

Draft Revit Guideline for Food Service Equipment Content Creation



Introduction

The aim of this document is to provide uniform guidelines and standards for the preparation of Revit®- Contents for the equipment in the commercial kitchen industry.

Currently, the IFSE BIM Committee and the FCSI TAD Revit® Taskforce are coordinating their efforts to define a uniform global standard. Therefore, changes in this document may still occur.

Revit®-Content are simplified components or devices for the Revit® software that represent the real components or devices of the manufacturers.

Good quality Revit® content is a balance between design accuracy and a minimum level of detail, resulting in the smallest possible file size.

This guide is aimed at all those who create equipment in the commercial kitchen industry as Revit® content for the Revit® software, including device manufacturers, content service organizations, and other service providers who create content.

The standards in this guide can also be used as a guide by professional kitchen planners, but they do not cover all aspects of a project environment, as they are primarily aimed at the content of the equipment manufacturers.

Additional Documents

All additional files and documents to the Revit® guide for commercial kitchen equipment can be found here:

<https://hki-online.de/en/up-to-date/building-information-modeling>

The additional files and documents are:

- **Draft Revit® Guide for Commercial Kitchen Equipment.pdf** (this document)
- the **IFSE Parameter Data Dictionary.xlsx** in the current version
- the current text files with shared parameters **IFSE_SharedParametersList.txt** in seven languages (German, American English, International English, Spanish, French, Italian, Portuguese).
- the „Dummy-Families“ **IFSE_Dummy.rfa** with the shared parameters in seven languages (German, American English, International English, Spanish, French, Italian, Portuguese)
- the document **International Food Service Equipment Data Dictionary Parameter List: Basics**, which contains regulations regarding the IFSE Parameter Data Dictionary
- the comment table **International Foodservice Equipment BIM Parameters Comment Form.doc**, via which new IFSE parameters can be requested and existing ones commented on
- the current Revit® material library **IFSE Materials.adsklib**
- **Test protocol** for checking the created content

Feedback on the Revit® Guide for Commercial Kitchen Equipment

Please send your comments on the **Revit® Guide for Commercial Kitchen Equipment** and related documents to the following email address:

bim@hki-online.de

This will help us to improve it in the next version.

Comments can be submitted until 31 October 2020. The opposition period applies to this draft version.

General Information

The Revit® Version for the Content

Revit® files cannot be saved in an older version. It is therefore recommended to use the last possible Revit® version that can be started with a current Revit® license. **This is the third last version of the current version.**

For example, if the Revit® version 2021 is the current one, the content should be created in the 2018 version. Thus, a certain downward compatibility is maintained.

Family Templates and Categories

The Revit® content for the commercial kitchen equipment is to be created as **loadable families**.

For commercial kitchen equipment, the family template of the category **Specialty Equipment** shall be used.

If the components of the commercial kitchen equipment are to be shown cut, the family templates of the Category **Casework** or the Category **General Model** shall be used.

Since commercial kitchen projects are usually linked in building construction projects **host-based templates** must **not** be used (e.g. Specialty Equipment wall based.rft or Casework wall based.rft).

As there will be no separate category for the commercial kitchen equipment sector in Revit® in the foreseeable future, the only option left is to create commercial kitchen equipment on subcategories of the categories **Special Equipment**, **Casework** or **General Model** to separate it from other trades.

Subcategories – General Information

The category **Specialty Equipment** is used for most commercial kitchen equipment, but also for many other trades that do not have their own categories, e.g. conveyor systems or fire extinguishing systems. The number of additional subcategories should therefore be limited.

The main function of subcategories is the project-wide uniform control of the representation in views.

The **advantage** of subcategories is that each end user can define his own standard (line colours, patterns, thicknesses, materials) in his template file, to which components (families) automatically

adapt when they are loaded into a project. The prerequisite for this is that the families have been created according to the same standard.

The **disadvantage** of subcategories is that the number of subcategories skyrockets if content creators do not follow a uniform standard. As a result, the adaptation of subcategories becomes confusing and time-consuming for the end user.

Stainless steel is the material mainly used in the commercial kitchen industry. For this reason, all common components made of stainless steel that do not require special presentation should be created directly on the subcategory **QF_Foodservice_Equipment**.

Units

When creating content for worldwide use, use family templates for the metric system, and preferably mm as the unit of length. Create parts or devices in the actual size in the appropriate unit. Any family created in the metric system is automatically converted to the imperial system by Revit® when loaded into a project with imperial units. If you create families exclusively for the US market, please use the imperial system.

For the IFSE parameters, use the units specified for the respective parameters in the **IFSE Parameter Data Dictionary**.

Detail Level and Level of Geometry (LOG)

Professional kitchen planners can only use the content (Revit® families) of different manufacturers of commercial kitchen equipment efficiently for their planning in the different planning phases if it has been created in a uniform way.

In order for Revit® families to be usable for the different representations of professional kitchen planning, and in order for professional kitchen planners not to have to replace them with other families in the planning process, they must support the three **Detail Levels** available in Revit®: **Coarse**, **Medium** and **Fine**, with the following content:

Detail Level: Coarse

The detail level coarse is used for simple schematic and symbolic representations, such as **overview plans** or **concept designs**.

In the detail level coarse, only the **general outline** and **shape** of a device is shown. However, different commercial kitchen equipment should be distinguishable from one another; this is not guaranteed if equipment is only represented by a cuboid, for example.

It is recommended to create families in the detail level coarse with a **LOG** of **100**.

Detail Level: Medium

In the detail level medium, "**classic**" **planning** (approval planning, construction planning, installation planning) is carried out. In the detail level medium, the Revit® families are to be modelled abstractly in such a way that the edges of the Revit® shapes in 2D views correspond to the classic 2D CAD representation. The representation is supplemented with model and detail lines.

The 3D geometry should **not** be hidden in floor plans (and also in the other 2D views) and should be traced with detail elements (symbolic lines and masking), because this would lead to incorrect representation in the case of superimposed components.

Exceptionally, double-curved surfaces that Revit® cannot show properly in 2D views can be replaced with detail elements.

Connections to equipment and on-site connections for media recommended by manufacturers must be indicated in the detail level medium.

It is recommended to create families in the detail level medium with a **LOG** of **200**.

Detail Level: Fine

In the detail level fine, Revit® families are presented realistically so that the professional kitchen planner can use them for **visualizations**, including: isometric and perspective 3D views, 3D exports in DWF, DWG and PDF, renderings, videos, virtual reality, etc.

It is recommended to create families in the detail level fine with a **LOG** from **300** to **400**.

Recommendations for the Size of a Family File

Making a recommendation on the size of a family is not appropriate, since families that need to be modelled in great detail for certain purposes are inevitably larger than those that consist of few shapes.

Furthermore, families can contain entire systems of a commercial kitchen consisting of many nested components (families), these are then also much larger than the families that only represent individual components.

Keep to this recommendation when creating the Revit® content:

Families should include as little as possible, but as much as necessary.

Modelling Recommendations

Create your own family template that includes the standards of this guide to avoid re-entry

Identify all variants and options of a component or device before you start modelling the family.

Consider which variants and options are represented as types, and thus by type parameter and which as exemplar parameters.

Create type catalogues to allow selection of the appropriate type when inserting the family into a project.

Specify where the family insertion point should be located and whether its position is fixed or dynamic.

Consider beforehand how the family should be represented in the individual views in conjunction with the detail level.

Try to use the same elements in several levels of detail. Therefore, do not duplicate geometry that can be used in different detail levels.

Do not model geometry that is not visible when viewing the device from the outside.

For example, create only the exterior of a refrigerator; model the door, but not the interior of the refrigerator.

If interior elements are relevant for planning, such as the inner shelves of a closed cabinet, you represent them using symbolic lines - preferably on the subcategory **QF_Hidden_Lines**, so that you can show and hide them as required. The system subcategory **Hidden Lines** should be reserved for the function **Show Hidden Lines**.

Do not create closed devices as "sheet metal models" as in a mechanical engineering CAD application and do not model screws, bolts and other details irrelevant for planning and visualization.

The following sizes can serve as an orientation guide for the modelling

<i>Size of the geometry</i>	<i>Detail Level</i>
< 25 mm	Fine
25 – 75 mm	Medium
> 75 mm	Coarse

Nest families wisely and no more than two levels deep.

Only apply parametric series in families if the number of elements must actually be parametric. In all other cases, the number should be controlled by visibility parameters.

Avoid cut geometry with **Void Forms** if the geometry can also be created without, e.g. by using several **Chains of Lines** in the Edit Mode sketch, or by using several Forms.

It is recommended that geometry imported into a family as DWG, DXF, DGN, SAT, SKP or 3DM be re-modelled with Revit® shapes and that the imported geometry be removed to avoid display artifacts, complex view settings or countless layers

In order to quickly hide or show all logos contained in the commercial kitchen equipment families of a project, company logos should be created on the subcategory **QF_Logo**.

For more information on subcategories, see the **Subcategories - Standards** section.

IFSE-Parameters – General Information

The **IFSE parameters** are a uniform global standard for the commercial kitchen industry.

Primarily system parameters located in the **Identity Data** group should be used.

The use of these parameters for the commercial kitchen industry is described in the **IFSE Parameter Data Dictionary**; they are listed above in the **IFSE Parameter Data Dictionary**.

Furthermore, the IFSE parameters from the **IFSE_SharedParametersList** should always be used. This ensures that only one and the same parameter with a unique GUID is used for the same property in the commercial kitchen industry.

Analogous to the **IFSE Parameter Data Dictionary**, in which the IFSE parameters are translated into seven languages (US English, International English, Spanish, Portuguese, French, German and Italian), there are seven **Shared Parameter Files** (text files):

IFSE_SharedParametersList_DEU_XX.txt

IFSE_SharedParametersList_ENG_XX.txt

IFSE_SharedParametersList_USA_XX.txt (included since version 7.2)

IFSE_SharedParametersList_ESP_XX.txt

IFSE_SharedParametersList_FRA_XX.txt

IFSE_SharedParametersList_ITA_XX.txt

IFSE_SharedParametersList_POR_XX.txt

(XX = File version)

Other languages will be added as required.

Using the IFSE parameters when creating the Revit® content has two basic advantages. Only one standard needs to be considered and it is irrelevant in which of the seven languages parameters are created in a family.

This is because an Italian parameter that is loaded with a family into a German-language project is automatically translated if this parameter already existed in the project with the same GUID in German.

If a property cannot be described using an IFSE parameter, create a separate parameter for the property. See section **Create your own Parameters**.

Furthermore, it is possible to apply for an IFSE parameter for the property. The form for this can be found under the link in the section **Additional Documents**.

The **IFSE Parameter Data Dictionary** and the **IFSE_SharedParametersList** can be obtained via the link specified in the **Additional Documents** section.

IFSE Standards

Family Template

Use primarily **Specialty Equipment.rft** family Template.

If you need to create sections of Food Service Equipment, then use **Casework.rft** or **Generic Model.rft** family Template.

LOG

Specific Food Service Equipment must be designed so that they are represented in:

- Coarse **LOG 100**
- Medium **LOG 200**
- Fine **LOG 300-400**

Family Naming Format

For distinguish Food Service Equipment in the **Specialty Equipment**, **Generic Model** or **Casework** category from other elements, name the Families using the prefix **QF_**
(QF = Equipment Foodservice)

The Family name shall include **Manufacturer** and Model name.

All Wording shall begin with Capital Letter and use underscore (**_**) for spaces and between the words.

Syntax for the family name without a type catalogue:

QF_<Manufacturer>_<Model_Number>_<Other>

If a type catalogue is created for a family that is used in only one language, the family must be identified by the suffix **_cat**. This makes it clear to the user that a type catalogue belongs to this family.

Syntax for the family name with a type catalogue for only one language:

QF_<Manufacturer>_<Model_Number>_<Other>_cat

If families are made available in several languages, a type catalogue must be created for each language. The name of the type catalogue and the family must be the same.
(see further in section **Type Catalogues**)

Syntax for the family name with type catalogues for several languages:

QF_<Manufacturer>_<Model_Number>_<Other>_<Language>_cat

Use for **<Language>** the syntax that is also used in the file names for shared parameters: DEU, ENG, USA, ESP, FRA, ITA, POR.

Examples:

QF_MEIKO_M-iClean_HXL.rfa

QF_UNOX_XEVC-0711-EPR.rfa

QF_RATIONAL_SCC101.rfa

Type Names

The type name specifies the model name. This enables an exact identification of the device. Multiple types in a family are not mandatory.

Type names should show the essential differences between the types (capacity, size, connection values, configuration, media connections (operating modes), etc.) and, if applicable, indicate standard sizes.

Type naming should be as short as possible.

If types are named by size, only use dimensions in the order: <width> x <depth> x <height>. Avoid using characters or words (W, D, H or width, depth, height).

Example: 1000x800x900

Type Catalogues

It is recommended for families that contain six or more types to create type catalogues.

Type catalogues must have the same name as the associated family.

Type catalogues must be created for all languages in which a family is to be used.

The language of a type catalogue that uses IFSE parameters must correspond to the **language used in the project**, because type catalogues have type parameters of a family when they are loaded into a project, the values about the parameter names used in the project and not about the parameter names of the family or the GUIDs the parameters too.

Example:

A family contains the parameter **Depth**, the same parameter (same GUID) already exists in a German-speaking project with the name **Tiefe**. When loading the family into the project, the **Depth** parameter is renamed to **Tiefe** and a value can only be assigned to the **Tiefe** parameter from a type catalogue.

Subcategories - Standards

It is up to the content creators whether they create subcategories or not.

If content relevant to the end user is created on subcategories, the subcategories are to be named with the prefix **QF_**.

The sub-category **QF_Foodservice_Equipment** is to be used as the main sub-category for Food Service Equipment.

To the Category **QF_Specialty_Equipment** and the Subcategory **QF_Foodservice_Equipment** the material **QF_Metal-Stainless-Steel_general** is to be assigned from the IFSE material library.

The following subcategories are **optional** when creating family content on subcategories:

- **QF_Centerlines**
for axes (centre lines)
- **QF_Foodservice_Equipment**
for all model and detail elements that are not created in other subcategories
- **QF_Hidden_Lines**
for hidden lines
- **QF_Media_Connections**
for media connections
- **QF_Media_Connections_On-site**
for on-site media connections
- **QF_Media_Lines**
for media lines
- **QF_logo**
for company logos

If subcategories are created through which families are to be assigned materials across projects, the prefix **QF_Material_** should be used for the subcategories.

Necessary space requirements

On 14 June 2019, the IFSE Parameter Expert Group decided to indicate the necessary space requirements of components and devices on subcategories. The necessary space requirements may not be created optionally on the Specialty Equipment category.

Clearances must be specified in the following subcategories:

- **QF_Clearances_Door_Drawer**
for opening areas of appliance doors, flaps, hoods, filters, etc.
- **QF_Clearances_Service**
for access for maintenance and after-sales service
- **QF_Clearances_Code_Mandatory**
for safety-relevant distances
- **QF_Clearances_Operation** (*optional*)
for areas necessary for smooth operation of the device
This information is optional and is intended to assist the Food Service Equipment Designer in his planning.

System subcategories

The **Hidden Lines** subcategory is predefined by the system.

Family Origin

The family origin (insertion point) of Food Service Equipment is to be defined at the back-left of the appliance if there is no reason for a different position.

If there are clearances to the wall or other devices at the back, left or bottom, then this should be taken into account and the family origin should be defined on the outer edge of the clearances.

Preview Image (Thumbnail Preview)

Create a default 3D view for the thumbnail and name it **Preview Image**.

For the preview image, select the front-right-top alignment.

IFSE-Parameter – Standards

In order to describe the properties of components and appliances in the Food Service Equipment industry, **system parameters** and the **IFSE parameters** with predefined GUIDs from the **IFSE_SharedParametersList** must be used primarily.

The standards of the **IFSE parameters** are set in the **IFSE Parameter Data Dictionary**.

Create Your Own Parameters

If Properties of a component or device require parameters that are not included in the IFSE parameter list, create the necessary parameters based on the following guidelines:

- Keep the parameter names as short as possible
- Avoid abbreviations
- Write the first letter of the words in the parameter name with Capital Letters, e.g.: Hot Water Temperature, Cooling Water Supply Connection Size, Outlet Static Pressure.
- Use a common descriptor for a set of parameters as the first part of the name so that the parameters can be sorted logically:
Steam Volume, **Steam** Pressure, **Steam** Connection Description, **Steam** Connection Height
- Parameters for subsequent items should contain a number in the name before the last part of the description, but not a number in the name for the first element:
Cold Water Supply Connection Size, Cold Water Supply 2 Connection Size
- Avoid using symbols in parameter names, including:
+ - / \ * () “ ’ < > | ^ \$ { } [] .
- Do **not** use units in parameter names, e.g.:
 - Gas flow - litres per second
 - Electrical power in watts.
- Name Yes/No parameters to reflect the Yes value:
 - Has a handle
 - Is energy efficient
 - Show hoods

Classifications

OmniClass Number

Assign the **OmniClass number** that is relevant to the foodservice equipment in the **Family Category and Parameters** dialog box in the Family Editor.

The **OmniClass title** is automatically assigned according to the OmniClass number.

The following OmniClass numbers are available for Catering Equipment in the **Special Equipment and Casework** categories:

Revit® Version 2016

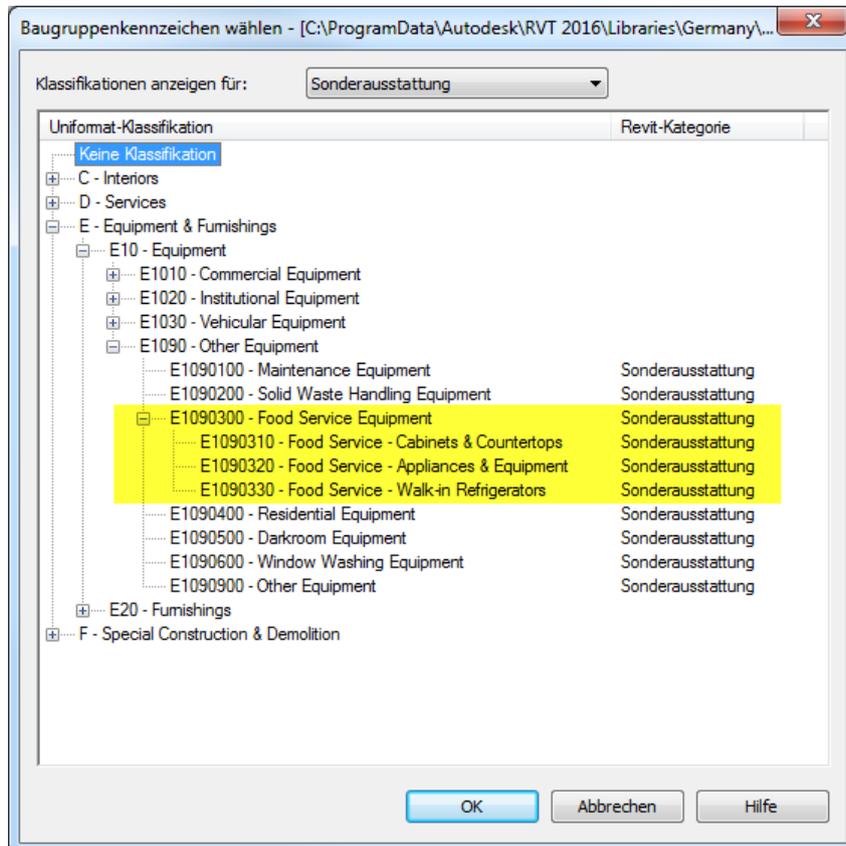
Klassifikationen anzeigen für: Sonderausstattung	
OmniClass-Nummer und -Titel	Revit-Kategorie
Keine Klassifikation	
23.10.00.00 - Site Products	
23.25.00.00 - Structural and Space Division Products	
23.30.00.00 - Openings, Passages, Protection	Sonderausstattung
23.35.00.00 - Covering, Cladding, and Finishes	
23.40.00.00 - Equipment and Furnishings	Sonderausstattung
23.40.05.00 - Plants and Planting Products	Bepflanzung
23.40.10.00 - Exterior Equipment and Furnishings	Sonderausstattung
23.40.20.00 - General Furniture and Specialties	Möbel
23.40.40.00 - Food Service Equipment and Furnishings	Sonderausstattung
23.40.40.11 - Specialized Food Storage and Display Furnishings	Sonderausstattung
23.40.40.11.11 - Refrigerators and Freezers	Sonderausstattung
23.40.40.11.11.11 - Refrigerators	Sonderausstattung
23.40.40.11.11.14 - Freezers	Sonderausstattung
23.40.40.11.11.17 - Refrigerator-Freezer	Sonderausstattung
23.40.40.11.14 - Food Storage Coolers	Sonderausstattung
23.40.40.11.14.11 - Walk-In Coolers	Sonderausstattung
23.40.40.11.14.14 - Display Coolers	Sonderausstattung
23.40.40.11.17 - Refrigerated Cases	Sonderausstattung
23.40.40.11.21 - Hot Cabinets	Sonderausstattung
23.40.40.11.24 - Cold Cabinets	Sonderausstattung
23.40.40.11.27 - Bottle Racks	Sonderausstattung
23.40.40.11.31 - Steam Tables	Sonderausstattung
23.40.40.11.34 - Snack Cabinets	Sonderausstattung
23.40.40.14 - Food Service Equipment	Sonderausstattung
23.40.40.14.11 - Food Delivery Carts and Conveyors	Sonderausstattung
23.40.40.14.11.11 - Food Delivery Carts	Sonderausstattung
23.40.40.14.11.14 - Food Delivery Conveyors	Sonderausstattung
23.40.40.14.14 - Food Preparation Equipment	Sonderausstattung
23.40.40.14.14.11 - Food Mixers	Sonderausstattung
23.40.40.14.14.14 - Drink Making Equipment	Sonderausstattung
23.40.40.14.17 - Food Cooking Equipment	Sonderausstattung
23.40.40.14.17.11 - Cookers, Ovens, Stoves	Sonderausstattung
23.40.40.14.17.14 - Hot Plates	Sonderausstattung
23.40.40.14.17.17 - Ranges	Sonderausstattung
23.40.40.14.17.21 - Grills	Sonderausstattung
23.40.40.14.17.24 - Fryers	Sonderausstattung
23.40.40.14.17.27 - Barbecues	Sonderausstattung
23.40.40.14.17.31 - Small Specialized Cooking Equipm...	Sonderausstattung
23.40.40.14.24 - Food Dispensing Equipment	Sonderausstattung
23.40.40.14.24.11 - Bar Equipment	Sonderausstattung
23.40.40.14.24.14 - Service Line Equipment	Sonderausstattung
23.40.40.14.24.17 - Soda Fountain Equipment	Sonderausstattung
23.40.40.14.27 - Ice Machines	Sonderausstattung
23.40.40.14.31 - Cleaning and Disposal Equipment	Sonderausstattung
23.40.50.00 - Educational, Cultural Equipment and Furnishings	Möbel
23.40.70.00 - Work Environment Equipment and Furnishings	Sonderausstattung
23.40.90.00 - Information and Communication Specialties	Sonderausstattung
23.40.95.00 - Furnishings, Ornaments, and Decoration	Sonderausstattung
23.45.00.00 - Sanitary, Laundry, and Cleaning Equipment	Sonderausstattung
23.50.00.00 - Conveying Systems & Material Handling	Sonderausstattung
23.55.00.00 - Manufactured Structures	Sonderausstattung
23.60.00.00 - General Purpose: Services	Sonderausstattung
23.65.00.00 - Supply and Distribution of Liquids and Gases	Sonderausstattung
23.70.00.00 - Waste Management	Sonderausstattung
23.75.00.00 - Climate Control (HVAC)	HLS-Bauteile
23.80.00.00 - Electric Power and Lighting	Elektrische Ausstattung
23.85.00.00 - Information and Communication	Sonderausstattung

Klassifikationen anzeigen für: Schreinerarbeiten	
OmniClass-Nummer und -Titel	Revit-Kategorie
Keine Klassifikation	
23.40.00.00 - Equipment and Furnishings	Sonderausstattung
23.40.20.00 - General Furniture and Specialties	Möbel
23.40.35.00 - Casework	Schreinerarbeiten
23.40.35.11 - Casework Components	Schreinerarbeiten
23.40.35.14 - Casework by Type	Schreinerarbeiten
23.40.35.17 - Casework by Purpose	Schreinerarbeiten
23.40.35.17.11 - Bank Casework	Schreinerarbeiten
23.40.35.17.14 - Hospitality Casework	Schreinerarbeiten
23.40.35.17.17 - Display Casework	Schreinerarbeiten
23.40.35.17.21 - Religious Casework	Schreinerarbeiten
23.40.35.17.24 - Library Casework	Schreinerarbeiten
23.40.35.17.27 - Educational Casework	Schreinerarbeiten
23.40.35.17.31 - Laboratory Casework	Schreinerarbeiten
23.40.35.17.34 - Medical Casework	Schreinerarbeiten
23.40.35.17.37 - Mortuary Casework	Schreinerarbeiten
23.40.35.17.41 - Commercial Kitchen Casework	Schreinerarbeiten
23.40.35.17.44 - Darkroom Casework	Schreinerarbeiten
23.40.35.17.47 - Residential Casework	Schreinerarbeiten
23.40.50.00 - Educational, Cultural Equipment and Furnishings	Möbel
23.40.70.00 - Work Environment Equipment and Furnishings	Sonderausstattung

UniFormat

The UniFormat classification is typically used in the USA to assist in early cost estimation.

Assign the key of the UniFormat classification using the system **parameter Assembly Indicator** in the **Identity Data** group.



MasterFormat

In addition to the two classification systems mentioned above, building components are often classified by their section in the CSI MasterFormat tables. The difference between OmniFormat and UniFormat is that the building component keys can be customized for the company or even for each project.

Assign the MasterFormat key to the **Component** parameter in the **ID Data** group.

Section 11 40 00 in MasterFormat 2016 describes the catering equipment:

11 40 00 FOODSERVICE EQUIPMENT

11 41 00	Food Storage Equipment
11 41 13	Refrigerated Food Storage Cases
11 41 23	Walk-In Coolers
11 41 26	Walk-In Freezers
11 41 33	Foodservice Shelving
11 42 00	Food Preparation Equipment
11 42 13	Food Preparation Appliances
11 42 16	Food Preparation Surfaces
11 43 00	Food Delivery Carts and Conveyors
11 43 13	Food Delivery Carts
11 43 16	Food Delivery Conveyors
11 44 00	Food Cooking Equipment
11 44 13	Commercial Ranges
11 44 16	Commercial Ovens
11 46 00	Food Dispensing Equipment
11 46 13	Bar Equipment
11 46 16	Service Line Equipment
11 46 19	Soda Fountain Equipment
11 46 23	Coffee and Espresso Equipment
11 46 83	Ice Machines
11 48 00	Cleaning and Disposal Equipment
11 48 13	Commercial Dishwashers

In Germany: DIN SPEC 91400 BIM classification according to STLB construction

<https://www.din-bauportal.de/Public/BIM/DIN-SPEC-91400.aspx>

One would have to clarify with buildingSMART which classification is best suited for international use and how it can be implemented in Revit® to recommend it here.

Materials

To ensure consistency in projects and to reduce the number of materials used in a project by the end user, all equipment families that do not require material adaptation in the planning process should contain **IFSE materials** from the IFSE Materials library. The **IFSE Materials library** contains the materials frequently used in the professional kitchen industry.

Materials with the suffix **_general**, e.g. QF_Metal-Stainless-Steel_general, are materials that combine a wide range of individual properties in a generic material. As a content creator, you should primarily use this material to ensure that the end user is provided with a uniform representation.

In the Family Editor, assign the material QF_Metal-Stainless Steel_General to the category **Specialty Equipment** or subcategory **QF_Foodservice_Equipment**.

Material parameters associated with stainless steel elements should have the value "By Category" as default.

If the **IFSE Materials library** does not contain the desired material, create a new material in English according to the following scheme

QF_<Class>-<Material>-<Color>-<Tinting>-<Surface property>

QF_

Prefix for the professional kitchen industry

<Class>

Revit® material class

Examples: Glass, Metal, Plastic, Stone, Wood

<Material>

A material within a class.

Examples for the class Metal: Stainless Steel, Steel, Aluminum, Copper

Examples for the class Wood: Oak, Cherry, Birch, Beech

<Material> can be omitted if it is already sufficiently described by the class, e.g. Glass or Plastic.

<Color> optional

The color of a material. Examples: Red, Yellow, Blue, Green, Orange, Gray, Black, White

<Tinting> optional

More detailed description of a color or a material

Examples: Light, Dark, Transparent

<Surface property> optional

More detailed description of the material surface examples: Glossy, Matt, Rough, Smooth

Examples of material naming:

"Plastic light grey matt": QF_Plastic-Gray-Light-Matt

"Plastic dark blue glossy": QF_Plastic-Blue-Dark-Glossy

"Steel painted white": QF_Metal Steel White

"Glass": QF_Glass

"Glass white translucent": QF_Glass-White-Translucent

The material library **IFSE Materials** can be accessed via the link, which is specified in the section **Other Documents**.

Connectors

An official recommendation on how and whether to install connectors is currently being prepared. It is a topic that spans all trades, since Revit® connectors are primarily used for MEP systems (TGA systems).

We are very grateful for feedback with experiences and suggestions on this topic.

Audit of the Revit® Families

To ensure the quality of Revit® content, families should be thoroughly tested before making it available to end users.

A family should be tested in the **Family Editor** and in a **project**.

Checklist for the test:

- ✓ Test all parameters that control geometry.
- ✓ Test all family types.
- ✓ Test the type catalog in the project environment.
- ✓ Check that the correct thumbnail image is displayed.
- ✓ Check the representation of a family in the project environment in all view types: Floor Plan, Ceiling Plan, Sectional View and/or View and 3D View in combination with the three levels of detail: Coarse, Medium and Fine.
- ✓ Verify that each component of the family is in the correct subcategories by turning the subcategories on and off or overwriting them.
- ✓ Check the IFSE parameters and their values in a component list.