

# Part Publishing Wizard User Guide

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## 1 OVERVIEW

This document serves as a quick tutorial for using the Part Publishing Wizard which ships with Civil3D 2013. This is an unsupported tool which provides a basic method for promoting an AutoCAD 3D Solid into an “official” pressure piping part that can be inserted into pressure piping networks.

### 1.1 Introduction

Civil3D 2013 ships with a new Pressure Pipes feature. While several stock parts are shipped with the default catalog(s), there may be a need for a customer to publish an individual part that is not included with the shipped content. The part publishing wizard is nothing more than a command that allows end users to select a 3D solid and centerline Entity within AutoCAD to create a .CONTENT file. This .CONTENT file can then be imported into a pressure piping catalog using the Content Catalog Editor that ships with C3D. The publishing tool works in conjunction with the Autodesk Connection Point (ACP). For more information about ACP, refer to the online help:

<http://docs.autodesk.com/CIV3D/2012/ENU/contexthelp/AUTODESKCONNECTIONPOINT.htm>

## 2 HOW TO SETUP A PUBLISHING ENVIRONMENT

By default, Civil3D installs a .NET DLL called “AeccPartPublishingWizard.dll”. A new command called “PUBLISHPARTCONTENT” will be registered for use. This is the only command to publish a part.

### 2.1 Preparing a Part for Publishing

When you are ready to publish a model to pressure piping content, there are some preliminary preparations you need to make. The preparation assumes that you have:

- An AutoCAD 3D Solid (this is the 3D model of the part)
- An AutoCAD line based Entity (this is a Line/Polyline/Arc equivalent of the 3D Model)
  - Line equivalent is necessary for Centerline representations in the Pressure Piping style system.
- Autodesk Connection Points (ACP).
  - ACP’s can be applied to either the Line Entity or 3D Solid.

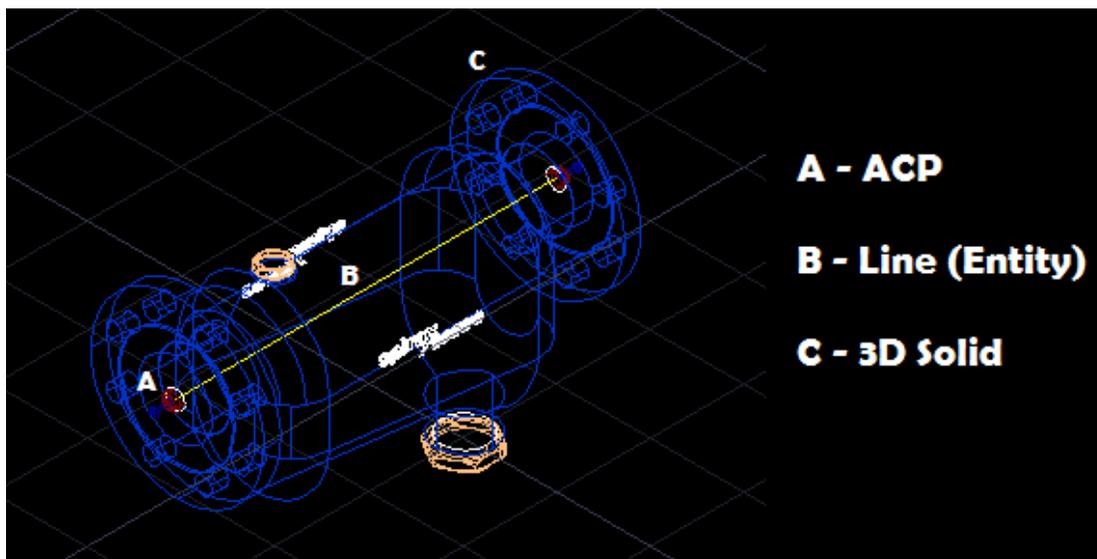


Figure 1 – Prepared part that is ready for publishing

## 2.2 Autodesk Connection Points

Part publishing assumes that there's at least one Autodesk Connection Point (ACP) on the part. ACP's tell the publishing wizard the 3D *location* and *direction* of where pressure pipes can connect to the part during layout of a new network. The connection point can also contain some additional property data that can be carried over into the new part, such as Units and Pipe Size (nominal diameter).

To add ACP's to an existing 3D Solid, run the "AUTODESKCONNECTIONPOINT" command using the "Insert" option. This is an AutoCAD provided command. *Hint: the first connection point will be used for the initial orientation of the part during pressure part layout.*

## 3 HOW TO USE THE PUBLISHING COMMAND

This section will walk the user through the PUBLISHPARTCONTENT command.

### 3.1 Prompt User to Select a 3D Solid

The first prompt after issuing the PUBLISHPARTCONTENT command will be to select a 3D Solid in the currently open DWG. If you have a Block Reference that contains a 3D Solid, you must EXPLODE the Block Reference to expose the 3D Solid for selection. *Hint: tile the drawing window so that the height and width are about the same. This will produce the best results when the preview image file is generated. Also, the preview image will inherit the same background color you have in your drawing.*

### 3.2 Prompt User to Select a Centerline Version of the 3D Solid

Once the 3D Solid has been selected, it will temporarily disappear so that you can select a Line/PLINE/ARC type Entity that represents the part. Some content authors may create a part from scratch using AutoCAD line entities then extrude a 3D Solid from that line work. If you are, for example, in Realistic mode then the Line may be hidden inside the 3D model so by hiding the original 3D Solid we can display the line for selection. Once the line has been selected, the 3D Solid will become visible again. The command is creating a temporary frozen layer to hide the 3D Solid to achieve this but the temporary layer is then removed from the drawing.

### 3.3 Collecting the Autodesk Connection Points

After the user has selected both a 3D Solid and Line Entity, the tool will automatically read in all Autodesk Connection Points in the drawing and find the ACP's that are associated with the selected Entity/3D Solid. If you've created an ACP but have not inserted them into one of the two selected models, they will not be associated with the part and direction/location data will be lost.

### 3.4 Prompt for Measuring Unit

The next prompt will be for measuring units. Pressure pipes consume either millimeter or inch based diameters for connection. Choose either Inches or Millimeters.

```
> PUBLISHPARTCONTENT Specify the Measuring Unit [Inches Millimeters] <Inches>:
```

### 3.5 Prompt for Measuring Unit

You should assign the part type for the model being published. The supported part types for pressure pipes include Cap, Coupling, Cross, Elbow, Hydrant, Plug, Pump, Reducer, Tee, Valve and Wye.

```
PUBLISHPARTCONTENT Specify the Part Type [Cap COupling CRoss Elbow Hydrant Plug PUMp Reducer Tee Valve Wye] <Elbow>:
```

### 3.6 CONTENT File Creation

At this point the command is going to create a .CONTENT file. This file is a zipped up content file that contains three files.

1. A new .DWG that contains the 3D Solid and Line
2. A new .XML file that provides connection point information about the part
3. A new image file (.PNG) that represents the preview image of the model.

While the .CONTENT file is being created, you'll notice the tool will temporarily set your Visual Style to "Shades of Gray" so that the created PNG file will match the content that shipped with pressure pipes. Once the PNG file is created, your original Visual Style will be set back.

### 3.7 CONTENT File Saving

Assuming the publishing is complete, you will be prompted to save the .CONTENT file. Save it any directory location that you deem convenient. Once you have a .CONTENT file, it can now be consumed by the Catalog Editor.

### 3.8 CONTENT File Importing

Civil3D includes an application that allows you to interact with pressure piping catalogs. This application is called the "Content Catalog Editor" (CCE).

You can start the CCE directly by clicking Autodesk.Aec.Content.CatalogEditor.EXE located in the Civil3D installation directory. Once the CCE is running and you've loaded your catalog, you can select the Import feature to import your .CONTENT file. From there the CCE will walk you through a wizard to allow you to provide more specific information related to the part such as Part Family Name, Material, etc. After that you are now able to consume your part inside the pressure pipe feature in Civil3D. Remember to save your catalog after you import your new part.

