



Pressure Network PE Water

Content package guidance material



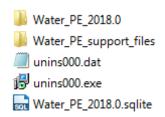
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Installation

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.

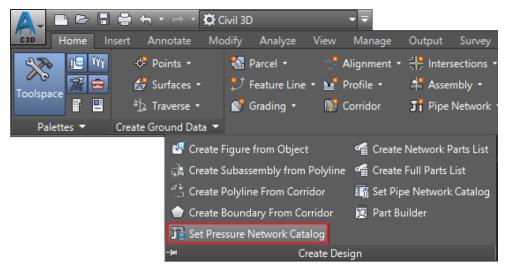
After catalog installation, following catalogs/files appear:

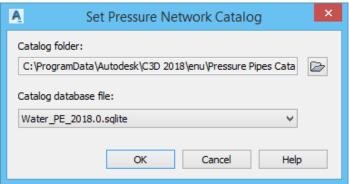


- Water_PE_2018.0 additional content package files
- Water_PE_support_files additional notes about the content pack
- Water_PE_2018.0.sqlite main database file to assign in AutoCAD Civil 3D.
- unins000.exe uninstallation of the content pack (removes only noted catalogs/files)

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 grahpics, 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).

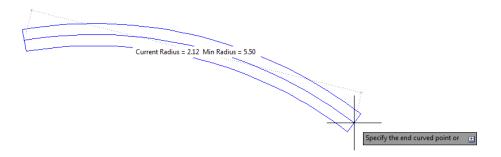
Part Data					
Part Family Name	Water_PE_SDR11				
Description	DN110 - SDR11				
Cut Length					
Diameter Inside	90.000mm				
Diameter Outside	110.000mm				
Type Description	Water				
Minimum Flex Radius	5.500m				
Thickness	10.000mm				
Nominal Diameter Description	DN110				
Id Coating Inside					
ld Coating Outside					
ld 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					

⊟ 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	
ld 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 pipe data

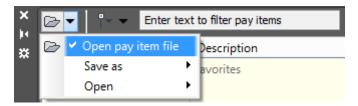
An example of fitting data

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.

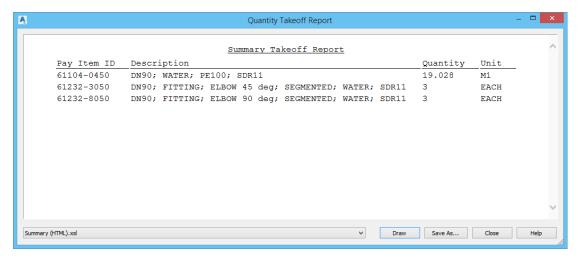
For that open: Analysis > QTO > QTO Manager



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.

Available content in the catalog

Stand	ard Dimension	Ratio	SDR 33	SDR 27.6	SDR 26	SDR 21	SDR 17	SDR 13.6	SDR 11	SDR 9	SDR 7.4
Pressure Class (PN), PE100		5	6	6	8	10	12.5	16	20	25	
			DN315 -	DN90 -	DN50 -	DN40 -	DN32 -	DN25 -	DN20 -	DN16 -	DN16 -
PE Pipe			- DN1600	- DN1600	- DN1600	- DN1600	- DN1600	- DN1600		- DN800	- DN450
PE Fitting											
cap									DN20 -		
	electrofusion								- DN250		
coupling											
	electrofusion								DN20 -		
elbow									- DN400		
	electrofusion										
		22.5 deg							DN180		
		45 deg							DN32 - - DN180		
									DN20 -		
		90 deg							- DN180		
	butt-welded										
		30 deg	DN315 - - DN1200	DN90 - - DN1200	DN90 - - DN1200	DN90 - - DN1200	DN90 - - DN1200	DN90 - - DN1200	DN90 - - DN1000	DN90 - - DN800	DN90 - - DN450
		45.1	DN315 -	DN90 -	DN90 -	DN90 -	DN90 -	DN90 -	DN90 -	DN90 -	DN90 -
		45 deg	- DN1200	- DN1200	- DN1200		- DN1200	- DN1200	- DN1000	- DN800	- DN450
		60 deg	DN315 -	DN90 -	DN90 -	DN90 -	DN90 -	DN90 -	DN90 -	DN90 -	DN90 -
			- DN1200 DN315 -	- DN1200 DN90 -	- DN1200 DN90 -	- DN1200 DN90 -	- DN1200 DN90 -	- DN1200 DN90 -	- DN1000 DN90 -	- DN800 DN90 -	- DN450 DN90 -
		90 deg	- DN1200	- DN1200	- DN1200	- DN1200	- DN1200	- DN1200			- DN450
stub end	butt-welded						DN50 -		DN25 -		
	butt weided						- DN1200		- DN1000 DN25 -		
reducer	electrofusion	Min							- DN20		
		May							DN180 -		
		Max							- DN125		
	butt-welded	Min	DN355 - - DN315	DN110 - - DN90	DN90 - - DN50	DN90 - - DN50	DN90 - - DN50				
					DN1200 -	DN1200 -	DN1200 -	DN1200 -			
		Max	DN1200 - - DN1000	DN1200 - - DN1000	-	-	-	-	DN 1000 - - DN 900	DN800 - - DN710	DN450 - - DN400
			- DIV1000	- DIV1000	DN1000	DN1000	DN1000	DN1000	- DIV300	- DIV/10	DIV400
tee	electrofusion										
	Cicciorasion	00 daa							DN25 -		
		90 deg							- DN180		
		reducing							DN20 -		
	butt-welded								- DN180		
			DN630 -	DN630 -	DN630 -	DN630 -	DN630 -	DN630 -	DN630 -	DN630 -	
		45 deg	- DN900	- DN900	- DN900	- DN900	- DN900	- DN900	- DN900	-	
										DN800 DN630 -	
		60 deg	DN630 -	DN630 -	DN630 -	DN630 -	DN630 -	DN630 -	DN630 -	-	
			- DN900	- DN900	- DN900	- DN900	- DN900	- DN900		DN800	
		90 deg	DN315 - - DN1200	DN90 - - DN1200	DN90 - - DN1200	DN90 - - DN1200	DN90 - - DN1200	DN90 - - DN1200	DN90 - - DN1000	DN90 - - DN800	DN90 - - DN450
PE Equipr	ment		PINTZUU	הואדקחח	DINTZ00	PINIZUU	PINTZUU	PINTZUU	PIAT000	טטטאום	DIV450
hydrant											
valve									DNI20		
	ball								DN20 - - DN110		
	butterfly										
	electric actuator electric pneumatic handlever						DN63 -				
							- DN630 DN63 -				
							- DN315				
							DN63 -				
							- DN315				
							DN63 - - DN400				
						<u> </u>	- DN400				
0	verall number	of	100	100	100	100	270	100	227	172	124
fit	tings/equipme	nt	100	190	199	199	278	199	337	173	124