



## **Uputstvo za korišćenje Acon programa za izbor klima komora**

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# 1. Login

1. **Web address:** http://acon.flaktwoods.com
2. Select language
3. Key in your User id
4. Key in your Password
5. Click **Login**
6. Information about service windows
7. Click **You can register here if you are a new user** in order to become an Acon user. Key in your data and click **Save**. You will receive an e-mail when you have been registered.
8. Click Web browser requirements and you will get information about web browser requirements.
9. Click **Forgotten your password?** enter your User id and e-mail address and click **Send password**.

The screenshot shows the Microsoft Internet Explorer browser window displaying the Acon Fläkt Woods website. The address bar shows 'http://acon.flaktwoods.net/WEBAPP/Login.aspx'. The page features a banner for 'AIR MAGIC' with a callout '1' pointing to the browser window. Below the banner is a maintenance notice: 'Acon will not be available due to maintenance, October 10 between 09:00 - 13:00 (GMT+1)'. The login form has a callout '2' pointing to the 'English [en]' language selector, callout '3' pointing to the 'User id' input field, callout '4' pointing to the 'Password' input field, and callout '5' pointing to the 'Login' button. Below the login form are three links: 'You can register here if you are a new user' (callout '7'), 'Web browser requirements' (callout '8'), and 'Forgotten your password?' (callout '9').

The registration form (callout '7') includes the following fields:

- User id
- New Password
- Confirm New Password
- First name
- Surname
- Language (English)
- Country (Bahrain)
- Currency (USD)
- Telephone
- E-mail
- Company data
- Web application (radio buttons for Acon, EXSELAIR, Acon & EXSELAIR)
- Decimal symbol
- Save button

The 'Forgotten your password?' form (callout '9') includes the following fields:

- User id
- E-mail
- Send password button

At the bottom left, the text 'Fläkt Woods 2009.09' is visible.

## 2. Settings

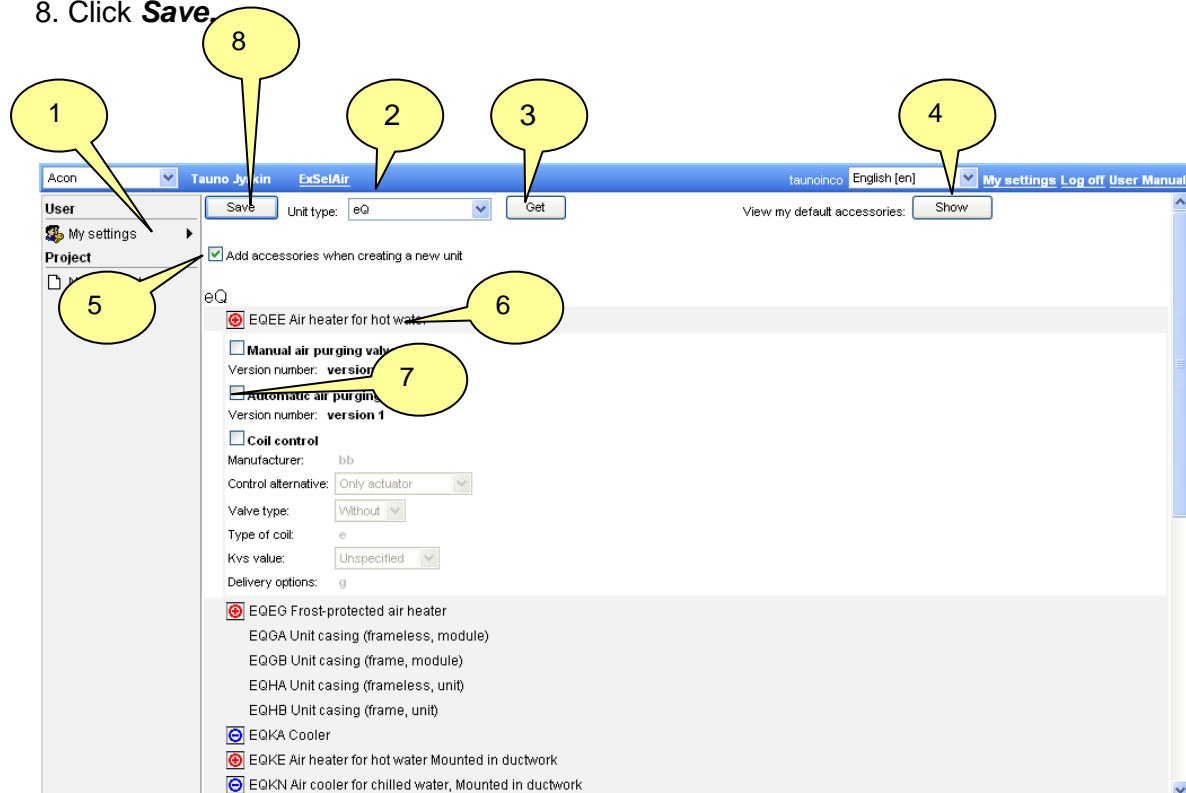
1. Select application, start application can be set in 6. **My settings**.
2. Name, registered in 6. **My settings**.
3. Link to **ExSelAir**, selection tool for air terminal devices, chilled beams and fan coils.
4. Registered User id
5. Select language
6. **My settings**, user account data, decimal symbol and Password can be changed here.
7. **Log off**
8. User manual
9. **My settings** for configuring and dimensioning
  - Default accessories automatically added to new units
  - Default dimensioning data
  - Defaults for Unit configuration
  - Defaults for Life Cycle Cost Calculation
10. Navigation panel
11. Project list, click row to open a project.

The screenshot displays the Acon user interface. At the top, there is a navigation bar with the application name 'Acon', user name 'Tauno Jyrkin', and 'ExSelAir' link. Below this, a 'User' section shows '1 - 2 av 2 25'. A 'Project' table lists projects with columns for 'Project name', 'Project number', 'Date of registration', 'Registered by', and 'Pid'. A 'My settings' sidebar is visible on the left, and a 'Project list' table is in the center. A 'My settings' dialog box is open on the right, showing fields for 'User id', 'First name', 'Surname', 'Language', 'Country', 'Currency', 'Telephone', 'E-mail', 'Decimal symbol', and 'Start application'. The FläktWoods logo is at the bottom left.

Project name	Project number	Date of registration	Registered by	Pid
Test2		091009	Tauno Jyrkin	192
Acon Manual		090922	Tauno Jyrkin	191

## 2.1 Set default accessories

1. Click **My settings** - Accessories in the menu.
2. Choose **Unit type**.
3. Click **Get**.
4. Click **Show** and view your selected accessories.
5. Mark **Add accessories....** and the accessories will automatically be added when you create a new unit.
6. Click a function, e.g. EQEE.
7. Mark accessories you want added as defaults.
8. Click **Save**.



## 2.2 Set defaults for dimensioning data

1. Click **My settings – Dimensioning data** in the menu.
2. Select and key in defaults.
3. Mark **Show dimensioning**..... if you want page dimensioning data be shown when you create a new unit.
4. Click **Save**.

The screenshot shows the Acon software interface with the following settings:

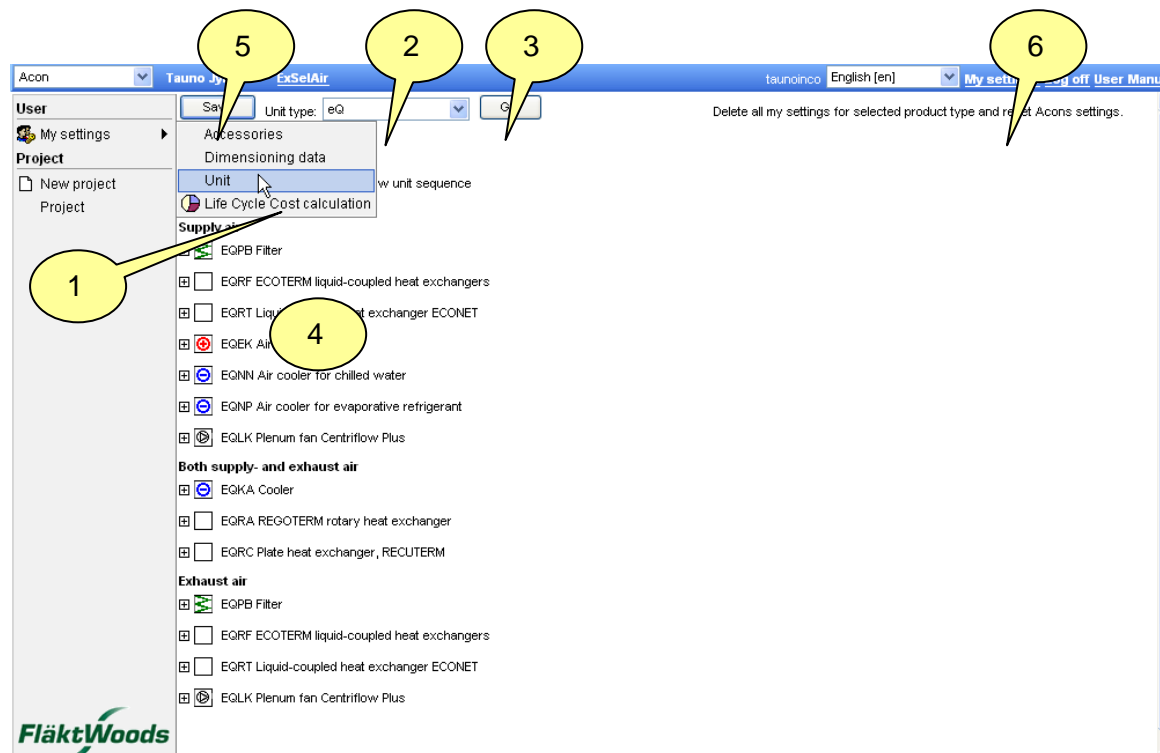
Parameter	Value
Unit for air humidity	% relative
Unit for air flow	m³/sec
Ref. altitude above sea level [m]	0
Outdoor temperature [°C]	Summer: 22, Winter: -8
Outdoor air humidity [% relative]	55, 80
Supply air temperature [°C]	16, 20
Supply air humidity [% relative]	50, 50
Exhaust temperature [°C]	22, 20
Exhaust humidity [% relative]	40, 80
Heating water temp in [°C]	80
Heating water temp out [°C]	60
Antifreeze medium, air heater	Ethylene glycol
Antifreeze air heater [%]	30
Control principle for water heater	flow control
Primary pressure hot water [kPa]	15
Steam temperature [°C]	110
Temperature margin between heat recovery/air heater [°C]	0
Chilled water temperature in [°C]	6
Chilled water temperature out [°C]	12
Antifreeze medium, air cooler	Ethylene glycol
Antifreeze air cooler [%]	30
Control principle for water cooler	flow control
Primary pressure chilled water [kPa]	15
Refrigerant	R 407c
Evaporation temperature [°C]	6
Cooling	no
Max external pressure drop, Econet [kPa]	40
Water temperature, humidifier [°C]	10
Max. pressure drop on both coils, Ecoترم [kPa]	70

Additional settings and options:

- Show dimensioning data in new unit sequence
- Save button

## 2.3 Set default for units

- 1 Click **My settings-Unit** in the menu.
2. Choose unit type
3. Click **Get**.
4. Select defaults for the unit type.
5. Click **Save**.
6. Click **Delete** if you want to remove all your settings.





## 2.4 Set default for Life Cycle Cost calculation

1. Click **My settings – Life Cycle Cost** calculation in the menu.
2. Choose between the Fläkt Woods model and Simplified Swedish model.
3. Select and key in default data.
4. Click **Save**.

The screenshot shows the Acon software interface for Life Cycle Cost calculation. The interface is divided into several sections, with callout boxes 1, 2, 3, and 4 highlighting specific steps in the process.

**1** points to the **My settings** menu item in the left sidebar.

**2** points to the **Life Cycle Cost** dropdown menu, which is currently set to **Fläkt Woods model**.

**3** points to the **Temperatures** section, where the **Exhaust air temperature / moisture** is set to **22** °C and **30** %.

**4** points to the **Save** button at the bottom left of the interface.

Climate data		Temperature	moisture	Temperature	moisture		
Climate Data / other location Average year temperature, moisture		5.4	98.1			°C, %	
Year highest temperature / moisture				26.5	73	°C, %	
Normal temperature, summer				22.5		°C	
Normal temperature, winter		-13.7				°C	
Year lowest temperature / moisture		-20.8	99.8			°C, %	
<b>Temperatures</b>							
Supply air temperature / moisture		21	19.6	23	23	°C, %	
Exhaust air temperature / moisture		22	30	24	50	°C, %	
Supply air temperature		18	18	18	18	°C	
Outdoor temperature		-20	0	20	30	°C	
<b>Operation</b>		Days per week Hours per day Air flow [%]					
Operation times/Air flow		5	12	100			
Economy operation							
Temp. adjust, economy mode						2	°C
Outdoor temperature <						-15	°C
<b>Energy cost</b>		Heating	Cooling	El.	Reheating		
CO2 - emission		243	422	151	243	CO2UNI	
Price per kWh		0.4	0.6	0.5	0	EUR/kWh	
Expected actual price rise		1	2	3	0	%	
<b>Power cost</b>		Heating	Cooling	El.			
Cost for installed capacity		0	0	0	EUR/kW		
<b>Economy</b>							
Tender sum		0					EUR
Interest		6					%
Operating time		20					year
<b>Variable flow</b>							
Correction factor flow		1					0-1
Correction factor external pressure		1					0-1

## 3. Project

### 3.1 Create a new project

1. Click **New project**.
2. Key in and select project data.
3. Click **Save**.

The screenshot displays the Acon user interface for creating a new project. The interface is divided into a sidebar and a main form area.

**Sidebar:**

- User: My settings
- Project: **New project** (1), Search

**Main Form:**

- Header: Acon, Tauno Jyrkin, ExSelAir, tauno, English [en]
- Fields: Pid, Project name, Project number, Customer id, Customer name, Customer ref, Our Reference (Tauno Jyrkin), Country (Malta), Market segment (EQ), Unit for air humidity (% relative), Currency (EUR), Unit for air flow (m<sup>3</sup>/sec), Ref. altitude above sea level [m] (0), Ref. pressure [Pa] (101325), Motor classification (without), Power supply (3 x 400 V), Electrical frequency (50 Hz), Offer date (yymmdd), Expected order date, Order date (yymmdd), Registered by, Date of registration.
- Buttons: Save (3), Grant permission, Move.

### 3.2 Search project

1. Click **Project**.
2. You can search in
  - own projects
  - internal projects
  - external projects
  - or choose Acon ordering code and key in code.
3. Narrow your search further by keying in
  - Project name
  - Project number and/or
  - Project ID.
4. Click **Search**.
5. You can sort the projects according to the headings by clicking them.
6. Open a project by clicking it.

The screenshot shows the Acon software interface. The top bar displays 'Acon', 'Tauno Jyrkin', 'ExSelAir', and 'krttauno English [en]'. The left sidebar has 'User' and 'Project' sections. Under 'Project', 'New project' and 'Project' are visible. The main area shows search options: 'Search in' with radio buttons for 'Search your own projects only', 'Internal projects', 'External projects', and 'Acon Ordering Code'. A dropdown menu shows 'MELBOURNE (1839)'. Below are input fields for 'Project name', 'Project number', and 'Pid', followed by a 'Search' button. A table of results is shown below, with columns: 'Project name', 'Project number', 'Date of registration', 'Registered by', and 'Pid'. The table contains several rows of project data.

Project name	Project number	Date of registration	Registered by	Pid
Atwood 11		090922	Jong kook Ahn	464
KUNSHAN		090918	Jin Seob Noh	463
aa		090917	Jin Seob Noh	462
marine air marine		090916	Jong kook Ahn	461
1	1	090914	Shin Seung hun	459
산도림역세권		090914	Min-Sang Lee	460
C		nanam	Sanghak Lee	455

### 3.3 Project information

1. Click **Project information** in the left hand menu.

#### 3.3.1 Change project data

2. Key in and select what you want to change.
3. Click **Save**.

The screenshot shows the 'Project information' form in the Acon software. The left-hand menu is open, and 'Project information' is selected (1). The form contains the following fields and values:

- Pid: 8540
- Project name: Acon manual
- Customer id: (empty)
- Customer ref: (empty)
- Country: United Kingdom (2)
- Market segment: EQ
- Unit for air humidity: % relative
- Currency: GBP
- Unit for air flow: m³/sec
- Ref. altitude above sea level [m]: 0
- Ref. pressure [Pa]: 101325
- Power supply: 3 x 400 V
- Electrical frequency: 50 Hz
- Offer date (yyymmdd): (empty)
- Expected order date: (empty)
- Order date (yyymmdd): (empty)
- Registered by: Tauno Jyrkin
- Date of registration: 9/22/2009

The 'Save' button is highlighted with a yellow circle (3). The 'Grant permission' button is also visible (4).

#### 3.3.2 Grant permission to project

4. Click **Grant permission**.
5. Choose Permission recipient
6. Key in date of validity.
7. Click Add to.
8. Click **Close** to leave the page.

The screenshot shows the 'Grant permission -- Webbsidedialog' dialog box. The dialog contains the following fields and values:

- Permission recipient: FWG SE AVF SOLLENTUNA (1622) (5)
- Role: Full rights
- Valid until: 091022 (6)
- Add to button: (7)
- Close button: (8)

### 3.3.3 Move a project

1. Open a project
2. Click **Move**.

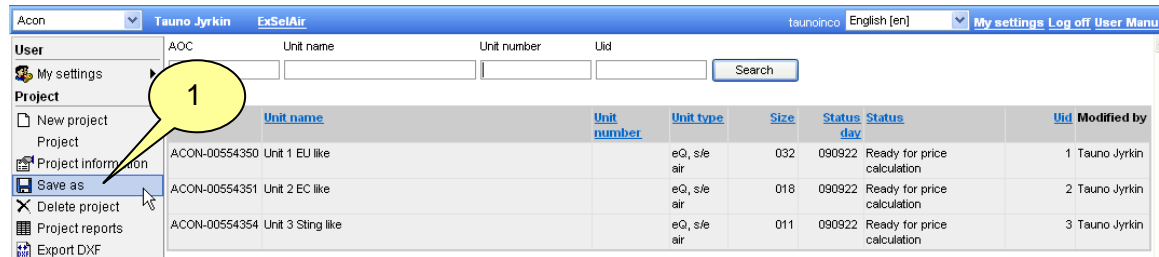
The screenshot shows the Acon software interface for user 'Tauno Jyrkin' and project 'ExSelAir'. The left sidebar contains a 'Project' menu with options like 'New project', 'Project information', 'Save', and 'Find unit'. A yellow callout bubble labeled '1' points to the 'Project' menu. The main area displays project details such as 'Pid: 191', 'Project name: Acon Manual', 'Country: Sweden', 'Currency: EUR', and 'Electrical frequency: 50 Hz'. At the bottom, there are buttons for 'Save', 'Grant permission', and 'Move'. A yellow callout bubble labeled '2' points to the 'Move' button.

3. Select to whom you want to move the project.
4. Click **Move**.

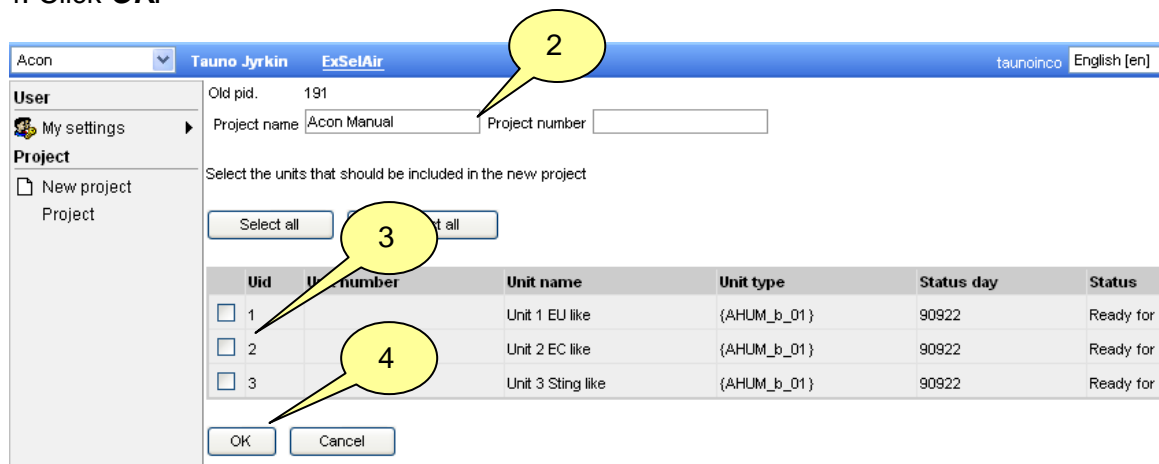
The screenshot shows the Acon software interface for user 'Tauno Jyrkin' and project 'ExSelAir'. The left sidebar contains a 'Project' menu with options like 'New project', 'Project information', and 'Project'. A yellow callout bubble labeled '3' points to the 'Project' menu. The main area displays a list of projects with columns for 'Customer number' and 'Sort by number/name'. A yellow callout bubble labeled '4' points to the 'Move' button.

### 3.4 Copy project

1. Click **Save as**.

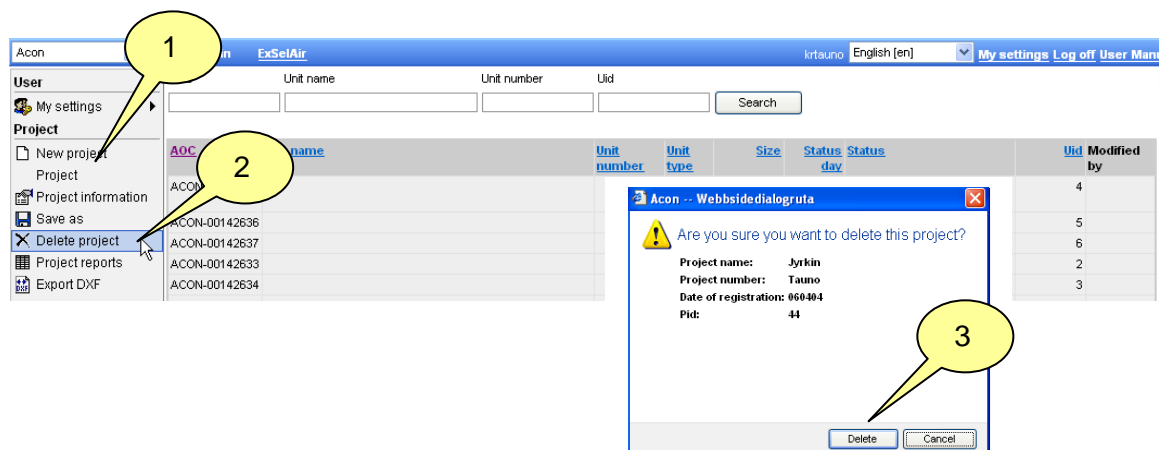


2. Key in a new project name and project number.
3. Mark the units you wish to copy for the new project.
4. Click **OK**.



### 3.5 Delete project

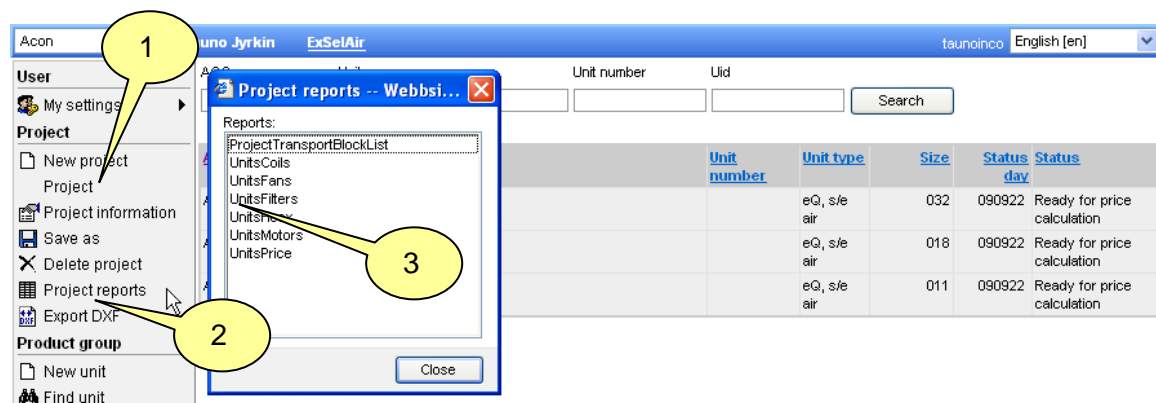
1. Open a project
2. Click **Delete project**.
3. Click **Delete**, will become active after 5 seconds.



### 3.5 Project reports

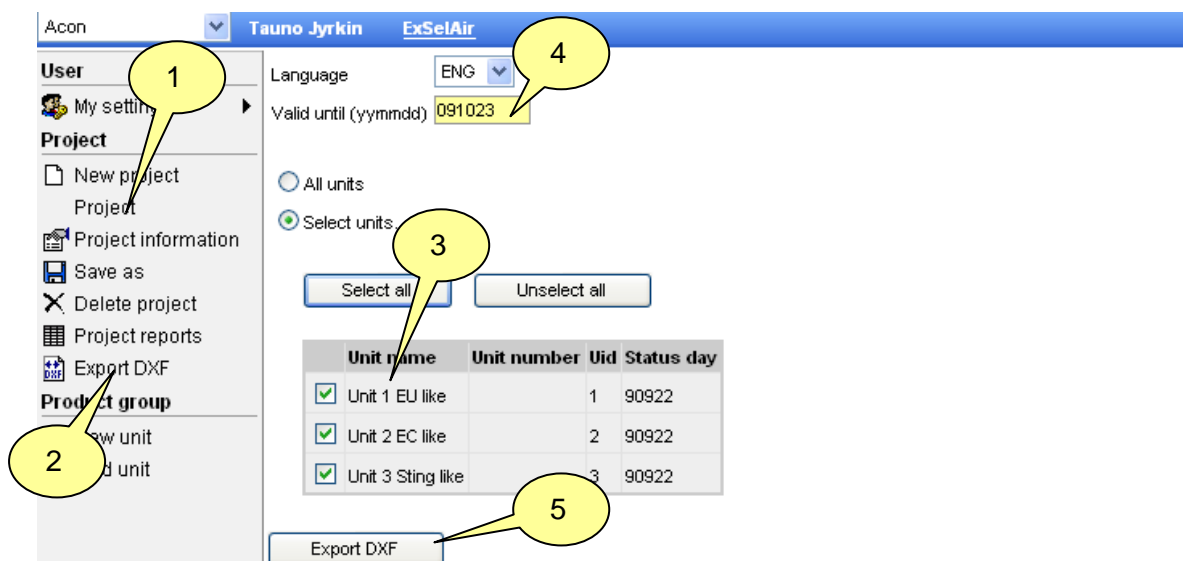
1. Open a project
2. Click **Project reports**.
3. Select project report in the list. Chosen report can be exported to Excel.

Transport dimensions  
 Heater/cooler data  
 Fan data  
 Filter data  
 Heat exchanger data  
 Motor data  
 Price data (if available)



### 3.5 Export Dxf

1. Open a project.
2. Click **Export DXF** in the menu
3. Select units to export
4. Key in **Valid until** date.
5. Click **Export DXF**



6. You can copy and mail the address to a consultant. The page will be available for the consultant until the valid date registered in 4.
7. Select unit
8. Select view
9. Select block when a unit consists of more than 1 block
- 10 Select Layers
- 11 Use **i-drop** if available in your CAD software
- 12 **Download DWG file** if you have CAD software from Autodesk.
- 13 **Download DXF file** creates a file which can be opened by all CAD software

The screenshot shows the 'Export DXF' web application interface. The browser address bar shows the URL: [http://acon.flaktwoods.com/WEBAPP/File.Acon.Webapp/acon01/project\\_cad\\_export.aspx?q=OvplLaHU4WFBjTzR6T1Fa50QxVzBaUEhTETqTIRYR3VwUnpPK3IPVjZmVUIJd1drWE4zan8BPT0=&h=0t](http://acon.flaktwoods.com/WEBAPP/File.Acon.Webapp/acon01/project_cad_export.aspx?q=OvplLaHU4WFBjTzR6T1Fa50QxVzBaUEhTETqTIRYR3VwUnpPK3IPVjZmVUIJd1drWE4zan8BPT0=&h=0t). The interface includes a 'Unit' dropdown menu (7) set to 'Unit 1 EU like (1)', a 'Preview' area showing a technical drawing of a unit, a 'View' section (8) with radio buttons for 'Inspect inside', 'Real', 'Left hand', 'Right hand', 'Above', 'Below', and '3D', a 'Block' dropdown menu (9) set to '1', an 'i-drop' section (11) with an Autodesk logo and a link to 'Autodesk i-drop indicator', and a 'Layers' section (10) with a table of layer names and colors. At the bottom, there are two buttons: 'Download DWG file' (12) and 'Download DXF file' (13).

Details	Layer name	Layer colour
<input checked="" type="checkbox"/> Unit	FLECAD1	7
<input checked="" type="checkbox"/> Functions	FLECAD2	7
<input checked="" type="checkbox"/> Symbols	FLECAD3	7
<input checked="" type="checkbox"/> Pipes	FLECAD4	7



## 4. Product group

### 4.1 New unit

#### 4.1.1 Create a new unit by specifying the unit

1. Click **New unit**.
2. Select and key in input data.
3. Click **Next**.

The screenshot shows the 'New unit' configuration dialog. The sidebar on the left has the following items: User, My settings, Project (New project, Project), Project information (Save as, Delete project, Project reports, Export DXF), and Product group (New unit, Find unit). The 'New unit' option is selected. The main area contains the following fields:

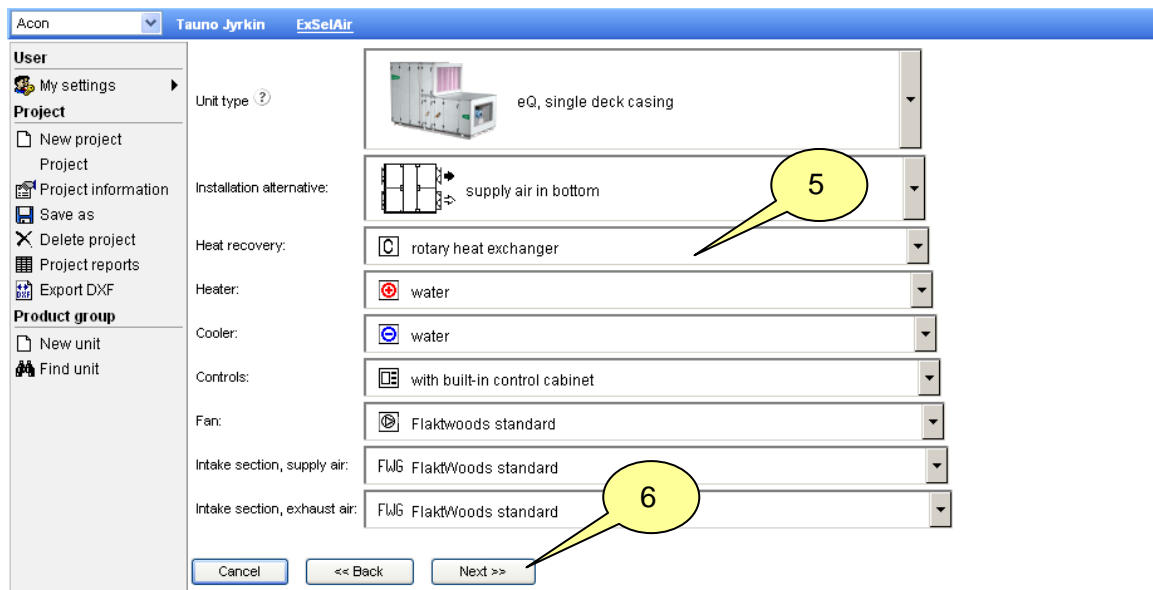
- Unit name:
- Unit number:
- Product range: EQ
- Flow combination: supply and exhaust air
- Location: indoor horizontal
- Supply air flow [m<sup>3</sup>/sec]:
- Exhaust air flow [m<sup>3</sup>/sec]:
- Supply air pressure drop [Pa]:
- Extract air pressure drop [Pa]:
- Indoor air pressure drop [Pa]: 0
- Exhaust air pressure drop [Pa]: 0
- Ref. density [kg/m<sup>3</sup>]: 1.2

At the bottom, there are two checkboxes: 'Copy configuration from saved unit' and 'Copy dimensioning data from saved unit'. Below the checkboxes are three buttons: 'Cancel', '<< Back', and 'Next >>'.

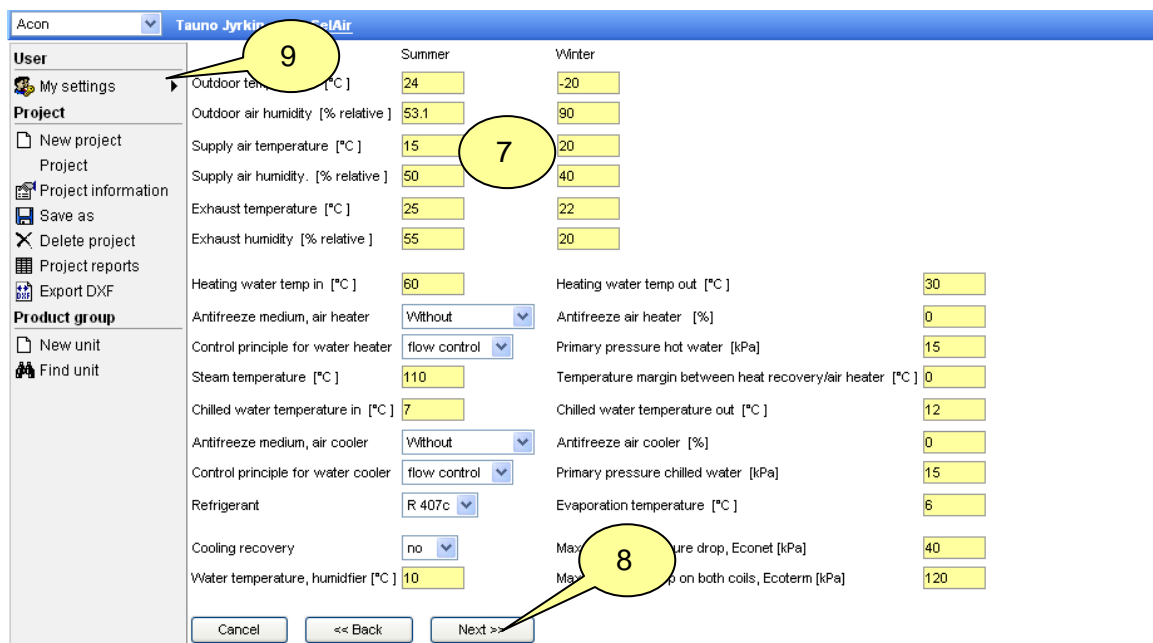
4. Select unit type in the list.

The screenshot shows the 'Unit type' selection list. The list is open, showing three options: 'eQ, single deck casing', 'eQ, double deck casing', and 'eQ, double deck casing - duct mounted components'. A yellow callout circle with the number 4 points to the first option. The 'Unit type' dropdown is currently set to 'Select'.

5. Select components.
6. Click **Next**.



7. Change the dimensioning data, if you wish.
8. Click **Next**.
9. Did you mark the box *Show dimensioning data* in **My settings, Dimensioning data** when you set the defaults for dimensioning data? If you did not mark it, Acon uses the settings automatically and goes directly to page Size.



9. Choose size by clicking a bar in the chart.

10. Click **Finish**.

11. A dimensioned unit is suggested by Acon

## 4.1.2 Create a new unit by copying the configuration from a stored unit.

1. Click **New unit**.
2. Select and key in input data.
3. Mark **Copy configuration** from saved unit.
4. Click **Next**.

5. Search for the unit you wish to copy by naming the project name, number or ID.
6. Click **Search**.

7. Select unit by clicking **Copy**.

Project name	Project number	Pid	Unit name	Unit number	UId	Unit type	Heat recovery
Copy Acon Manual		191	Unit 1 EU like	1	eQ, s/e air	C	
Copy Acon Manual		191	Unit 1 EU like test	5	eQ, s/e air	C	
Copy Acon Manual		191	Unit 2 EC like	2	eQ, s/e air	C	
Copy Acon Manual		191	Unit 3 Sting like	3	eQ, s/e air	C	
Copy Acon Manual		191	Without controls	4	eQ, s/e air	C	

8. Change the dimensioning data, if you wish.
9. Click **Next**.
10. Did you mark the box *Show dimensioning data* in **My settings, Dimensioning data** when you set the defaults for dimensioning data? If you did not mark it, Acon uses the settings automatically and goes directly to page Size.

Parameter	Summer	Winter	
Outdoor temperature [°C]	24	-20	
Outdoor air humidity [% relative]	53.1	90	
Supply air temperature [°C]	15	20	
Supply air humidity [% relative]	50	40	
Exhaust temperature [°C]	25	22	
Exhaust humidity [% relative]	55	20	
Heating water temp in [°C]	60	30	
Antifreeze medium, air heater	Without	Antifreeze air heater [%]	0
Control principle for water heater	flow control	Primary pressure hot water [kPa]	15
Steam temperature [°C]	110	Temperature margin between heat recovery/air heater [°C]	0
Chilled water temperature in [°C]	7	Chilled water temperature out [°C]	12
Antifreeze medium, air cooler	Without	Antifreeze air cooler [%]	0
Control principle for water cooler	flow control	Primary pressure chilled water [kPa]	15
Refrigerant	R 407c	Evaporation temperature [°C]	6
Cooling recovery	no	Max. pressure drop, Econet [kPa]	40
Water temperature, humidifier [°C]	10	Max. pressure drop on both coils, EcoTerm [kPa]	120

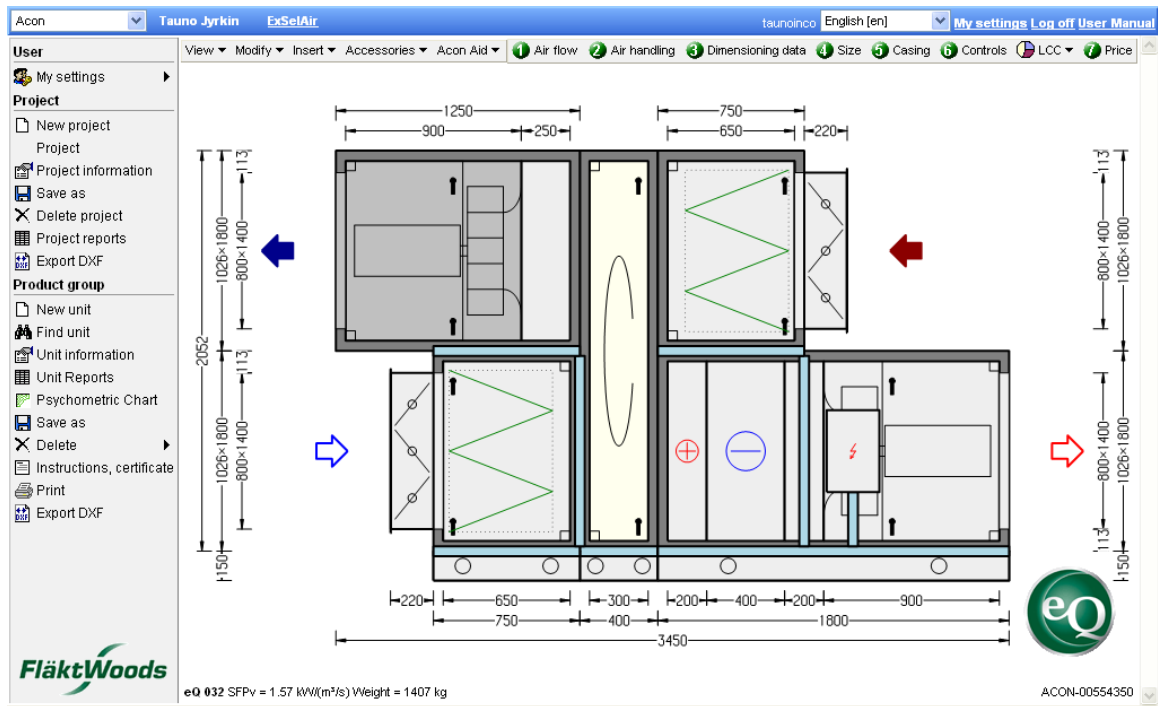
11. Choose size by clicking a bar in the chart.
12. Click **Finish**.

Unit Size	Air Flow (m³/s)	Velocity (m/s)
018 (2.78 m/s)	2.78	2.78
023 (2.22 m/s)	2.22	2.22
032 (1.56 m/s)	1.56	1.56
041 (1.23 m/s)	1.23	1.23
050 (1.00 m/s)	1.00	1.00
072 (0.69 m/s)	0.69	0.69

Unit Size: 018 (2.78 m/s)

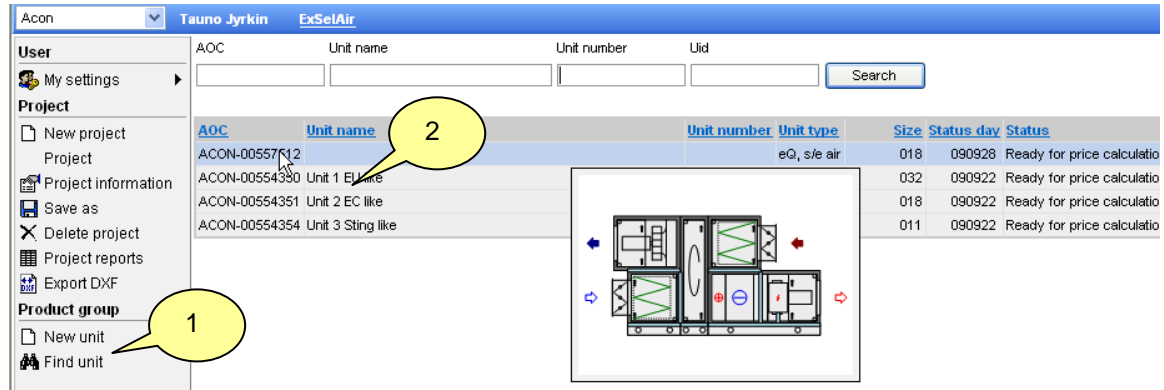
Min. air flow: 0.40 m³/s  
 Max air flow: 2.90 m³/s  
 Max air velocity: 4.03 m/s

13. A dimensioned unit is suggested by Acon

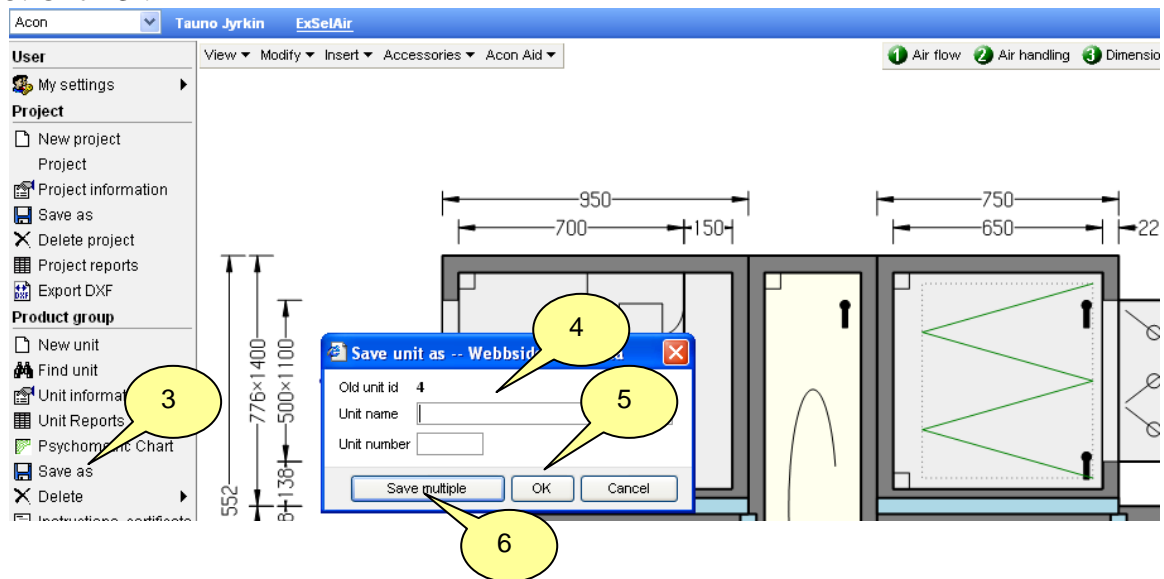


### 4.1.3 Create a new unit by copying a stored unit

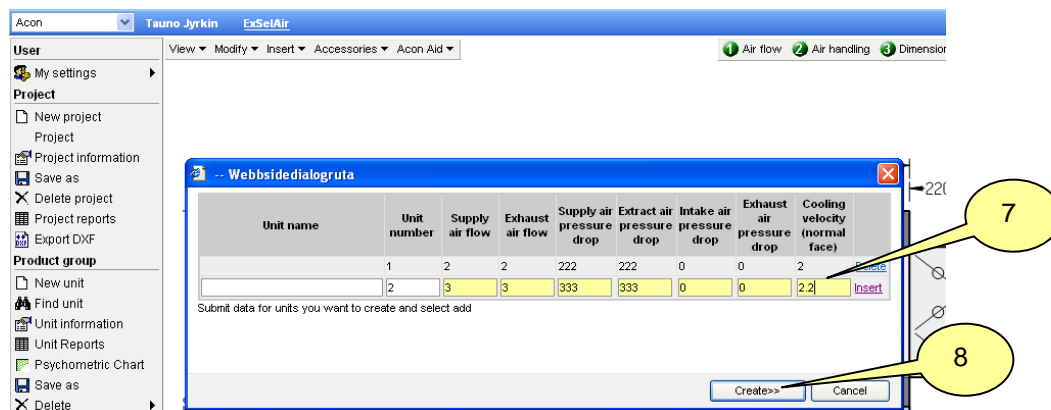
1. Open a project and click **Find Unit**.
2. Open the unit you wish to copy. Click a row.



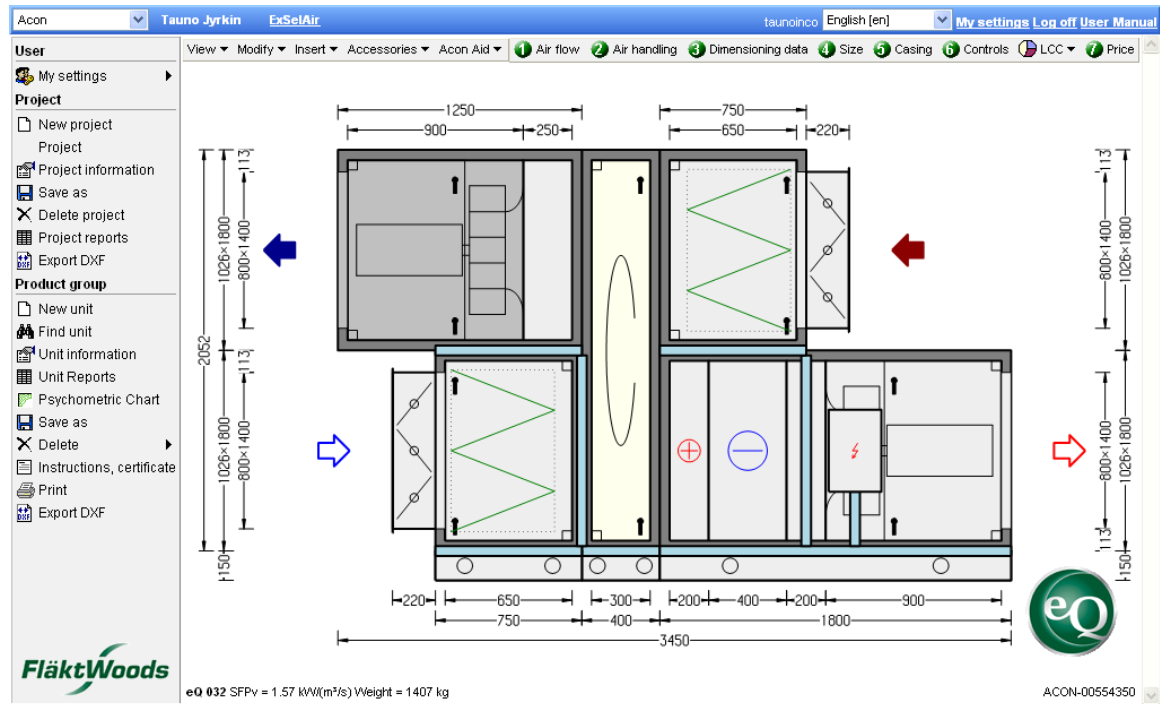
3. Click **Save as** in the menu.
4. Key in the new unit name and number.
5. Click **Ok**



6. Choose **Save multiple** in order to save several units at the same time.
7. Key in data and click **Insert**
8. Click **Create>>**

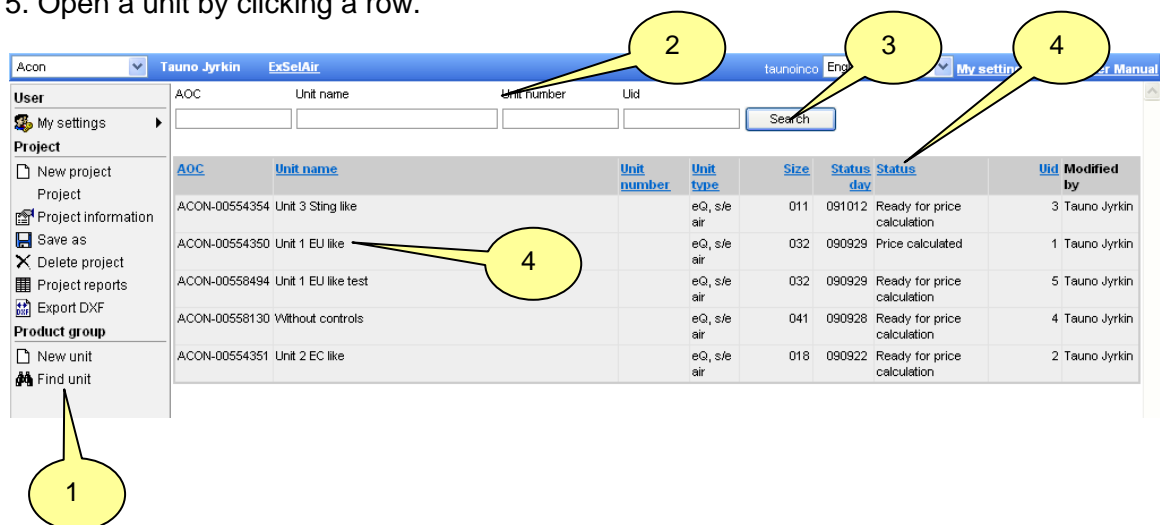


## 9. A dimensioned unit is suggested by Acon



## 4.2 Find unit

1. Click Find unit.
2. Narrow your search further by keying in  
AOC (Acon Ordering Code)  
Unit name  
Unit number and/or  
Unit ID.
3. Click **Search**.
4. You can sort the projects according to the headings by clicking them.
5. Open a unit by clicking a row.





### 4.3 Unit information

1. Click **Unit information**, contains sound and input data
2. You can Change Unit name and Unit number. Return to unit picture by click **OK**

Unit information -- Webbsidedialogruta

Unit: 5  
 Unit name: Unit 1 EU like test  
 Unit number:   
 Market segment: E0  
 Unit type: e0, s/e air  
 Location: indoor horizontal  
 Installation alternative: supply air in bottom  
 Exhaust air direction: counter-flow  
 Controls: with built-in control of cabinet  
 SFPv: 1.5  
 Weight [kg]: 1438  
 Status: Dimensioned  
 ACON purchase number:

	Summer	Winter
Supply air flow [m <sup>3</sup> /sec]	3	3
Supply air pressure drop [Pa]	100	100
Extract air pressure drop [Pa]	0	0
Supply air temperature [°C]	15	20
Supply air temperature calculated [°C]	15	20

Sound power level per octave band	63	125	250	500	1k	2k	4k	8k	LwA
Fresh air connection	66	73	69	64	58	53	45	42	66
Supply air connection	70	79	80	81	78	72	68	66	82
Extract connection	68	73	75	69	63	60	55	53	71
Exhaust connection	70	77	82	82	79	73	69	67	84
To surroundings	65	70	66	53	50	48	43	33	60
Tolerance	6	4	4	4	4	4	4	7	4

### 4.4 Unit reports

1. Click **Unit reports**
2. Two reports are available. Can be exported to Excel.
  - Unit performance data
  - Product codes and price (if available)

Unit Reports -- Webbside...

Reports:  
 UnitCalculation  
 ProductPrice

## 4.5. Psychrometric chart

### 1. Click *Psychrometric chart*

The screenshot displays the Acon software interface. On the left, a menu lists various options, with 'Psychrometric Chart' highlighted by a yellow circle containing the number '1'. The main window is divided into several sections:

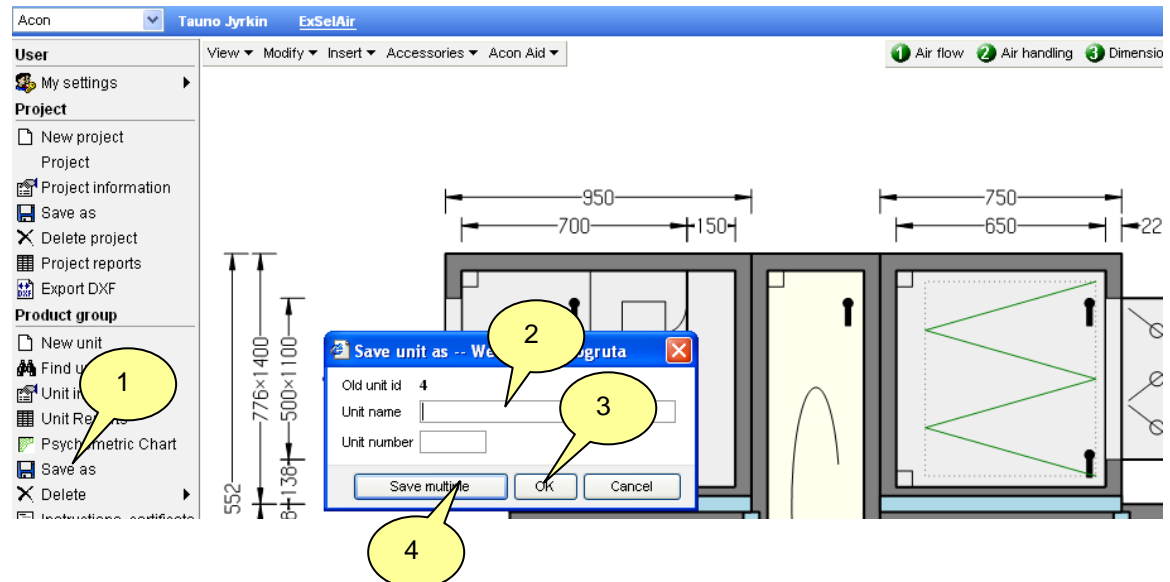
- Diagram type:** Operative case, Air flow, Both.
- Mode:** SUMMER.
- Supply air flow table:**

Number	Name	Dry bulb temperature (°C)	Relative humidity (%)	Specific humidity (g/kg)	Enthalpy (kJ/kg)	Wet bulb temperature (°C)	Sensible output (kW)	Water (l/s)
1	Outdoor Air	24.0	53.1	9.9	49.3	17.6		
2	Air cooler for chilled...	14.3	86.8	8.8	36.6	13.0	-46.7	-35.8
3	Plenum fan Centriflow ...	15.0	82.9	8.8	37.3	13.3	2.7	2.6
4	Supply air	15.0	82.9	8.8	37.3	13.3		
- Exhaust air flow table:**

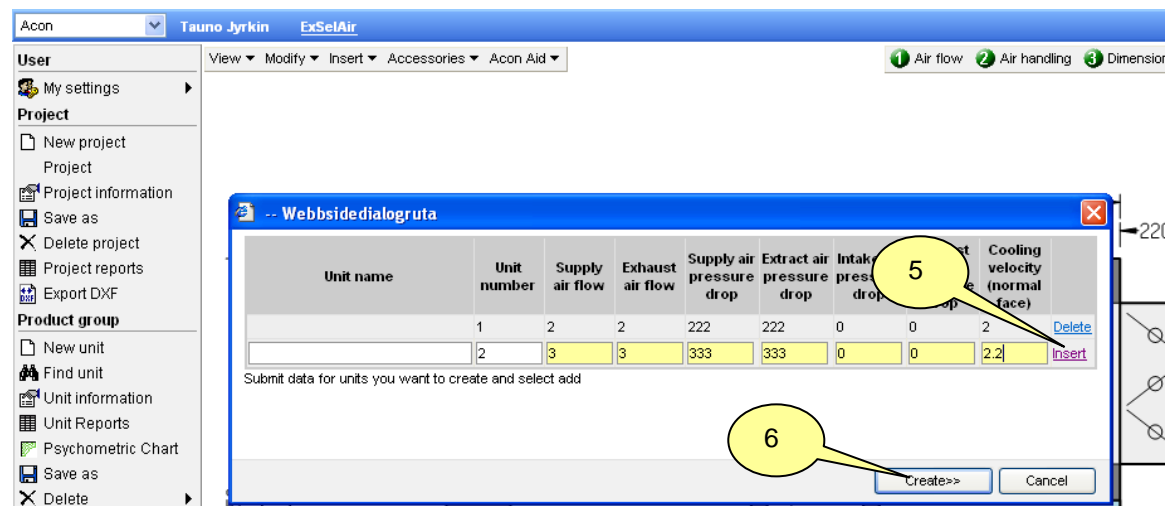
Number	Name	Dry bulb temperature (°C)	Relative humidity (%)	Specific humidity (g/kg)	Enthalpy (kJ/kg)	Wet bulb temperature (°C)	Sensible output (kW)	Water (l/s)
1	Exhaust air	25.0	55.0	10.9	52.9	18.7		
2	Plenum fan Centriflow ...	25.7	52.8	10.9	53.6	18.9	2.7	2.6
3	Exhaust air outlet	25.7	52.8	10.9	53.6	18.9		
- Psychrometric Chart:** A graph showing Dry bulb temperature (°C) on the y-axis and Specific humidity (g/kg) on the x-axis. A red dot is plotted at approximately 15°C and 8.8 g/kg. A blue line connects this point to the outdoor air point (24°C, 9.9 g/kg).
- Unit Diagram:** A schematic of a unit with dimensions: 1800mm width, 900mm depth, and 1130mm height. A red arrow points to the unit, and another red arrow points to the exhaust air outlet.

## 4.6. Save as

1. Click **Save as** in the menu if you want to create a copy of the unit.
2. Key in the new unit name and number.
3. Click **Ok**

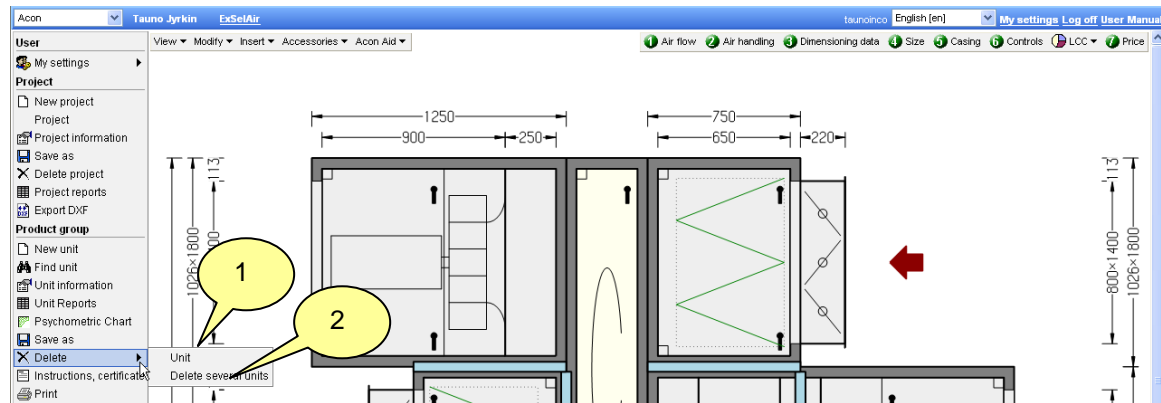


4. Choose **Save multiple** in order to save several units at the same time.
5. Key in data and click **Insert**
6. Click **Create>>**



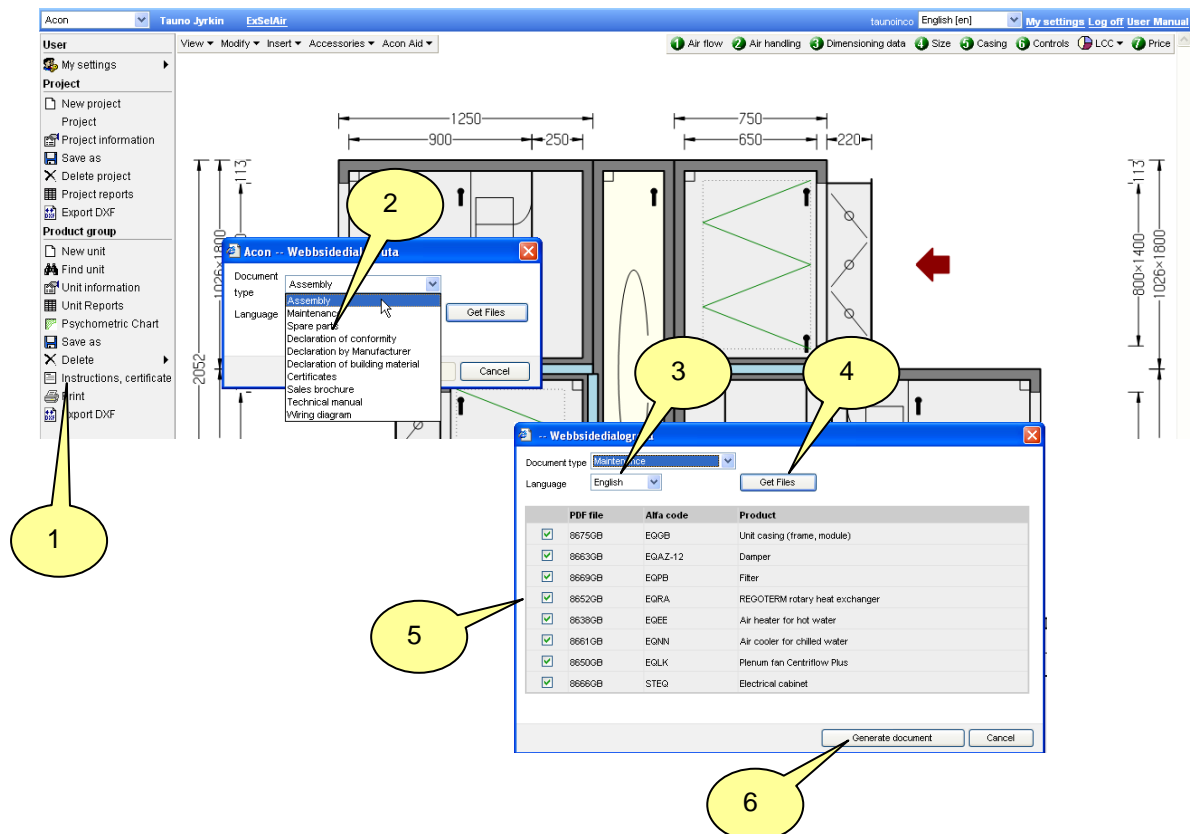
## 4.7. Delete

1. Click **Delete, Unit** if you want to delete the unit in the project.
2. Click **Delete several units** and mark units in the project you want to delete..



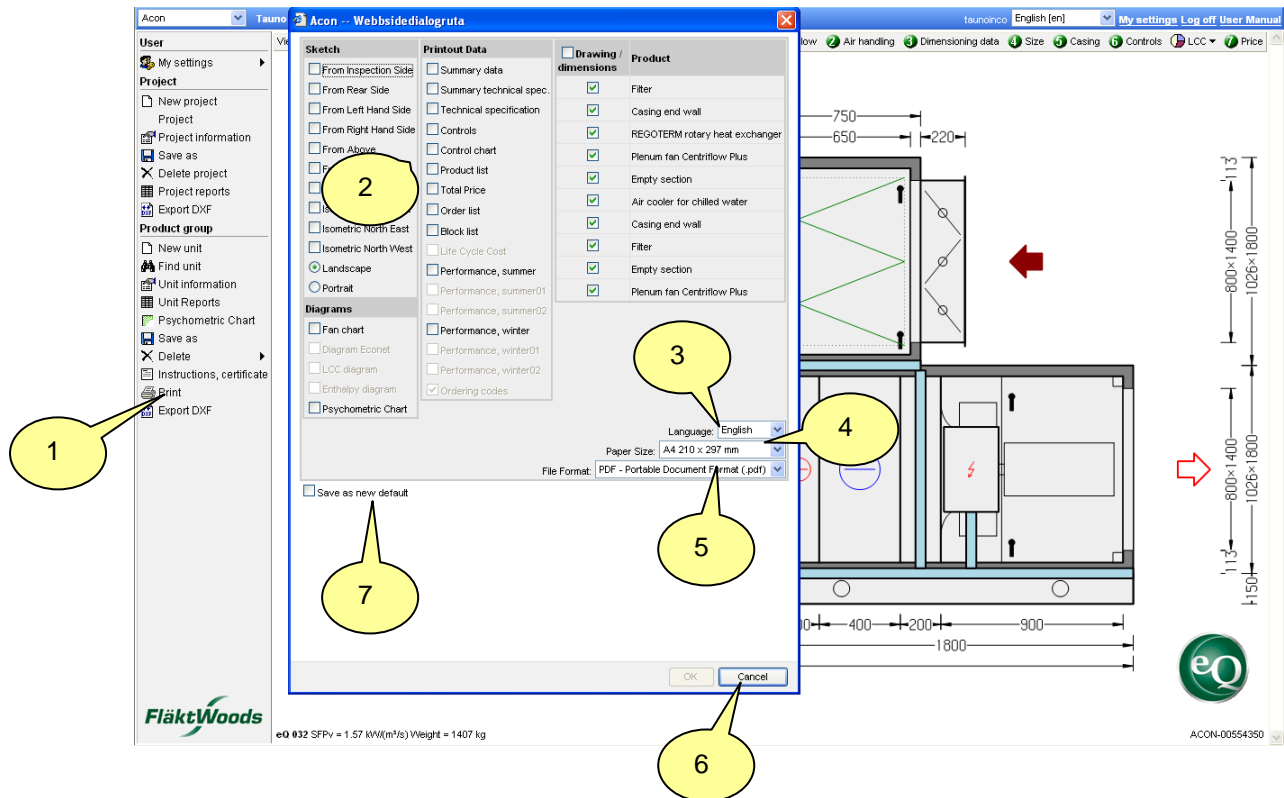
## 4.8 Instructions, certificate

1. Click **Instructions, certificate**
2. Select Document type
3. Select Language
4. Click **Get files**
5. Mark documents to print out
6. Click **Generate document**



## 4.9 Print

1. Click **Print**
2. Select documents to print out.
3. Select Language.
4. Select Paper size.
5. Select File format.
6. Click **Ok**
7. Mark **Save as new default** in order to save your selections.



## 4.10 Export Dxf

1. Click **Export Dxf**
2. Select view
3. Select block when a unit consists of more than 1 block
4. Select Layers
5. Use **i-drop** if available in your CAD software
6. **Download DWG file** if you have CAD software from Autodesk.
7. **Download DXF file** creates a file which can be opened by all CAD software

The screenshot illustrates the 'Export DXF' dialog box in the Acon software. The dialog is titled 'Export DXF -- Webbsidialgruta'. It contains several sections:

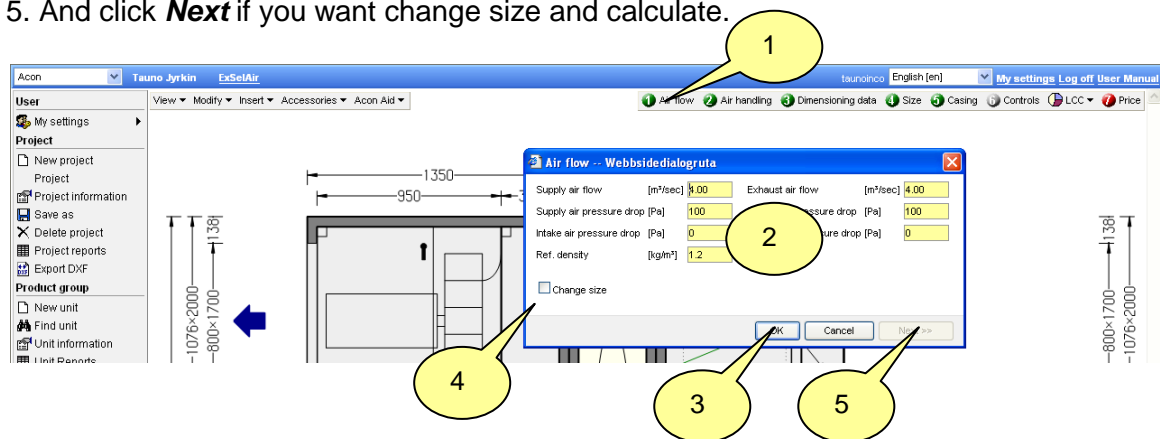
- Preview:** A technical drawing of a unit, with a yellow callout '2' pointing to the 'Inspection side' view option.
- View:** A section with radio buttons for 'Inspection side', 'Rear', 'Left hand', 'Right hand', 'Above', 'Below', and '3D'. A yellow callout '3' points to the 'Block' dropdown menu.
- Block:** A dropdown menu showing '1'.
- i-drop:** A button with the Autodesk logo and the text 'Autodesk i-drop'. A yellow callout '5' points to this button.
- Layers:** A section with a table of layers and checkboxes for 'Unit', 'Functions', 'Symbols', and 'Pipes'. A yellow callout '4' points to the 'Layer name' column.
- Buttons:** 'Download DWG file' and 'Download DXF file' buttons. A yellow callout '6' points to the 'Download DWG file' button, and a yellow callout '7' points to the 'Download DXF file' button.

The background shows a sidebar with 'Export DXF' highlighted (yellow callout '1'). A technical drawing of a unit is visible, with dimensions and a red arrow pointing to the 'Download DXF file' button. The FläktWoods logo is in the bottom left, and the eQ logo is in the bottom right.

## 5. Modify suggested configuration, right top menu bar

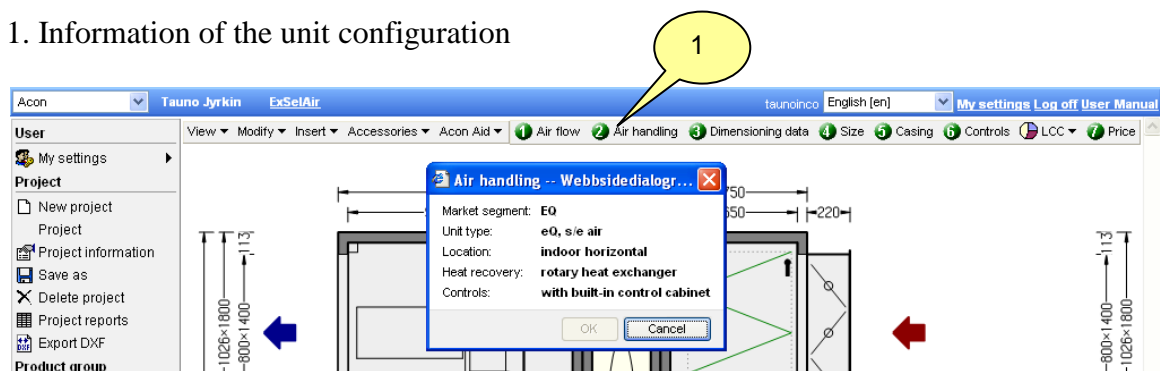
### 5.1 Change air flow

1. Click **1 Air flow**.
2. Key in your changes
3. Click **Ok** if you want to calculate with new data.
4. Mark **Change size**
5. And click **Next** if you want change size and calculate.



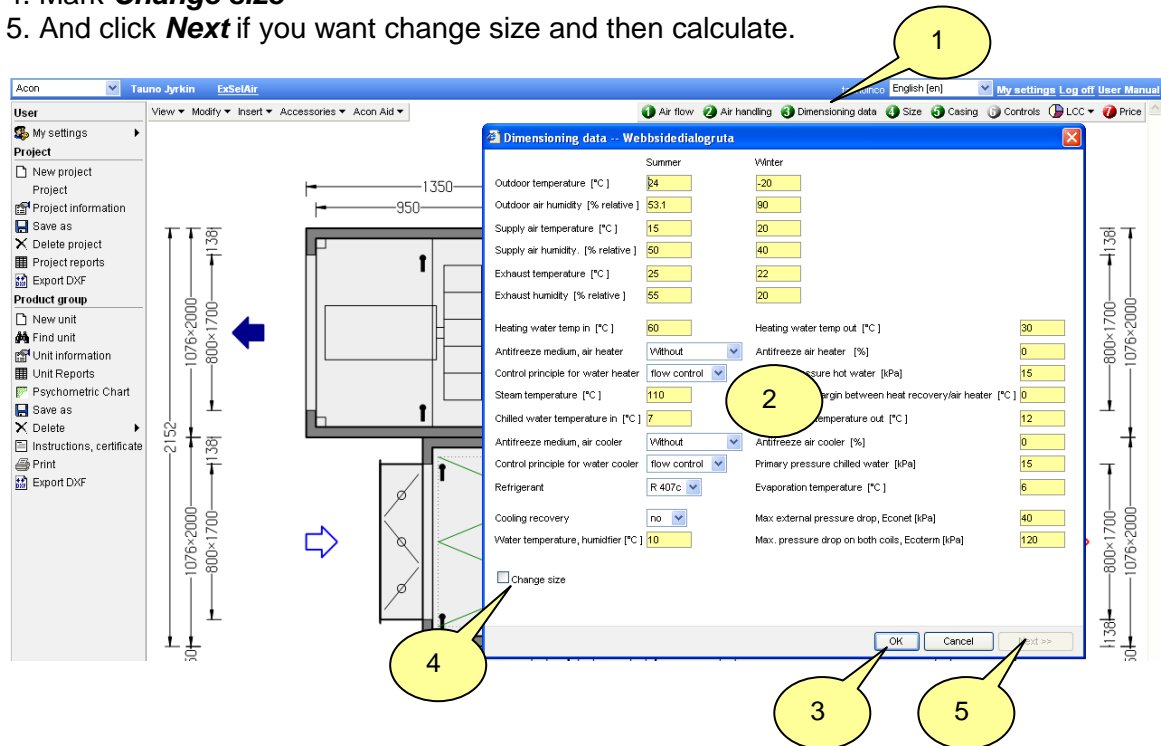
### 5.2 Air handling

1. Information of the unit configuration



### 5.3 Change dimensioning data

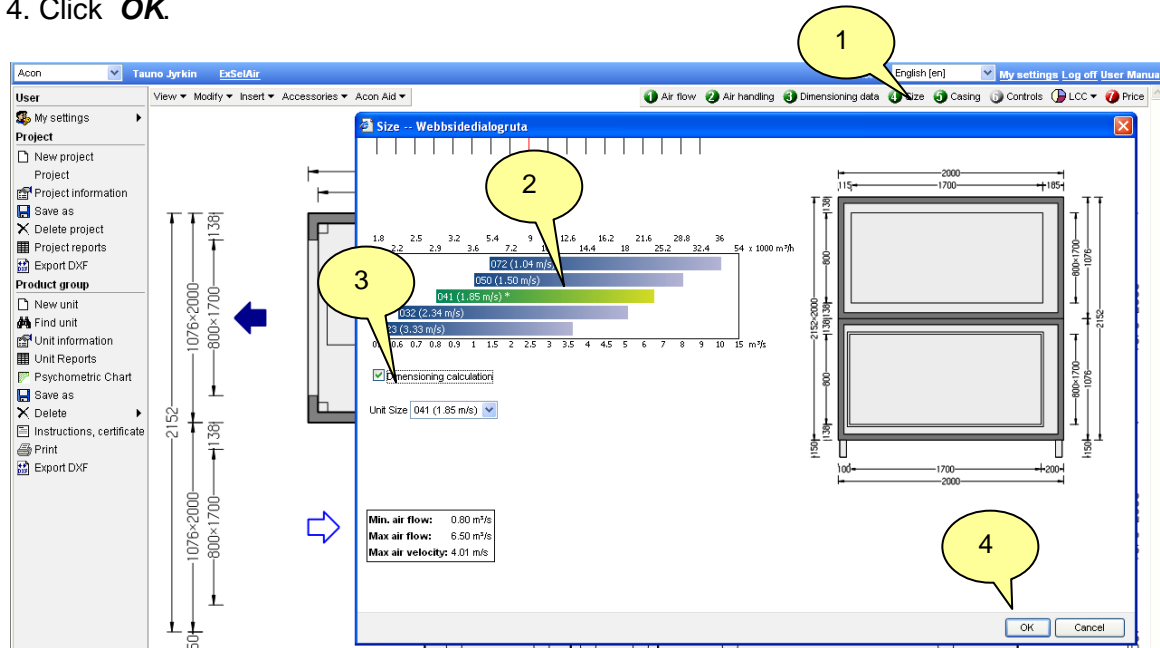
1. Click **3 Dimensioning data**.
2. Key in your changes.
3. Click **Ok** if you want to calculate with new data.
4. Mark **Change size**
5. And click **Next** if you want change size and then calculate.





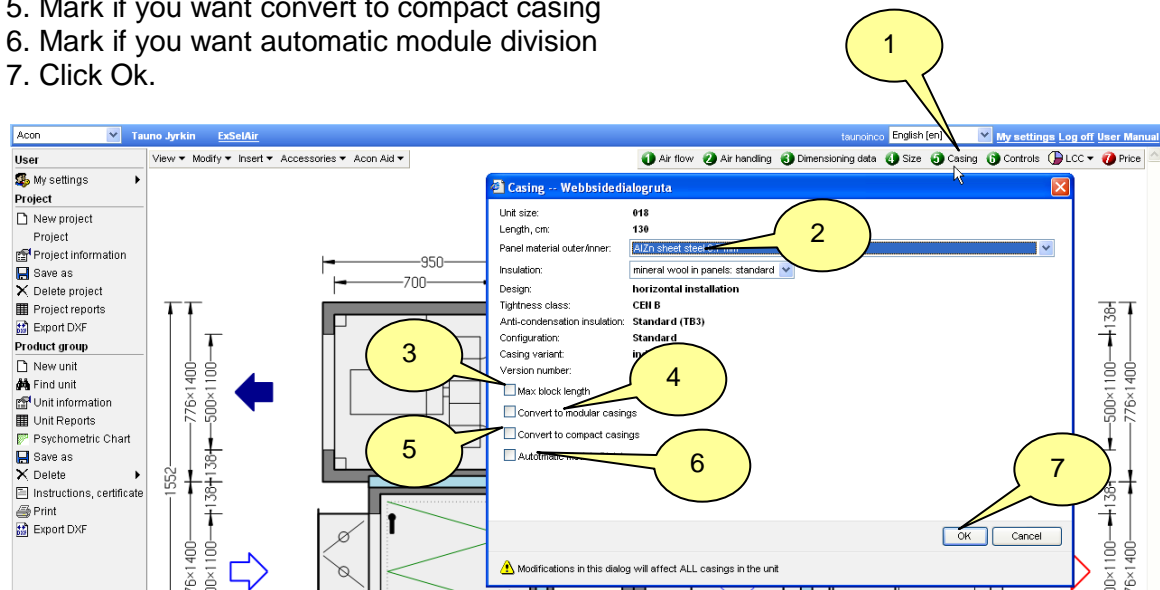
## 5.4 Change unit size

1. Click **4 Size**.
2. Choose size by clicking a bar in the chart..
3. Mark **Dimensioning calculation** if you want the unit redimensioned.
4. Click **OK**.



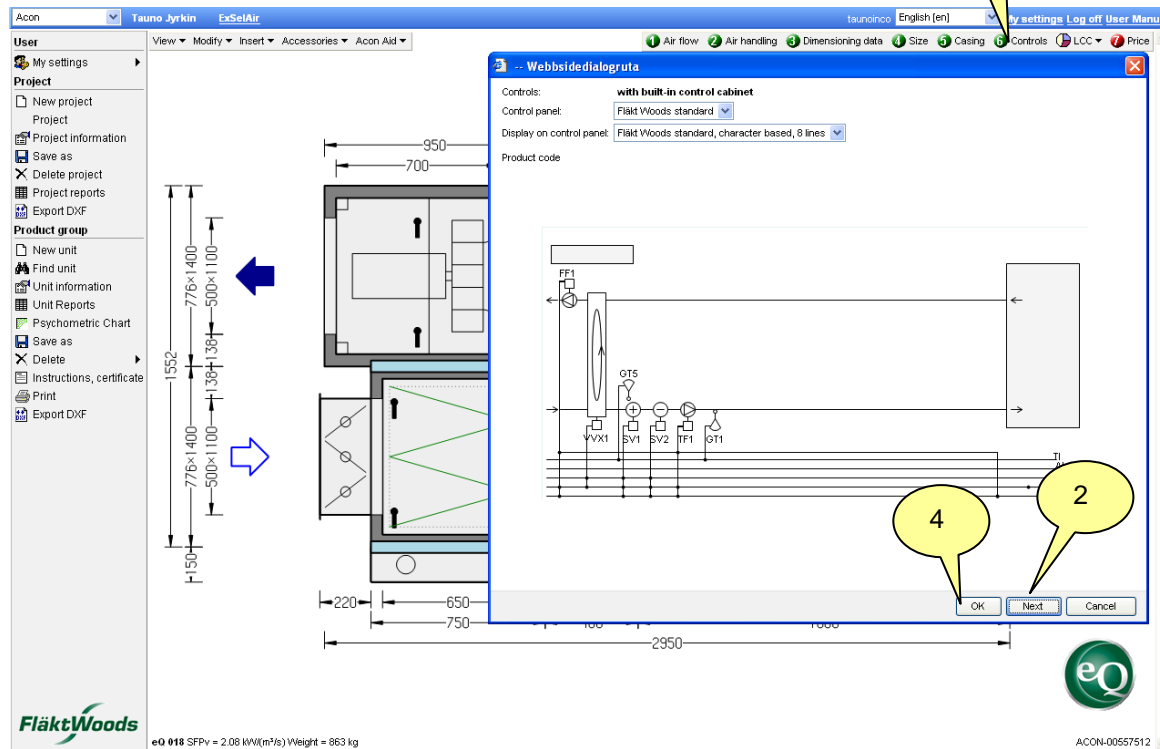
## 5.5 Change the casing

1. Click **5 Casing**.
2. Choose panel material and insulation.
3. Mark if you want set max block length
4. Mark if you want convert to modular casing
5. Mark if you want convert to compact casing
6. Mark if you want automatic module division
7. Click **Ok**.



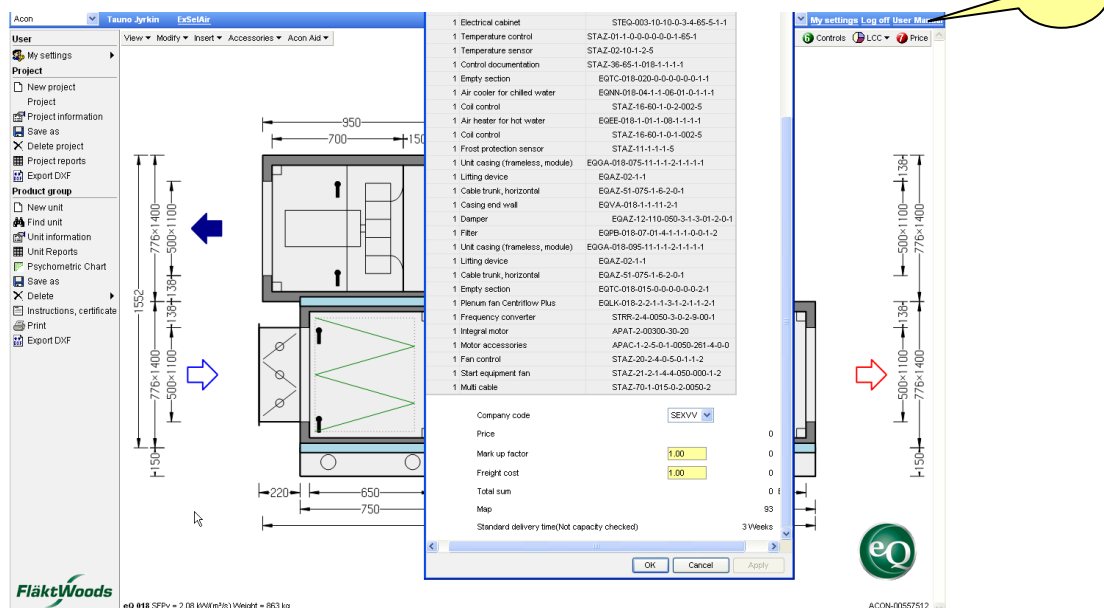
## 5.6 Change controls (factory default)

1. Click **6 Controls**.
2. Click **Next**.
3. Go through the steps and make the changes.
4. Click **Ok**.



## 5.7 Product codes, workshop lead time and price

1. Click **7 Price** to see product codes, workshop lead time and price.



## 5.8 Calculate Life Cycle Cost

1. Click **LCC**.
2. Select calculation model *Flakt Woods model* or *Simplified Swedish model*.
3. Key in and select input data.
4. Click **Calculate**
5. Result is shown.
6. Click **<<Input value** if you want to calculate with new data.
7. Click **OK** if you want to go back to the unit picture.

The screenshot shows the Acon software interface. The main window displays a unit diagram with dimensions. Overlaid on this is the 'LCC - Webbsidialgruta' dialog box. The dialog box contains the following sections:

- Life Cycle Cost:** Model set to 'Flakt Woods model'.
- Cooling calculation:** Set to 'To temperature'.
- Climate data:** Location set to 'Sweden', 'Jönköping'.
- Temperatures:** Winter and Summer data for supply and exhaust air.
- Operation:** Days per week (5), Hours per day (12), Air flow (100%), Return air (0%).
- Energy cost:** Price per kWh for Heating (0.4), Cooling (0.6), and EI (0.5).

At the bottom of the dialog box are 'Cancel' and 'Calculate >>' buttons. A separate window titled 'Webbsidialgruta' displays the results:

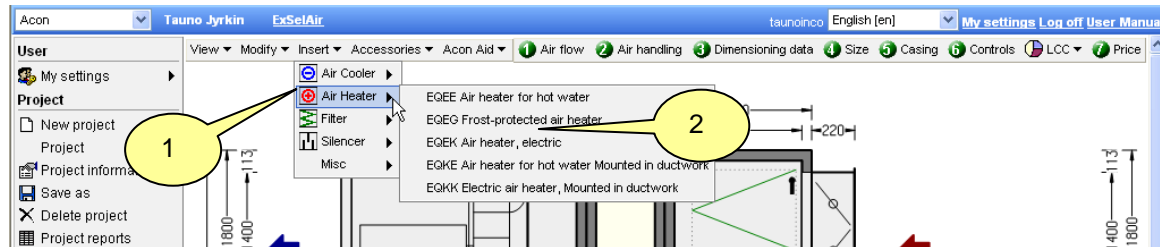
Recovery			
Heat recovery	138521	kWh	
Cooling recovery	0	kWh	
Temp. rise in supply air fan	7789	kWh	
Energy demand			
Heating	28107	kWh	
Cooling	598	kWh	
Supply air fan	7929	kWh	
Exhaust fan	7669	kWh	
Annual net cost			
Energy , Heating	11243	EUR	
Energy , Cooling	359	EUR	
Energy , EI , fans	7799	EUR	
Total	19401	EUR	
Life Cycle Cost			
Tender sum	0	EUR	
LCC,Heating	140110	EUR	
LCC,Cooling	4876	EUR	
LCC , EI , Supply air fan	58982	EUR	
LCC, EI , Exhaust fan	57048	EUR	
Evaluation sum	261016	EUR	

The graph shows 'Comfort operation' with Temperature [°C] on the y-axis (ranging from -30 to 30) and time [h] on the x-axis (ranging from 0 to 3129). The graph area is filled with colors representing different energy flows: red for Heating, light red for Heat recovery, blue for Cooling, light blue for Cooling recovery, and a patterned area for Supply air. At the bottom of the result window are '<< Input value' and 'OK' buttons.

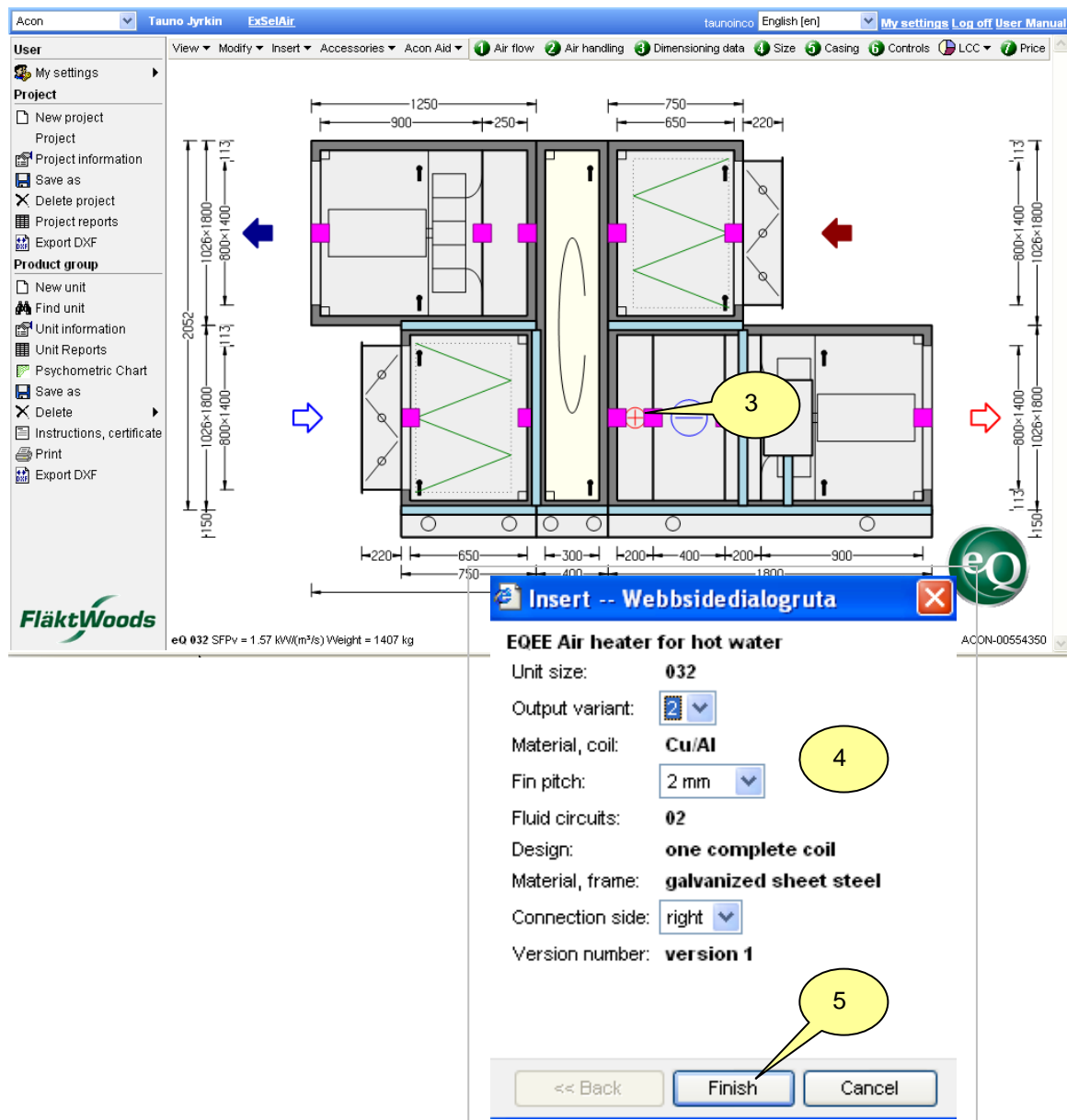


### 6.3. Insert a component

1. Click insert in the menu.
2. Click a component to insert.



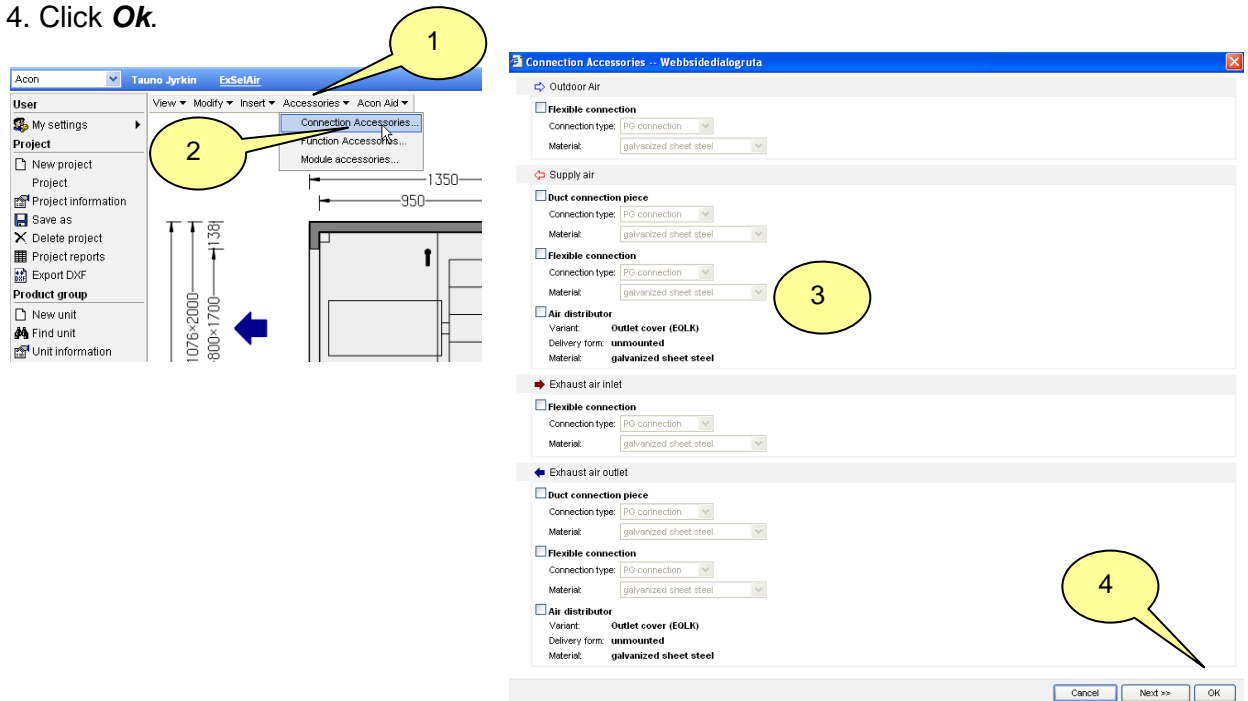
3. Click position where the component is to be inserted.
4. Select component properties.
5. Click finish



## 6.4. Choose / change accessories

You can select all accessories for the unit in this menu.

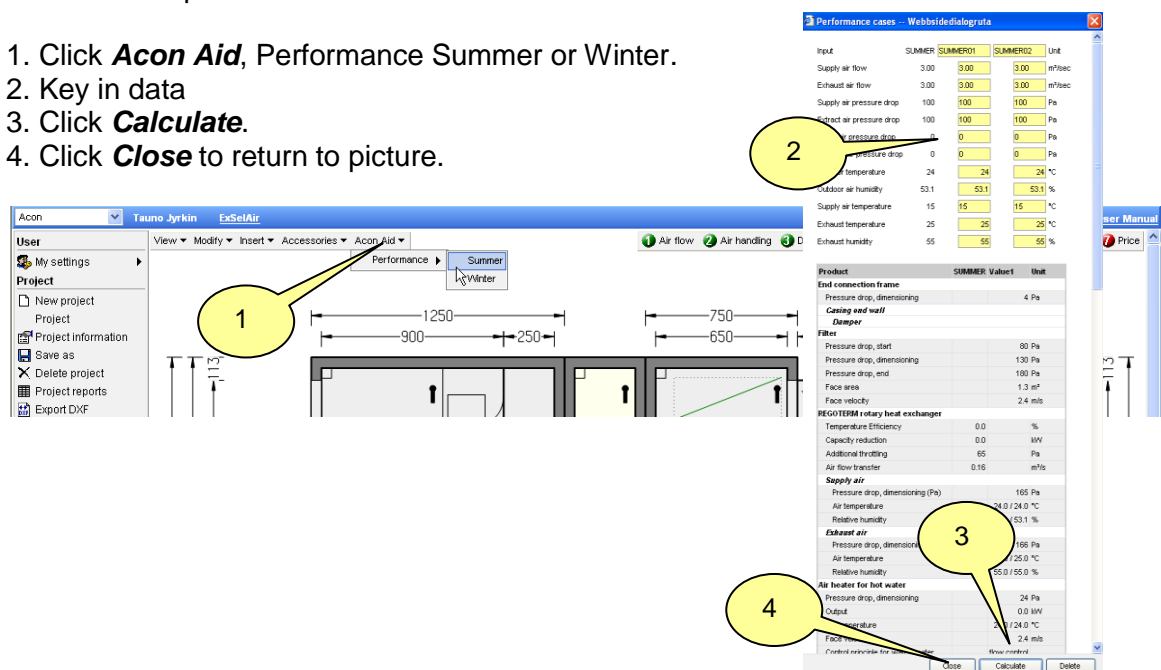
1. Click **Accessories** in the menu.
2. Select type of accessories, connection, function or module
3. Mark the accessories you wish to add.
4. Click **Ok**.



## 6.4 Calculate unit performance

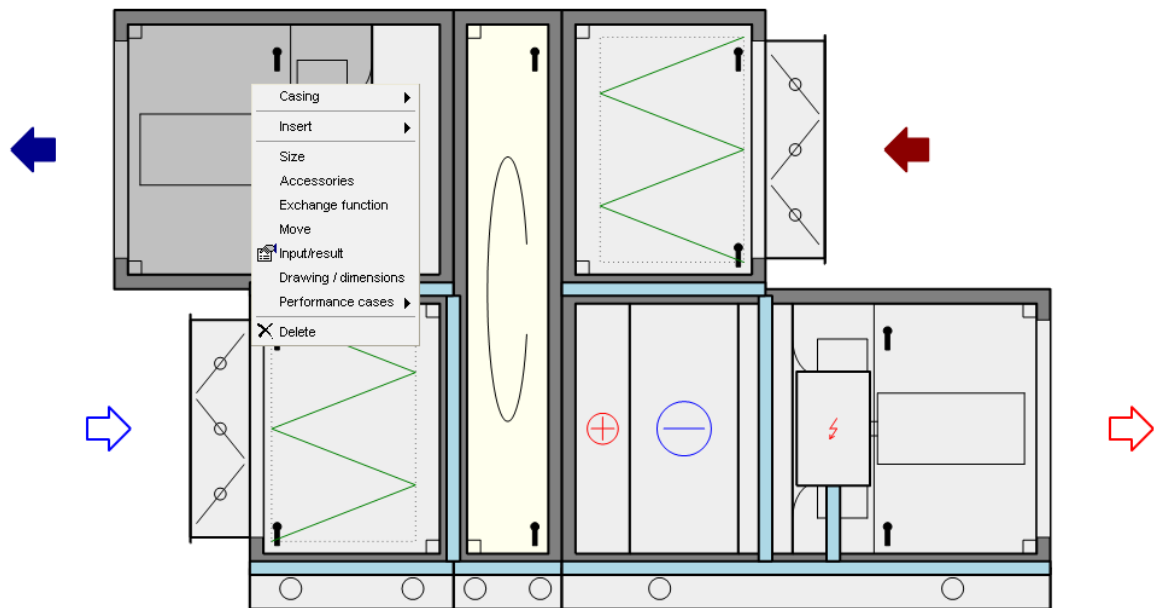
Acon provides the facility to make up to two additional performance calculations on the selected unit. No component is changed but performance input data such as airflow, pressure and temperatures can be altered in order to be able to see performance at part load for example.

1. Click **Acon Aid**, Performance Summer or Winter.
2. Key in data
3. Click **Calculate**.
4. Click **Close** to return to picture.



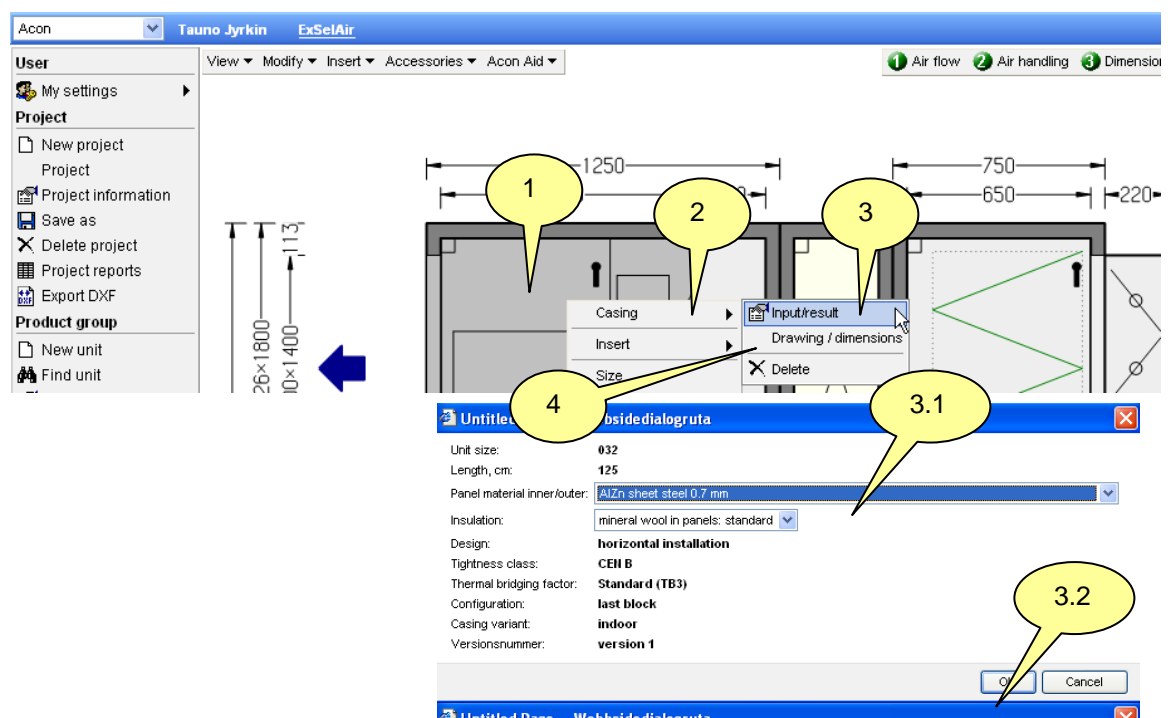
## 7. Functions when you click the picture

By clicking a component you can view result, change, add or delete components.



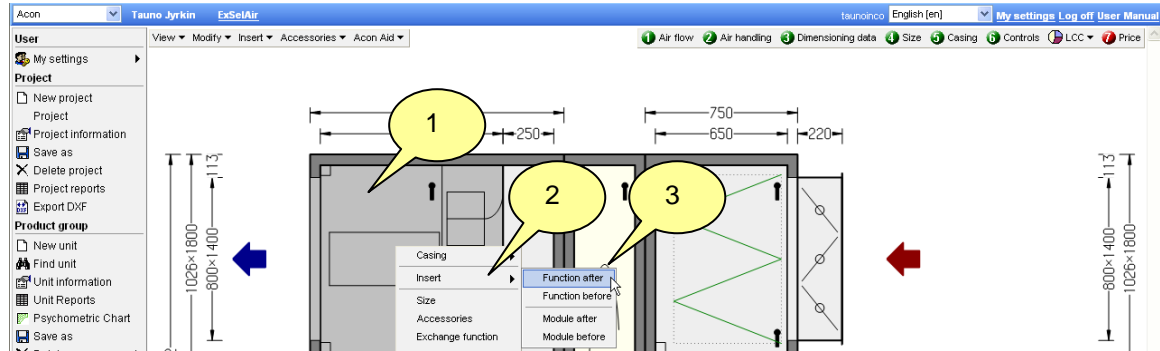
### 7.1 Change clicked components casing

1. Click a component
2. Click **Casing**
3. Click **Input/result**
  - 3.1. Panel material and insulation can be changed for the component
  - 3.2. Click **OK**
4. Click Drawing/dimensions to view available drawings

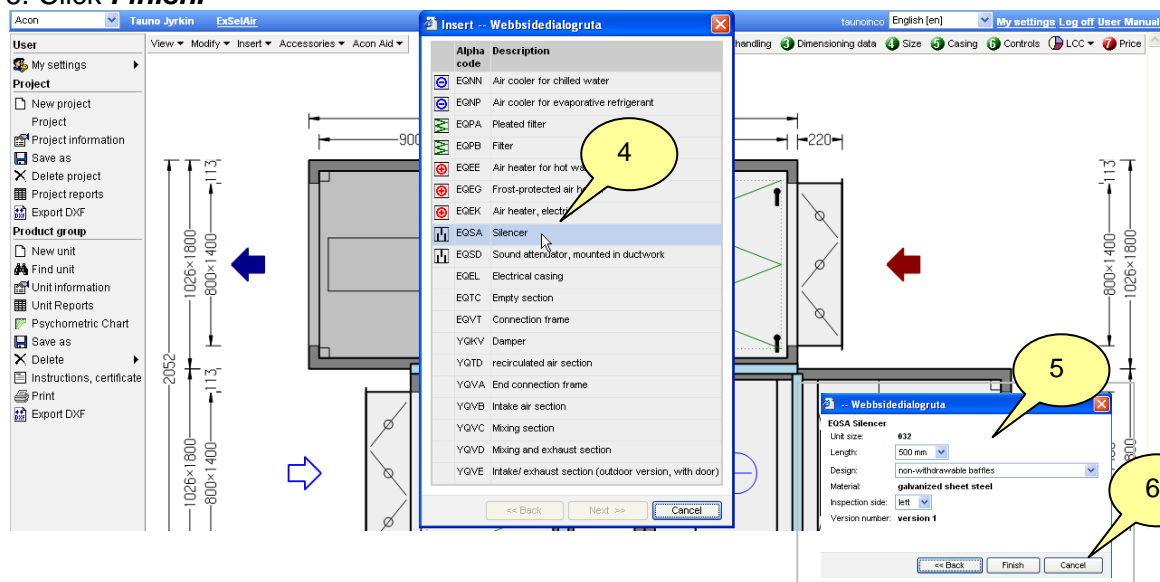


## 7.2 Insert component

1. Click a component
2. Click **Insert**
3. Select Function after or Function before



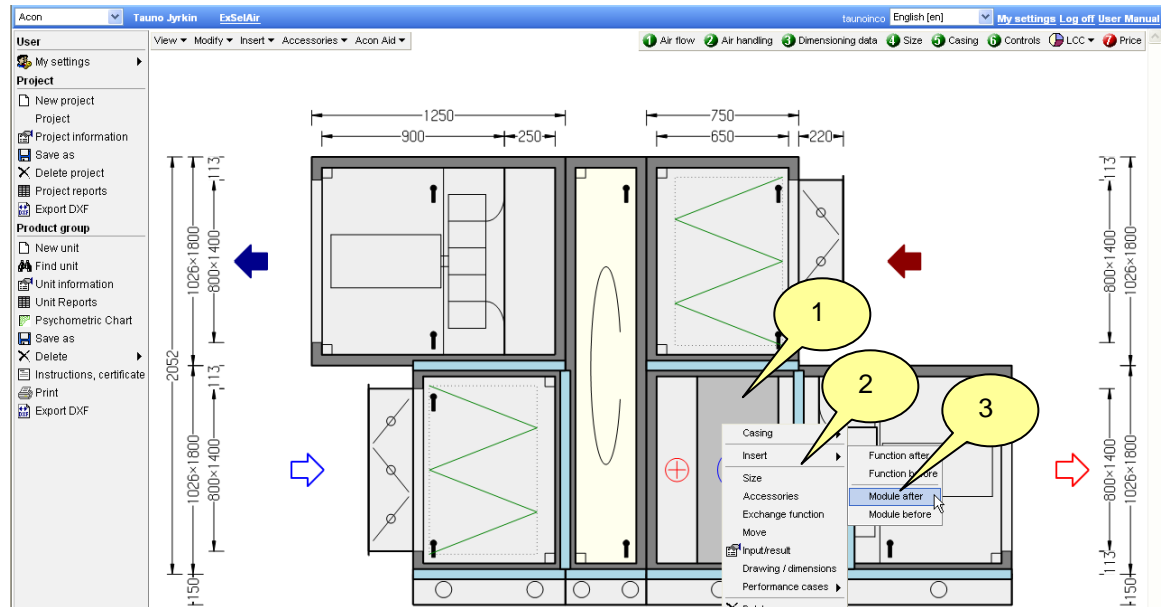
4. Select component.
5. Select properties.
6. Click **Finish**.





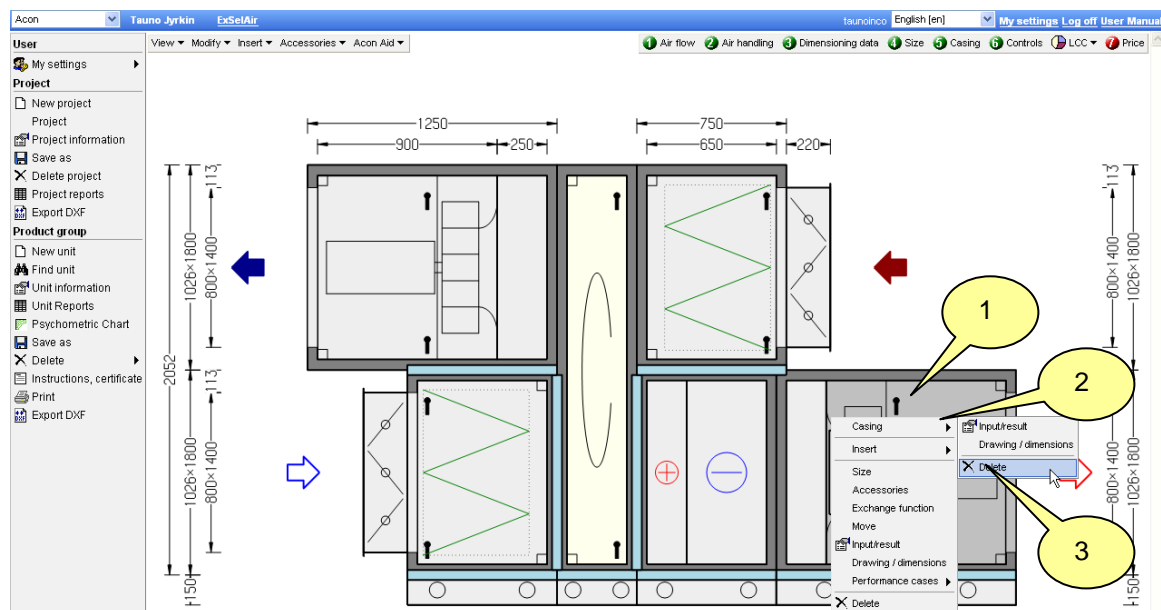
## 7.3 Insert module

1. Click a component, in this case the water cooler.
2. Click **Insert**
3. Choose Module after or Module before.



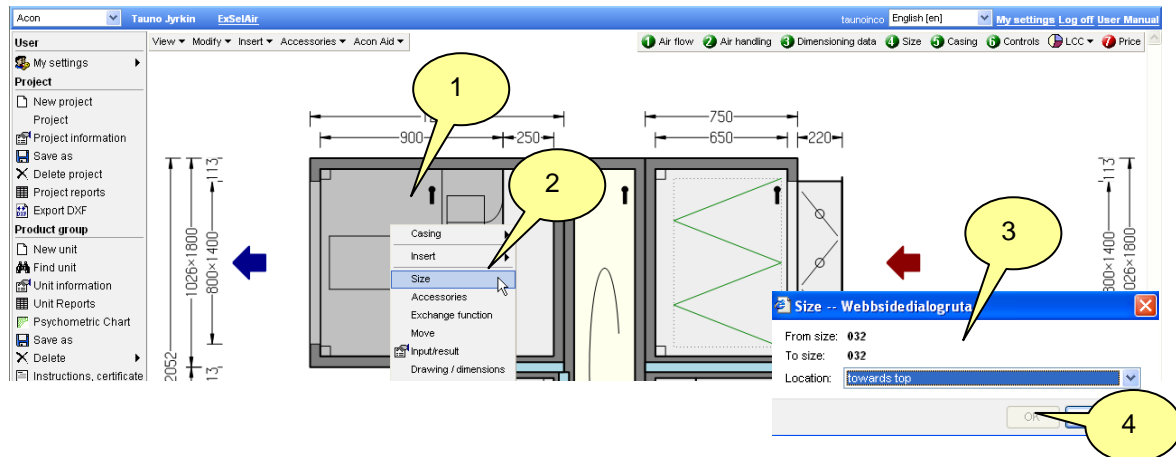
## 7.4 Delete module

1. Click a component (not the first in the supply air flow direction)
2. Click **Casing**
3. Click **Delete**



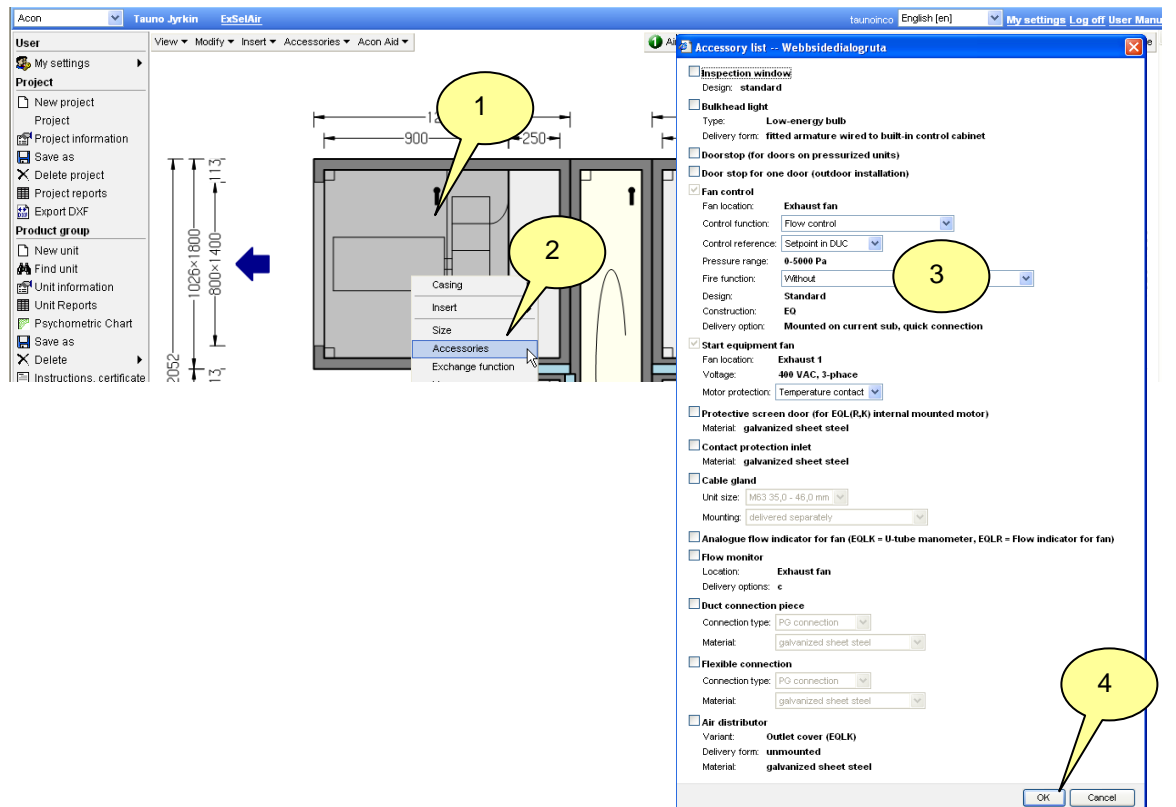
## 7.5 Change a components size

1. Click a component.
2. Click **Size**.
3. Select size.
4. Click **Ok**.



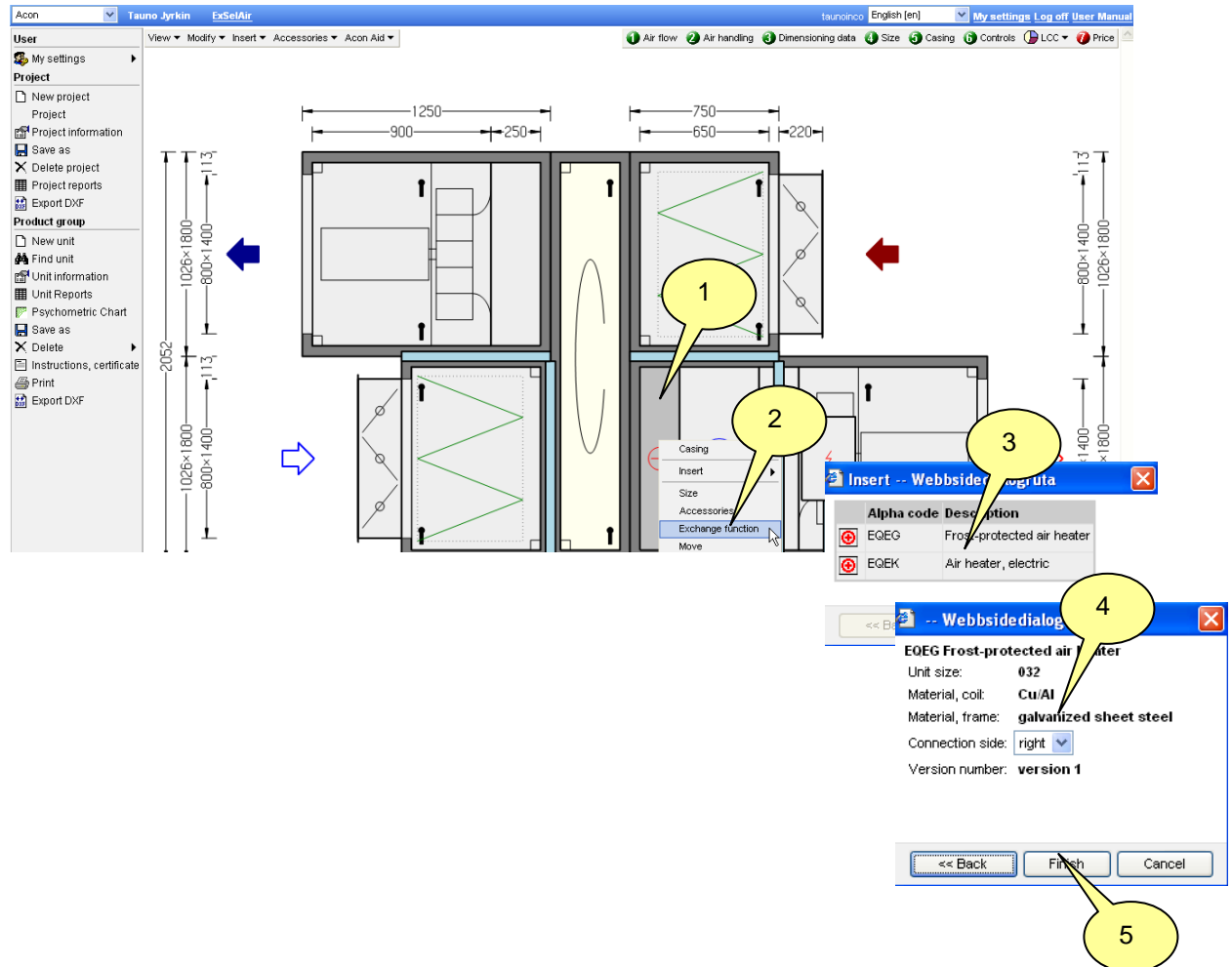
## 7.6 Choose, change or view accessories

1. Click a component.
2. Click **Accessories**.
3. Mark the accessories you want to add.
4. Click **Ok**.



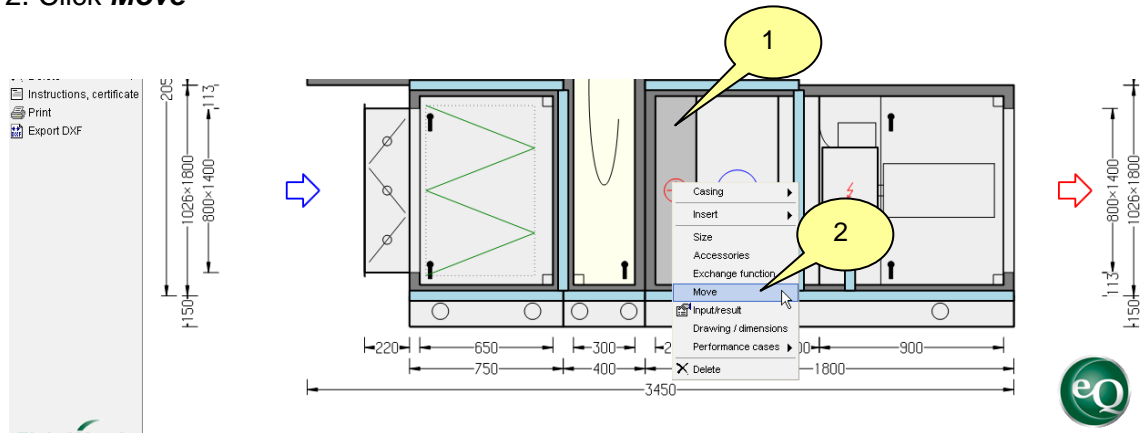
## 7.7 Exchange function

1. Click the component you wish to exchange (in this case air heater for hot water).
2. Click **Exchange function**.
3. Click a new component.
4. Select properties.
5. Click **Finish**.

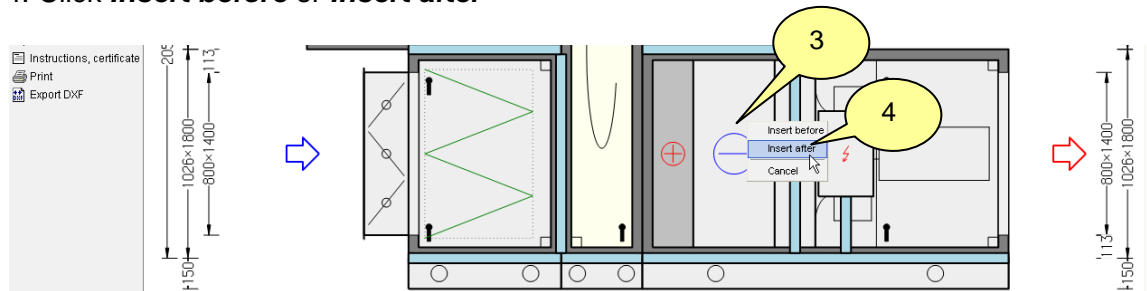


## 7.8 Move component

1. Click the component you wish to move (in this case Air heater for hot water).
2. Click **Move**

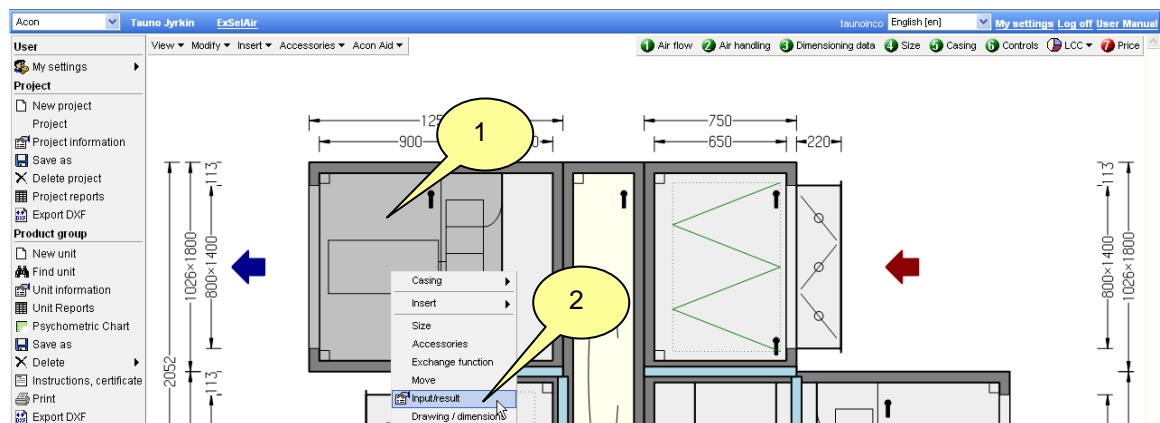


3. Click component you want to move to (in this case Air cooler for chilled water)
4. Click **Insert before** or **Insert after**



## 7.9 Choose, view or change a components input/result

1. Click a component (in this case the exhaust fan).
2. Click **Input/result**.



3. Change size (plug fan), click a row.

4. Exchange to centrifugal fan
5. Fan input, mark **View fan input** and scroll down
6. Motor, frequency converter and accessories , mark **View accessories** and scroll down
7. Click Apply and check the calculation with new input.
8. Click OK, return to unit picture.

**Plenum fan Centriflow Plus**

Speed	1188 rpm
Fan efficiency	76.4 %
Total efficiency	65.7 %
Pressure rise, dimensioning	490 Pa
Fan shaft power at dim. data	2.01 kW
Grid Power	2.33 kW
Temperature rise	0.6 °C

**SFP Calculation**

Specific fan power	0.69 kW/m <sup>3</sup> /s
Grid power according to SFP	2.06 kW
Pressure rise	432 Pa
Speed	1134 rpm

**Integral motor**

Efficiency	88.4 %
Speed	1440 rpm
Motor output	4.0 kW
Electric current	8.0 A
Number of Poles	4
Output margin, minimum	10 %

**Frequency converter**

Efficiency	97.4 %
Operating frequency	41.0 Hz
Max frequency at frequency control	51.3 Hz
Max speed at frequency control	1467 rpm

**Motor accessories**

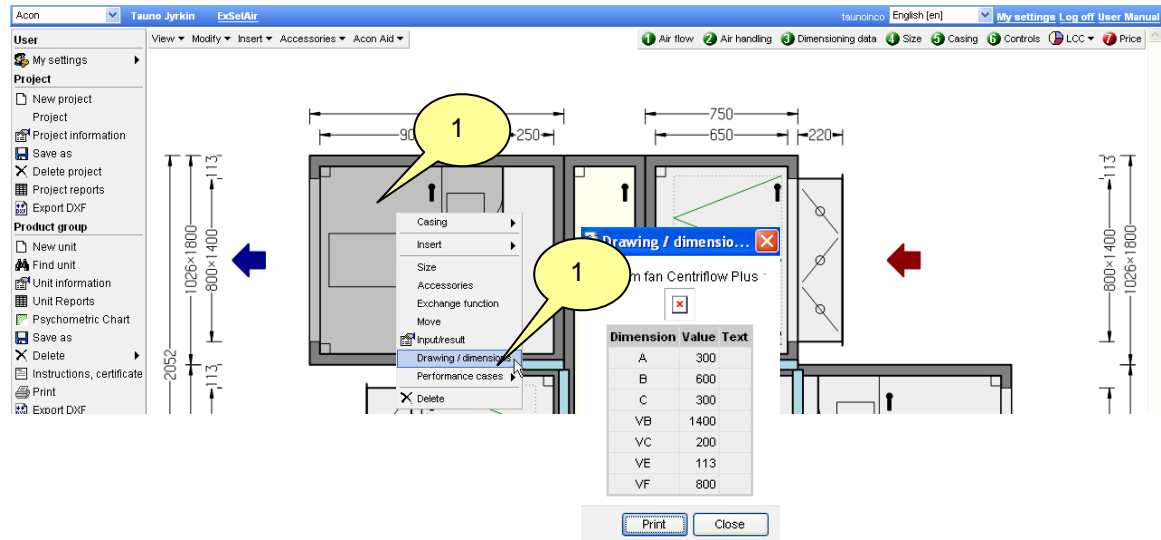
Impeller type	Fan size	Speed Max	Total pressure rise	Efficiency	Fan shaft power at dim. data	Motor output	Number of Poles	Lw total	Temperature rise
K	2	1134	493	70.4	2.19	3.00	4	88	0.7
K	3	1134	482	76.3	1.98	4.00	4	84	0.6

Graph showing  $\Delta p_s$  (Pa) vs  $q_v$  (m<sup>3</sup>/s). The graph displays performance curves for various fan speeds (40, 50, 60, 70, 75, 77, 78, 80, 82, 86, 90, 94, 98, 100, 105, 110, 115, 120, 125, 130, 135, 140, 145, 150, 155, 160, 165, 170, 175, 180, 185, 190, 195, 200, 205, 210, 215, 220, 225, 230, 235, 240, 245, 250, 255, 260) and power ratings (1 kW, 1.5 kW, 2 kW, 2.5 kW, 3 kW, 3.5 kW, 4 kW, 4.5 kW, 5 kW, 5.5 kW, 6 kW, 6.5 kW, 7 kW, 7.5 kW, 8 kW, 8.5 kW, 9 kW, 9.5 kW, 10 kW). A red dot is marked on the graph at approximately  $q_v = 3.5$  m<sup>3</sup>/s and  $\Delta p_s = 500$  Pa.

Buttons: Exchange function, View fan input, View accessories, OK, Cancel, Apply.

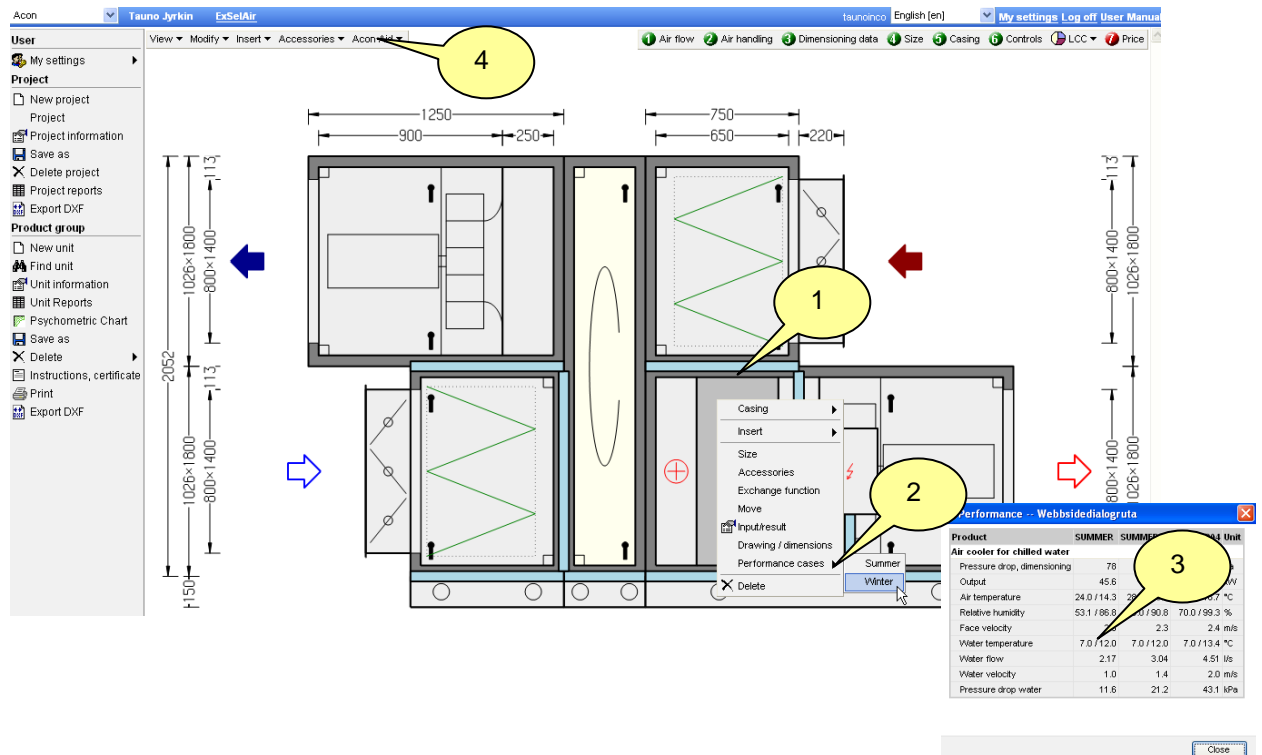
## 7.10 View a components drawing/dimensions

1. Click a component.
2. Click **Drawing/dimensions**
3. Click **Print** for a printout.



## 7.11 View performance case (summer and winter)

1. Click a component.
2. Click **Performance cases, Summer or Winter**.
3. If performance simulations have been done in 4. **Acon Aid** then these results are also presented for each component.



## 7.12 Delete a unit component

1. Click the component you wish to delete.
2. Click **Delete**.

