

## BIM Object Guide

Generic Window (Vent) & Actuator

Version 1.0

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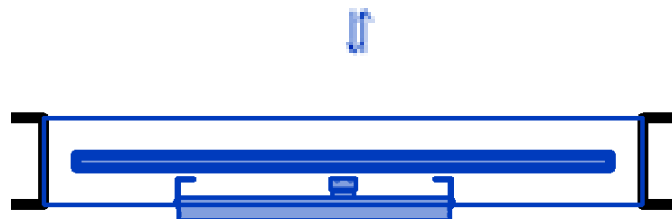
## 1.0 Introduction

SE Controls are committed to fulfilling the requirements of Level 2 BIM as mandated by the UK Government from April 4<sup>th</sup> 2016 for all centrally funded contracts. Furthermore we intend to produce high quality, fit for purpose content by utilising our relationships with Architects, Specifiers & BIM end users & determining the specific requirements and issues they experience with BIM content & processes.

## 2.0 Adding BIM objects into Autodesk Revit

### 2.1 Loading SE Controls generic vent objects into Autodesk Revit projects

Once you have downloaded the SE Controls generic vent BIM Object you can load it into your Revit project as a typical generic family. When you drop the generic vent object in the appropriate location in your project, please ensure that the actuator shown in the generic vent family is inside the building. You can flip the orientation by selecting the pair of arrows that appear once you select the vent family as shown in the image below.

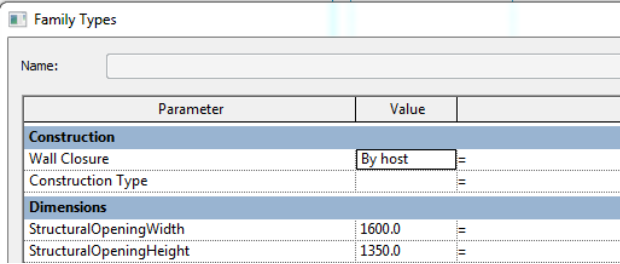


### 2.2 Modifying SE Controls generic vent dimensions

To modify the dimensions Structural Opening Width & Structural Opening Height of the generic vent from

within a Revit project, first select the frame of the vent at this point the 'Properties' panel should appear on the left hand side of the screen, secondly select 'Edit Type' within the 'Type Properties' window that appears, the user can then modify the vent "StructuralOpeningWidth" & "StructuralOpeningHeight". For details on the rules within a Generic Vent Object see *3.4 Vent dimension rules*.

Please note, actuator may not stay centred to vent in Revit 2014 due to technical issues within the software. The issue is not present in Revit 2015 onwards.



Parameter	Value	
<b>Construction</b>		
Wall Closure	By host	=
Construction Type		=
<b>Dimensions</b>		
StructuralOpeningWidth	1600.0	=
StructuralOpeningHeight	1350.0	=

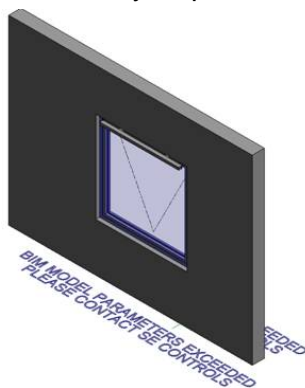
## 2.3 Vent orientation types

We have created generic vent objects in a number of common orientations, the orientation and actuator type will be dependent upon the specific application, the orientation is denoted by the use of a triangle symbol with the point of the triangle at the hinge location, for further information on the appropriate orientation for your project please contact SE Controls.



## 2.4 Vent dimension rules

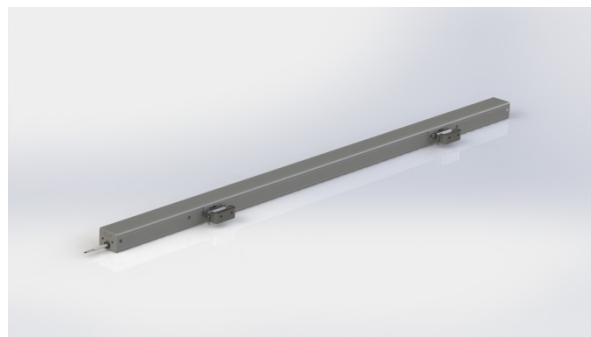
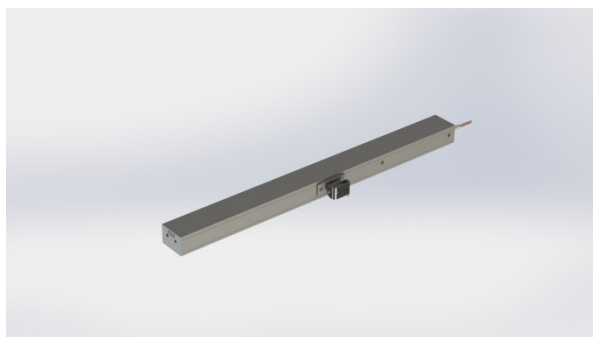
Vent dimension rules have been integrated into all SE Controls generic vent objects, this allows the user to freely modify the vent dimensions to suit their requirements and will prompt them when model parameters have been exceeded & technical support will be required from SE Controls. The prompt to seek support from SE Controls could be for a number of reasons such as the vent weight may exceed the maximum output force of the motor, the size of the vent may require multi-point locking devices to achieve good seal performance and more than one actuator may be required to automate the vent.



## 2.5 Actuator Types

All SE Controls generic vent objects have parametric relations and object logic between the vent and automation product. For example, it is typical at certain vent widths for a twin chain actuator to be fitted for reasons such as improving vent stability, satisfying a greater force requirement and improving seal/weather performance. Our generic vent objects will select an appropriate product based on the vent dimensions set by the user.

PLEASE NOTE – SECO N 24 25 range products are suitable for environmental ventilation only. SECO Ni 24 40 range products are suitable for smoke & environmental ventilation.



### **3.0 Properties**

#### **3.1 COBie**

Construction Operations Building Information Exchange (COBie) data is available for all SE Controls BIM objects. This data set forms a key part of Level 2 BIM requirements for UK Government contracts.

#### **3.2 NBS\_General**

NBS\_General data is available for all SE Controls BIM objects; this data set is a requirement of the NBS BIM Object Standard.

#### **3.3 IFC**

IFC data is available for all SE Controls BIM objects; IFC is an open-source data format that is fast becoming the industry standard for rich data exchanges.

#### **3.4 Other (Manufacturer/Product Specific)**

SE Controls has produced product specific data fields for information not applicable to other data sets such as COBie but still of importance to a BIM end user.