



Pressure Network PE Water

Content package guidance material

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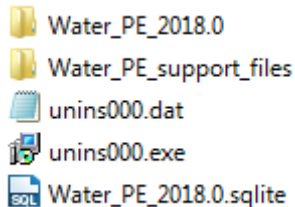
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Installation

Run **setup.exe** to extract the content (default path: *C:\ProgramData\Autodesk\C3D 2018\enu\Pressure Pipes Catalog\Metric*). Installation does not affect any registry settings, you are adding additional content pack to the location you indicate.

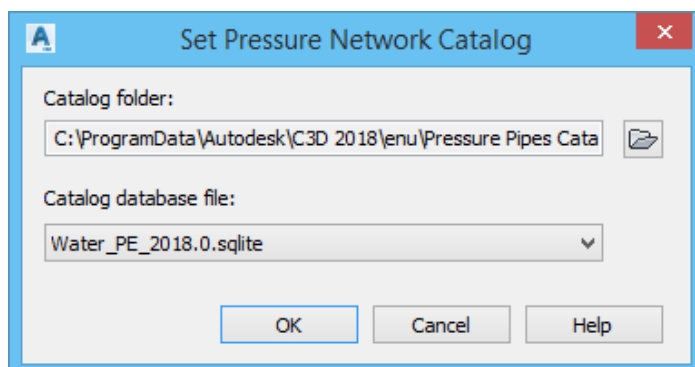
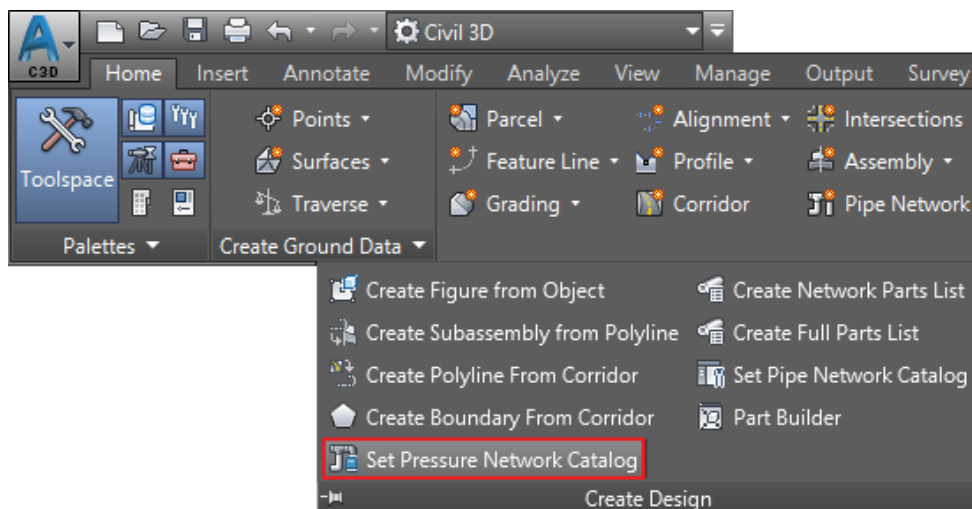
After catalog installation, following catalogs/files appear:



- *Water_PE_2018.0* – additional content package files
- *Water_PE_support_files* – additional notes about the content pack
- *Water_PE_2018.0.sqlite* – main database file to assign in AutoCAD Civil 3D.
- *unins000.exe* – uninstallation of the content pack (removes only noted catalogs/files)

Preliminary activities – catalog set up

Open an example *DWG* file. Ensure that you refer to a recently installed catalog.



Catalog in action

Catalog is meant for water pipeline design. All components are based on PE material (if not otherwise noted) and material strength class of PE100. It is possible to use all components as PE80 if assumed that SDR class shifts one step. For example SDR11 refers by default to PE100 (pressure class of PN16) but when PE80 material is used then with the same SDR, pressure class PN10 (PN12.5) can be noted.

Pick a tool: *Home > Create Design > Pipe Network > Pressure Network Creation Tools*

Choose: *Parts List > SDR11 – butt-welded*

Additional ribbon tab is shown that enables you to start with a pipeline design. Design itself doesn't differ when compare with default *Civil 3D* components.

Note: Different pressure class components do have different pipe inner diameter (and also wall thickness). With PE pipes/fittings the DN refers to pipe outside diameter. During design you can combine different SDR components with each other if a particular component is not available at some specific SDR class. You should be aware that if those components are shown in 3D or with pipe inside/outside graphics, the result may not satisfy you. All components are created based on manufacturer data sheets (or their 3D models are used directly if available). All components include various data that can be used when *Civil 3D* labelling tools are used (created).

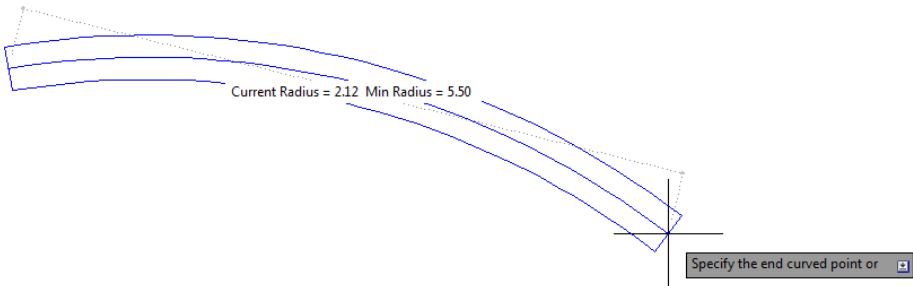
| Part Data | |
|------------------------------|--------------------|
| Part Family Name | Water_PE_SDR11 |
| Description | DN110 - SDR11 |
| Cut Length | |
| Diameter Inside | 90.000mm |
| Diameter Outside | 110.000mm |
| Type Description | Water |
| Minimum Flex Radius | 5.500m |
| Thickness | 10.000mm |
| Nominal Diameter Description | DN110 |
| Id Coating Inside | |
| Id Coating Outside | |
| Id Material | PE-SDR11 |
| Pressure Class | 1600kPa |
| Maximum Pressure | |
| Schedule | |
| SDR | 11.000 |
| Series | |
| Strength Class | PE100 |
| Thickness Class | |
| Compatible Standard | EN 12201, ISO 4427 |
| Connection Point Count | 2 |
| Fid Manufacturer | Uponor Infra |
| Model Name | www.flowbim.com |
| Version Number | |

An example of pipe data

| Part Data | |
|------------------------------|--------------------------------|
| Pressure Part Type | Elbow |
| Part Family Name | Water_PE_segmented_90deg_SDR11 |
| Description | DN110-elbow-seg-90deg-SDR11 |
| Angle | 90.0000 (d) |
| Curve Radius | |
| Cutback Angle | |
| Type Description | elbow |
| Nominal Diameter Description | DN110 |
| Id Coating Inside | |
| Id Coating Outside | |
| Id Material | PE-SDR11 |
| Pressure Class | 1600kPa |
| Maximum Pressure | |
| Schedule | |
| SDR | 11.000 |
| Series | |
| Strength Class | PE100 |
| Thickness Class | |
| Compatible Standard | |
| Connection Point Count | 2 |
| Fid Manufacturer | Uponor Infra |
| Model Name | www.flowbim.com |
| Version Number | |

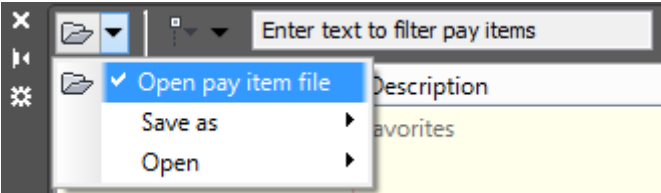
An example of fitting data

You can lay out the pipeline also using its flexibility feature (min radius). Thereafter you can use *AutoCAD Civil 3D* tools to check if pipelines are laid out correctly (without exceeding the minimum radius).



If you would like to use the quantity takeoff tool, ensure that pay item is included with all pipe/fitting components. In the example file all pay items are included. But when you use those styles first time you have to check that the installed pay item file can be found from your system.

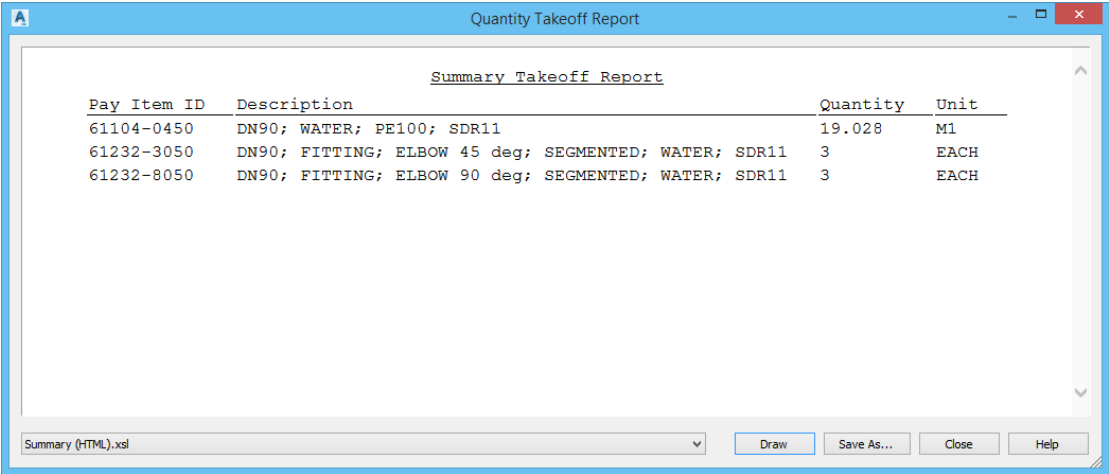
For that open: *Analysis > QTO > QTO Manager*



Refer with a command *Open pay item file* to installed file called: *Civil3D_QTO_Water.csv*

If you want to change/update pipe styles (*Parts List*), please ensure that you always include pay item ID because otherwise you are not able to create a quantity takeoff report. If everything is set up correctly you can use a tool: *Analysis > QTO > Takeoff*

As a result you should get a report that includes all pipes/fittings you have used in your design file.



Note: *Pay Item ID* and *Description* comes from included CSV file. If you want to change its presentation, you have to change it from your CSV file. If you change a *Pay Item ID*, you have to create a new connection with your part style.

