Lindab Duct series with CADvent families

This guide explains how to design with Lindab ducts and fittings using Duct series in CADvent plugin for Revit. Duct fittings are loaded as CADvent families.

CADvent plugin and Revit are sufficient for all the functionality, no other applications are needed.

Workflow

A basic overview of the command workflow:

1. **Duct series** – Create Revit Duct types with CADvent families from Lindab Duct series

2. Draw ducts and fittings by selecting Lindab Rectangular or Lindab Safe for round ducts

3. **Manage Ducts** - Split duct segments into standard lengths

4. **Bill of Materials -** Automatically starts **Model Checker** and **Update Model** whenever needed

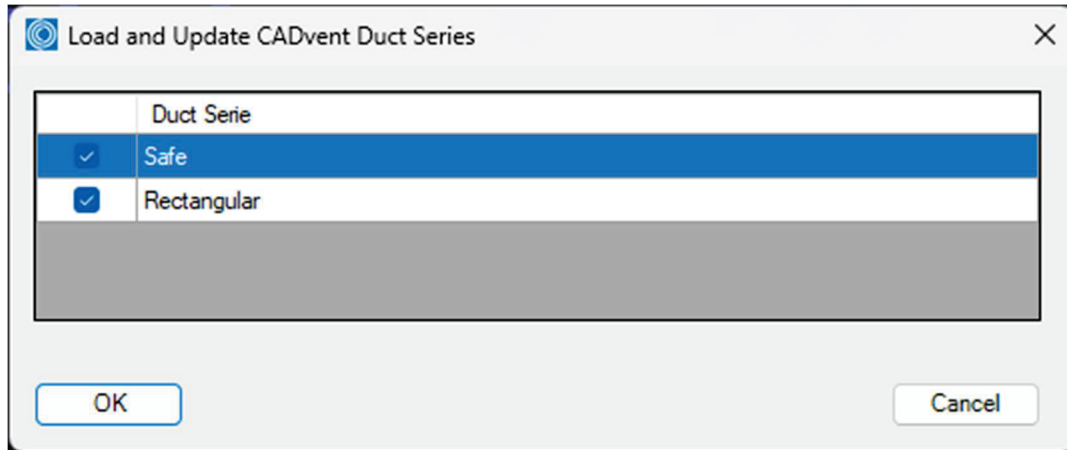5. **Model Checker** – Check if elements in drawing are valid products

6. **Update Model** – Modify elements to become valid products
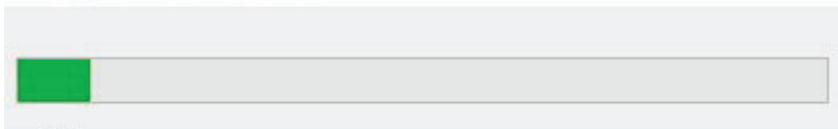

1. Duct Series

This command creates Revit duct types and loads families for Lindab fittings.

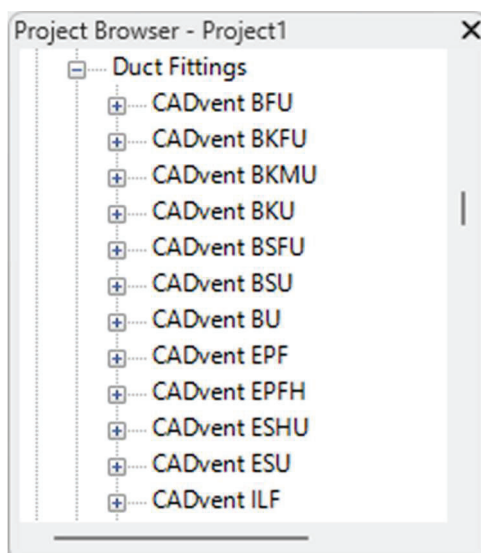Select the Duct series to be loaded into the Revit project.

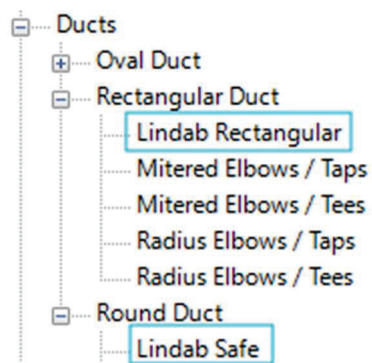On "OK" the selected Duct Series will create Revit Duct types.
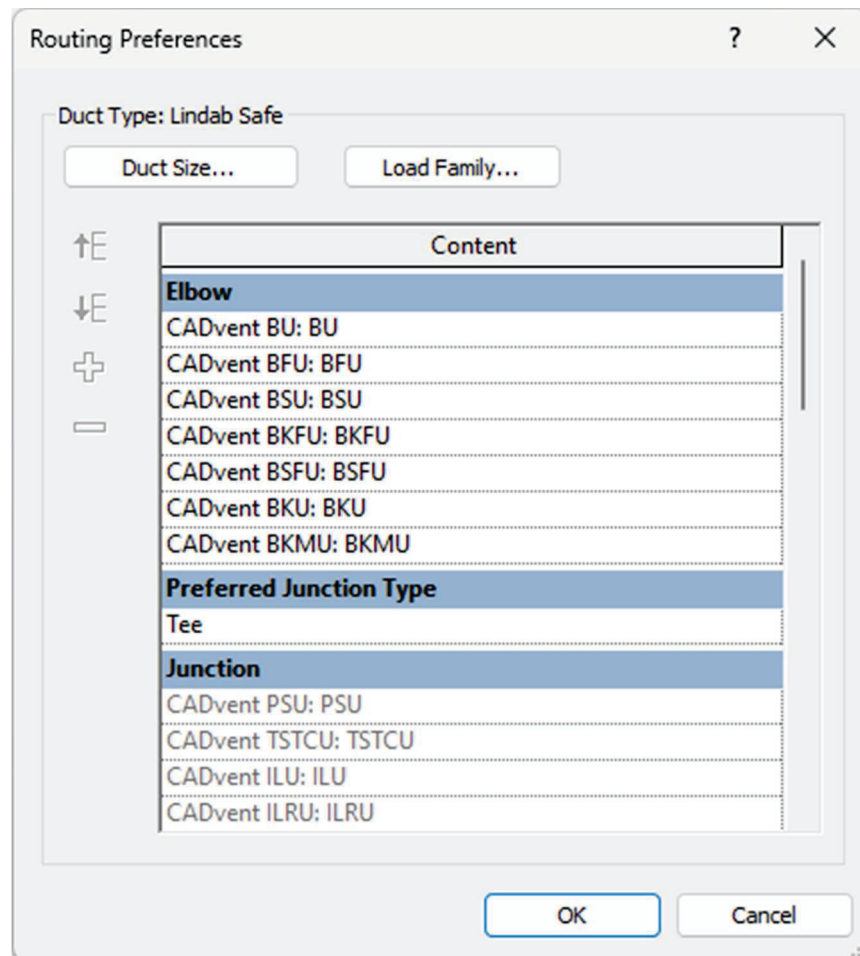

When all CADvent families have loaded, the duct fittings are available.

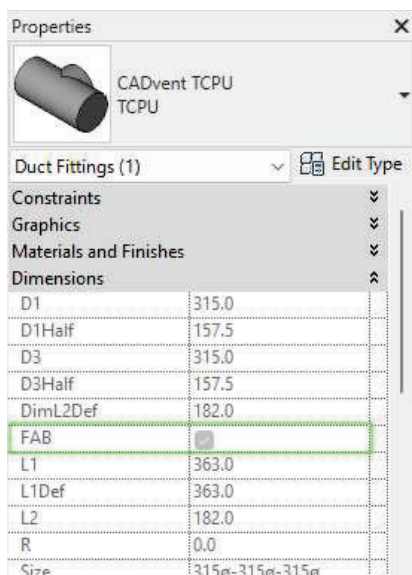The Lindab Duct types also appear in Revit.

These are configured with CADvent families in Routing Preferences.

2. Draw ducts and fittings

Use standard Revit functionality to draw ductwork while having the Duct type Lindab Safe or Lindab Rectangular selected.
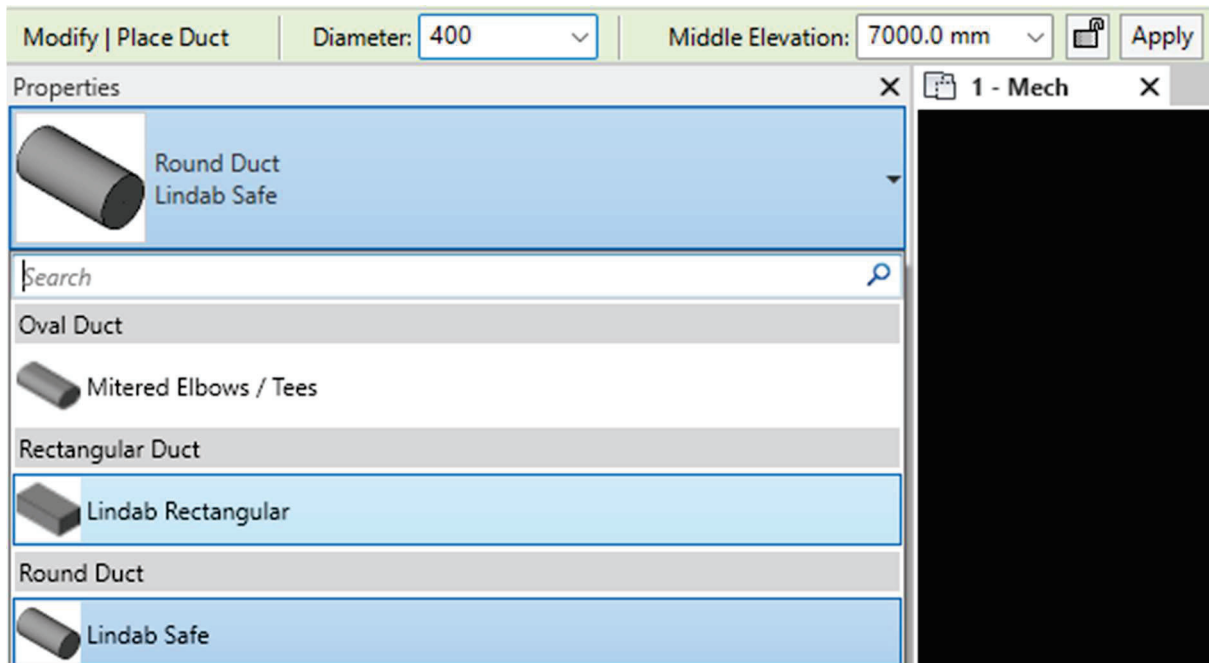
Make sure that the duct size you are using exists for ducts and fittings depending on the Lindab market.

Duct sizes in Revit are shared for the whole project. They are not assigned to a specific Duct Type.

If the Dimension property FAB for a Lindab fitting is checked it means that the fitting size is valid and can be fabricated.

3. Manage Ducts

The Manage Ducts function allows you to cut ducts into standard lengths, set flange type and insert connectors automatically.
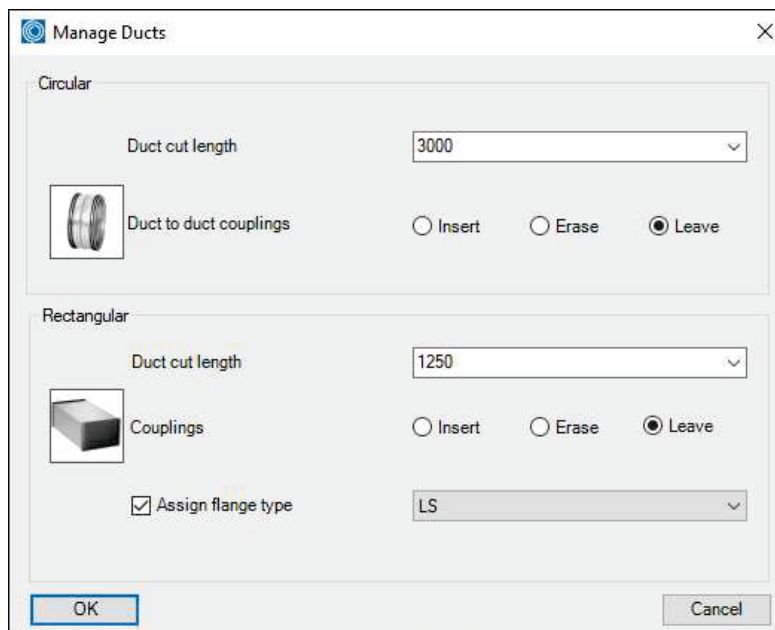

In the Round Selection you can set parameters to insert duct to duct and fitting to fitting couplings and select a standard length to cut round ducts into standard lengths. You can select a market dependant standard length or manually type a standard length.

The buttons Insert, Erase and Leave define whether you want to cut or re-cut the ducts (Insert), whether you want to remove existing duct cutting (Erase), or you want to leave the round duct cutting as is, f. ex. if you want to change only the rectangular settings.

In the Rectangular selection you have similar functions for duct cutting and insertion of flange types as in the round selection. In addition, you also have a selection of market specific flange types and a check button to assign the selected flange type to the rectangular ductwork.

Now you can select the products to be cut by dragging a window or press right mouse click or Return/Enter to select all products in the drawing.
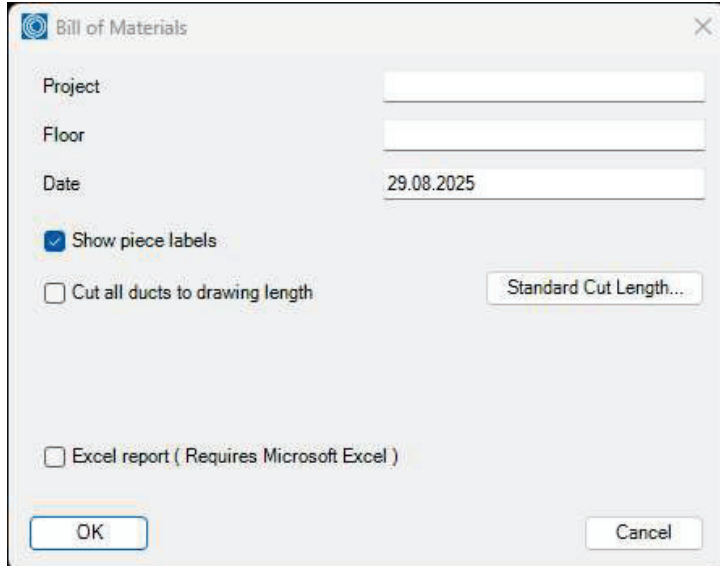

*Round and rectangular ducts with inserted flanges and connectors*

4. Bill of Materials

The Bill of Material function creates a material list for the selected ventilation products.

BoM has following settings:

Project:	Enter the name of the project if you want to show it on the printouts
Floor:	Add the description of the floor that you want to show on the printouts
Date:	Current date by default
Show piece labels:	Check this button if you want the BoM to divide each product that has a unique piece label
Cut all ducts to drawing lengths:	This will list all ducts with the individual length, as designed in the Revit project. Otherwise, all ducts length will be summed up and listed in standard length.
Standard cut lengths:	Adjust the standard Lindab cut length according to user standards
Excel report	Exports the current selection and format to Microsoft Excel

When you are finished with setup for the Bill-of-Materials you can push the OK button to get to the selection to select the objects that should be included in the BoM-report:
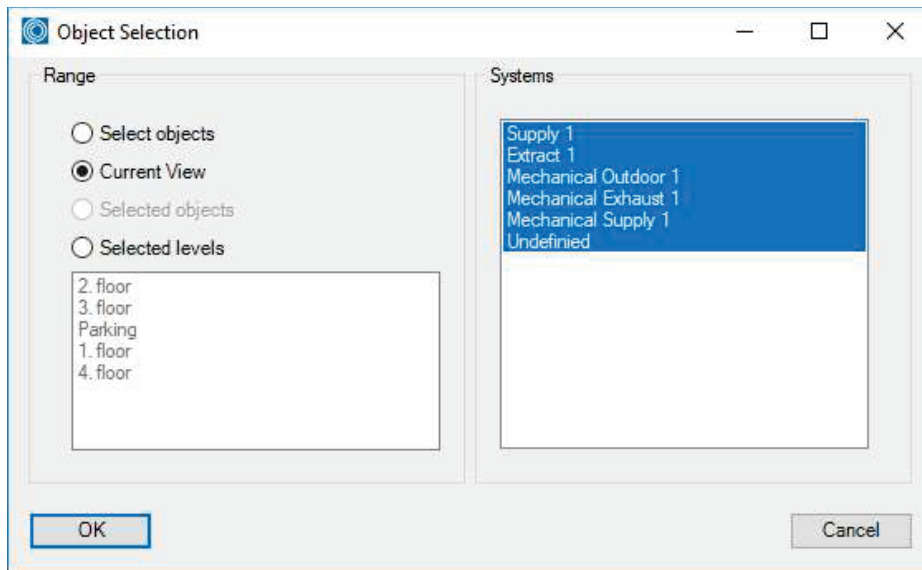
The Model Checker function will automatically check if the selected objects have any deviations from the standard and addresses in a table as shown below:
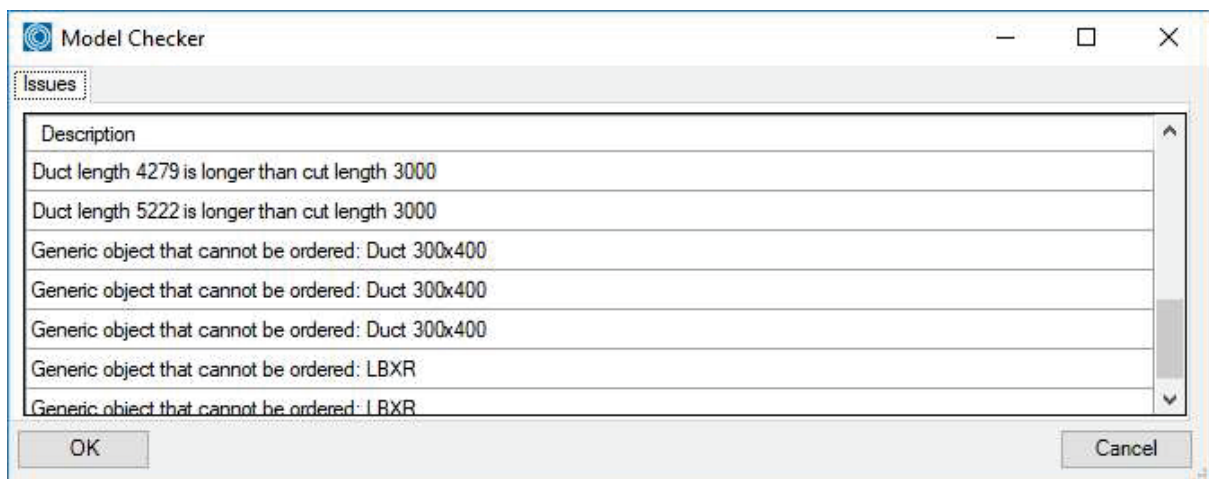
When pushing the OK button 2 dialogs will be opened. One dialog for the circular duct system components and technical products like diffusers, silencers and dampers and one dialog to show the rectangular ductwork:

Materialspecification

Projekt	Testprojekt
Del	Entréplan
Datum	31.10.2018

Typ / Tillverkare / Material	Produkt	Pos. nr.	Antal
Lindab			
Galvanized			
	LCA-125		2
	MBB-125-125-E		2
	NS19-H-S-2-125 - 4-way		2
Lindab			
Galvanized			
	SLCU 125 600 50		1
	SLCU 125 900 50		1

Materialspecification

Projekt	Testprojekt
Del	Entréplan
Datum	31.10.2018

Galvanized

LKR	Pos. nr.	Antal	A	B	L					fläns 1	fläns 2	fläns 3	
		1	600	400	1019					LS	LS		
		1	600	400	1042					LS	LS		
		2	600	400	1250					LS	LS	LS	
		14	600	400	1250					LS	LS		
		1	600	400	249					LS	LS		
		1	600	400	495					LS	LS		
		1	600	400	749					LS	LS		
		1	600	400	969					LS	LS		

LBSR	Pos. nr.	Antal	A	B	C	E	L			fläns 1	fläns 2	fläns 3	
		1	600	400	600	518	1100			LS	LS		

LBXR	Pos. nr.	Antal	A1	A2	B	R	ANGLE	L1	L2	fläns 1	fläns 2	fläns 3	
		2	600	600	400	100	45	25	25	LS	LS		
		1	600	600	400	100	90	25	25	LS	LS		

LEPR	Pos. nr.	Antal	A	B	L					fläns 1	fläns 2	fläns 3	
		1	600	400	0					LS			

5. Model Checker

Model Checker selects elements and checks whether they are valid for ordering. The list shows all objects that are not OK to order. By double-clicking on the product in each line the selected product moves into focus in the current Revit View:
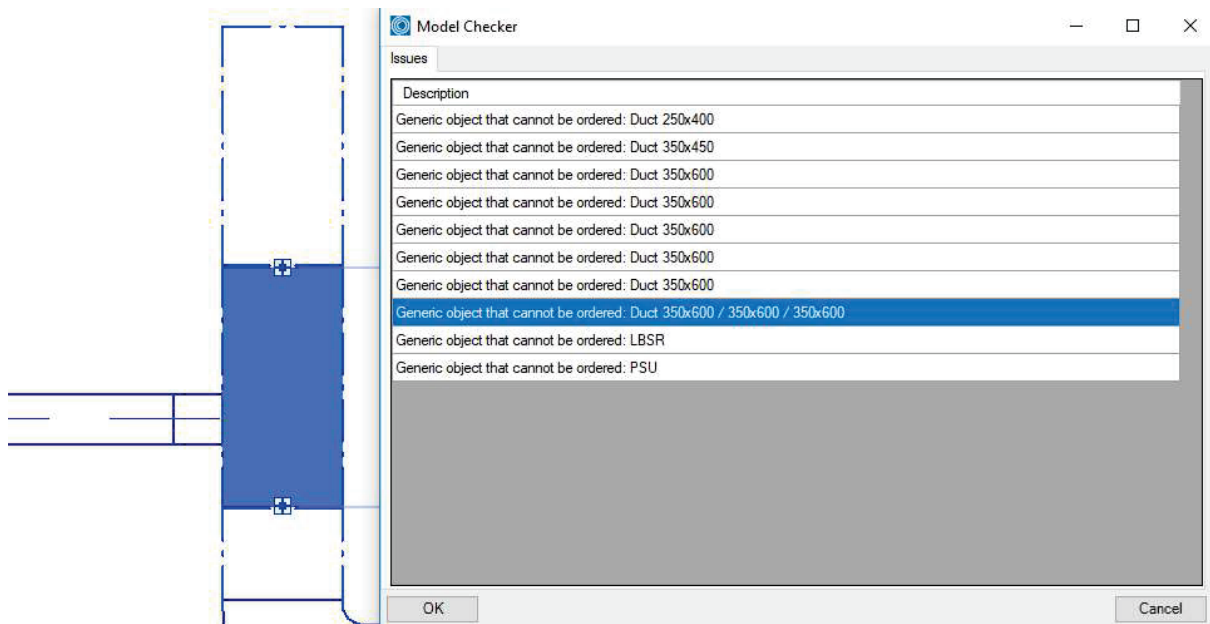
6. Update Model

The Update Model command will replace fitting families when needed to match size and connection rules. This way you can get the correct dimensions in Revit for the different duct fittings as well as the correct connection types (Male/Female) which aren't managed by standard Revit functionality.

Please note that the design of the duct fitting might not be exactly as in reality, important are though the outer dimensions like lengths, diameters and angle.