



Software for Architecture,  
Engineering and Construction



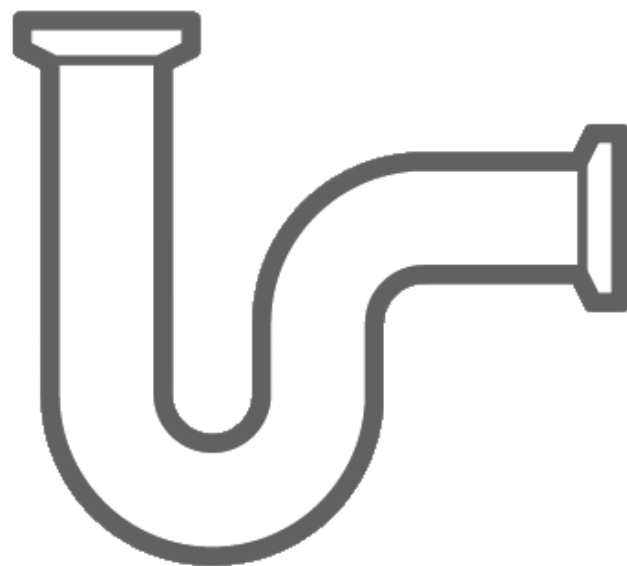
# CYPEPLUMBING

## **Sanitary Systems**

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### **User's Manual**

*Design of wastewater and rainwater installations.*





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# 1 Introduction

Thank you for choosing CYPE and CYPEPLUMBING Sanitary Systems. CYPEPLUMBING Sanitary Systems is a program created for the design and analysis of foul water and rainwater evacuation systems. This system is integrated in the Open BIM workflow via BIMserver.center using the IFC standard. CYPEPLUMBING Sanitary Systems includes predefined, code-complying configurations for select countries as well as the ability to configure custom design checks and technical limits. This program can be used to design the sanitary system installation in a 2D workspace with 3D viewing; conduct automated calculations and checks based off predefined or custom installation configurations; graphically analyze the results; and obtain various drawings, diagrams, and result reports.

In the following link, a general video overview of CYPEPLUMBING Sanitary Systems can be viewed.



*[Sanitary Systems – General Overview \(7 minutes and 37 seconds\)](#)*

Throughout the remainder of the manual, more in-depth tutorial videos and descriptions of navigating the CYPEPLUMBING Sanitary Systems can be found.

# 2 Initial Setup

This section of the manual is to show how to initially start a project and begin using CYPEPLUMBING Sanitary Systems. The video below, along with the remaining videos in the manual, will be used as an inclusive walkthrough in how to use CYPEPLUMBING Sanitary Systems by examining the installation of an example sanitary system.



*[Starting a project \(2 minutes and 19 seconds\)](#)*

### 3 Program Interface

The CYPEPLUMBING Sanitary Systems interface comprises of four main areas: *Installation Design Menu*, *Floor Plan Definitions*, *BIM Model 3D View*, and *Work Area*. Pictures of each of the main areas, outlined in red, are below.

In the video link, a short explanation of the program interface can be viewed. Each sectioned will be explained in further detail in later sections in this manual.

 [Basic Explanation of the Work Environment \(2 minutes and 43 seconds\)](#)

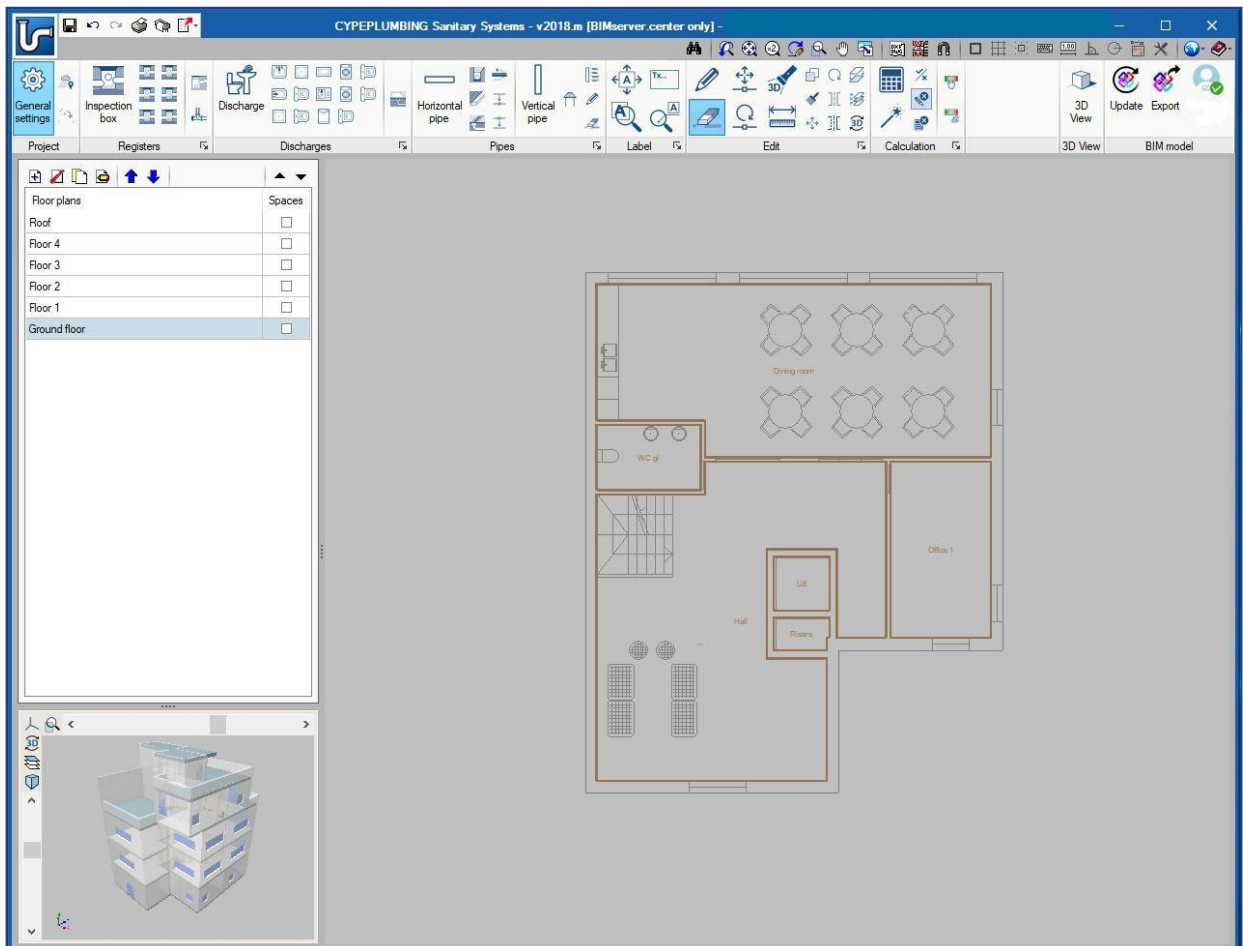


Figure 1 - Installation Design Menu

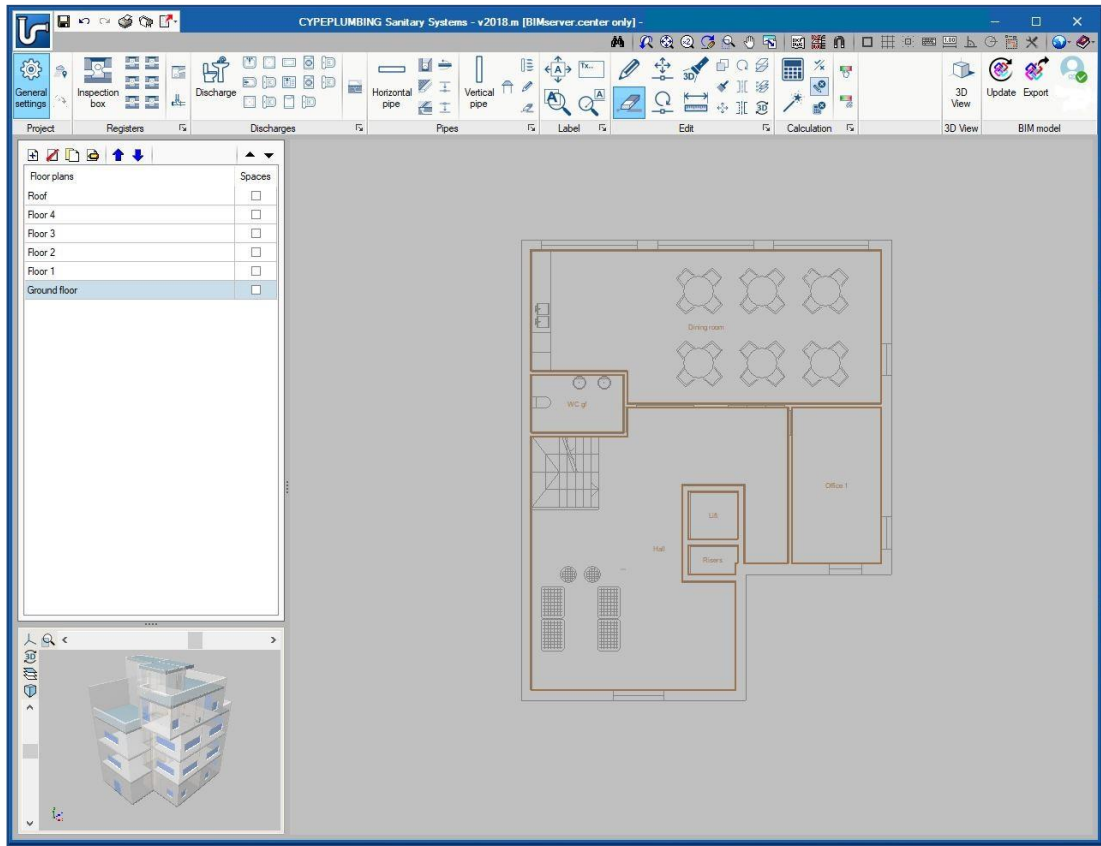


Figure 2 - Floor Plan Definitions

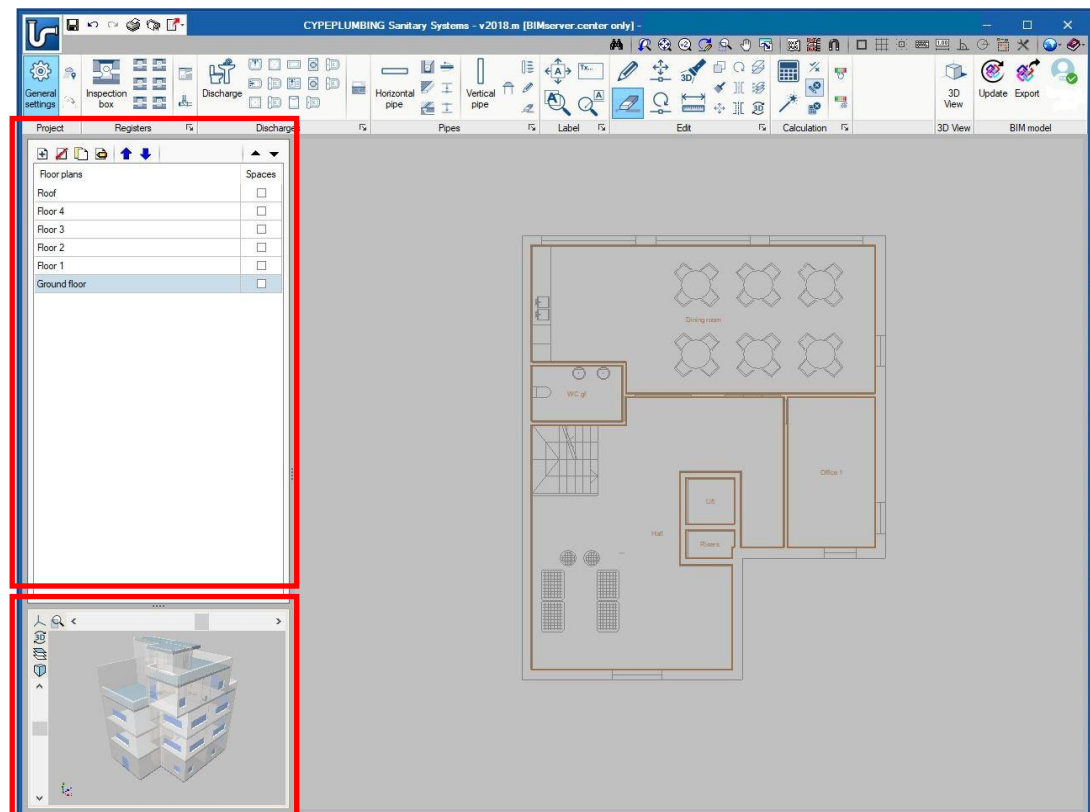


Figure 3 - BIM Model 3D View

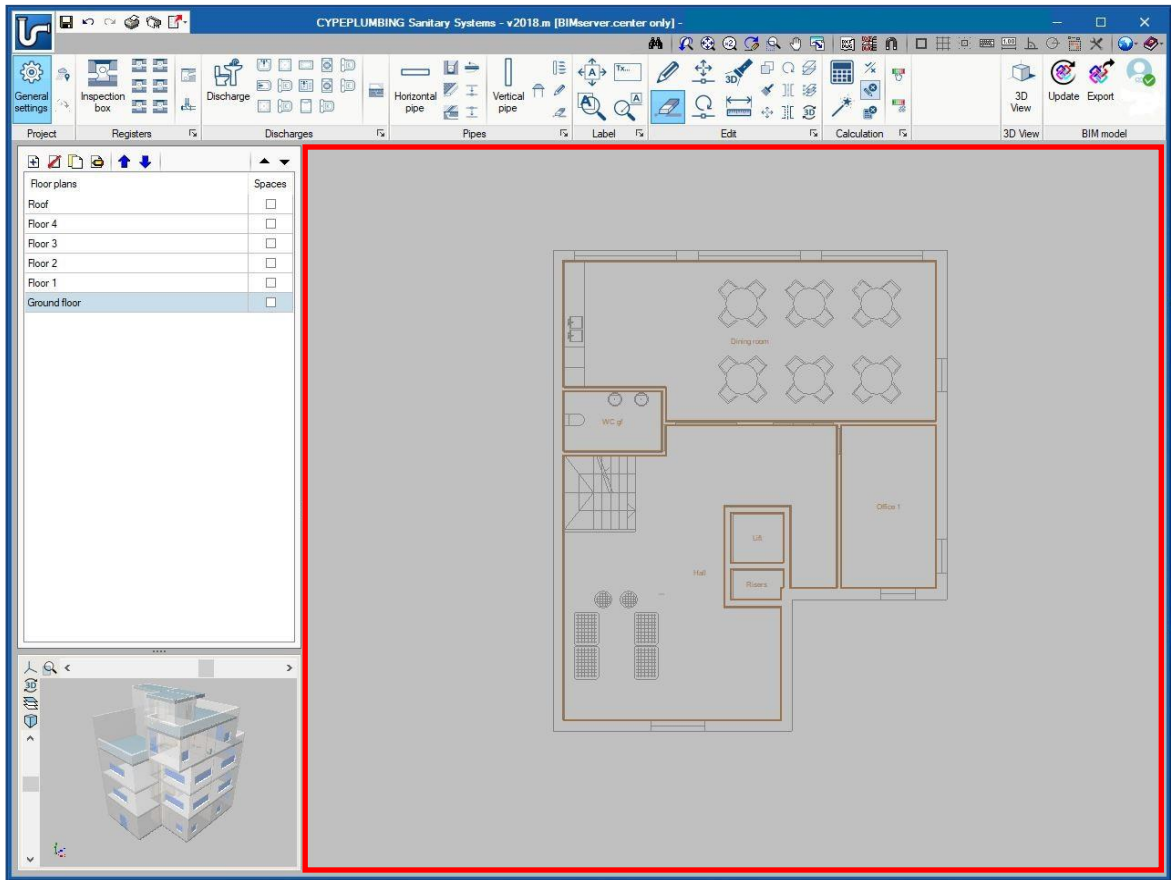


Figure 4 - Work Area

## 4 Installation Design Menu

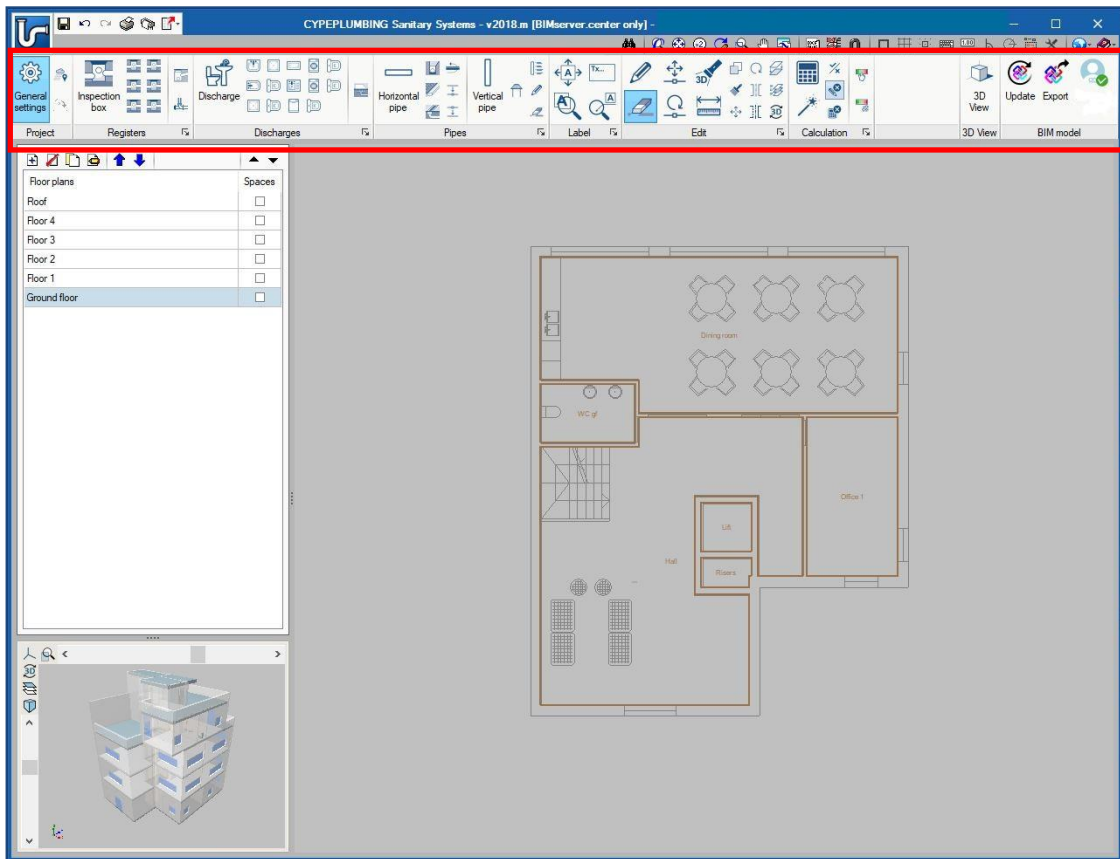


Figure 5 - Installation Design Menu

The Installation Design Menu is the top toolbar (outlined in red above) in the CYPEPLUMBING Sanitary Systems. This toolbar serves as the location for almost all of the necessary design tools, settings, and calculations. This menu is utilized in most actions when designing and analyzing a sanitary system installation.


The Installation Design Menu is divided into several sections: *Project Menu*, *Registers Menu*, *Discharges Menu*, *Pipes Menu*, *Label Menu*, *Edit Menu*, *Calculation Menu*, and *3D View and BIM Model Menu*. A brief description of each menu is provided below alongside a tutorial video explaining each section in further detail. It is recommended to view the tutorials for more information.

## 4.1 Project Menu



Figure 6 – Project Menu

These first tutorial videos explain how to navigate the general settings and the project menu in the Installation Design Menu. This section of the toolbar configures most installation design options.

 [Project Menu \(1 minute and 37 seconds\)](#)

 [General Settings \(3 minutes and 4 seconds\)](#)

The following videos are a more in-depth explanation of the *General Settings* section in the Installation Design Menu. A video on each of the three main sections can be viewed by following the respective links.

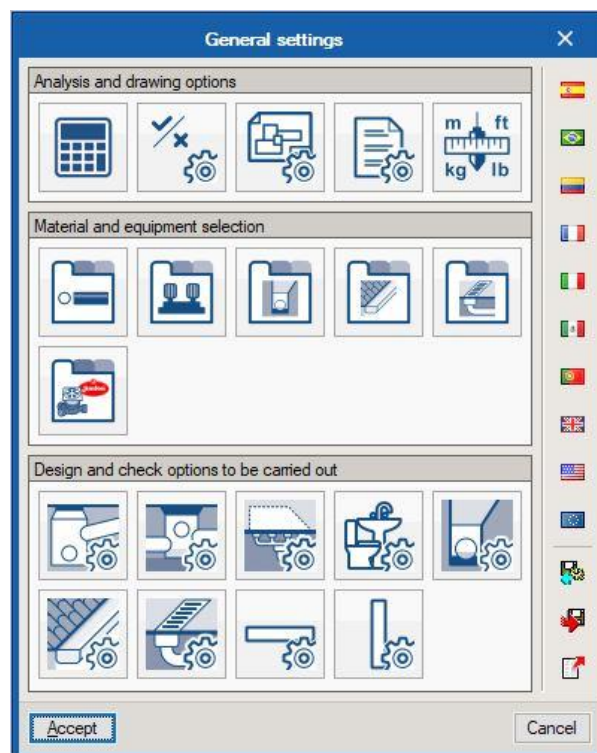



Figure 7 – General Settings Menu



 *Analysis and drawing options (5 minutes and 32 seconds)*

 *Material and equipment selection (2 minutes and 50 seconds)*


 *Design and check options to be carried out (7 minutes and 1 second)*

## 4.2 Registers Menu



Figure 8 – Registers Menu

The next section is the *Registers menu* of the Installation Design Menu. This tutorial video further explains the design and settings of registers such as inspection boxes and supply connection points.


 *Registers Menu (10 minutes and 19 seconds)*

## 4.3 Discharges Menu



Figure 9 – Discharges Menu

The *Discharges area* of the Installation Design Menu is the section to establish different types of discharges within the model as well as define the drainage area for rainwater. A tutorial video below explains how to design and refine settings for discharges.

 *Discharges Menu (7 minutes and 40 seconds)*

## 4.4 Pipes Menu

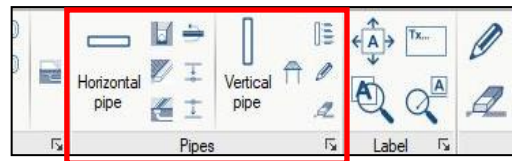


Figure 10 – Pipes Menu

The *Pipes* section of the Installation Design Menu is where to design and adjust the settings for all types of pipes to be used within the system. The tutorial video explains how to install and navigate the settings for the various types of pipes and related equipment.



*Pipes Menu (7 minutes and 44 seconds)*

## 4.5 Labels Menu

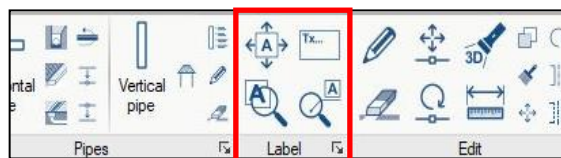


Figure 11 – Labels Menu

The *Labels Menu* is the area in the Installation Design Menu to adjust the labels in the model. The video below explains how to do that and how to adjust any necessary settings related to labels.



*Labels Menu (4 minutes and 7 seconds)*

## 4.6 Edit Menu



Figure 12 – Edit Menu

The *Edit Menu* is the section in the Installation Design Menu related to editing the current model. All of the necessary tools to edit aspects of the model such as delete, move, and copy are in this section. The tutorial video below explains each icon in more detail.



*Edit Menu (12 minutes and 55 seconds)*

## 4.7 Calculation Menu

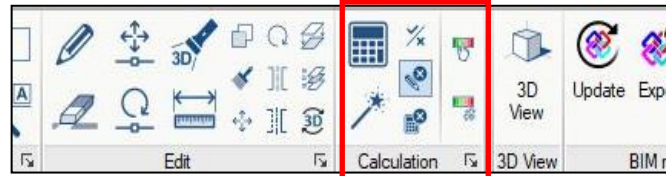



Figure 13 – Calculation Menu

The *Calculation Menu* of the Installation Design Menu is the location to calculate results and automatically have the program update the modeled sanitary system design to meet the specified parameters and selected installation code. This section provides graphical analysis of the results and can be visualized within the program. Tutorial videos on both the calculation and graphical analysis can be viewed through the links below.

 [Calculation Menu \(4 minutes and 20 seconds\)](#)

 [Graphical Analysis of Results \(2 minutes and 56 seconds\)](#)

## 4.8 3D View and BIM Model Menu

The *BIM Model Menu* and the *3D View Menu* are the final sections of the Installation Design Menu. These sections are used to view the current model in 3D in a separate window as well as export the current design to a connected BIMserver.center account. Also, if changes to the connected IFC file have occurred, the model can be updated from this menu. The tutorial video explaining these two sections can be viewed by following the link provided.

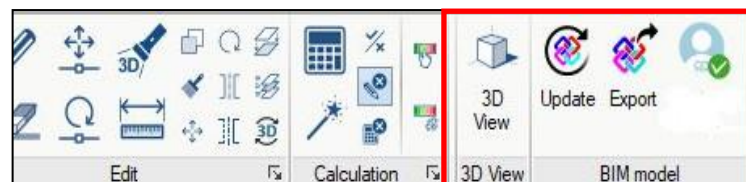


Figure 14 – 3D View and BIM Model Menu

 [3D View and BIM Model Menu \(5 minutes and 3 seconds\)](#)

## 5 Floor Plan Definitions

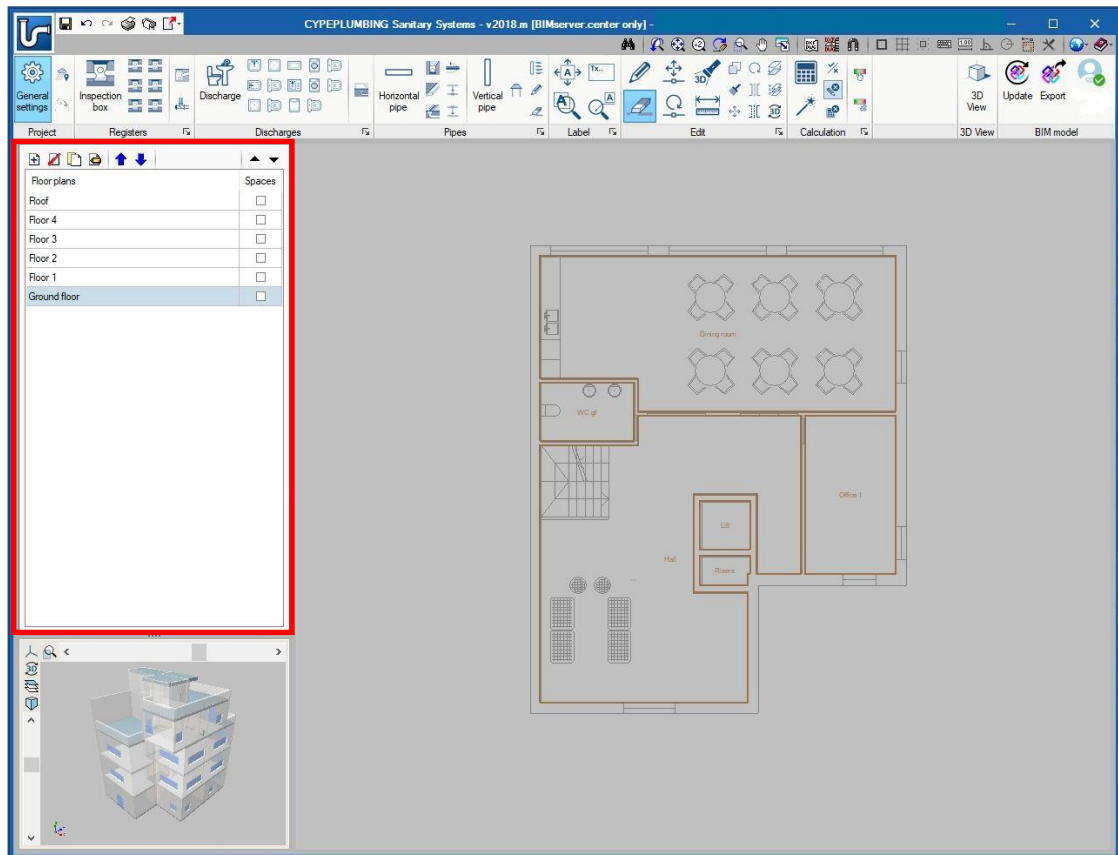
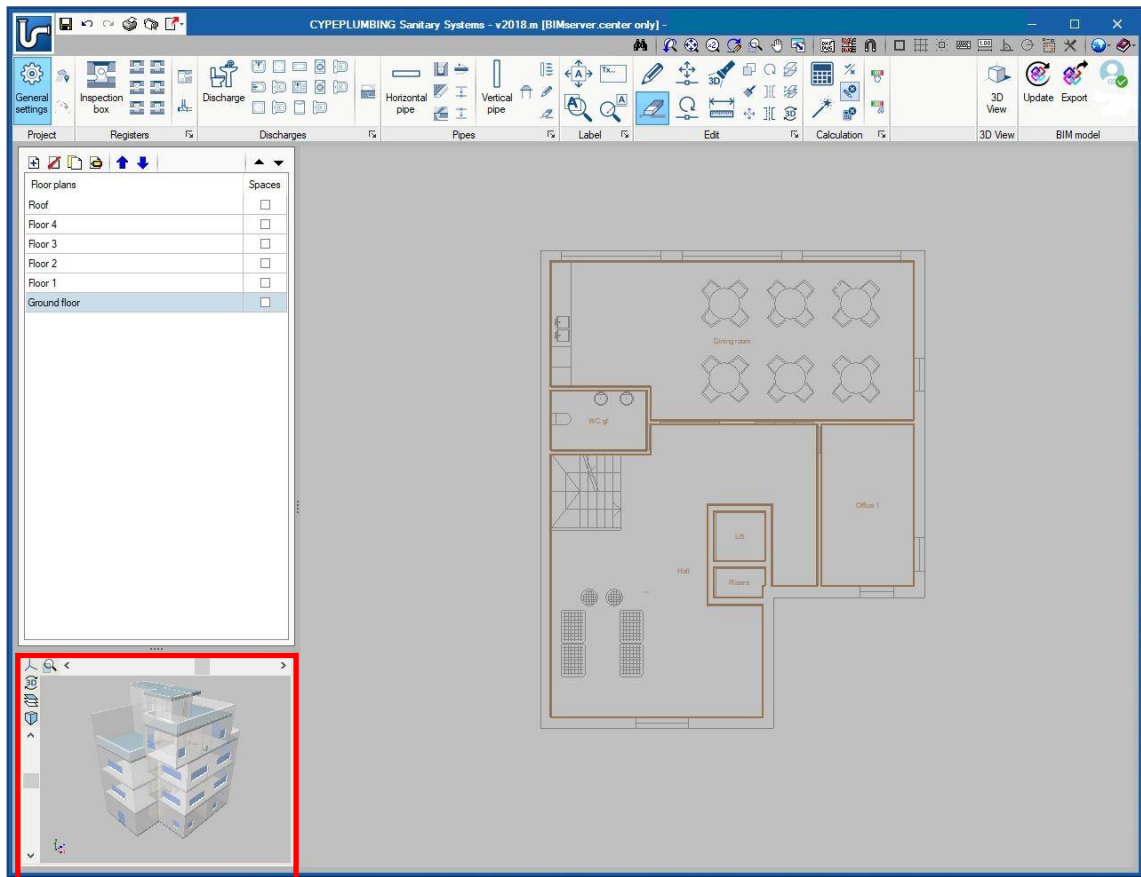


Figure 15 – Floor Plan Definitions

The *Floor Plan Definition* section of the interface is the upper left toolbar (outlined in red above) in the CYPEPLUMBING Sanitary Systems. This section serves as the location for information and navigation through floor plans, individual floor levels, and the related settings. The video link below provides a walkthrough on this section and how it pertains to the interface and the model.



## 6 BIM Model 3D View



The *BIM Model 3D View* section of the interface is the lower left area (outlined in red above) in the CYPEPLUMBING Sanitary Systems. This section is the location for viewing the 3D model of the current installation. The video link below provides a walkthrough on navigation through the 3D view and how to update the view when changes have been made.



## 7 Work Area

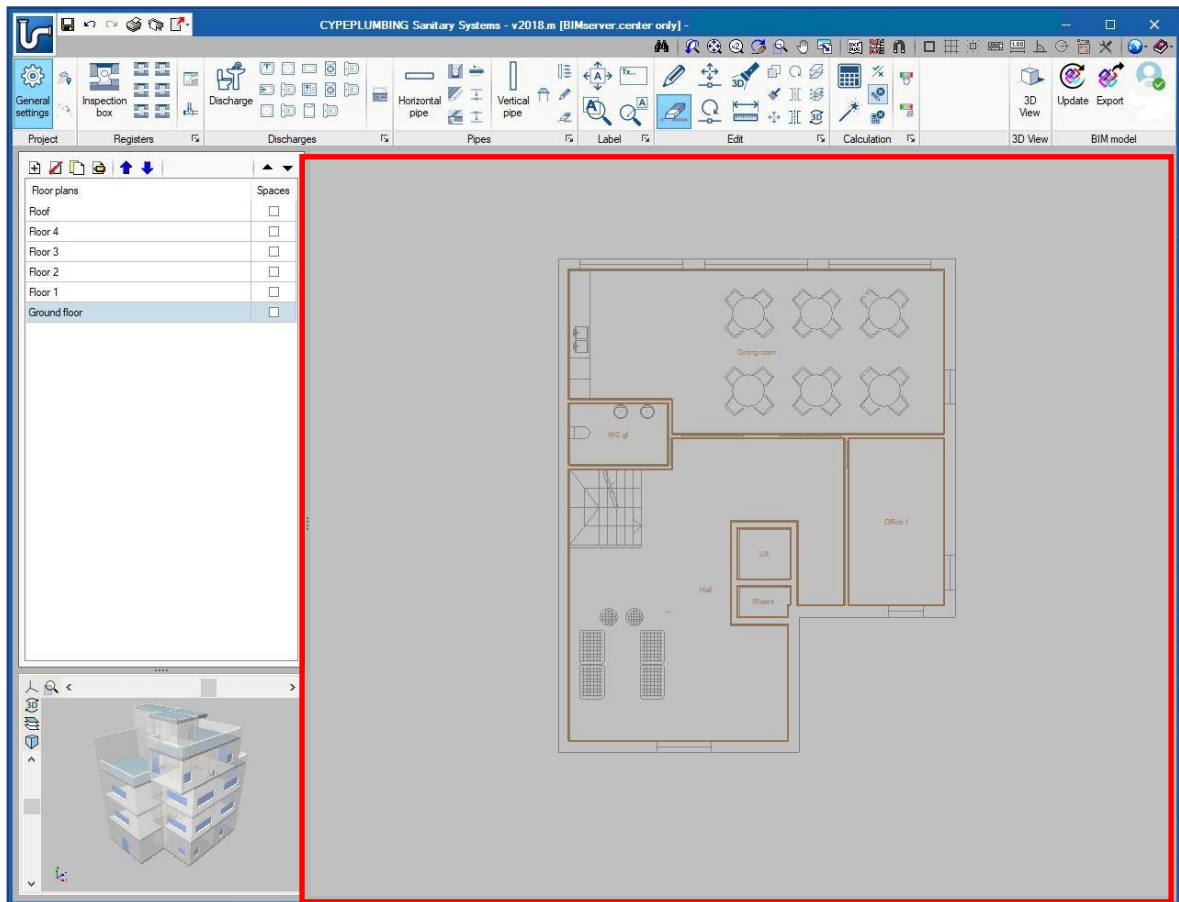


Figure 17 - Work Area

The *Work Area* of the interface is the central area (outlined in red above) in the CYPEPLUMBING Sanitary Systems. This section is the location for the design and editing of the model. The design of the sanitary system installation is done in 2D through this area of the interface. A helpful toolbar related to the *Work Area* is the *Auxiliary Toolbar*. More information on this toolbar is below.

### 7.1 Auxiliary Toolbar



Figure 18 - Auxiliary Toolbar

When designing in the *Work Area*, a useful toolbar is the *Auxiliary Tools Menu*. This toolbar is located at the top right of the entire system interface. Searches for various commands, adjustments to the viewing of the *Work Area*, establishment of object snaps, and setup of *Work Area* templates can be done from this toolbar.

Specifically within this toolbar are the *Template Views Manager*, *General Configuration*, and *Drawing Configuration*. The *Template Views Manager* defines and adjusts the DXF-DWG templates. This is accessed by selecting the white icon labeled DXF-DWG. The *General Configuration icon* adjusts units, printers, text style, background color, and drawings. This configuration is accessed by selecting the blue *Earth icon*. Lastly, within this *General Configuration* is the *Drawing Configuration*. The *Drawing Configuration* defines and configures how the drawings of the model will appear.

Links to video explanations of the toolbar are found below.



*Auxiliary Tools Menu (8 minutes and 13 seconds)*



*Template Views Manager (5 minutes and 2 seconds)*



*General Configuration (5 minutes and 26 seconds)*





*Drawing Configuration (2 minutes and 17 seconds)*

## 8 Results

Once the desired sanitary system installation and design has been completed, it is possible to obtain automatically generated, detailed report results and drawings. Detailed report results include results in the wastewater network and in the rainwater network. Each network has a design criteria, results, checks, materials, and quantities section. These documents can be exported and printed as needed. Automatically generated drawings are also able to be obtained. The 2D drawing files are generated based off of the input parameters and can be exported or printed as well.



Figure 19 – Reports and Drawings Icons

To access the results, in the top left corner of the interface, there is a *Reports icon*  and a *Drawings icon* .

A video explanation of the *Results-Reports* and *Drawings* is available to view by following the link below.





## 9 Conclusion

How to setup a project, navigate through the user interface, design within the software, and obtain results based off the design should be possible after going through this manual for CYPEPLUMBING Sanitary Systems. It is encouraged to review this manual and its video tutorials if there are any questions. If there are still questions, issues, or further information is needed, please contact CYPE. The contact information is below.

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Thank you for choosing CYPE and CYPEPLUMBING Sanitary Systems.