

# System Group – SAB S.p.A.

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## Sabdrain

drainage channel system

BIM Object Guide:

**Drainage channel system – Canali di drenaggio**

**English Version**

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## BIM Object Guide System Group SPA:

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## 1.0 Introduction:

This document guides the use of the BIM System Group Catalogue objects:

### **Polypropylene drainage channel complete with cast iron slotted grid load class D400, steel edges and anchors for installation in the concrete**

Sabdrain polypropylene drainage channel, conform with the standard UNI EN1433 with external reinforcement ribs and male/female embedding system.

The channel has an internal net area of ...x... mm and length 1000 mm, 90° embedding presetting (it can be possible to realize 90° deviations without bends, tee or other special items), 2 longerons in the lower side with openings to improve the adesion with concrete and 4 holes for the connection with any steel reinforcing bars.

The channel has two upper steel reinforcing edges h = 20 mm and l = 1000 mm

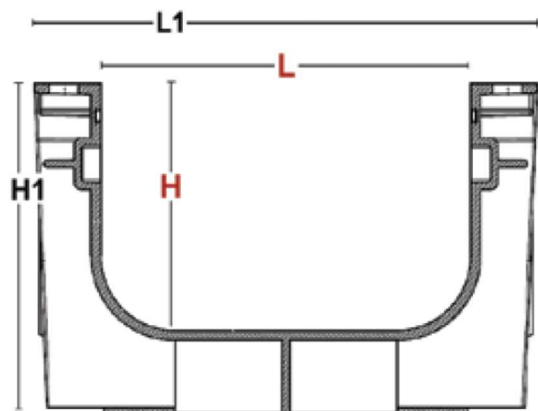
The channel will be delivered with two cast iron slotted grids, load class D400, conform with the standard EN1433, side h 20 mm, width ... mm, length 500 mm, each grid is fixed to the channel with four screws (two for each side) directly screwed on the concrete anchoring edges.

The channel has CE marking and must be produced by a company with a Quality Management System certified according to UNI EN ISO 9001/2015. The channel is conform with the standard UNI EN 1433, with thirty part certification.

The producer, on request, can provide the following documents, all iussed by independent bodies and laboratories:

- Conformity certificate according with UNI EN 1433
- Load test reports according with the class D400
- Abrasion test report according to ISO5470
- Chemical resistance according with ISO/TR10358

DIMENSIONS			
Internal		External	
L	H	L1	H1
100	50	150	80
100	100	150	130
100	150	150	180
150	100	200	130
150	150	200	180
200	100	250	130
200	150	250	180
200	200	250	230
200	250	250	280
200	300	250	330
300	200	390	240
300	300	390	340



## 1.1 Denominations

The parameters of the BIM objects are named according to the NBS National BIM Library objects standard to identify their type and configuration.

The fields are aggregated using the underscore character ( \_ ) and the information within the individual field is separated using the "minus" hyphens ( - ) characters. Field names are abbreviated to reduce the size and the separations are identified by capital letters to help readability.

The file and object names named as:

File name

Field1Author\_Field2 Manufacturer\_Field3 Category\_Field4 Product Range

Object

Field1 Author\_ Field2 Manufacturer\_Field3 Category\_Field4 Class Product\_Field5 Variations

## 2.0 Parameters

The parameters included in the BIM are:

### 2.1 Pset\_COBie

AccessibilityPerformance	The accessibility issue(s), which the object satisfies.
AssetType	An indication of whether the object is fixed or movable.
Description	A description of the type of object to detail any design intent.
Colour	Characteristic or primary colour of product.
Constituents	Optional constituent features, parts or finishes.
DurationUnit	Duration of expected life (typical value is 'years')
ExpectedLife	The typical service life of the object.
Features	Other important characteristics or features relevant to product specification.
Finish	Characteristic or primary finish of product.
Grade	Standard grading which the product corresponds.
Manufacturer	Email address for the organisation responsible for supplying or manufacturing the object
Material	Characteristic or primary material of product.
ModelNumber	The product, item or unit number assigned by the manufacturer of the object.
ModelReference	The name of the object as used by the manufacturer.
Name	A unique human-readable alphanumeric name that begins with the product type.
ConnectedStandardPipe	Connection Type
PipeOD	Connection Diameter
AssembledMinimumHeight	Typically the vertical or secondary minimum characteristic dimension of the assembled product
AssembledMaximumHeight	Typically the vertical or secondary maximum characteristic dimension of the assembled product
SiphonedGullyHeight	Typically the vertical or secondary maximum characteristic dimension.
NominalLength	Typically the larger or primary horizontal dimension.
NominalWidth	Nominal width of product, typically the characteristic or secondary horizontal or characteristic dimension.
TotalWeight	Total weight of product
ReplacementCost	An indicative cost for unit replacement.
Shape	Characteristic shape of product.
Size	Characteristic size of product.
SustainabilityPerformance	Description of the sustainability issue(s) which the object satisfies
WarrantyDescription	Description of the warranty content and any exclusions.
WarrantyDurationLabour	Duration of labour warranty.
WarrantyDurationParts	Duration of parts warranty.
WarrantyDurationUnit	Duration of warranties (typical value is 'years').
WarrantyGuarantorLabour	Email address for the organisation responsible for the labour warranty.
WarrantyGuarantorParts	Email address for the organisation responsible for the parts warranty.
AssetIdentifier	The identification assigned to an asset that enables its differentiation from other assets.
BarCode	The identity of the bar code (or rfid) given to an occurrence of the product (per instance).
InstallationDate	The date that the manufactured item was installed (per instance).

SerialNumber	The serial number assigned to an occurrence of a product by the manufacturer (per instance).
TagNumber	The tag number assigned to an occurrence of a product by the occupier (per instance).

### 3 - Load the IFC (INDUSTRY FOUNDATION CLASS) -BIM object

IFC is a neutral, open, non-proprietary file format and not controlled by a single or group of software producers. The file format is an object oriented parametric developed by BuildingSMART to facilitate interoperability in the field of architecture, engineering and construction. IFC is the collaboration format commonly used in BIM projects. The specification of the IFC model is open and available. In theory, it should allow the exchange and use of relevant data and information between different BIM software.

The IFC file is in IFC2x3 format. The new IFC4 scheme is announced soon, but the currently "certified" format is IFC2X3, which is preferred because it allows greater compatibility with the available BIM applications.

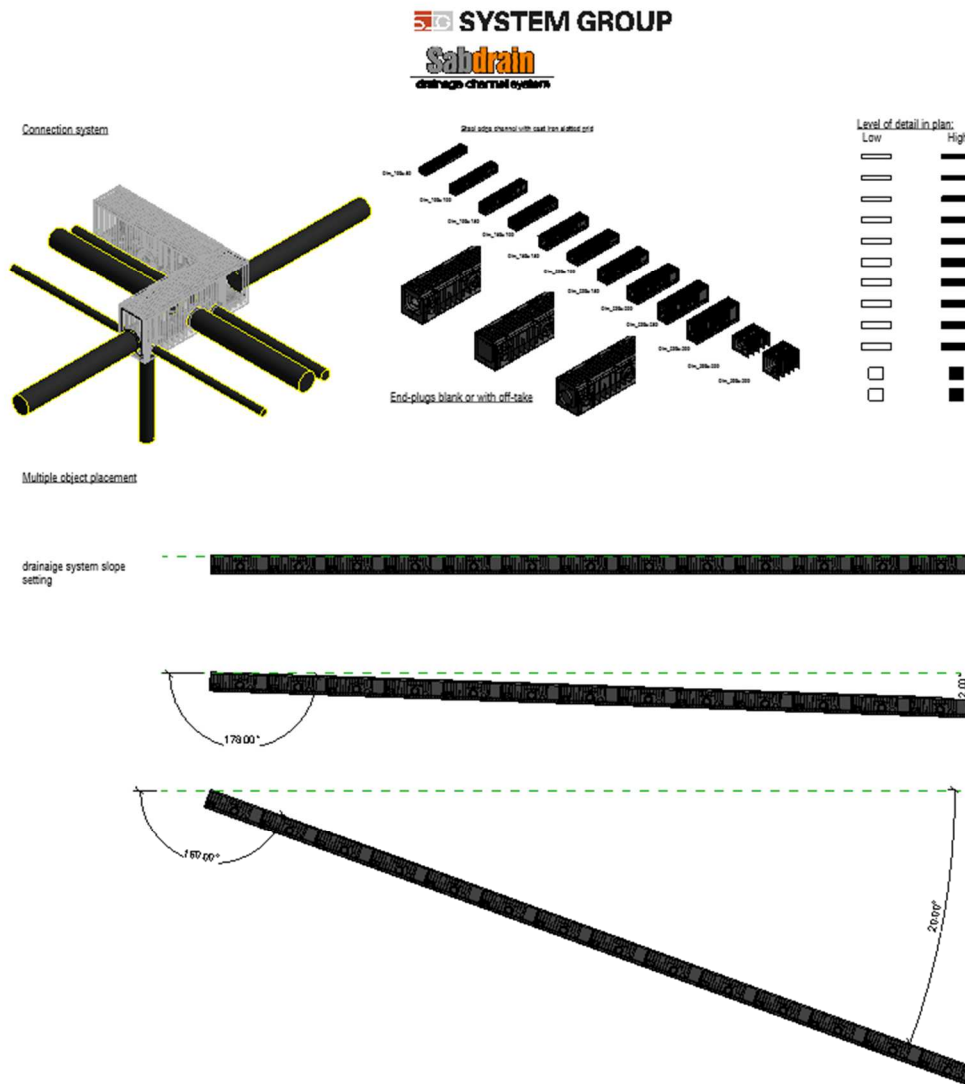
In the old versions of Autodesk Revit (example Revit 2013) the export function to the IFC format is done through the use of a specific plugin. IFC is a rapidly developing scheme and new versions of the IFC plugin are often available within the same version of the Revit software. If export is requested in IFC format, we recommend updating the IFC plugin to the latest version.

see <http://apps.exchange.autodesk.com/RVT/en/Home/Index>

Please note that System Group assumes no responsibility for the supply of IFC and RVT files, its accuracy, reliability and accuracy, nor for any damages, losses, lost profits, etc. as a result of its use.

For information on the IFC Industry Foundation Class, visit the buildingSMART site information page at <http://www.buildingsmart-tech.org/specifications/ifc-overview>

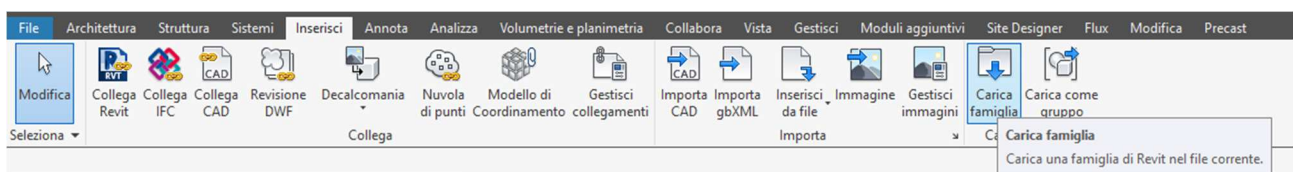
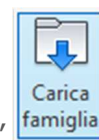
## 4 - Load the BIM object in Autodesk Revit



The BIM object "SABDRAIN" is intended, to be added to the project, as a loadable <family>. The object is presented in a Revit .rte template file from which it is easy to extract the object in .rfa format.

The typical method for adding a BIM object to the project with the extension .rfa (Revit Family) is as follows:

1. Select from Tool tab "Insert" >> "Sistemi" >> "Inserisci" >> "Annota" >> "Load Family"




2. Find the path of downloaded SABDRAIN object >>Open



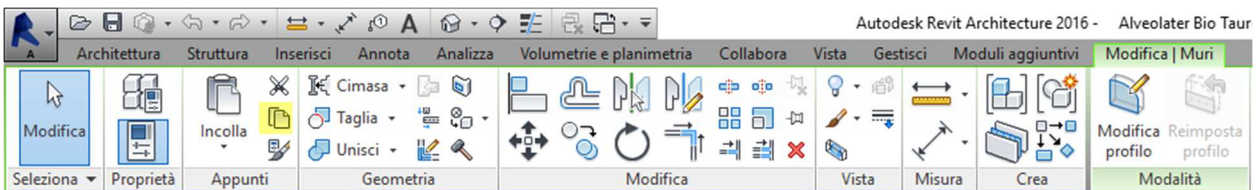
3. Now the object SABDRAIN is part of Families inside the RVT project

3. A new Revit file, containing the Hydro 16 system family can be used normally.

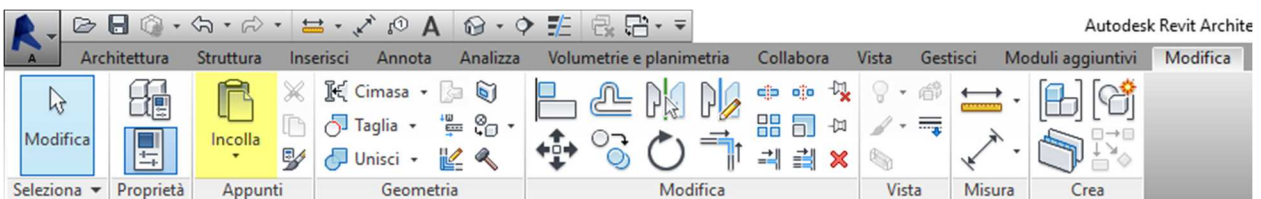
The typical method for adding a IFC BIM-object to the Project is:

	<ol style="list-style-type: none"><li>1. Select form icon  &gt;&gt; Open&gt;&gt; IFC</li><li>2. The program will open a new window with the inserted BIM object</li></ol>
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3. Select the object and Copy it (press Ctrl + C on keyboard ) or use Edit tab on the toolbar and select the Copy to Clipboard command.



4. In the target window, paste the BIM object file (Ctrl + V on the keyboard) or use the Edit and Paste command.



- This adds a new family type to the family type list.
- The BIM object is now available for use in the Project file.

## 5 - Using BIM object "SystemGroup\_Hydro 16"

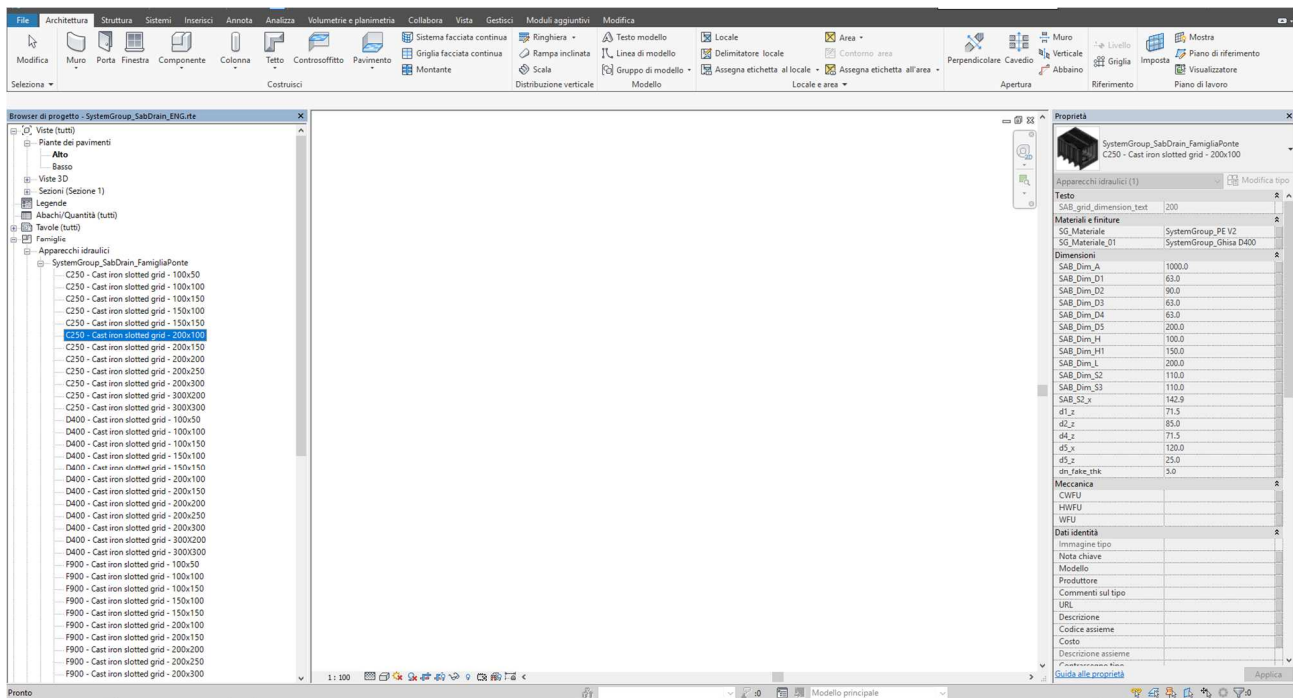
The just loaded object belongs to the "Plumbing Fixture" category and, inside the project, it can interact properly with the object that belongs to the "Pipe" category.

The insertion in the work area can be done in 2D plan view or 3D view.

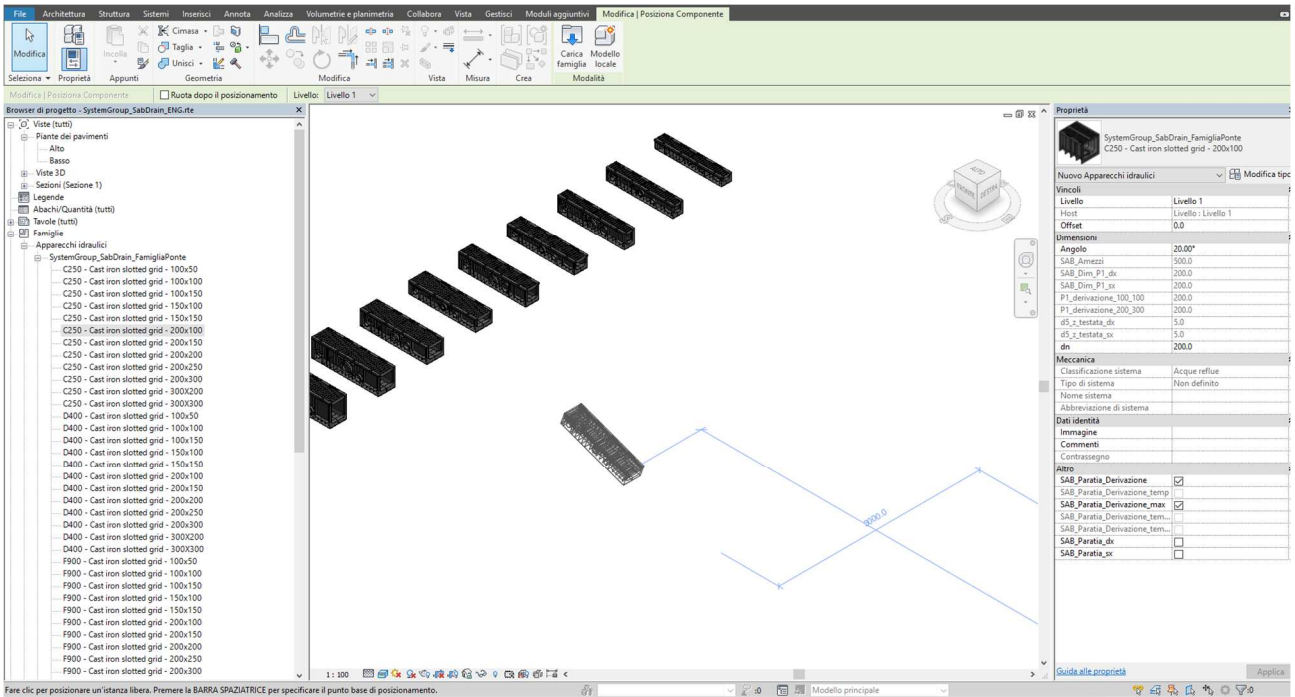
It is advisable to use the object in plan views as this allows greater control and precision in operations.

To better understand, we will indicate the steps through the three-dimensional view.

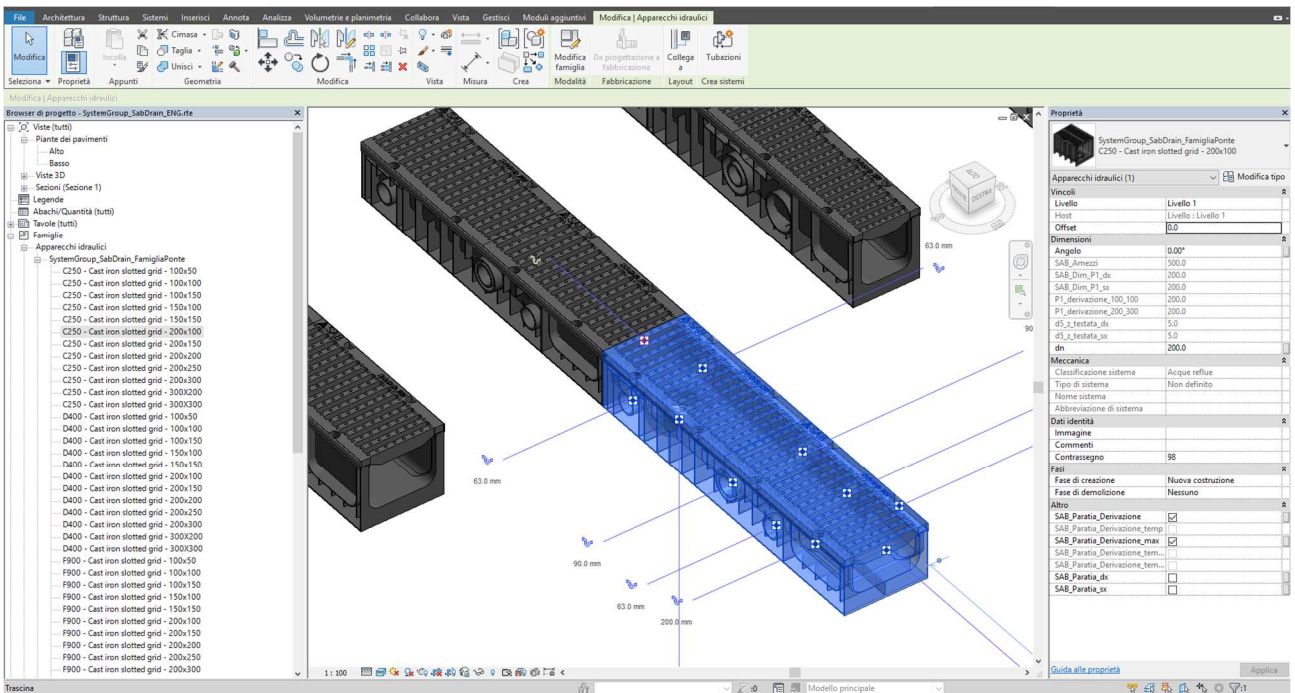
1. To use the object in the model, select the family from the Project Browser and drag it into the work area.



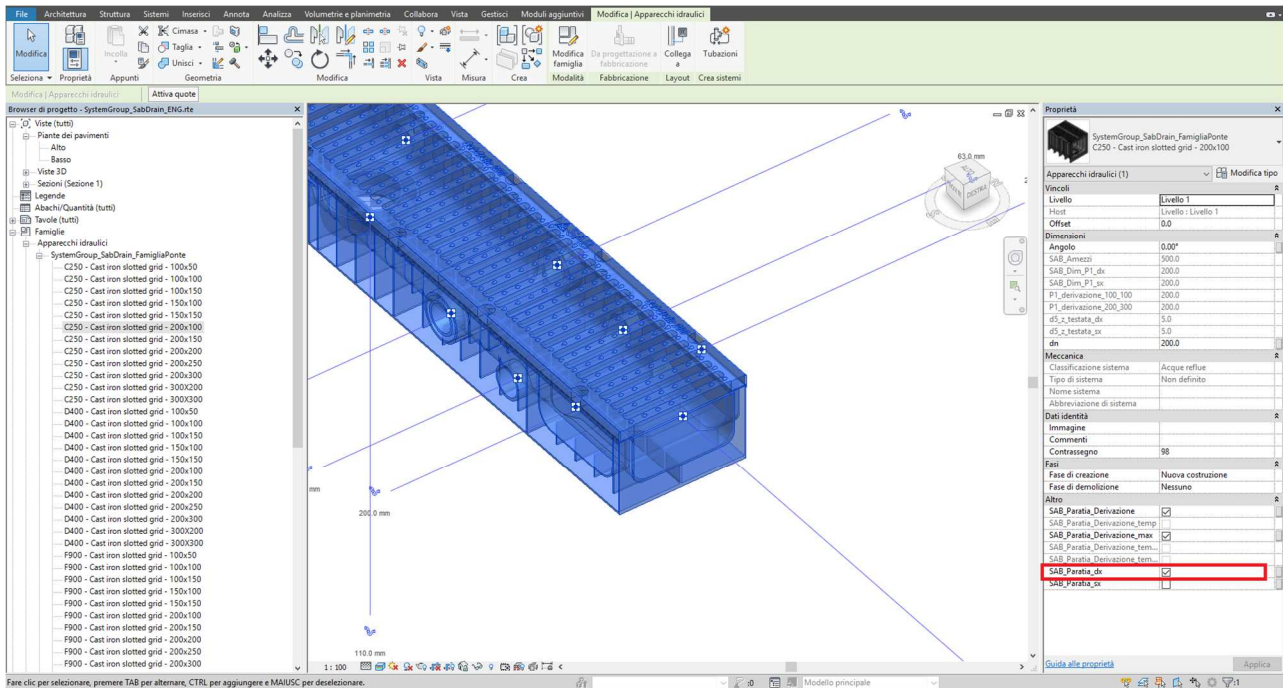
2. A preview of the object will appear on the cursor.



3. Now it will be sufficient to click anywhere in the project space to place the object. For precise positioning it is necessary to click on one end of the channel (marked with a blue dot) and place it at the end of another channel.



- Once the object has been positioned, it is possible to manage the instance parameters (linked to the individual objects created in the model and not to the type of objects) such as the presence of end closing bulkheads using the parameters from the properties dialog.



## 6- Supply conditions

The service is offered by System Group SPA "as is", in good faith in the substantial respect of the rules, and no responsibility can be accepted for any damages deriving from use, losses, lost profits, etc. suffered as a result of use.

For more information on the IFC (Industry Foundation Class), visit the BuildingSmart website at <http://www.buildingsmart-tech.org/specifications/ifc-overview>

## 7 - Contacts

System Group technical division is at your disposal for informations about the right application of the products according to the best practices of use.

SYSTEM GROUP TECHNICAL DIVISION

[tecnico@tubi.net](mailto:tecnico@tubi.net)

Please come back to:

[www.tubi.net](http://www.tubi.net)