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# **DUPLEX units**

## **Import of RFA and IFC models to Revit SW**

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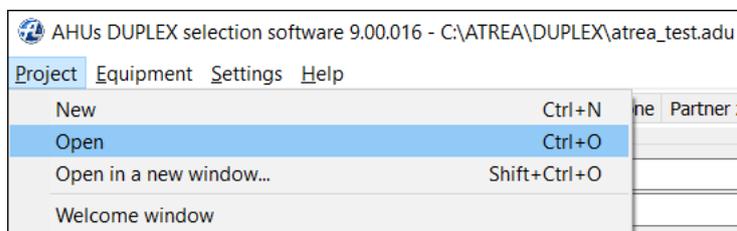
## 1. Introduction

The selection software for DUPLEX units supports the export of unit models in formats RFA and IFC. These formats are compatible with the system of BIM (Building Information Modelling). This means that DUPLEX ventilation unit models including additional data such as dimensions, air volume, external static pressure and heat recovery efficiency rates can be entered into the Revit application. Similarly, EASY box or SMART box models can be uploaded. Versions Revit 2016 and newer are supported.

## 2. Exporting RFA models from Atrea selection software

RFA model of DUPLEX units can be exported from Atrea's selection software.

1. Download Atrea's selection software from [www.atrea.com/en/duplex-en](http://www.atrea.com/en/duplex-en).
2. Install it.
3. Open a DUPLEX design in Atrea's selection software. Select **Project > Open**; the design file has extension .adu.



Alternatively, design a DUPLEX unit by selecting **Equipment > Add a new equipment**. For the design wizard go to [www.atrea.com/en/duplex-en](http://www.atrea.com/en/duplex-en), part Ventilation unit design procedure.

Add a new equipment

**Category**  
**All (24)**  
 For domestic use (0)  
 For commercial use (22)  
 For pools (0)  
 Independent recovery exchangers (2)  
 Independent accessories (0)  
 Kitchen ventilation (0)  
 Heat sources (0)

**Airflow**  
 1400 m3/h

**Ecodesign**  
 ErP 2016  
 ErP 2018

**Heat recovery core**  
**All (19)**  
 Crossflow (5)  
 Counterflow (13)  
 Rotary (2)

**Location**  
**All (19)**  
 Indoor type (13)  
 Rooftop (6)

**Function**  
 Heating (17)  
 Cooling (17)  
 Circulation (11)  
 New (4)

**Name**

---

**DUPLEX Multi Eco** **DUPLEX Multi Eco-V** **DUPLEX Multi Eco-N**

 A new generation of all-purpose heat recovery units, a highly efficient counter flow heat recovery exchanger, economical EC fans, for indoor use, a wide range of accessories (including built-in heating, cooling and circulation).  
 For flow rates between 300 and 10 800 m3/h.

DUPLEX 500 Multi Eco  
 DUPLEX 800 Multi Eco  
 DUPLEX 1100 Multi Eco  
**DUPLEX 1500 Multi Eco**  
 DUPLEX 2500 Multi Eco  
 DUPLEX 3500 Multi Eco  
 DUPLEX 4500 Multi Eco  
 DUPLEX 5500 Multi Eco  
 DUPLEX 6500 Multi Eco  
 DUPLEX 7500 Multi Eco  
 DUPLEX 9000 Multi Eco

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**DUPLEX Multi** **DUPLEX Multi-V** **DUPLEX Multi-N**

 All-purpose heat recovery units, a highly efficient counter flow heat recovery exchanger, economical EC fans, for indoor use, a wide range of accessories (including built-in heating, cooling and circulation).  
 For flow rates between 300 and 8 500 m3/h.

DUPLEX 500 Multi  
 DUPLEX 1000 Multi  
**DUPLEX 1500 Multi**  
 DUPLEX 2500 Multi  
 DUPLEX 3500 Multi  
 DUPLEX 5000 Multi  
 DUPLEX 6500 Multi  
 DUPLEX 8000 Multi  
 DUPLEX 10000 Multi  
 DUPLEX 11000 Multi

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**DUPLEX ROTO** **DUPLEX ROTO-N**

 A new generation of all-purpose heat recovery units, a highly efficient rotary heat recovery exchanger, economical EC fans, for indoor use, a wide range of accessories (including built-in heating, cooling and circulation).  
 For flow rates between 1 500 and 16 000 m3/h.

**DUPLEX 1500 Roto**  
 DUPLEX 2500 Roto  
 DUPLEX 4000 Roto  
 DUPLEX 5000 Roto  
 DUPLEX 8000 Roto  
 DUPLEX 12000 Roto  
 DUPLEX 15000 Roto

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**DUPLEX Flexi (2G)** **DUPLEX Flexi-V**

#### 4. Select the Design tab > Export to DXF / BIM

Operation point | Design | Controls | Specification | Note | Catalog sheets

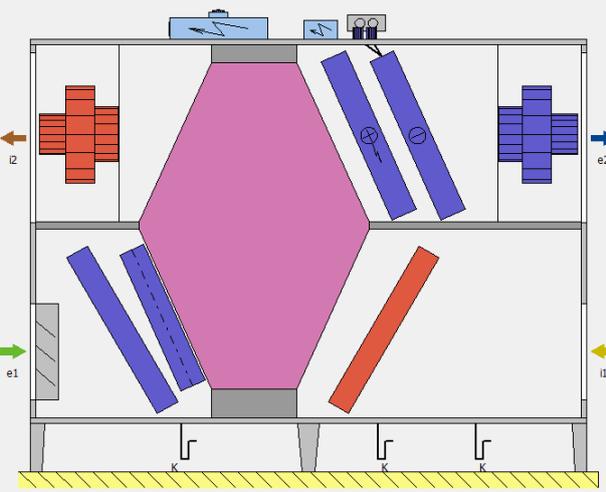
**Position**  
 Position  
 Floor-standing 1. (11)  
 Position  
 Ports configuration not defined  
 Coils order 1. heater - 2. cooler

**AHU delivery**  
 in total  
 in parts

**Other choices**  
 Condensate drain  
 standard  with ball   
 Door fastening  
 with hinges  without hinges   
 Pressure output (supply and exhaust fan) for simple volume flow measurement

**Connection ports**  
[Supply air connection port e1](#)  
[Supply air connection port e2](#)  
[Exhaust air connection port i1](#)  
[Exhaust air connection port i2](#)

**Drawing**  
 Current view access door side view (from the front)  
 View  AHU  External preheater



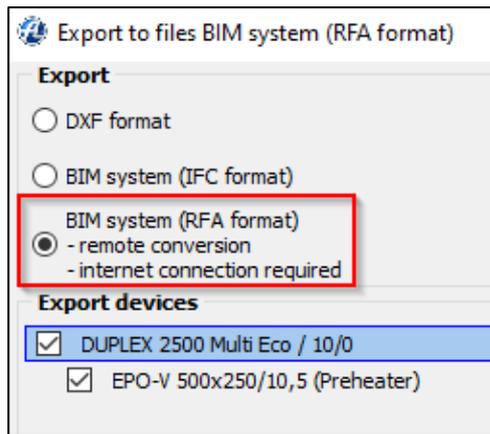
**Show**  
 manipulation space  
**Dimensioning**  
 total dimensions  
 connection ports  
 control module  
 condensate drains  
**Connection port :**  
 e1 - outdoor air (ODA)  
 e2 - supply air (SUP)  
 i1 - extract air (ETA)  
 i2 - exhaust air (EHA)  
 K - condensate drain  
 3x Ø 32/40 mm

depth: 665 mm, weight: 447 kg

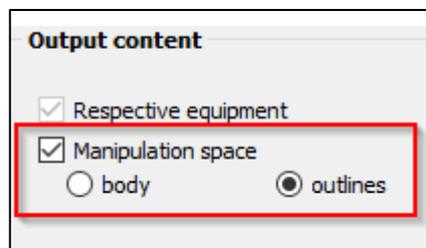
To edit move the mouse over the respective part of the unit

AHU placement method | Psychrometric chart | Air-side diagram | Print dimensional drawing | **Export to DXF / BIM**

### 5. Select **BIM system (RFA format)**



Besides air handling unit DUPLEX, external preheaters or reheaters can also be exported to RFA model. Select which components to export.



Along with the device model, you can also export its needed manipulation space.

Confirm your selection. Save the file created in .rfa format. Next, open the file in the SW Autodesk Revit.

**!** Internet connection is needed to export the model of DUPLEX unit to RFA format.

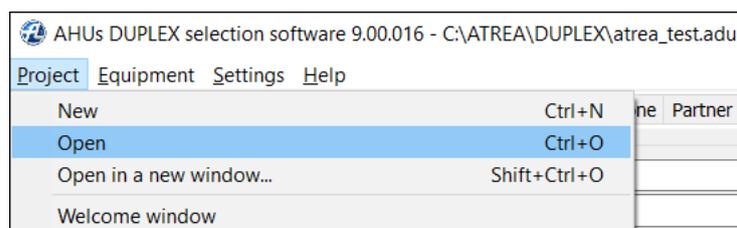


The steps are shown in a video <https://youtu.be/fD7CZ2dXLEU>.

## 3. Exporting IFC models from Atrea selection software

IFC models of DUPLEX units can be exported from Atrea's selection software.

1. Download Atrea's selection software from [www.atrea.com/en/duplex-en](http://www.atrea.com/en/duplex-en).
2. Install it.
3. Open a DUPLEX design in Atrea's selection software. Select **Project > Open**; the design file has extension .adu.



Alternatively, design a DUPLEX unit by selecting **Equipment > Add a new equipment**. For the design wizard go to [www.atrea.com/en/duplex-en](http://www.atrea.com/en/duplex-en), part Ventilation unit design procedure.

**Add a new equipment**

**Category**  
**All (24)**  
 For domestic use (0)  
 For commercial use (22)  
 For pools (0)  
 Independent recovery exchangers (2)  
 Independent accessories (0)  
 Kitchen ventilation (0)  
 Heat sources (0)

**Airflow**  
 1400 m<sup>3</sup>/h

**Ecodesign**  
 ErP 2016  
 ErP 2018

**Heat recovery core**  
**All (19)**  
 Crossflow (5)  
 Counterflow (13)  
 Rotary (2)

**Location**  
**All (19)**  
 Indoor type (13)  
 Rooftop (6)

**Function**  
 Heating (17)  
 Cooling (17)  
 Circulation (11)  
 New (4)

**Name**

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**DUPLEX Multi Eco** | **DUPLEX Multi Eco-V** | **DUPLEX Multi Eco-N**

 A new generation of all-purpose heat recovery units, a highly efficient counter flow heat recovery exchanger, economical EC fans, for indoor use, a wide range of accessories (including built-in heating, cooling and circulation).  
 For flow rates between 300 and 10 800 m<sup>3</sup>/h.



DUPLEX 500 Multi Eco  
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**DUPLEX Flexi (2G)** | **DUPLEX Flexi-V**

#### 4. Select the Design tab > Export to DXF / BIM

Operation point: Design | Controls | Specification | Note | Catalog sheets

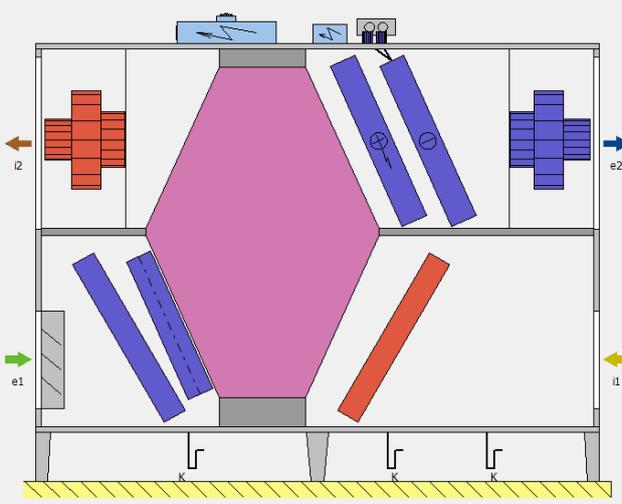
**Position**  
 Position: Floor-standing (10 - 11) | Position: 10 | Parts configuration: not defined | Coils order: 1. heater - 2. cooler

**AHU delivery**  
 in total  
 in parts

**Other choices**  
 Condensate drain:  standard |  with ball | on demand  
 Door fastening:  with hinges |  without hinges | incl.  
 Pressure output (supply and exhaust fan) for simple volume flow measurement

**Connection ports**  
[Supply air connection port e1](#)  
[Supply air connection port e2](#)  
[Exhaust air connection port i1](#)  
[Exhaust air connection port i2](#)

**Drawing**  
 Current view: access door side view (from the front)  
 View:  AHU |  External preheater



**Show**  
 manipulation space

**Dimensioning**  
 total dimensions  
 connection ports  
 control module  
 condensate drains

**Connection port :**  
 e1 - outdoor air (ODA)  
 e2 - supply air (SUP)  
 i1 - extract air (ETA)  
 i2 - exhaust air (EHA)  
 K - condensate drain  
 3x Ø 32/40 mm

depth: 665 mm, weight: 447 kg

To edit move the mouse over the respective part of the unit

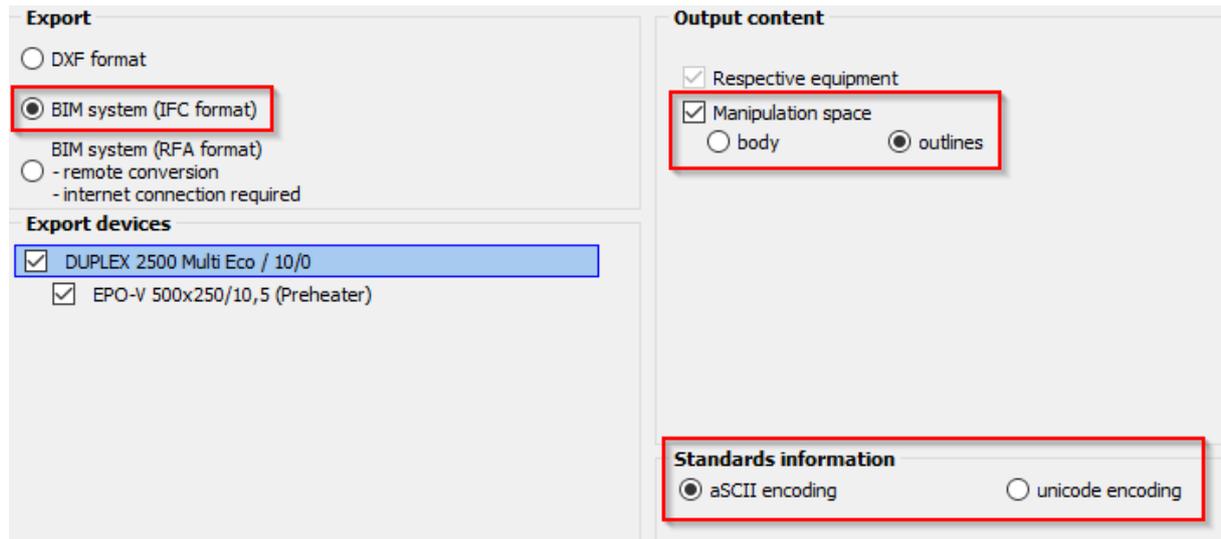
AHU placement method | Psychrometric chart | Air-side diagram | Print dimensional drawing | Export to DXF/ BIM

## 5. Select **BIM system (IFC format)**

Select **Manipulation space** to add to the IFC model also the manipulation space needed for operation and maintenance of the unit.

In **Standards information** decide which character encoding the IFC model shall have. The option is useful in case national characters are not displayed correctly.

- a. ASCII – viewers of IFC models available as freeware,
- b. Unicode – for SW Autodesk Revit.



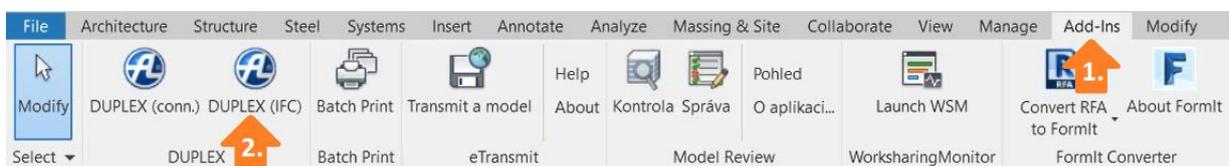
6. Save the file created in the .ifc format.

## 4. Importing IFC models to Revit

DUPLEX unit models in .ifc format can be imported to the Revit application using Atrea's selection software. If you are not using the selection software, ifc models can be imported to Revit using a stand-alone add-in feature.

### 4.1. Importing IFC models from Atrea selection software

1. Download Atrea's selection software from [www.atrea.com/en/duplex-en](http://www.atrea.com/en/duplex-en) and install it.
2. Start-up Autodesk Revit. DUPLEX (con.) and DUPLEX (IFC) add-ins will be newly displayed.
3. Select **Add-Ins > DUPLEX (IFC)**.



4. Select the DUPLEX unit model saved as an .ifc extension file. The DUPLEX unit including connectors will be imported.
5. Suitable ductwork can now be connected by using connectors on the unit's ports.

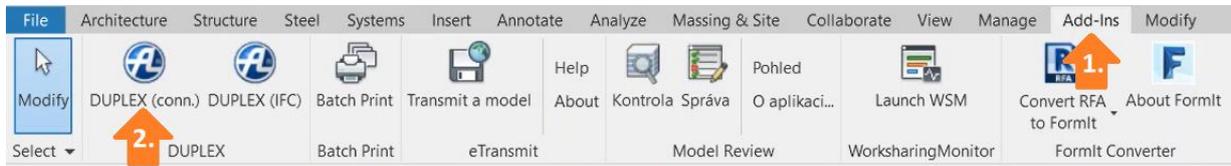
! Import IFC models of DUPLEX units to Revit using the add-in only. If an IFC model is imported directly, the imported unit will be without connectors and additional data.

### 4.2. Importing IFC models without using Atrea selection software

1. Download the *aduforrevit.exe* add-in for Revit from [www.atrea.com/en/duplex-en](http://www.atrea.com/en/duplex-en).
2. Install the add-in.
3. In Revit select **Add-Ins** and choose the add-in you have installed.
4. Select the file saved in .ifc format. The DUPLEX unit will be imported including connectors.

### 4.3. Importing DUPLEX units from Atrea selection software

1. Download Atrea's selection software from [www.atrea.com/en/duplex-en](http://www.atrea.com/en/duplex-en);
2. Install the SW;
3. In Revit select **Add-Ins > DUPLEX (conn.)**. Atrea's selection software will open.



4. Open an existing design or create a new DUPLEX unit design – see chapter 2, step 3.
5. When the design is completed, select Insert devices to Revit.



6. Select which device from the design should be inserted in the Revit application.
7. The DUPLEX unit will be imported including connectors.
8. Suitable ductwork can now be connected via connectors on the unit's ports.