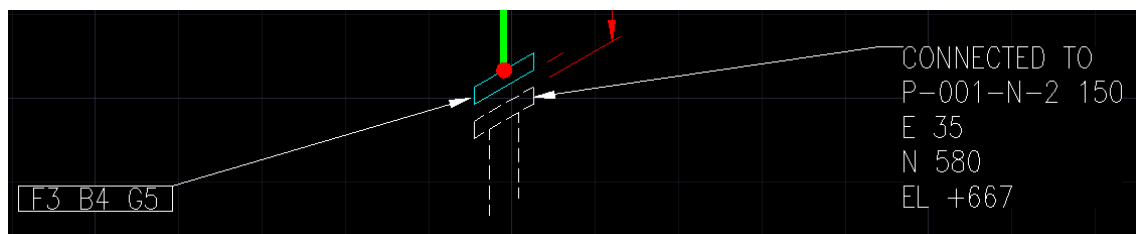


Modifying Iso End Connection References

AutoCAD Plant 3D 2014

This White Paper describes how to format the End Connection references that are displayed on an AutoCAD Plant 3D Isometric.

To illustrate the procedure, the end connection reference to an equipment nozzle will be modified from the default setting, showing “Equipment Tag – Nozzle Tag – Size”, below:



to the following, showing “Equipment Description – Equipment Tag – Nozzle Tag”:



Project Setup

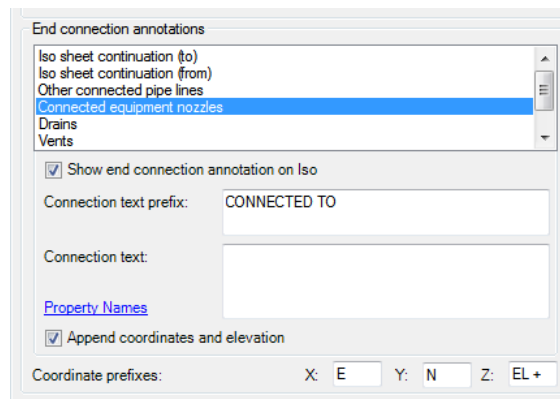
Initial configuration is achieved in the Annotations section of the Isometric Dwg Settings in Project Setup.

The text identification of each connection is set in the “Connection text prefix” field. The text and other information that follows are defined in the “Connection text” field. A blank entry in this field results in default values being assumed.

The display of co-ordinates may be turned on or off, but it is not possible to select individual ordinates for display.

The settings that are defined here are actually stored in 2 different configuration files: ClientConfig.isf and IsoConfig.xml. The settings stored in ClientConfig.isf affect the values that are written in to the .pcf file during Isometric generation; the settings stored in IsoConfig.xml control the format of the Isometric drawings that are generated from the information in the .pcf file.

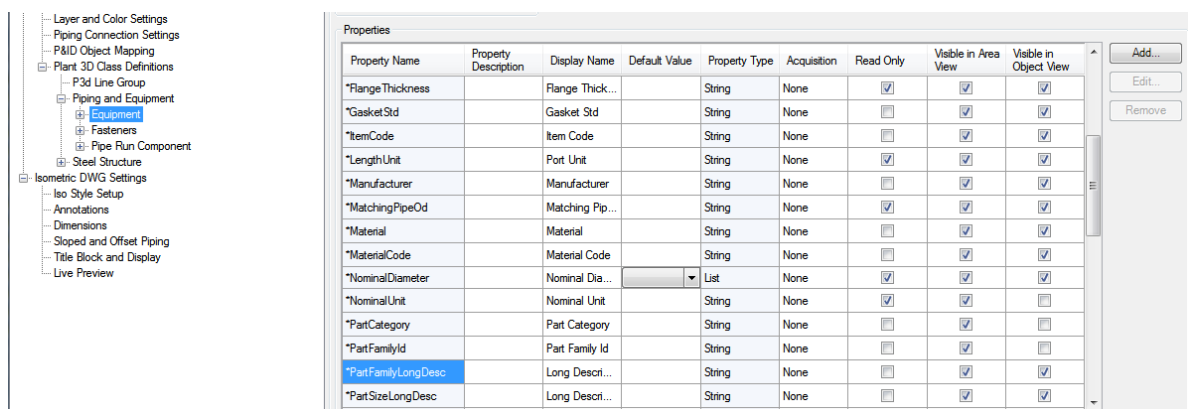
The default settings are shown below.



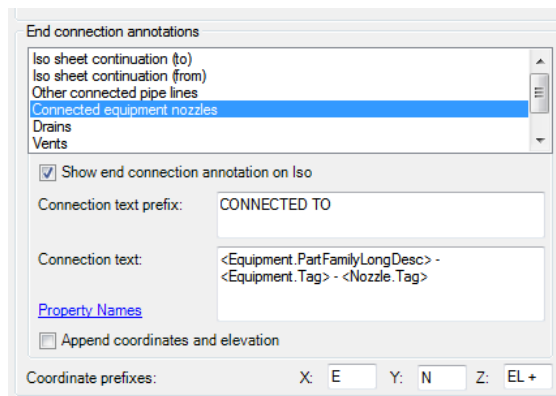
In our example, we need to create new “Connection text” settings and un-tick the box to “Append coordinates and elevation”.

Within the connection text field we can enter the names of property fields that we want to display on the Iso; we can find these by looking at the class definitions in Project Setup. We can choose fields from any connected objects.

In our case, we need the PartFamilyLongDesc and Tag fields of the equipment item and the connecting Nozzle Tag field.



We enter these values enclosed within < > pairs as follows:



The text wraps within the entry field. If we wanted to specify a line break on the Iso we would have to enter a \$ character into the field.

ClientConfig.isf

The changes that we have just made result in the following changes to the ClientConfig.isf file.

The initial, default contents of the file are shown below:

```
<?xml version="1.0" encoding="utf-8"?>
<PnPClientIsoSettings xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <StyleFilesDirectory>\</StyleFilesDirectory>
  <ProdOutputDirectory>\ProdIsos\</ProdOutputDirectory>
  <QuickOutputDirectory>\QuickIsos\</QuickOutputDirectory>
  <PCFsOutputDirectory>\PCFs\</PCFsOutputDirectory>
  <CustomExistingStatus />
  <UseFourDigitYearFormat>false</UseFourDigitYearFormat>
  <DisplaySupport>true</DisplaySupport>
  <ConnectionsTexts />
  <DateFormat>eAmericanFormat</DateFormat>
</PnPClientIsoSettings>
```

Our modified file now looks like this:

```
<?xml version="1.0" encoding="utf-8"?>
<PnPClientIsoSettings xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <StyleFilesDirectory>\</StyleFilesDirectory>
  <ProdOutputDirectory>\ProdIsos\</ProdOutputDirectory>
  <QuickOutputDirectory>\QuickIsos\</QuickOutputDirectory>
  <PCFsOutputDirectory>\PCFs\</PCFsOutputDirectory>
  <CustomExistingStatus />
  <UseFourDigitYearFormat>false</UseFourDigitYearFormat>
  <DisplaySupport>true</DisplaySupport>
  <ConnectionsTexts>
    <ConnectionText>
      <ShowCoordsName>ConnectedEquipmentNozzles</ShowCoordsName>
      <PropertyFields>
        <string>Equipment.PartFamilyLongDesc</string>
        <string>Equipment.Tag</string>
        <string>Nozzle.Tag</string>
      </PropertyFields>
      <Format>{0} - {1} - {2}</Format>
    </ConnectionText>
  </ConnectionsTexts>
  <DateFormat>eAmericanFormat</DateFormat>
</PnPClientIsoSettings>
```

Notice the <PropertyFields> and <Format> sections.

These changes have modified the content of the generated .pcf for our Iso. The initial settings produced this:

```
END-CONNECTION-EQUIPMENT
CO-ORDS          35.2412    580.1833    666.7500
CONNECTION-REFERENCE    P-001-N-2 150
```

Our modifications result in this:

```
END-CONNECTION-EQUIPMENT
CO-ORDS          35.2412    580.1833    666.7500
CONNECTION-REFERENCE    Pump - P-001 - N-2
```

IsoConfig.xml

Now, if we look at the Iso that is produced after making these initial changes, we have an unwanted blank line present between CONNECTED TO and the description of our connection point.



The overall formatting of end connection references is controlled by the <AnnotationSchemes> section in the IsoConfig.xml file.

```
<Annotations Enabled="true">
  <!-- Enable only end-connection or end-position annotations -->
  <AnnotationSchemes>
    <EndConnectionScheme Name="EndConnectionsEquipment" AnnotationStyle="Standard" Format="CONNECTED TO\P{0}\P{1}" LeaderStyle="AlwaysCorner" Filter="EndConnectionsEquipment" Fields="CONNECTION-REFERENCE CO-ORDS" />
```

The initial settings are shown above. Our changes to Project Setup produced the following changes:

```
<Annotations Enabled="true">
  <!-- Enable only end-connection or end-position annotations -->
  <AnnotationSchemes>
    <EndConnectionScheme Name="EndConnectionsEquipment" AnnotationStyle="Standard" Format="CONNECTED TO\P{0}" LeaderStyle="AlwaysCorner" Filter="EndConnectionsEquipment" Fields="CONNECTION-REFERENCE" />
```

Notice the differences in the **Format** and **Fields** sections.

Let's look at the Format string in detail, **Format="CONNECTED TO\P{0}"**; a \P in the format string results in a linefeed in the output string for our Iso. We therefore need to remove the second \P to remove the blank line from our final drawing.

```
<Annotations Enabled="true">
  <!-- Enable only end-connection or end-position annotations -->
  <AnnotationSchemes>
    <EndConnectionScheme Name="EndConnectionsEquipment" AnnotationStyle="Standard" Format="CONNECTED TO\P{0}" LeaderStyle="AlwaysCorner" Filter="EndConnectionsEquipment" Fields="CONNECTION-REFERENCE" />
```



Re-running the Iso now produces the output we wanted:

