

# Instructions

## Instructions for using AutoCAD Plant 3D 2018 Process Plant Layout and Piping Design

Software version  
AutoCAD Plant 3D 2018: K049.06 r2  
AutoCAD 2018: O.49.0.0

V3.4

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## Instructions for using AutoCAD Plant 3D 2018

### **Preliminary Instructions to Setup the Exercise**

#### **1. Obtain the necessary files**

- If you are using AutoCAD from your PC, download the folder below from Moodle (The name may be different depending on your course, but the template files are the same)
  - Practical\_AutoCADfiles\_Distillation Column
  - DME\_M10\_AutoCADfiles\_Distillation Column
- If you are using AutoCAD from the remote labs, you will find that folder in the folder called AutoCAD which is located on the desktop.

#### **2. Obtaining the software**

- You can download AutoCAD Plant 3D 2018 →
- Free Student software (large file – 3GB+):
  - <https://www.autodesk.com/education/free-software/featured>
- The trial version:
  - <https://www.autodesk.com.au/free-trials>

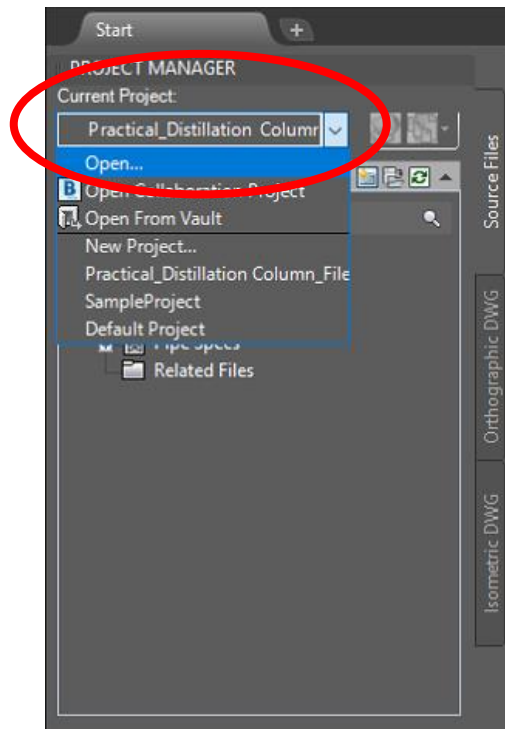
#### **Alternatively,**

- Logon to the Remote labs → AutoCAD Plant 3D 2018 is installed on:  
**Lab 12, Lab 13, Lab 14.**
- Read the lab descriptions if you are unsure:  
<https://lab.electromeeet.com/LabList>
- Open AutoCAD Plant 3D 2018
  - The icon is located on the desktop

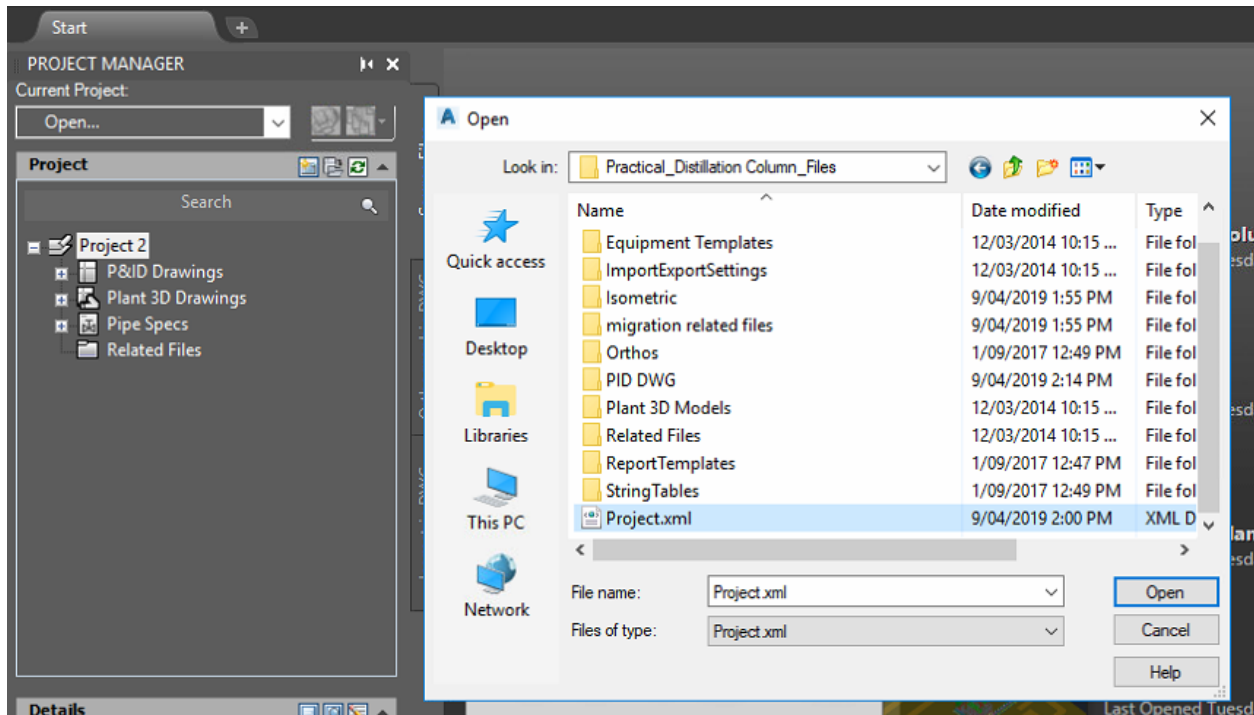


#### **2. Upload the project file into AutoCAD Plant 3D 2018.**

- Once AutoCAD is open, take a look to the left hand side of the window.
- Under Current project in the Project Manager Tab, expand the drop down menu.
- Click on Practical\_Distillation Column\_Files and go to step 3.
- If you can't find **Practical\_Distillation Column\_Files**, click **Open**

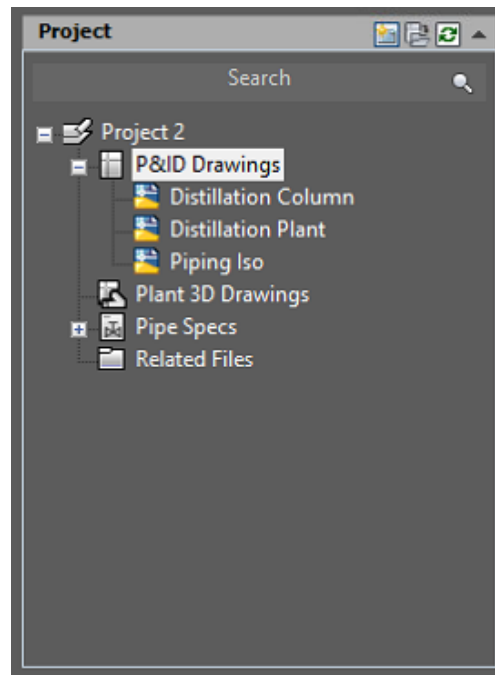


- Search and open the folder **Practical\_Distillation Column\_Files**, located on the desktop.
- Open the document **Project.xml**



### 3. Obtaining the drawing templates

- In Project Manager under the Project Tab expand **P&ID Drawings**

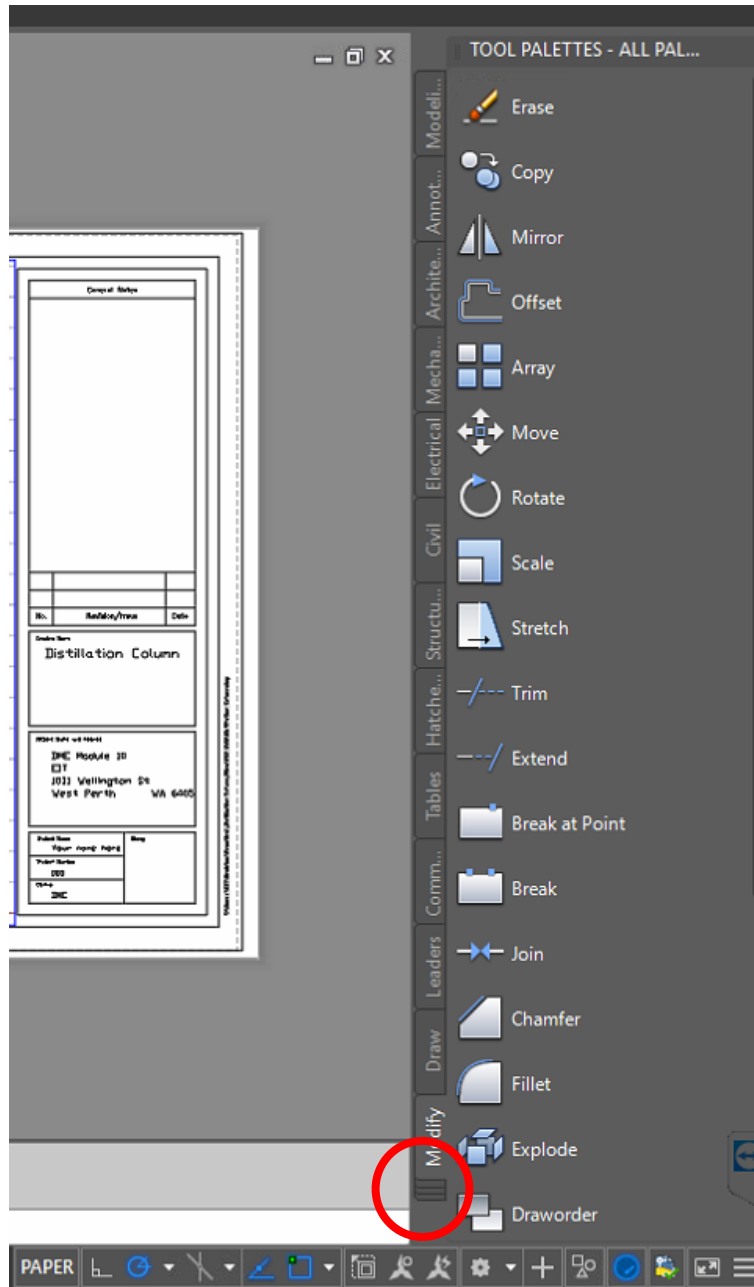


- Three drawings will appear.
- As per the exercise, simply click on the drawing you wish to open:
  1. Distillation Plant
  2. Distillation Column
  3. Piping Iso

## How to use Autodesk Autocad P&Id

### How to setup the correct Tool Palettes

- Before you start drawing, make sure you have the correct Tool Palettes.
- Right click on **Tool Palettes** on the right hand side and select **All Palettes**. All the available pallets will be available to you.



- To navigate through the different palettes, click on the relevant **palette's tab** or at the bottom of the tabs where indicated to navigate through the list and select the appropriate palette.

### Some of the useful palettes to the exercise are the following:

- **Draw**
- **Equipment**



to place the end point. Press enter to confirm.

### How to place equipment?

- Make sure you have the correct *Tool Palettes (equipment or other)*
- Select the desired equipment.
- To place it on your drawing, simply click at the desired position. You can adjust the size of the equipment by moving your mouse. Click and press enter to confirm.
- You can also adjust the scale by selecting the equipment, then right click and select *Scale*. Select a point and enter the scaling factor.
- To rotate or move the equipment, proceed in a similar way.

### How to shade?

- Make sure you have the Hatches and Fills Tool Palettes.
- Make sure that the boundary of the shading area is drawn first.
- Select the boundary then select the appropriate hatch or fill option.

### How to add annotations?

- On the top tool bar, select the letter A.
- Choose whether you want a text box or a leader.
- Click to place it on your drawing and enter the annotation

### How to draw a pipe segment?

- Select the Line palette and choose you line.
- Simply click where you want to connect the pipe. A nozzle will appear automatically.
- Drag you're the mouse to draw a straight section.
- To change direction, click where you want a change in direction drag your mouse until you reach the other equipment and click and press enter to confirm the path.
- If you want to stop a line without connecting it to equipment, click where you want to stop your line and press enter.
- To reverse the flow direction of a pipe, right click on the line, under **Schematic Line Edit** select **Reverse Flow**.

### How to add a valve?

- In your *Tool Palettes* under the *Valve* tab on the right hand side, select the appropriate valve.
- To place the valve on your drawing, simply click at the desired position.
- To assign a tag number, right click on the valve and select *Assign Tag...* Insert the tag number and make sure that *Place annotation after assigning tag* is selected. Click *Assign* to confirm.

### How to insert instruments?

- In your *Tool Palettes* under the *Instruments* tab on the right hand side, select the appropriate instrument under the *General instrument* section.
- Click to place the instrument.
- A window appears. Fill in the tagging information and under *type* select the instrument type.

Make sure that *Place annotation after assigning tag* is selected. Click *Assign* to confirm and chose the position of the tag.

### **How to insert an Off Page Connector?**

- In your *Tool Palettes* under the *Non-engineering* tab on the right hand side, select the appropriate *Off Page Connector* under the *Off Page Connector and Tie-In Symbol* section.
- Place the *Off Page Connector* like you did for the other drawing parts