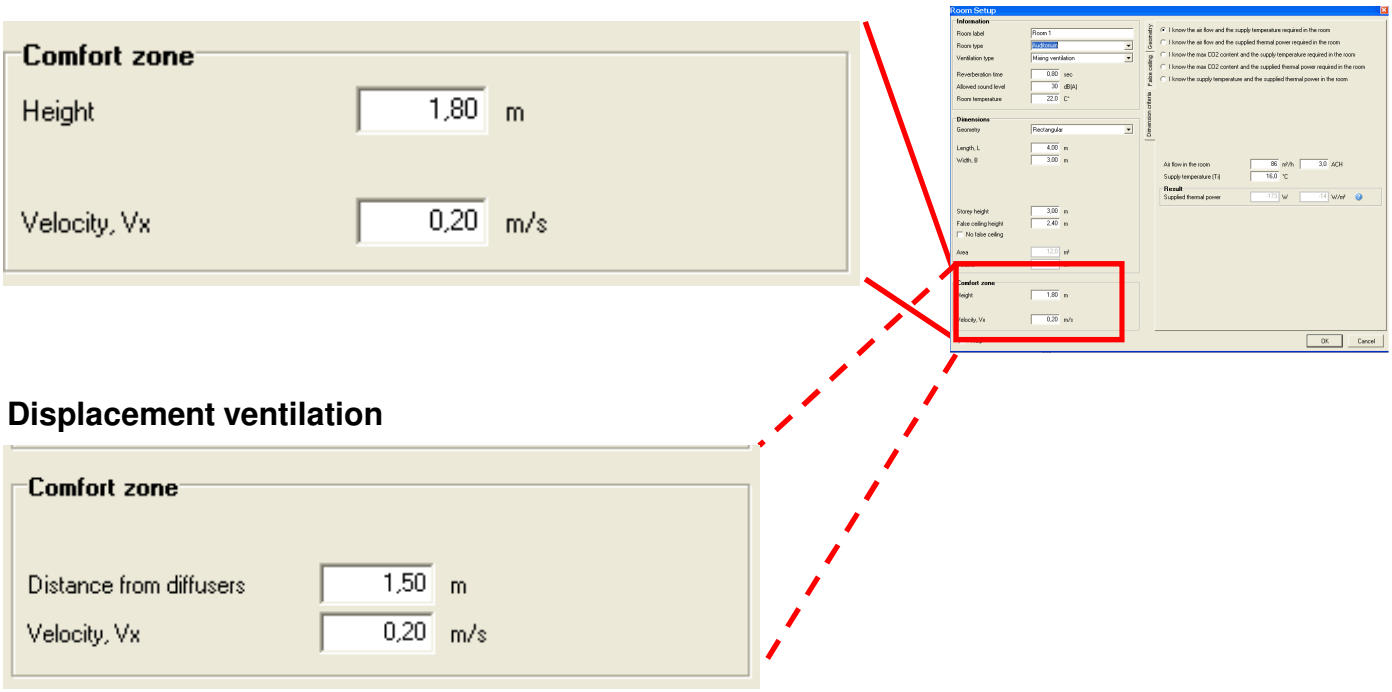
Storey height: Here you tap in the storey height.

False ceiling height: Height from floor to false ceiling

No false ceiling: If there are no false ceiling you "check"this box and the height of the False Ceiling equals the Storey height.

Area: The room area is calculated automatically.

Volume: The room volume is calculated automatically

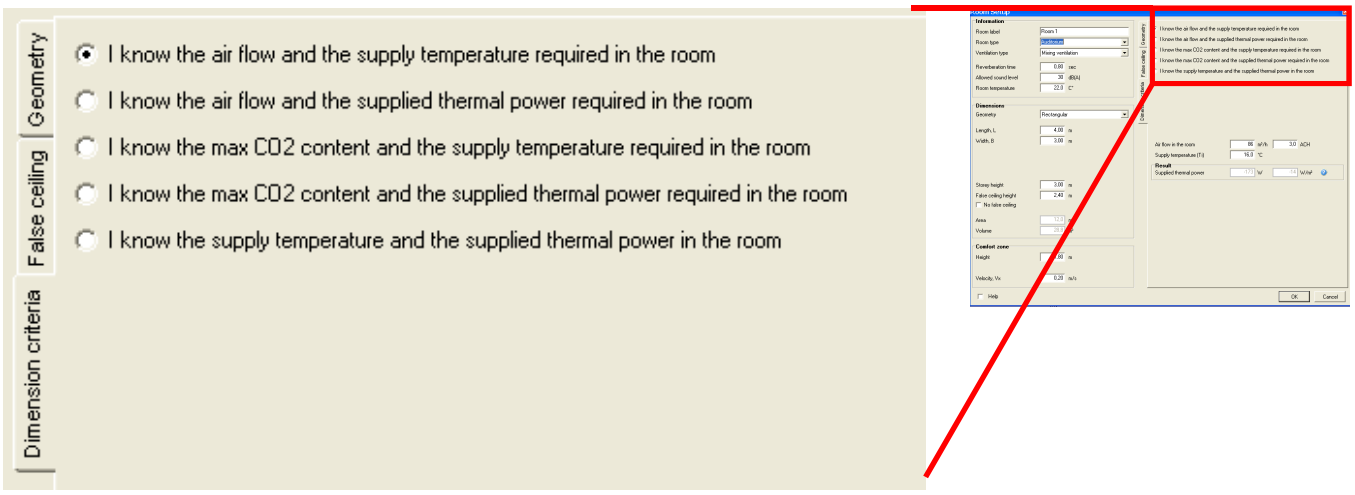


Comfort zone

Height: Height of the comfort zone is set to 1,8 m, but can be changed.

Distance from diffusers:
Occurs only when displacement ventilation is chosen and is the distance from the unit to the comfort zone. Acceptable near zone.

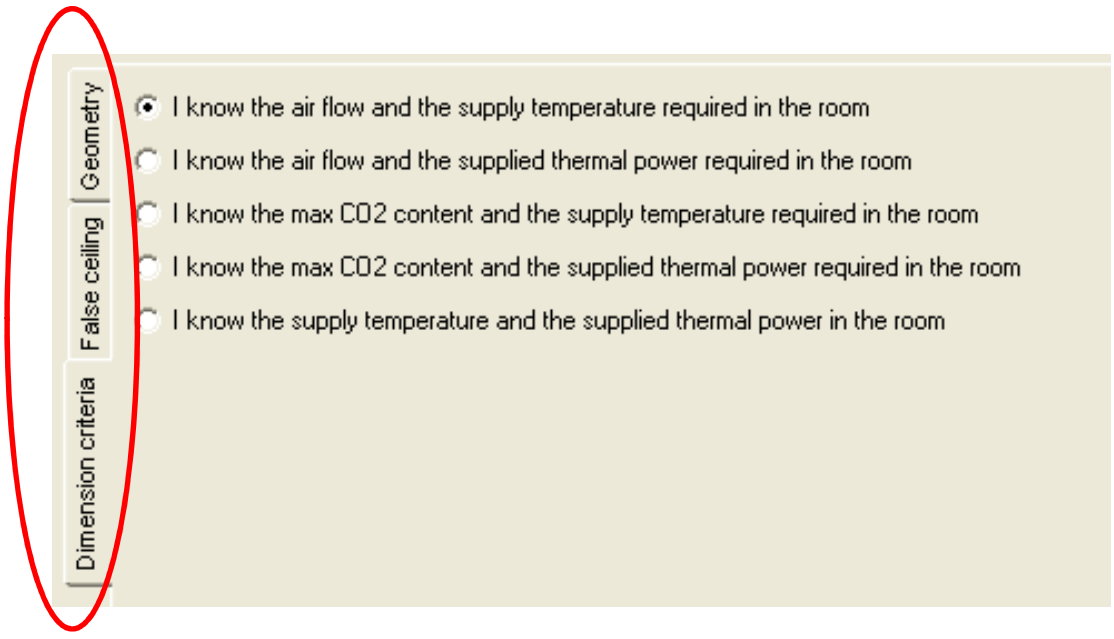
Velocity, Vx: Maximum allowed velocity in the Comfort Zone is set at the Lindab standard of 0.2m/s but can be adjusted to meet your criteria.



Dimension criteria

Depending on whether you are doing the dimension in order to remove the heat loads in the room or in order to obtain the demand for fresh air with regards to the content of CO2 and depending on which information you have, you can chose between the five different dimension criterias.

Insert the values and press OK

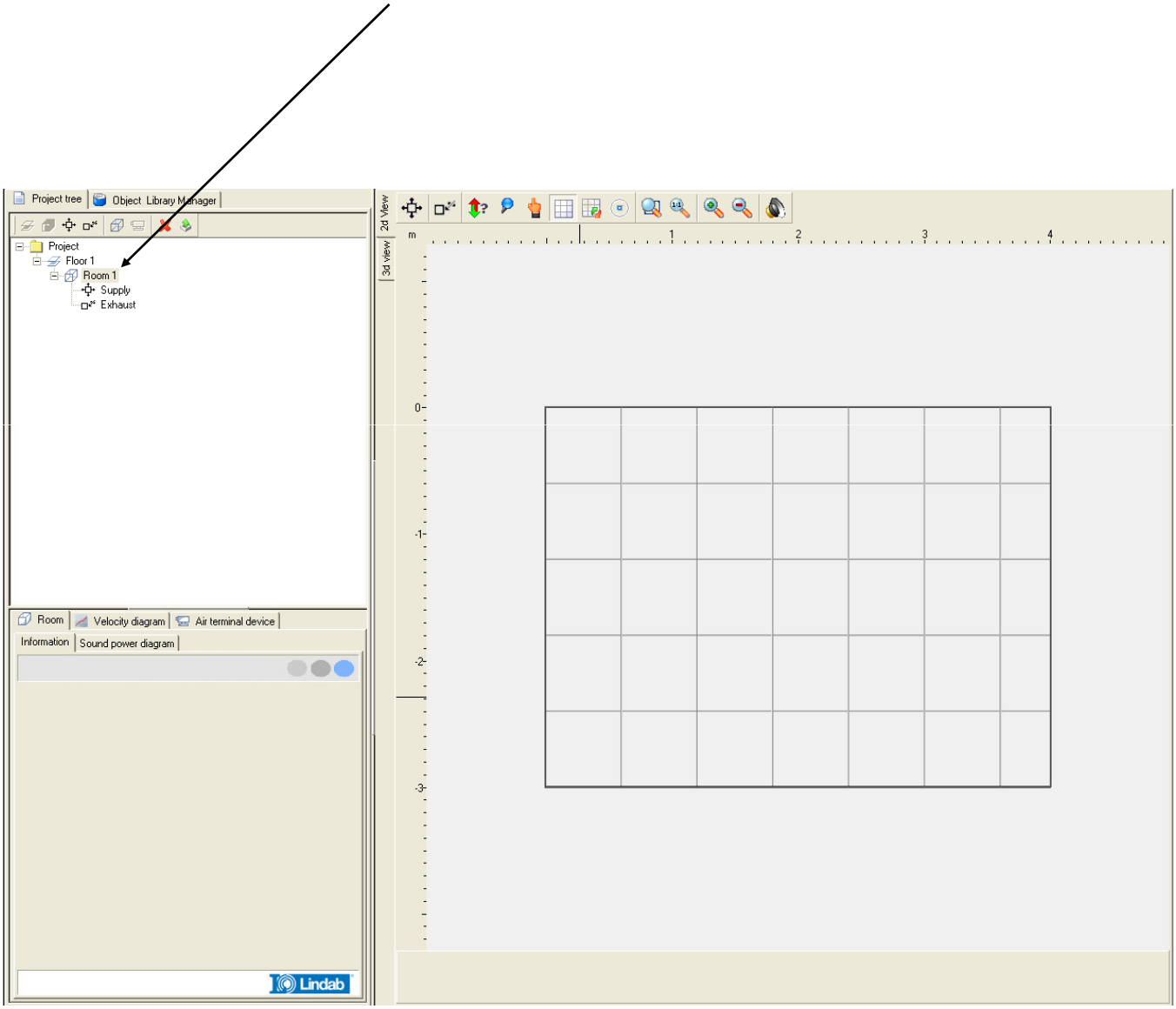


The menus you have on the left you use if you want to switch between Dimension criteria, dimensions of the False ceiling and the Geometry of the room. Dimension criteria are pre-selected.

Selection of air terminal devices

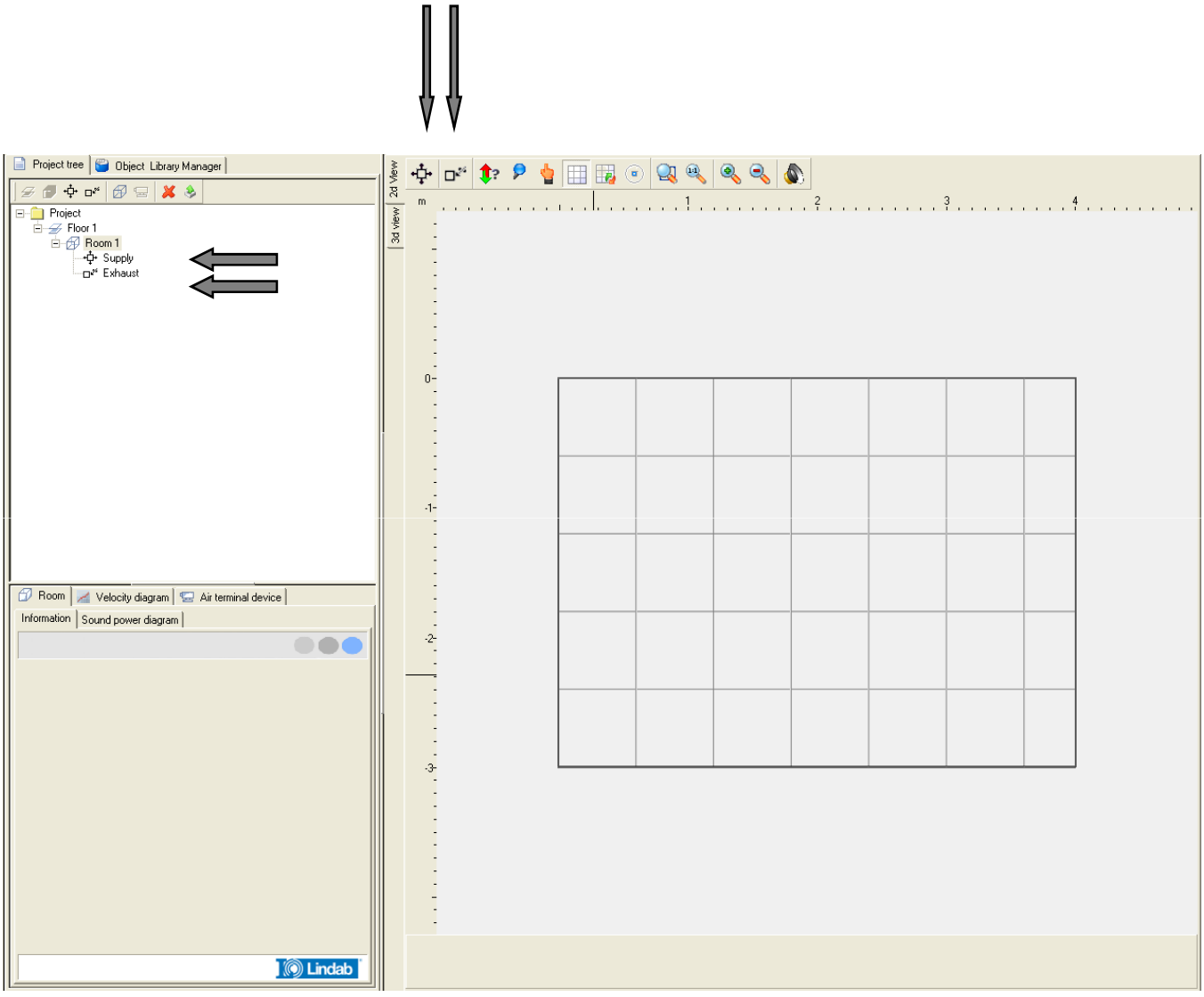
When you have pressed OK you can start to select your Air Terminal Devices.

When ever you want you can edit the room data by clicking on the room with the right mouse button and choose edit.

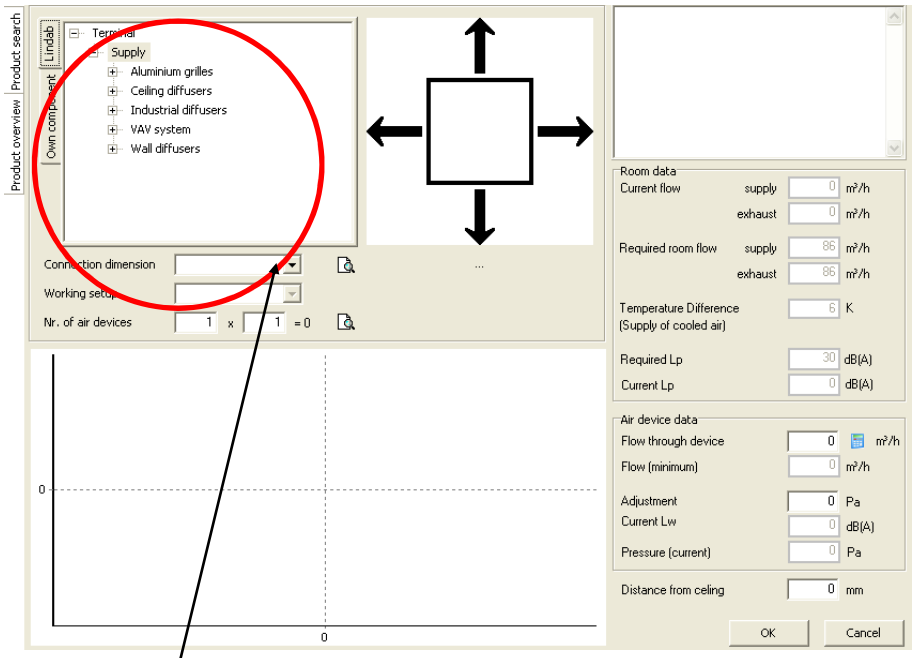


Selection of Air Terminal Devices

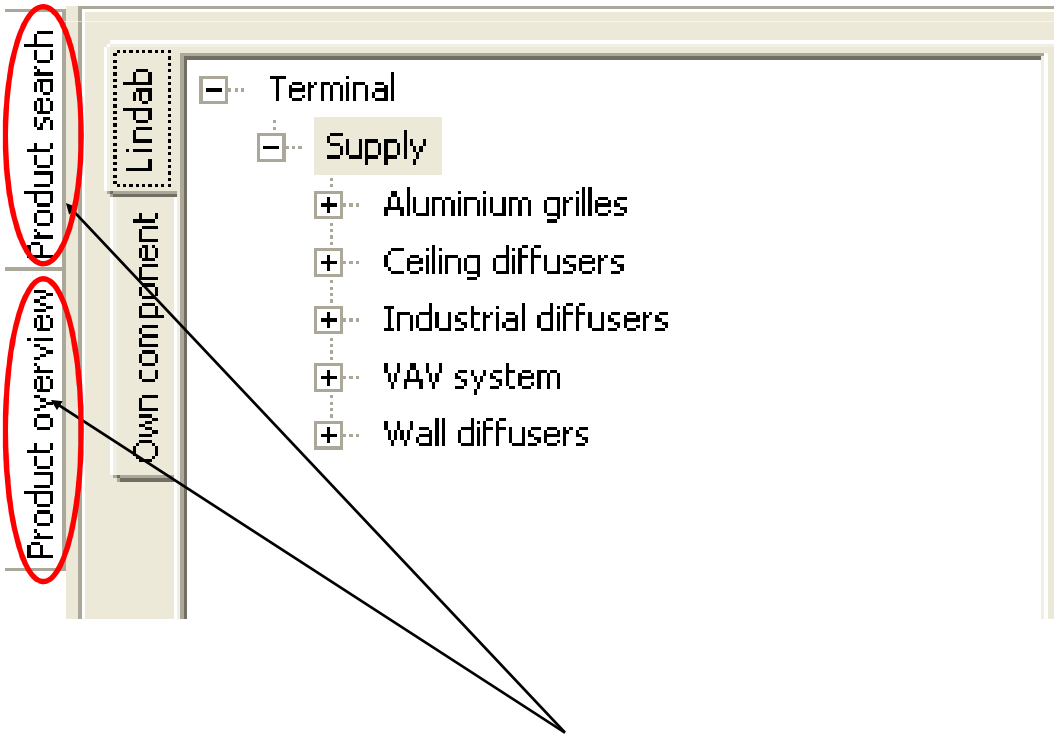
In order to choose respectively supply and exhaust units you double click on one of the symbols for supply or exhaust. As shown below.



Once you select the Supply or Exhaust grille you will be given the following option



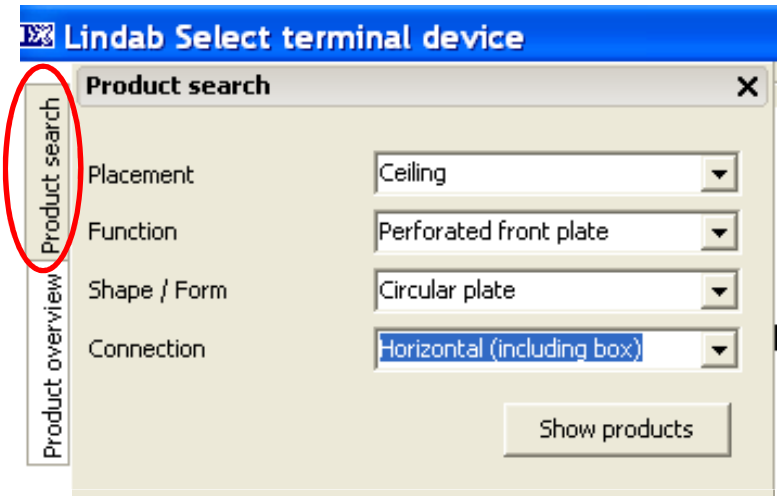
Here you have several possibilities to chose devices. One possibility is to use this menu.

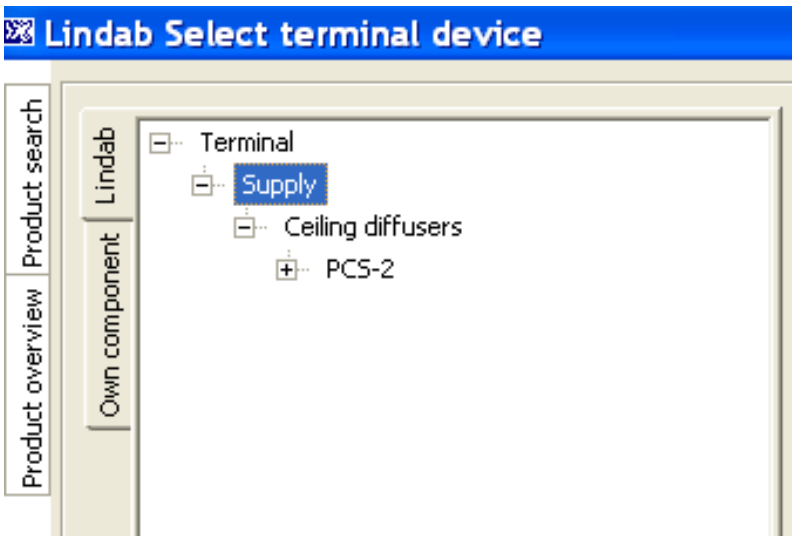


Alternatively you can click on Product overview or Product search. (See next page)

Product search

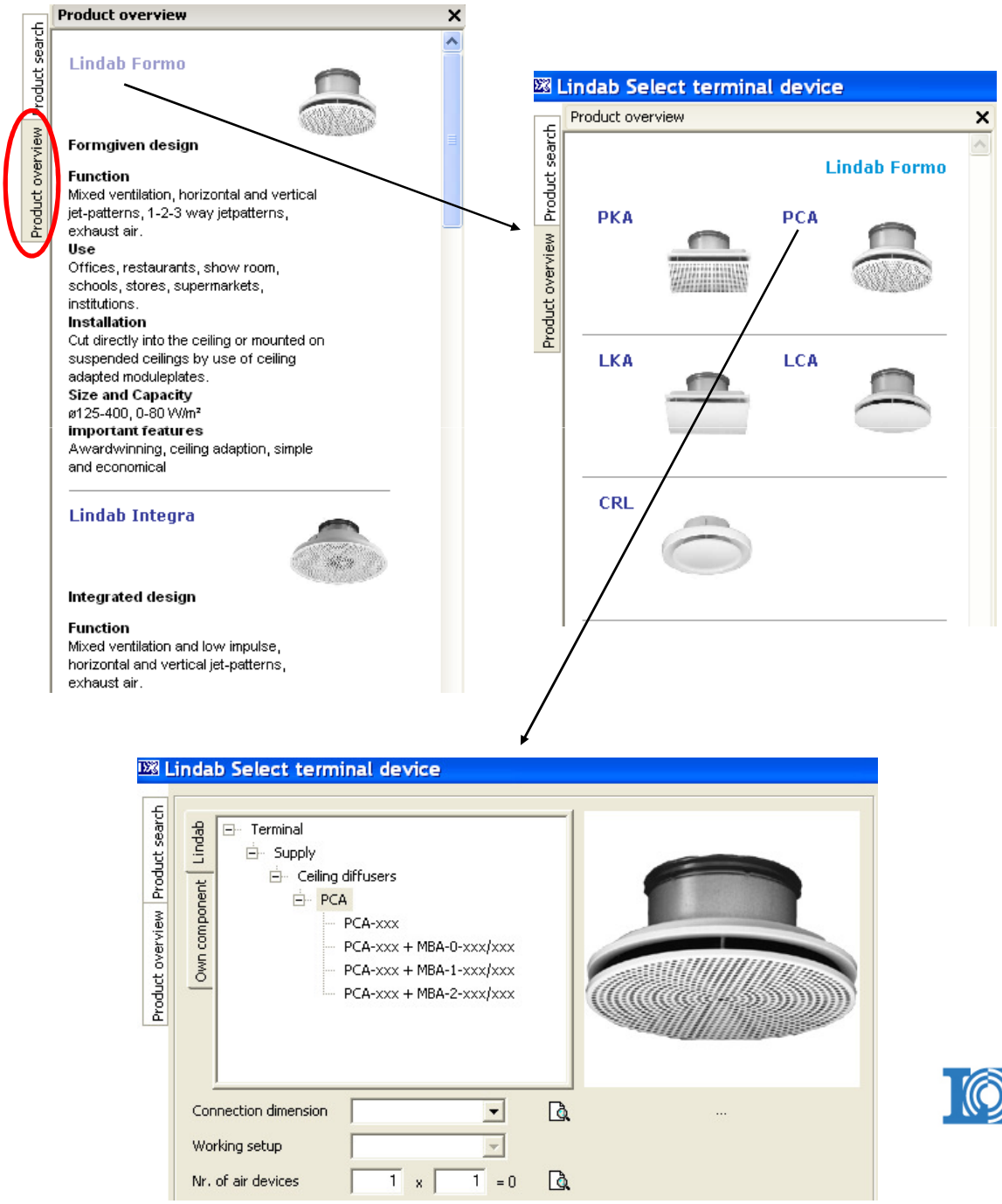
If Product search is chosen you can search according to Placement, Function, Shape/form and connection.
When the parameters are chosen you can click on Show products and the products with the chosen parameters will be shown.



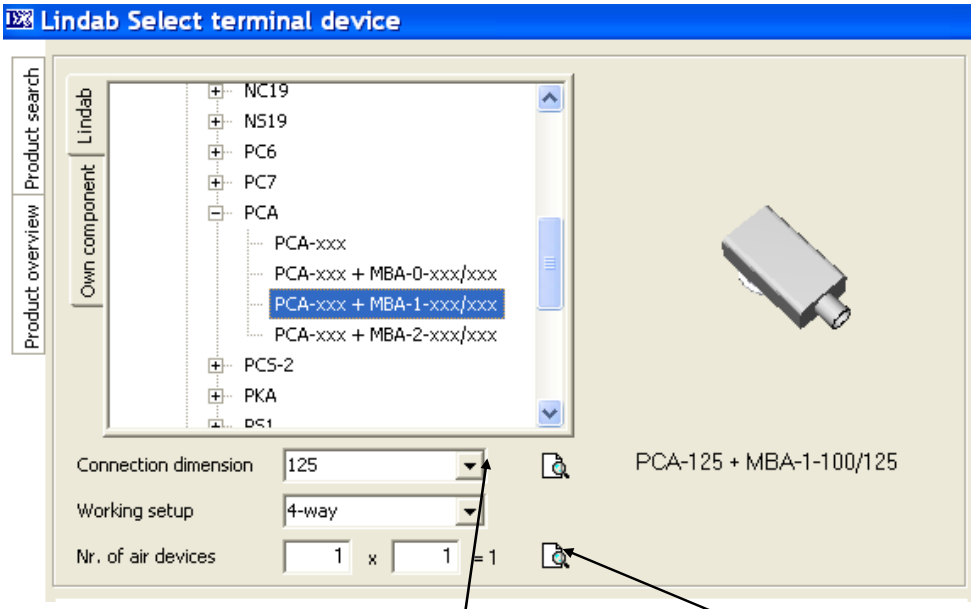


Product overview

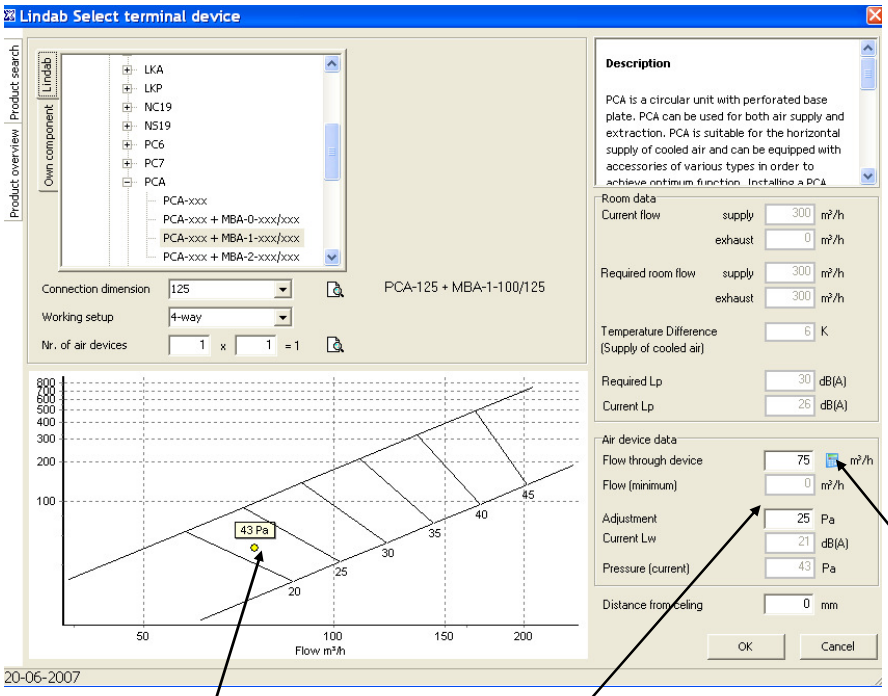
If you chose to click on Product overview you can find the requested device in a way very similar to when you look it up in a catalogue, meaning via product groups and pictures.
For instance click on Formo as shown below and the products that belongs to the Formo product group will be shown.
Afterwards for instance try to click on PCA.



Hereafter you can choose which plenum box type you want to combine with the diffuser or alternatively you chose without box.
In this case a MBA-1 box is chosen (diffuser one dimension larger than connection).



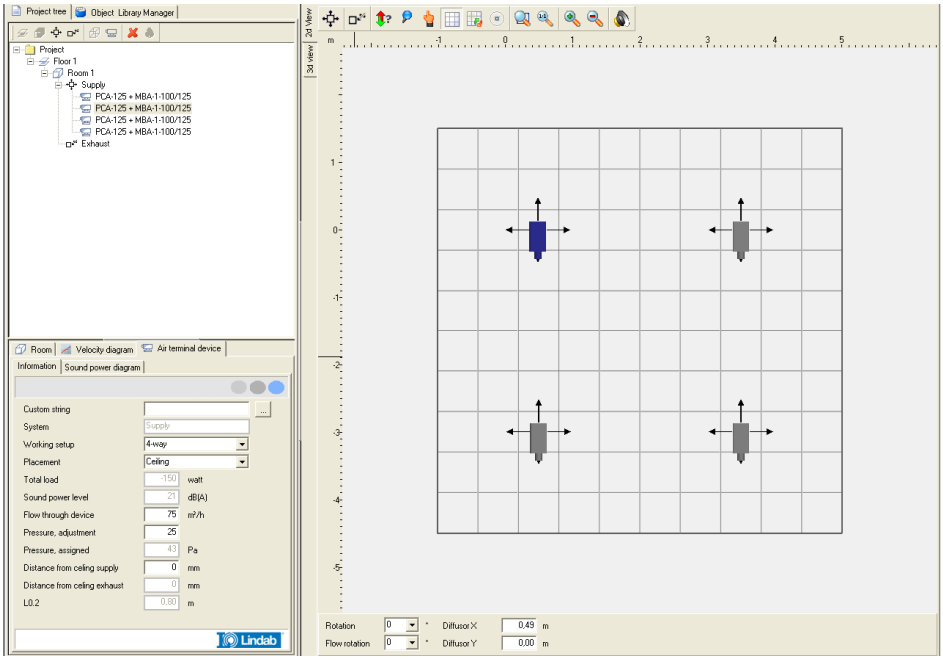
Choose yourself or let the program choose for you
If you know dimension and amount of diffusers you need you can just choose.
Alternatively you can choose dimension and let the program choose/calculate amount for you or do it the opposite way around.
Please note that the dimensioning is done is based on an approximated sound calculation since the diffuser positions are still unknown.



Whenever you change the amount remember to click on the calculation icon beside "Flow per device" so the new airflow are recalculated.

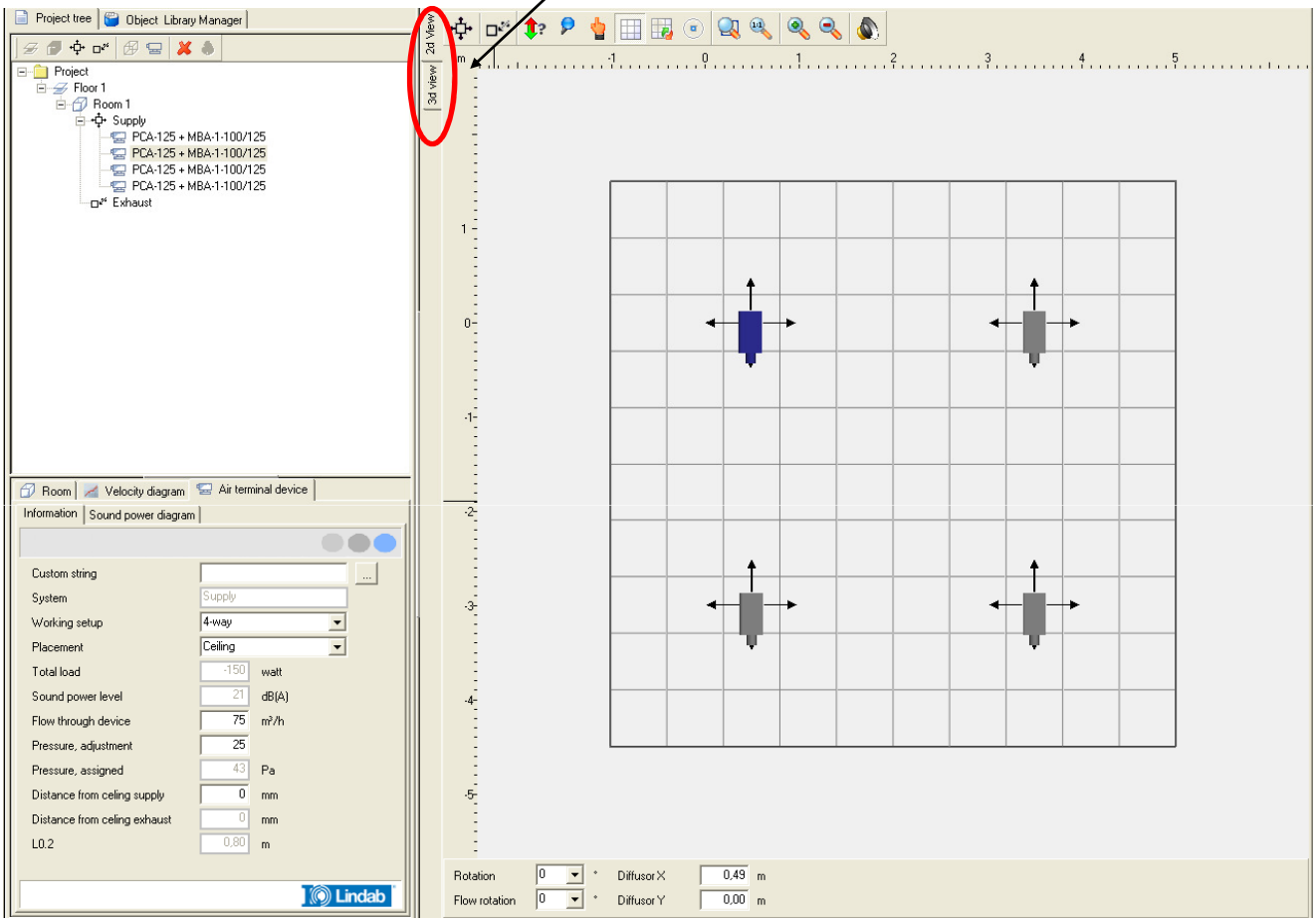
Balancing pressure

Also remember to tap in the balancing pressure in "Adjustment" otherwise the sound calculations will be based on the pressure loss with completely open damper.
The point in the diagram is automatically moved to the resulting pressure loss.
When you click on "OK" the below screen dump occurs. The diffusers are placed symmetrically in the ceiling grid.



2D view, 3D view

Now you have the possibility to work respectively in 2D and 3D view.
You change between the two views by clicking here



The icons belonging separately to the two views are described later.

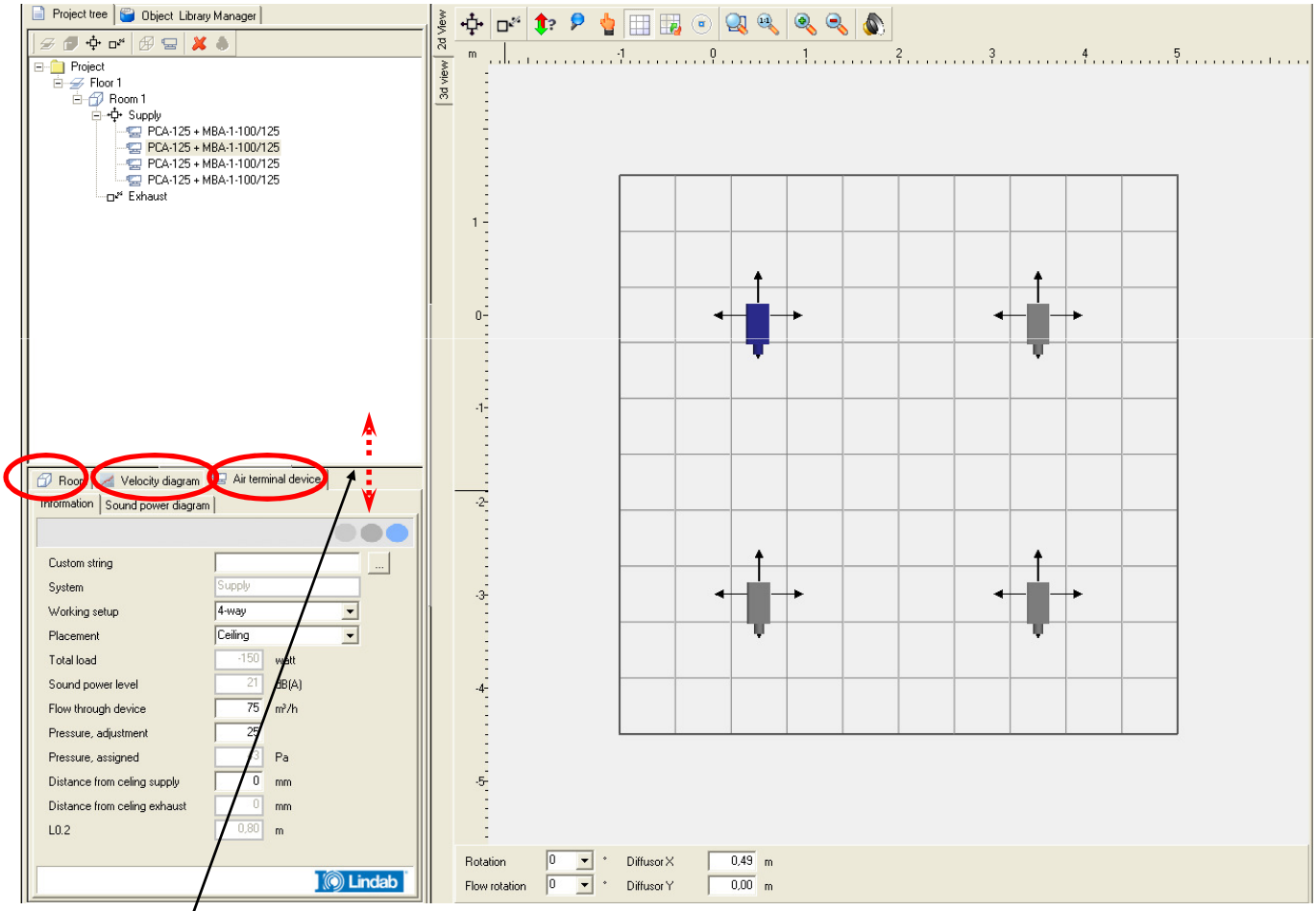
Room, velocity diagram and air terminal device

In the left lower corner of this screen you can change between:

Room: Here you can see the demands for the room and the actual result.

Velocity diagram: Here you can see jet velocity and thermal velocity in the occupied zone.

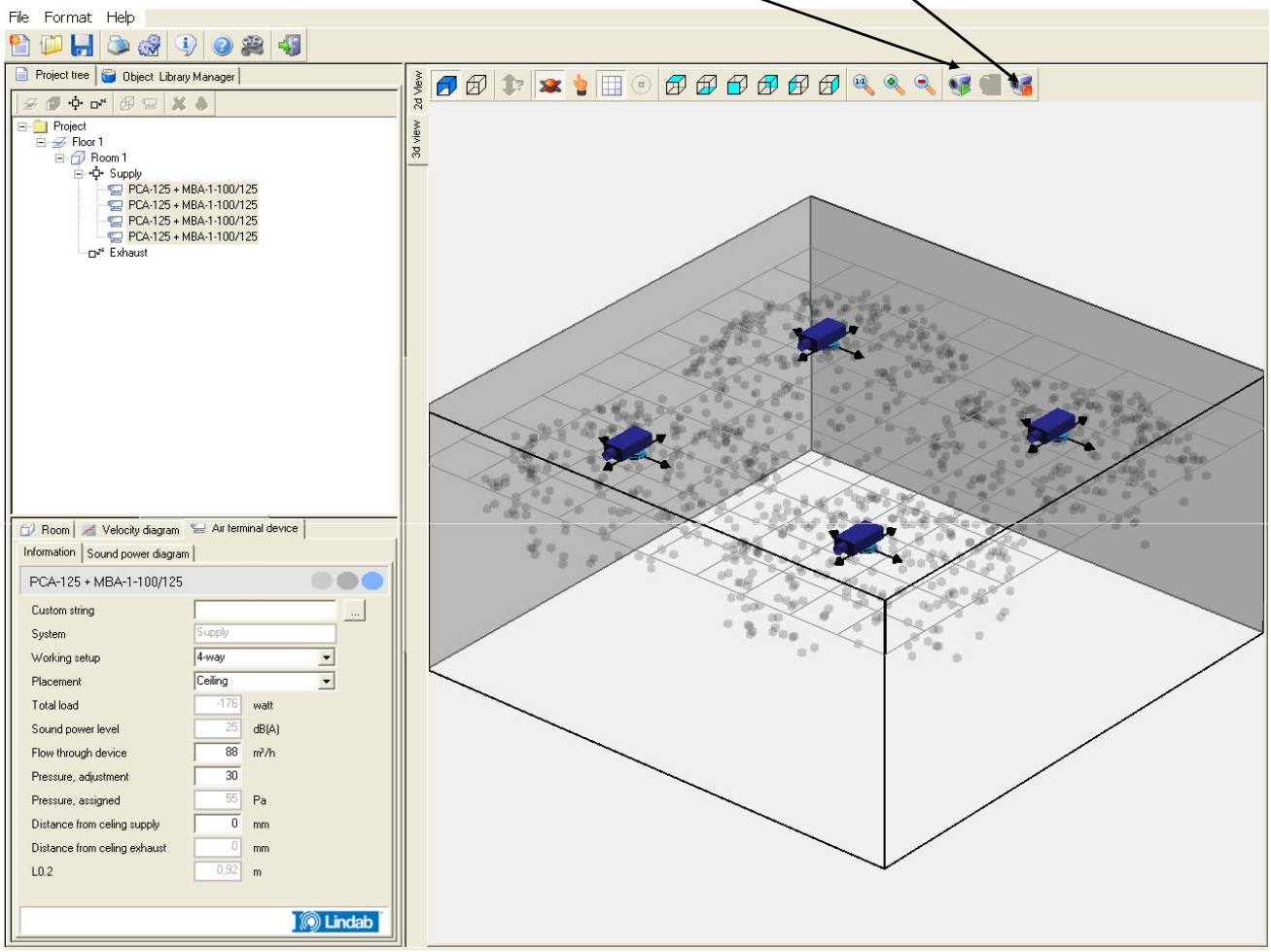
Air terminal device: Here you can see and edit one or more devices after you have marked them on the drawing to the right.



This line can be moved up and down in order to see more or less the calculated result as required.

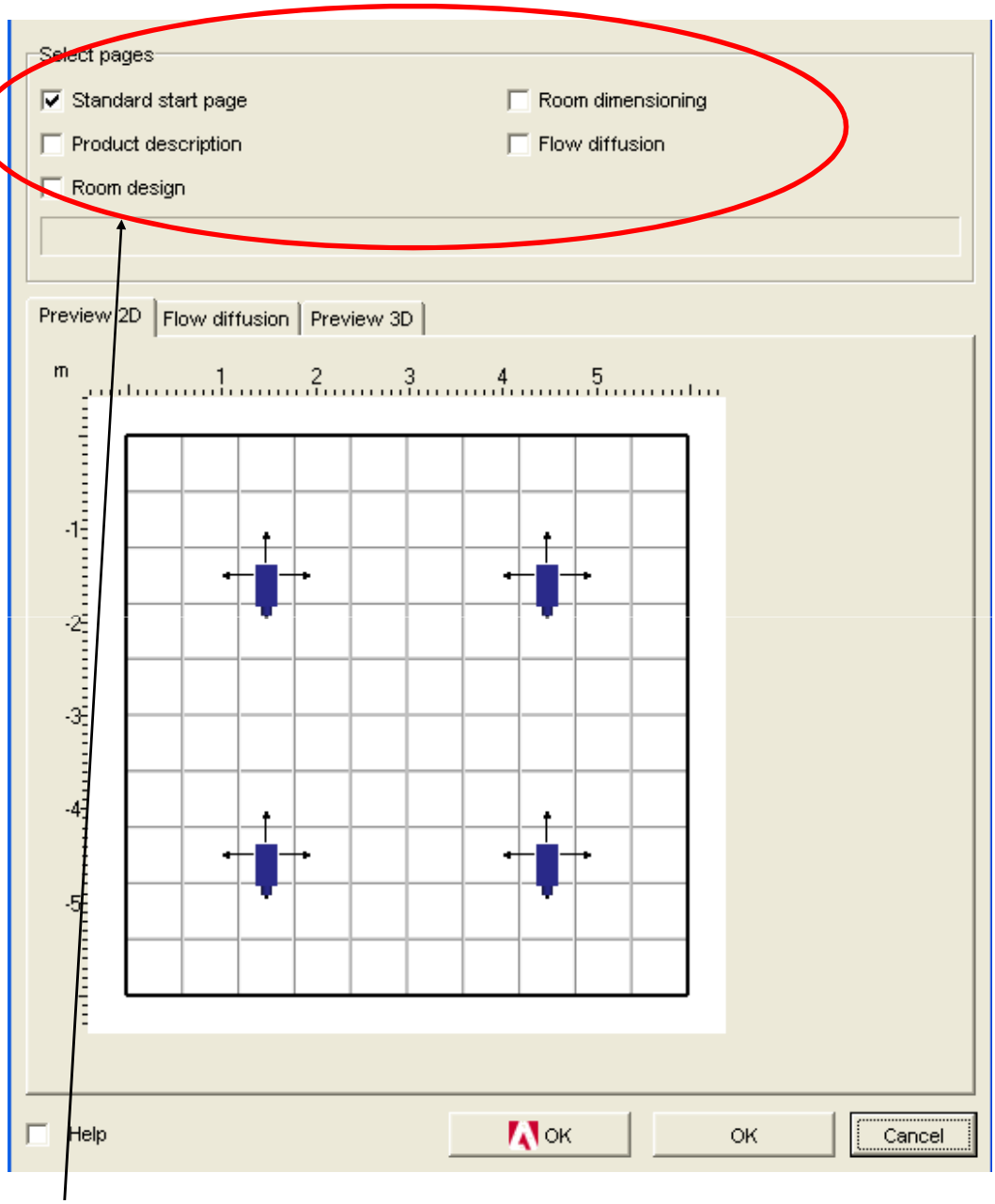
Start air flow

When you want to start the generation of air particles you click on 3 D view and then on the icon ”Start” When you want to stop the generation of air particles you click on the icon ”Stop air”



Print project

When you click on the print icon the following dialog box appears



Here you can choose what you want to include in the print.
If you click on OK with the red Adobe-symbol a PDF-file will be created which can be save or printed out afterwards.
If you want to write out directly to the printer you click on the other OK.

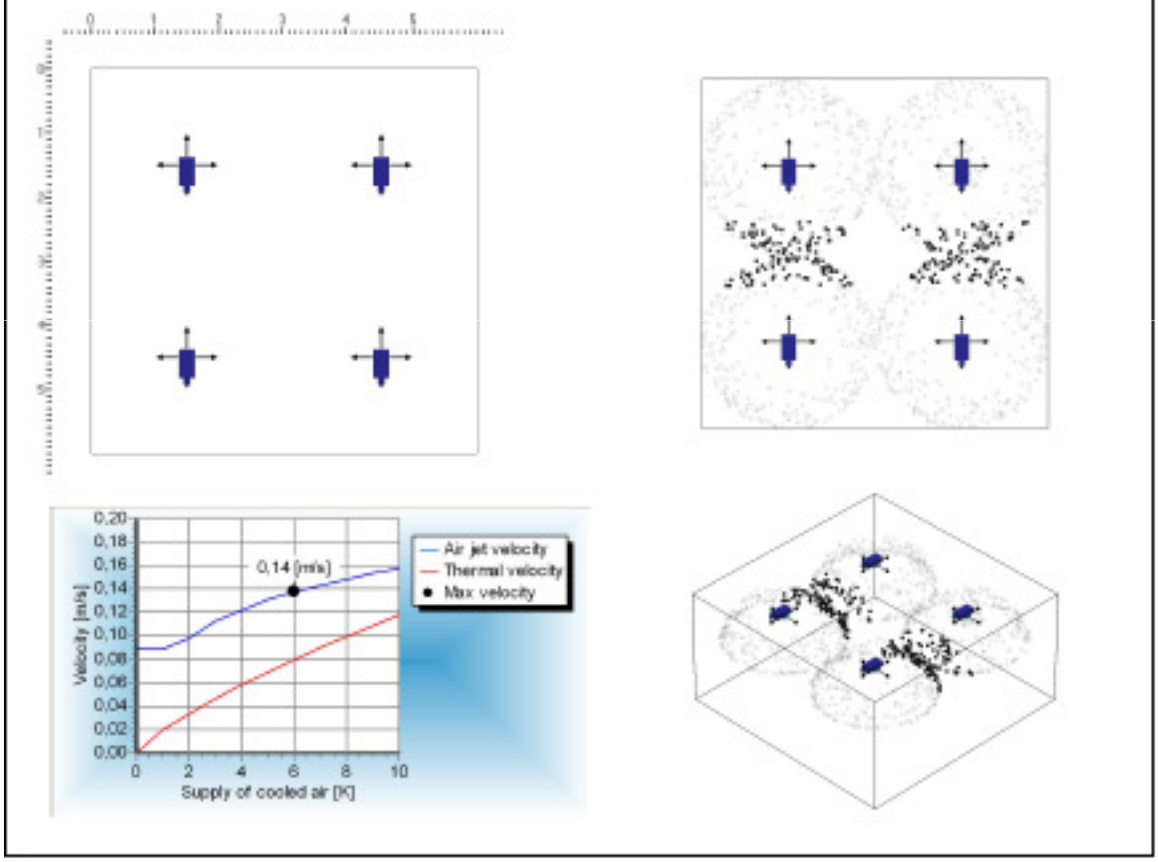
A standard print out:

lindab | dimcomfort

Lindab project				13-07-2007
Project number		Calculation number	changed	13-07-2007
Plant number		Calculated by		

Room 1				
Room type		H (comfort zone)	1,80	m
Ventilation type	Mixing ventilation *Supply of cooled air*	Offset (comfort zone)		m
L x W x H	8,0 x 8,0 x 3,0 m	Reverberation time	1,0	sec
H False ceiling	2,4 m	Room temperature	22,0	°C
Area / Volume	36,0 m² / 86,4 m³	Supply temperature	16,0	°C
		Temperature Difference	8,0	K

	Requirement	Result	
Sound pressure level	30	25	dB(A)
Total flow	350 m³/h		
	Supply	352	m³/h
	Exhaust	0	m³/h
Velocity, Vx	0,20	0,14	m/s
Thermal power	-701	-705	W
	-19	-20	W/m²

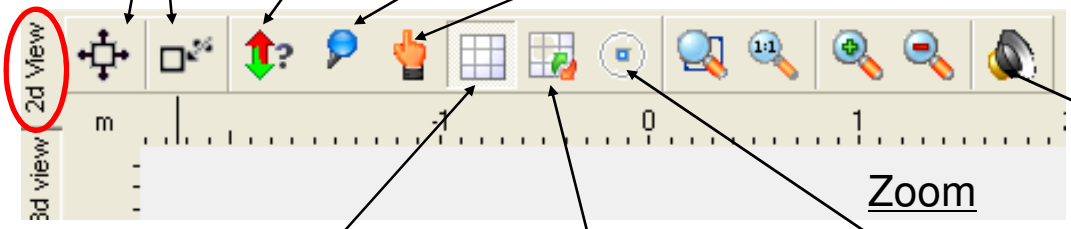


Air devices	Air device type	Working set	Flow / air device	Number of air devices
Supply	PCA-125 + MBA-1-100/125	4-way	88 m³/h	4

Project notes

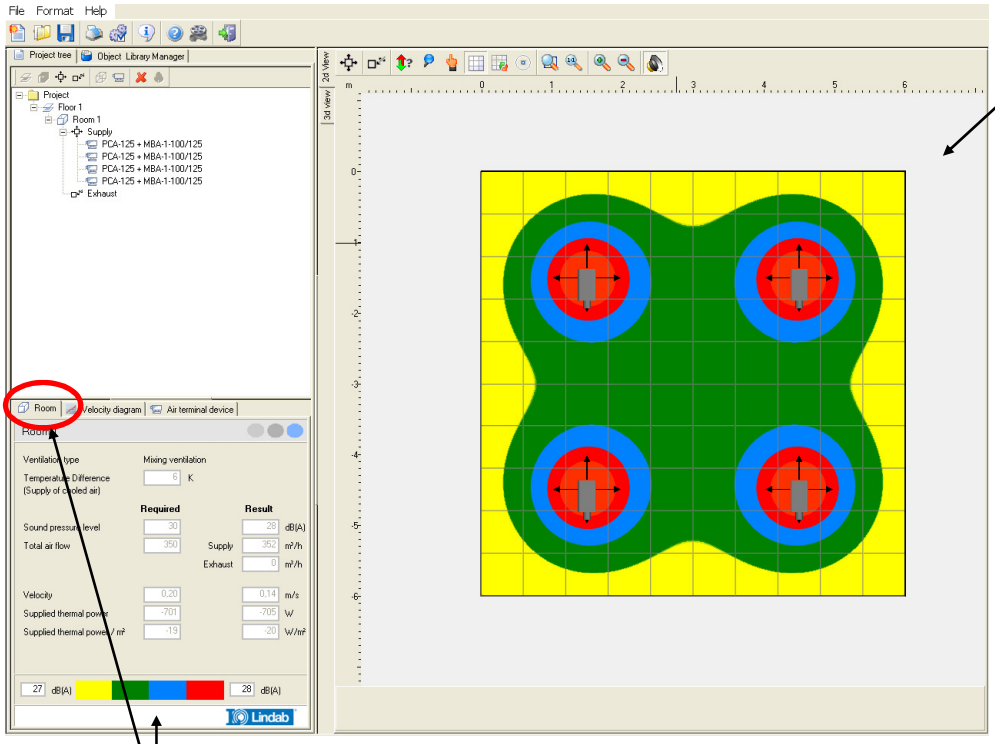
Buttons in the 2D-view

New device, Show critical length, Set new origin point, Pan the view



Show/Hide sound level

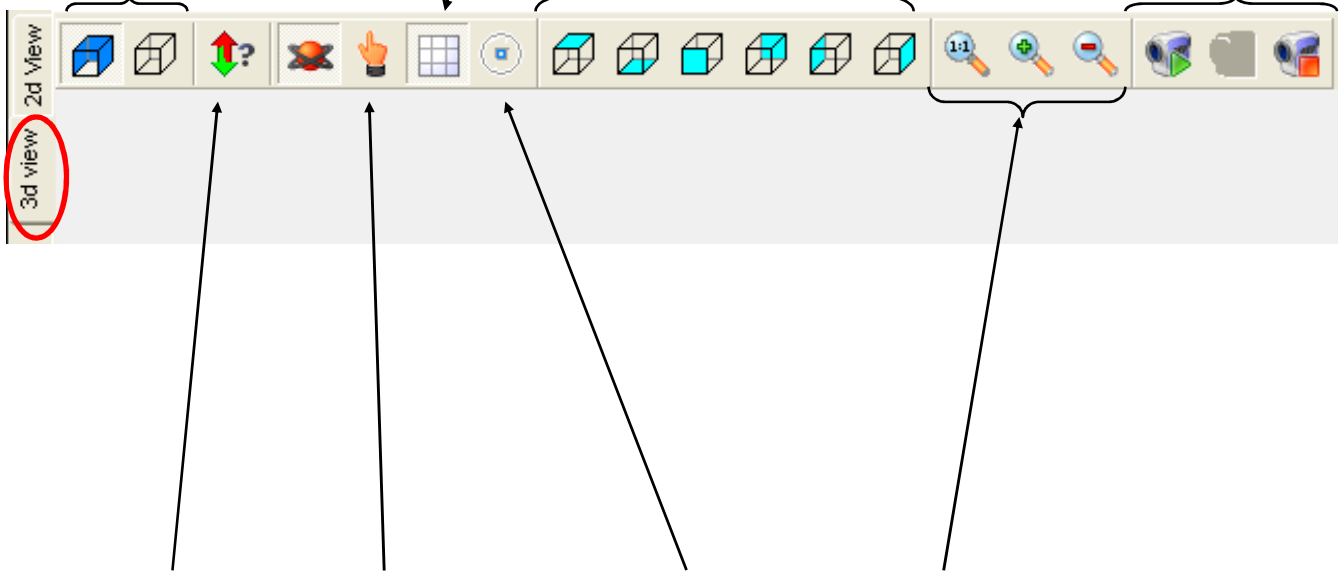
Show or hide the false ceiling, Move the placement of the false ceiling grid, Show /Hide frozen particle spread



The sound pressure level is shown at the height of the occupied zone with different colours when you are under Room.

Buttons in 3D-view

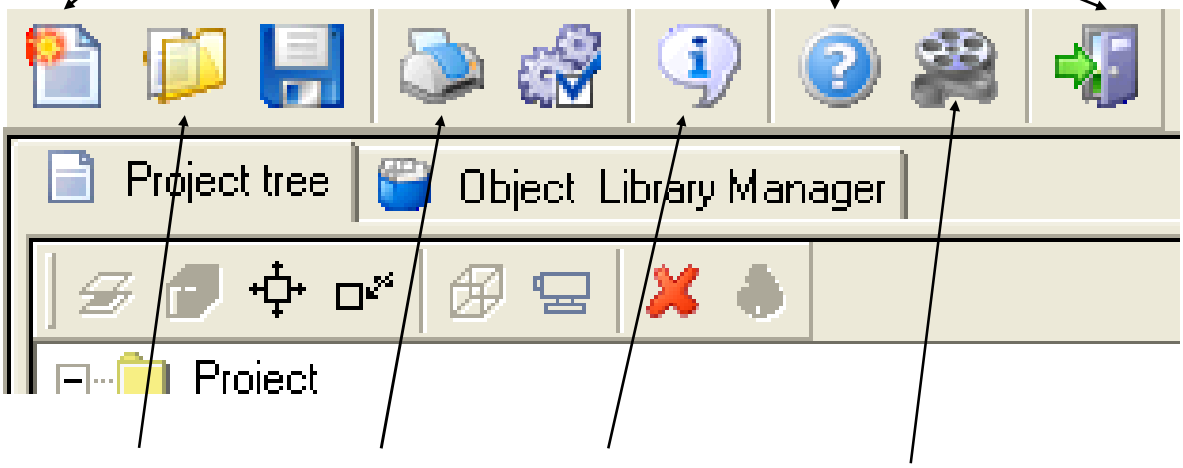
Hide/Show walls, Rotate, Show/Hide false ceiling, Views, Start/Stop air particles particles



Show critical length, Pan the view, Show/hide frozen particles, Zoom

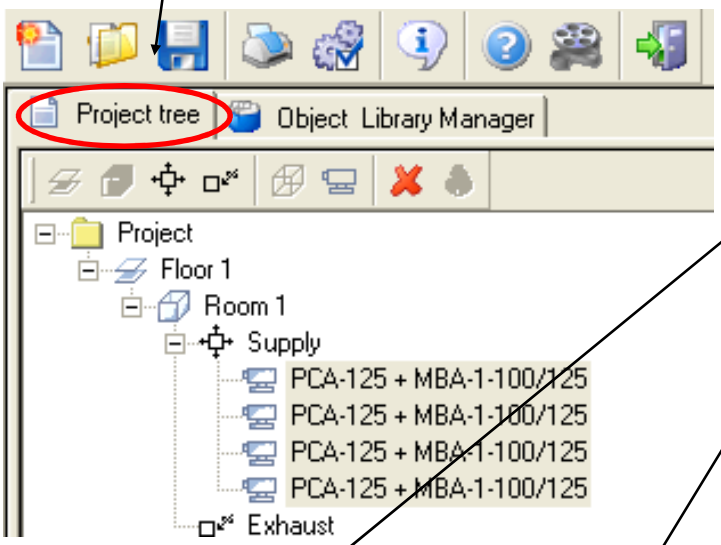
Buttons in the left upper corner:

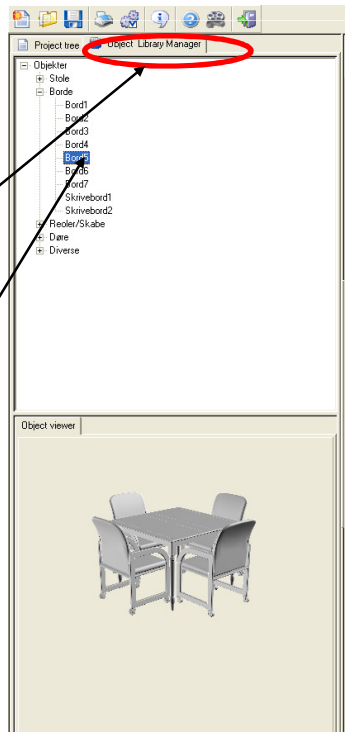
Open new project, Save project, Project options, Activate Help, Exit



Open exiting project, Print, Info about the program, Video tutorials

Project tree gives an overview over rooms and floors. Rooms and floor are added by a right click on respectively Floor and Room

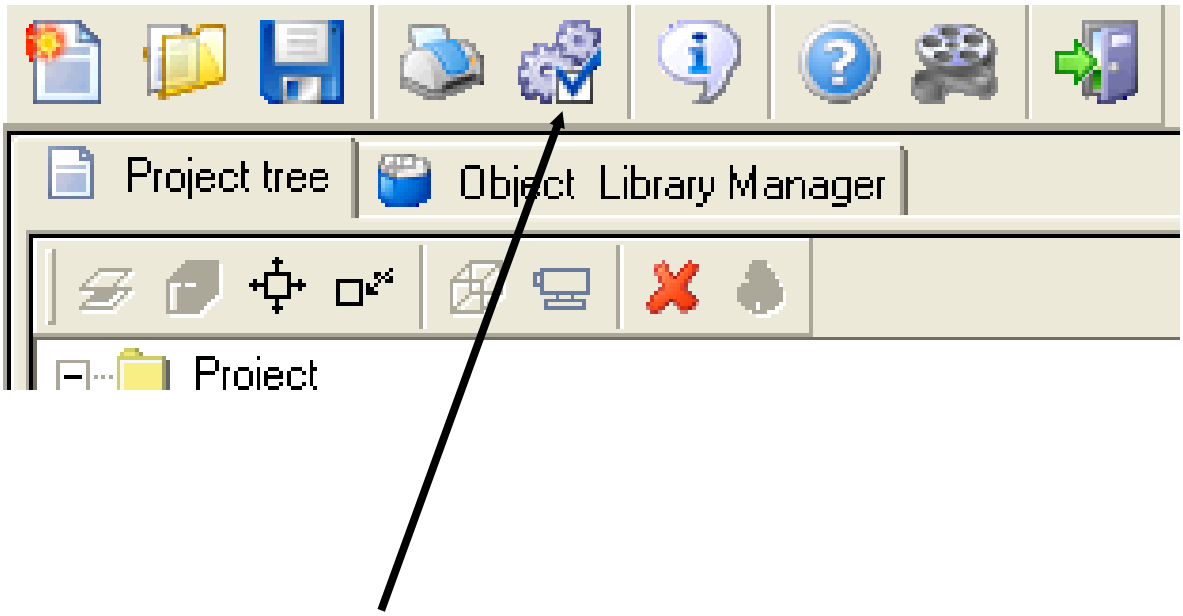




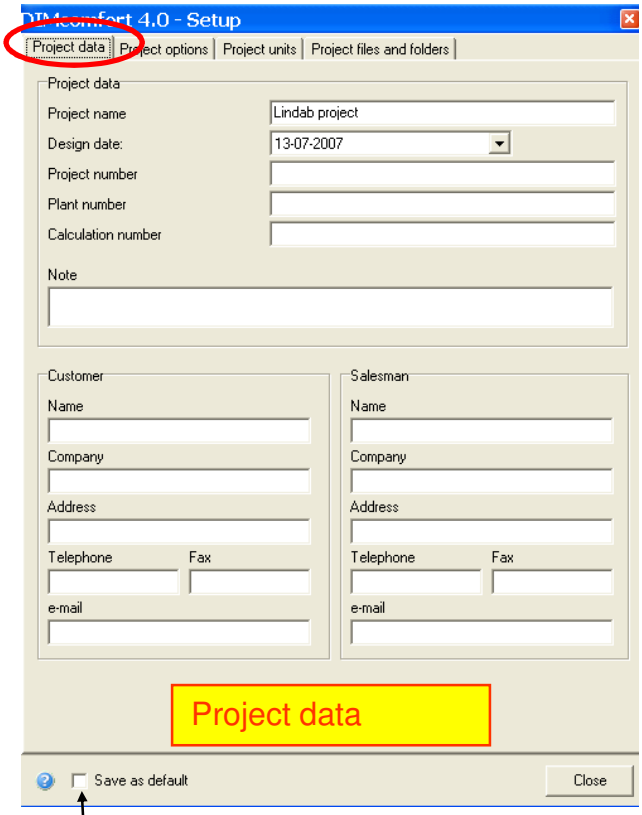
The Object library contents 3D objects such as furniture , door etc. The objects are drawn in on the 2D drawing by keeping the left mouse button down.

Note! The Objects do not affect the calculations.

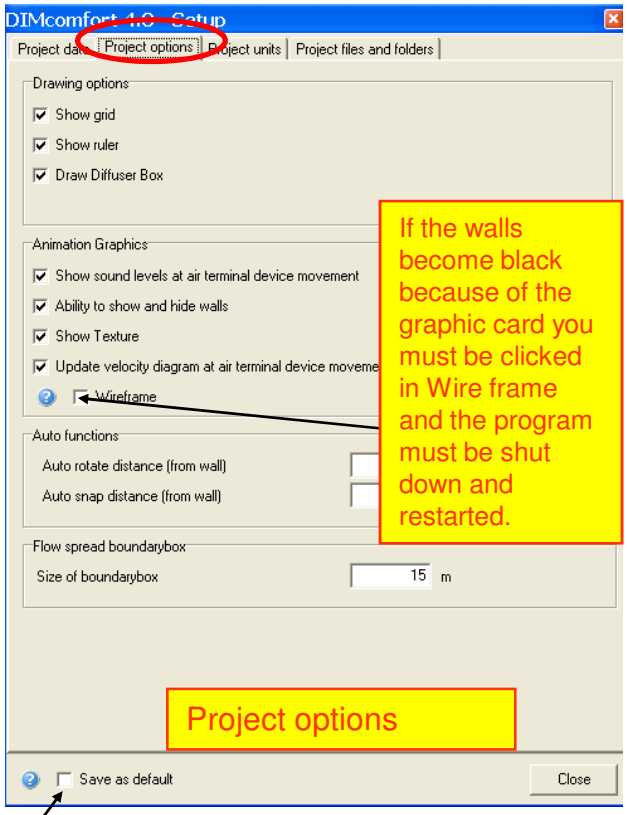
Project options



Under the symbol (wheel) the project setting are done

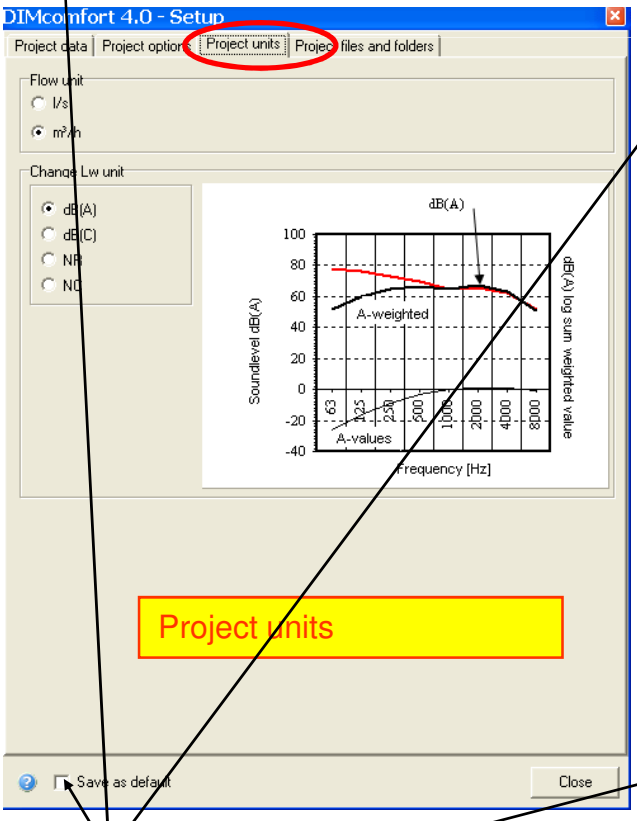


Project data

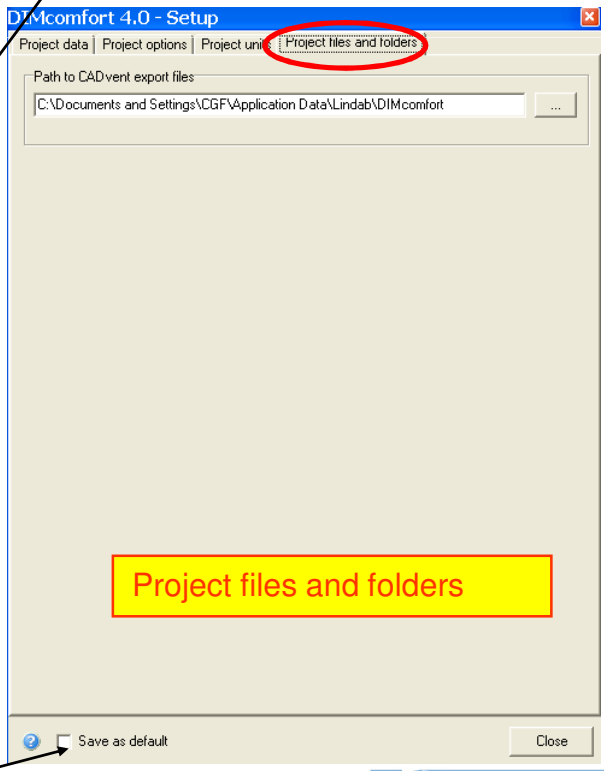


If the walls become black because of the graphic card you must be clicked in Wire frame and the program must be shut down and restarted.

Project options



Project units

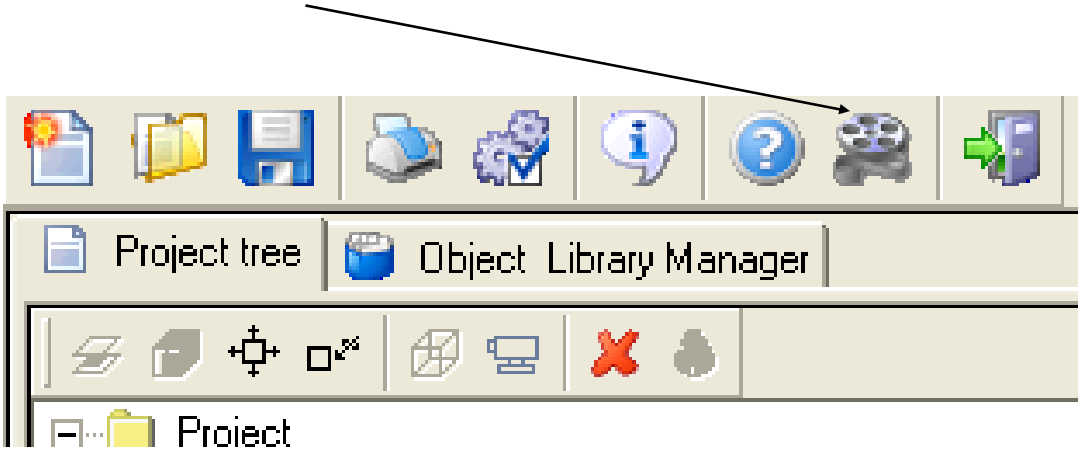


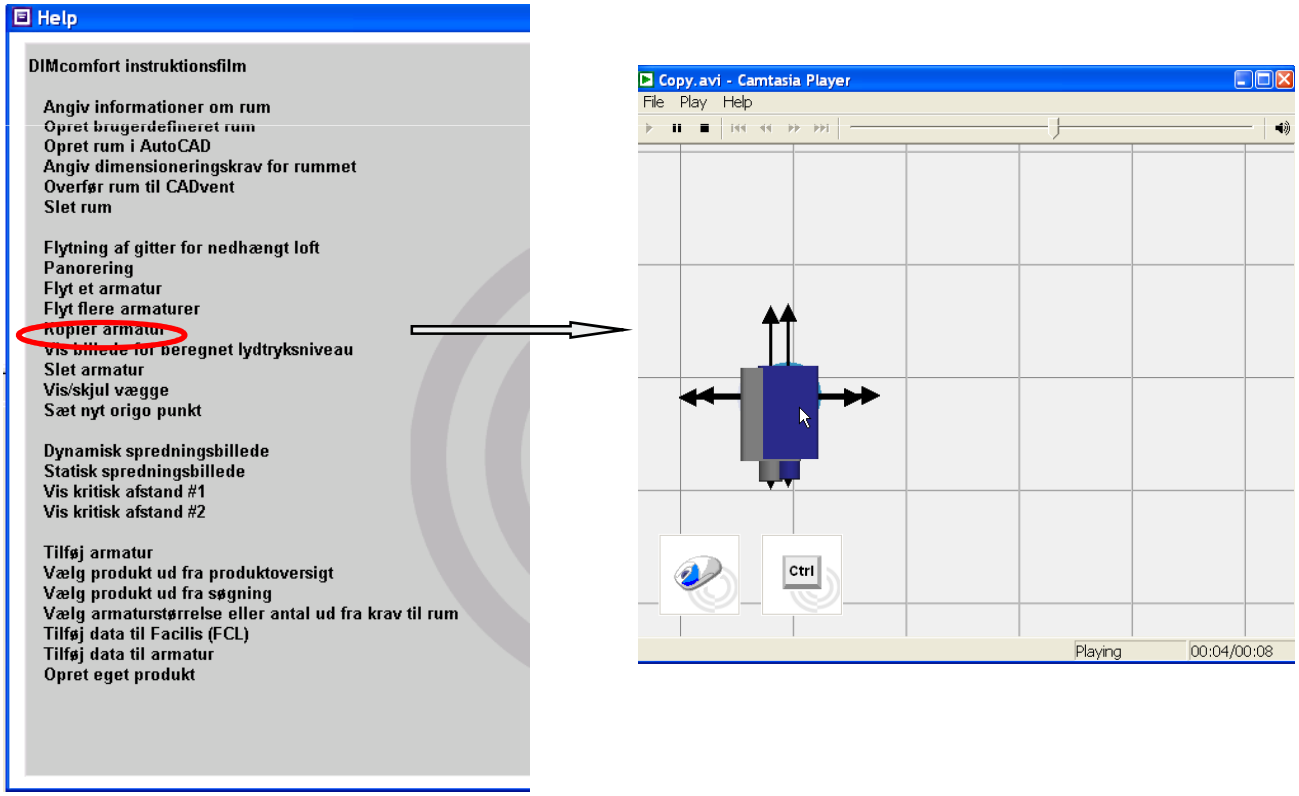
Project files and folders

When you tick off here the options will be save and used as default for future projects

Video tutorials:

By clicking on Video tutorials you get on overview over the existing video tutorials





Click on the text of the tutorial you would like to see

Good luck using DIMComfort!

We have the solution…