

# **Property Consistency Resolver & Property Manager Add-ins Guide**



# Bexel Property Consistency Resolver & Property Manager Add-ins Guide

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## Introduction

A distinctive property definition has a unique name, unit type, and group (property set) name. In practice, inconsistencies in property definitions occur.

Authoring Tool	Property		
	Name	Group Name	Unit Type
Source A	Offset	Other	Numeric
Source B	Offset	Other	Text
Source C	Offset	Identity data	Numeric

Table 1 – Example of Properties with the same name (different property set and property type) created in the Authoring tool

Properties with the same semantic meaning have names that differ from the original name in the Authoring Tool to keep their names unique. Their names will have the original name with the addition of either property's unit type or group (property set) name in brackets or both.

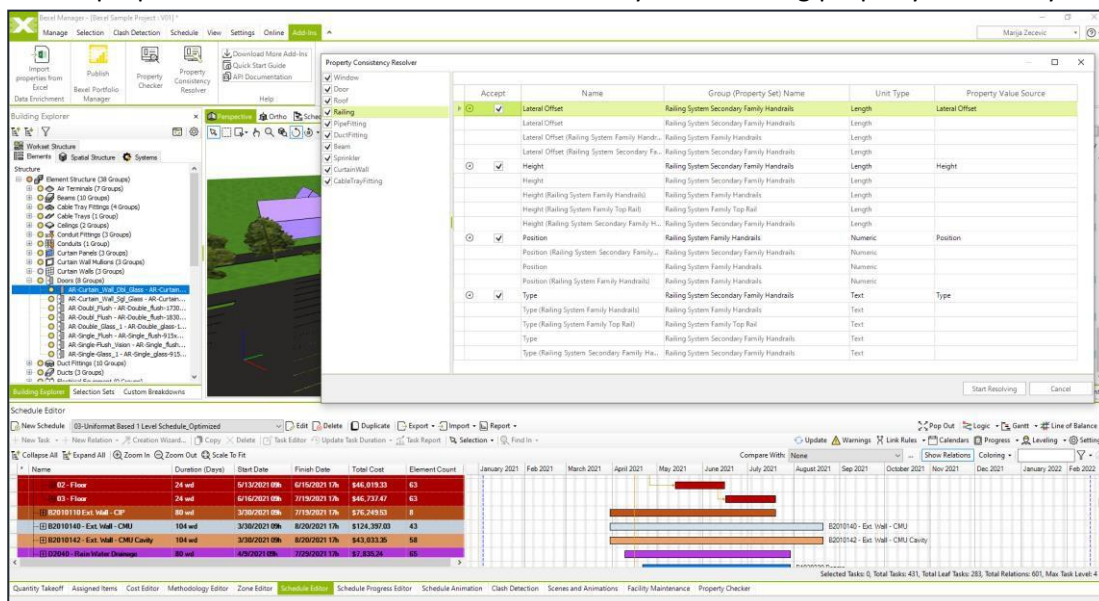
Property		
Name	Group Name	Unit Type
Offset	Other	Numeric
Offset (Text)	Other	Text
Offset (Identity data)	Identity data	Numeric

Table 2 – Example of Properties with the same name (different property set and property type) interpreted in BEXEL Manager

Many workflows rely on the names of semantically similar properties being the same. This add-in aims to resolve the naming issue and support these workflows.

Property Consistency Resolver automatically matches properties by their name by attempting to find a shared root name.

Matched properties will be removed and substituted by the resolving property defined by the user.

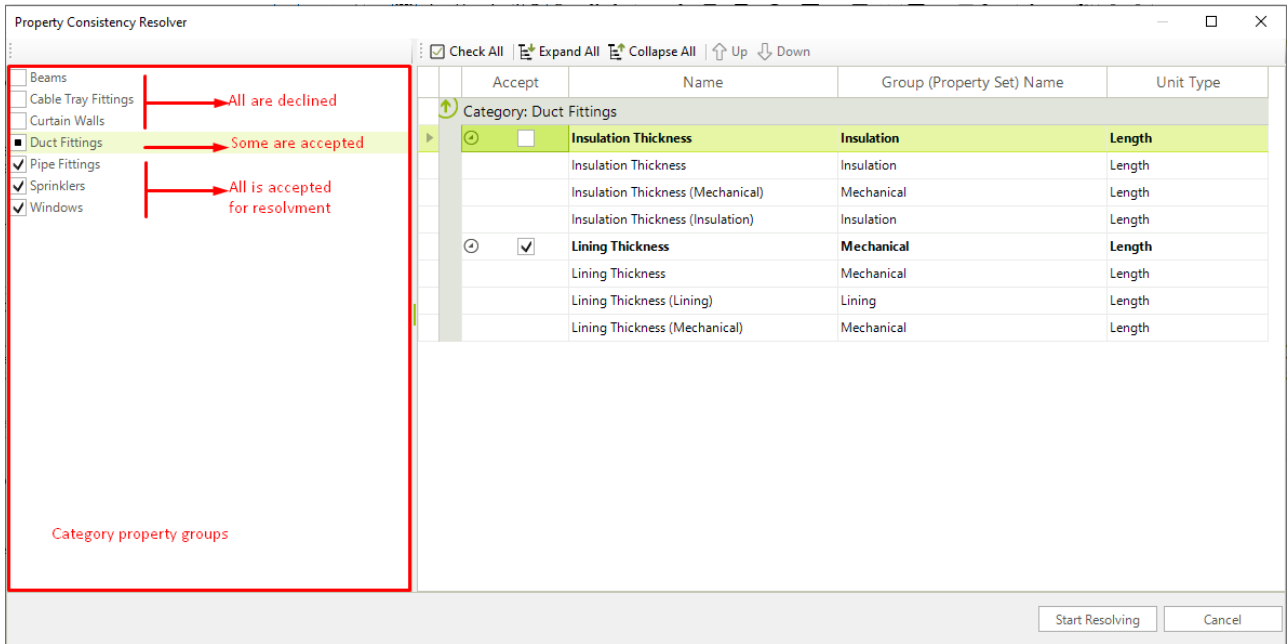


Screenshot 01: Bexel Property Consistency Resolver Add-in User interface



### Property Consistency Resolver

The left side of the window shows category property groups. Accepting (checking) a category will automatically select all of its properties for automated property resolving. The unchecked category is declined and will not be a part of property consistency resolution (Screenshot 03).



Screenshot 03: Different statuses of Category property groups

The right side of the window shows properties that will be resolved as editable bolded font rows. Under the resolving property are matched properties that the property consistency resolver will attempt to resolve (Screenshot 04). Matched properties can't be edited and are disabled (grey). Property consistency resolver will use only the accepted (checked) properties.



Screenshot 04: Resolving property and its matching properties



## Define the resolving property

The user can define the following for each resolving property:

- Property name** (Screenshot 05). The name has to be unique and can't be empty. To change the suggested property name, double click the appropriate cell and specify the property name.

Accept	Name
<input checked="" type="checkbox"/>	Extension
	End Extension
	End Extension (Construction)
	End Extension (Geometry Positioning)

Screenshot 05: Define Property Name for matching properties

- Group (property set) name** (Screenshot 06). The group name can't be empty. To change the suggested group name, double click the appropriate cell and specify property set name.

Accept	Name	Group (Property Set) Name
<input checked="" type="checkbox"/>	Extension	Positioning
	End Extension	Geometry Positioning
	End Extension (Construction)	Construction
	End Extension (Geometry Positioning)	Geometry Positioning

Screenshot 06: Define Group (property set) name for matching properties

- Property unit type** (Screenshot 07). To change the suggested unit type, click on the appropriate cell and choose a unit type from the drop-down list.

Name	Group (Property Set) Name	Unit Type
Analytical: Start Fz	Releases Member Forces	Numeric
Analytical: Start Fz	Releases Member Forces	Numeric
Analytical: Start Fz (Boolean)	Releases Member Forces	Boolean
Analytical: Start Fz (Yes / No)	Releases Member Forces	Boolean
Analytical: Start Fz (Numeric)	Releases Member Forces	Numeric

Screenshot 07: Define Property unit type for matching properties

- Preserve property value** (Screenshot 08). To change the suggested preserved property value, click on the **Up** or **Down** button to change the position of selected row, preserved property value will be the first row with existing property value that can match unit type of resolving property.

Accept	Name	Group (Property Set) Name	Unit Type
Category: Windows			
<input checked="" type="checkbox"/>	New Name	Constraints	Length
	Sill Height (Constraints)	Constraints	Length
	Sill Height	Constraints	Length

Screenshot 08: Define Property value source for matching properties

Respective positioning of properties as the value source is used as the primary target when attempting to preserve the value of the resolving property. If possible, the property consistency resolver will use the value of the first property, which has a value, as the value for the resolving property.

When attempting to preserve the value of the resolving property, if neither of properties have a value, the property consistency resolver will use the matched property value with the same unit type as the chosen unit type.

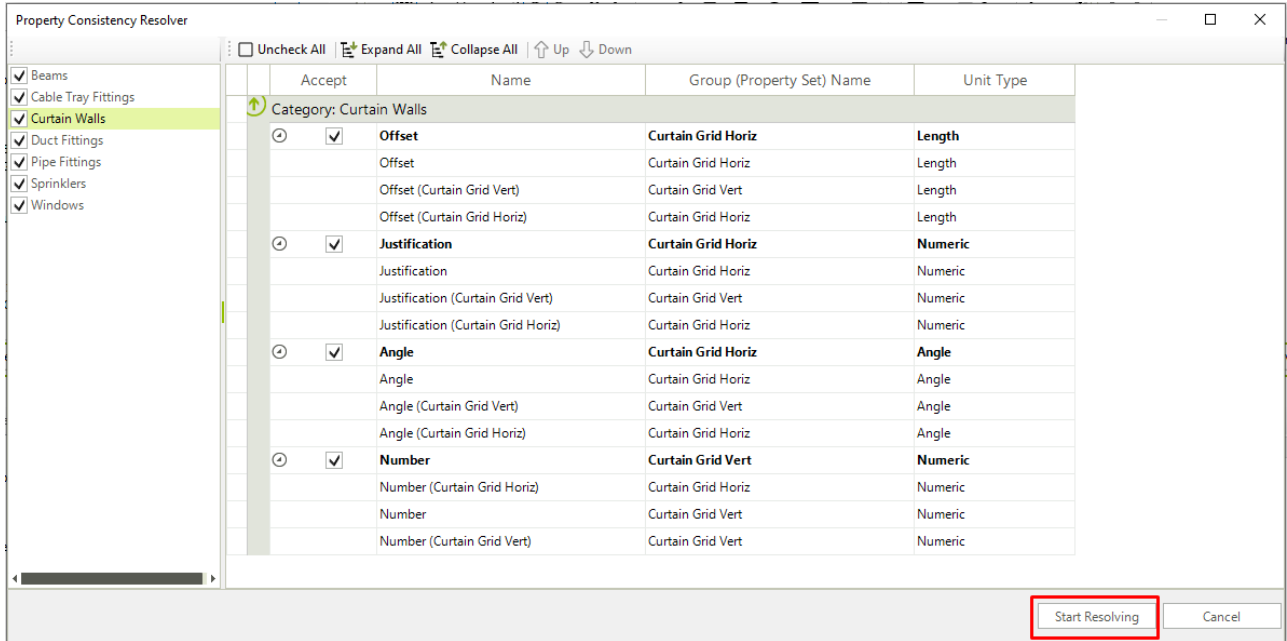
When the property consistency resolver can't find a matched property with the same unit type, it will use any matched property value.





### Start resolving process

After defining all required parameters, click on the **Start Resolving** button to implement changes on selected properties.



Screenshot 09: Start Resolving process

**NOTE: Currently, Property resolver will identify and resolve only instance properties in the project.**

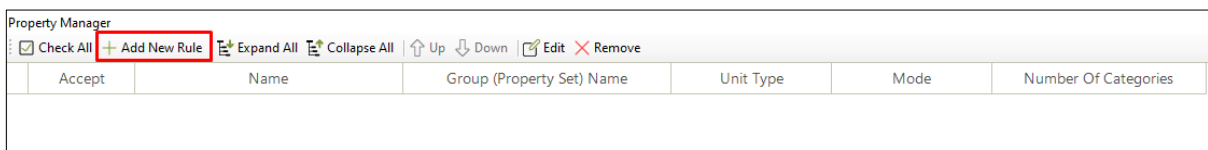


## Property Manager

Property Manager allows for managing existing properties by combining them into a new property. By grouping existing properties under a single resolving property, the user can replace the grouped existing properties with a new resolving property. By doing so, the user can choose the name, group name (property set), and unit type of the property that will replace the existing properties in the group. The Property Manager will try to preserve the value of existing properties when creating the new replacement property. Effectively this Add-in allows a user to change the name, group name (property set), and unit type of existing properties.

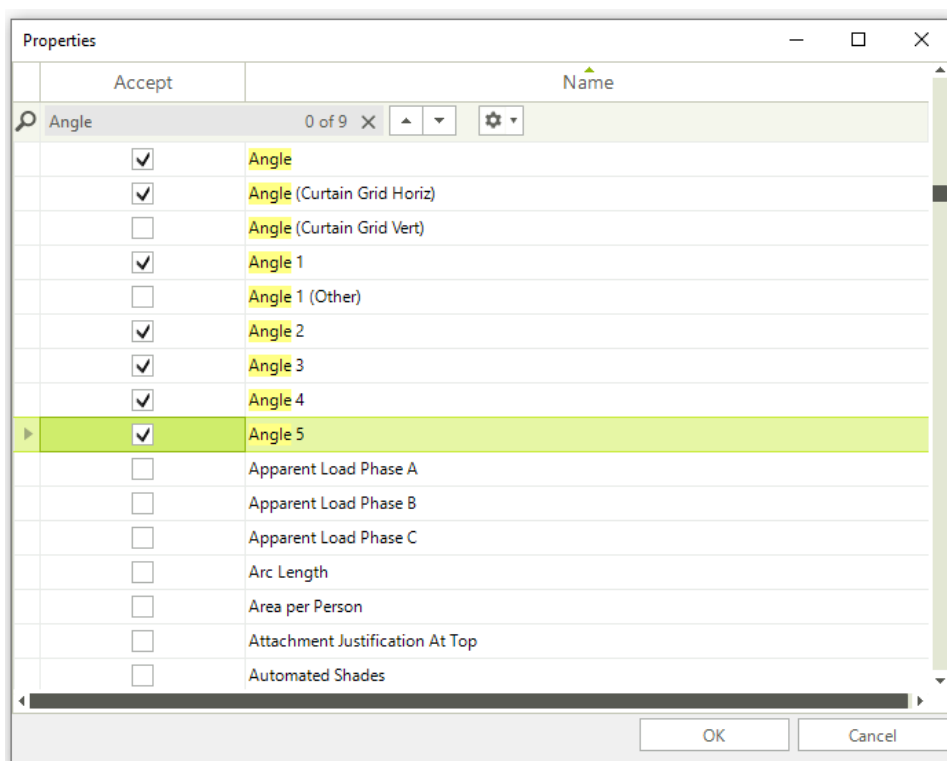
### Define managing property

To start managing properties you should create the managing property rule by selecting Add New Rule. That allows you to select Element Properties from Entire Project, without consideration in which category the property is already placed.



Screenshot 10: Adding new rule in Property Manager

The form will show names of all Element Properties available for managing. A user can choose some of properties they want to combine in order to rename it, change their property set or change their unit type. All selected properties will be placed in the same Rule that will replace selected properties within that rule with the property specified in the bolded row, once when the property manager is ran.



Screenshot 11: Picking properties to be managed



Now, user can manage new property any way it's needed or required.

The first row, which has bold letters is the New Property Rule, represents the property that shall replace all of the selected ones (listed below).

Accept	Name	Group (Property Set) Name	Unit Type	Mode	Number Of Categories
<input checked="" type="checkbox"/>	<b>Angle</b>	<b>Dimensions</b>	<b>Angle</b>	<b>Existing Categories</b>	<b>5</b>
	Angle	Dimensions	Angle		4
	Angle	Curtain Grid Horiz	Angle		1
	Angle (Curtain Grid Horiz)	Curtain Grid Horiz	Angle		1
	Angle 1	Dimensions	Angle		1
	Angle 1	Other	Angle		1
	Angle 2	Dimensions	Angle		1
	Angle 2	Other	Angle		1
	Angle 3	Other	Angle		2
	Angle 4	Other	Angle		2
	Angle 5	Other	Angle		1

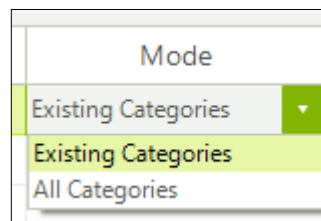
Screenshot 12: Managing properties

By editing the **Name** or the **Group (Property Set) Name**, it's possible to define a Property Name either from existing names of the properties selected for managing or to type a new name.

Accept	Name	Group (Property Set) Name	Unit Type	Mode	Number Of Categories
<input checked="" type="checkbox"/>	<b>Angle</b>	<b>Dimensions</b>	<b>Angle</b>	<b>Existing Categories</b>	<b>5</b>
	Angle	Dimensions	Angle		4
	Angle (Curtain Grid Horiz)	Curtain Grid Horiz	Angle		1
	Angle 1	Curtain Grid Horiz	Angle		1
	Angle 3	Dimensions	Angle		1
	Angle 4	Other	Angle		1
	Angle 2	Dimensions	Angle		1
	Angle 2	Other	Angle		1
	Angle 3	Other	Angle		2
	Angle 4	Other	Angle		2
	Angle 5	Other	Angle		1

Screenshot 13: Managing new rule property Name

Using the Property manager Add-In, two modes are available for applying the property rules, Existing Categories or All Categories.



Screenshot 14: Modes for Property Manager

**Existing Categories** will apply a new property rule only in elements of categories in which selected properties exist.

**All Categories** will apply a new property rule in the Entire Project, on all elements of all categories. It means that elements of categories that didn't have selected properties initially, after applying property rules and running the property manager will get a new property created by specified rule with initially empty value.





Preserved property value will be determined by the position of properties selected for managing.

Accept	Name	Group (Property Set) Name	Unit Type	Mode	Number Of Categories
<input checked="" type="checkbox"/>	<b>Angle</b>	<b>Dimensions</b>	<b>Angle</b>	<b>Existing Categories</b>	<b>5</b>
<input checked="" type="checkbox"/>	Angle 1	Other	Angle		1
<input type="checkbox"/>	Angle	Dimensions	Angle		4
<input type="checkbox"/>	Angle	Curtain Grid Horiz	Angle		1
<input type="checkbox"/>	Angle (Curtain Grid Horiz)	Curtain Grid Horiz	Angle		1
<input type="checkbox"/>	Angle 1	Dimensions	Angle		1
<input type="checkbox"/>	Angle 2	Dimensions	Angle		1
<input type="checkbox"/>	Angle 2	Other	Angle		1
<input type="checkbox"/>	Angle 3	Other	Angle		2
<input type="checkbox"/>	Angle 4	Other	Angle		2
<input type="checkbox"/>	Angle 5	Other	Angle		1

Screenshot 15: Reordering properties

By pressing Up or Down buttons or just by moving the row, you can reorder properties for managing. Reordering indicates how property manager will try to preserve property value in the descending order, from the top to the bottom of the list of selected properties, in the same way as the Property Consistency Resolver works.

Number Of Categories gives information in which Categories managing properties is recognized (already exist).

Accept	Name	Group (Property Set) Name	Unit Type	Mode	Number Of Categories
<input checked="" type="checkbox"/>	<b>Angle</b>	<b>Dimensions</b>	<b>Angle</b>	<b>Existing Categories</b>	<b>5</b>
<input type="checkbox"/>	Angle 1	Other	Angle		1
<input checked="" type="checkbox"/>	Angle	Dimensions	Angle		4
<input type="checkbox"/>	Angle	Curtain Grid Horiz	Angle		1
<input type="checkbox"/>	Angle (Curtain Grid Horiz)	Curtain Grid Horiz	Angle		1
<input type="checkbox"/>	Angle 1	Dimensions	Angle		1
<input type="checkbox"/>	Angle 2	Dimensions	Angle		1
<input type="checkbox"/>	Angle 2	Other	Angle		1
<input type="checkbox"/>	Angle 3	Other	Angle		2
<input type="checkbox"/>	Angle 4	Other	Angle		2
<input type="checkbox"/>	Angle 5	Other	Angle		1

Screenshot 16: Number of categories column

Note that multiple properties can be managed simultaneously by specifying multiple property rules, as shown in the screenshot 17. Once all the rules are set, by running the add-in, all defined property rules will be applied.

Accept	Name	Group (Property Set) Name	Unit Type	Mode	Number Of Categories
<input checked="" type="checkbox"/>	<b>Working Angle</b>	<b>Working Dimensions</b>	<b>Angle</b>	<b>Existing Categories</b>	<b>6</b>
<input type="checkbox"/>	Angle 5	Other	Angle		1
<input type="checkbox"/>	Angle 4	Other	Angle		2
<input type="checkbox"/>	Angle 3	Other	Angle		2
<input type="checkbox"/>	Angle 2	Dimensions	Angle		1
<input type="checkbox"/>	Angle 2	Other	Angle		1
<input type="checkbox"/>	Angle 1 (Other)	Other	Angle		1
<input type="checkbox"/>	Angle	Curtain Grid 2	Angle		1
<input type="checkbox"/>	Angle	Dimensions	Angle		4
<input type="checkbox"/>	Angle	Curtain Grid Horiz	Angle		1
<input type="checkbox"/>	Angle 1	Dimensions	Angle		1
<input type="checkbox"/>	Angle 1	Other	Angle		1
<input checked="" type="checkbox"/>	<b>Working Diameter</b>	<b>Dimensions</b>	<b>Length</b>	<b>Existing Categories</b>	<b>2</b>
<input type="checkbox"/>	Nominal Diameter	Dimensions	Length		2
<input type="checkbox"/>	Nominal Diameter 0	Dimensions	Length		1
<input type="checkbox"/>	Nominal Diameter 1	Dimensions	Length		2
<input type="checkbox"/>	Nominal Diameter 2	Dimensions	Length		2
<input checked="" type="checkbox"/>	<b>Radius</b>	<b>Dimensions</b>	<b>Length</b>	<b>Existing Categories</b>	<b>2</b>
<input type="checkbox"/>	Radius	Dimensions	Length		2
<input type="checkbox"/>	Radius 1	Other	Length		1
<input type="checkbox"/>	Radius 2	Other	Length		1

Screenshot 17: Multiple managing property rules defined



## Start managing process

Finally, when all managing rules are set, finish the process of property editing by pressing the Start button.

Accept	Name	Group (Property Set) Name	Unit Type	Mode	Number Of Categories
<input checked="" type="checkbox"/>	<b>Working Angle</b>	<b>Working Dimensions</b>	<b>Angle</b>	<b>Existing Categories</b>	<b>6</b>
	Angle 5	Other	Angle		1
	Angle 4	Other	Angle		2
	Angle 3	Other	Angle		2
	Angle 2	Dimensions	Angle		1
	Angle 2	Other	Angle		1
	Angle 1 (Other)	Other	Angle		1
	Angle	Curtain Grid 2	Angle		1
	Angle	Dimensions	Angle		4
	Angle	Curtain Grid Horiz	Angle		1
	Angle 1	Dimensions	Angle		1
	Angle 1	Other	Angle		1
<input checked="" type="checkbox"/>	<b>Working Diameter</b>	<b>Dimensions</b>	<b>Length</b>	<b>Existing Categories</b>	<b>2</b>
	Nominal Diameter	Dimensions	Length		2
	Nominal Diameter 0	Dimensions	Length		1
	Nominal Diameter 1	Dimensions	Length		2
	Nominal Diameter 2	Dimensions	Length		2
<input checked="" type="checkbox"/>	<b>Radius</b>	<b>Dimensions</b>	<b>Length</b>	<b>Existing Categories</b>	<b>2</b>
	Radius	Dimensions	Length		2
	Radius 1	Other	Length		1
	Radius 2	Other	Length		1

Start Cancel

Screenshot 18: Finalizing work

**NOTE: Currently, Property manager will identify and manage only instance properties in the project.**