



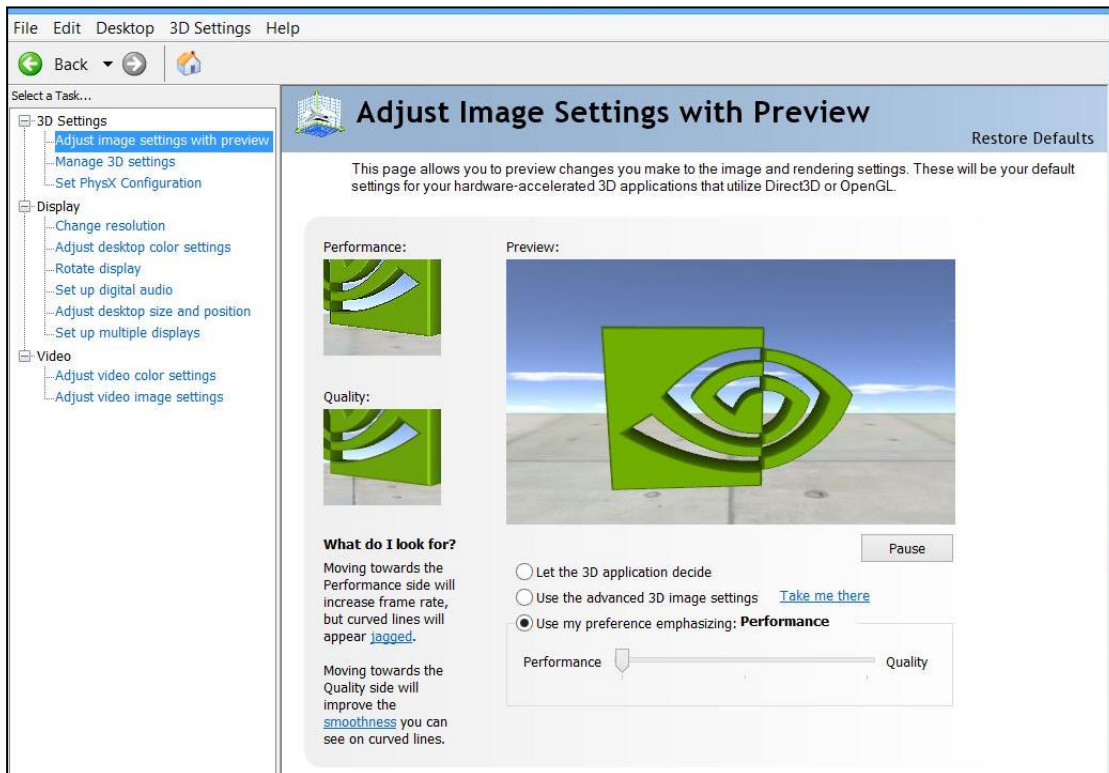
## LEVEL 1 TRAINING INTRODUCTION



# Welcome to Level 1 training for AutoSPRINK


## Configure the computer and video card settings

1. NVIDIA video cards
  - M.E.P.CAD recommends NVIDIA GTX series video cards for maximum performance.
2. Open the nVidia Control Panel (right-click on the desktop)
  - **CLICK** Adjust image settings with preview
  - **CLICK** the third radio button and move the slider to **Performance**



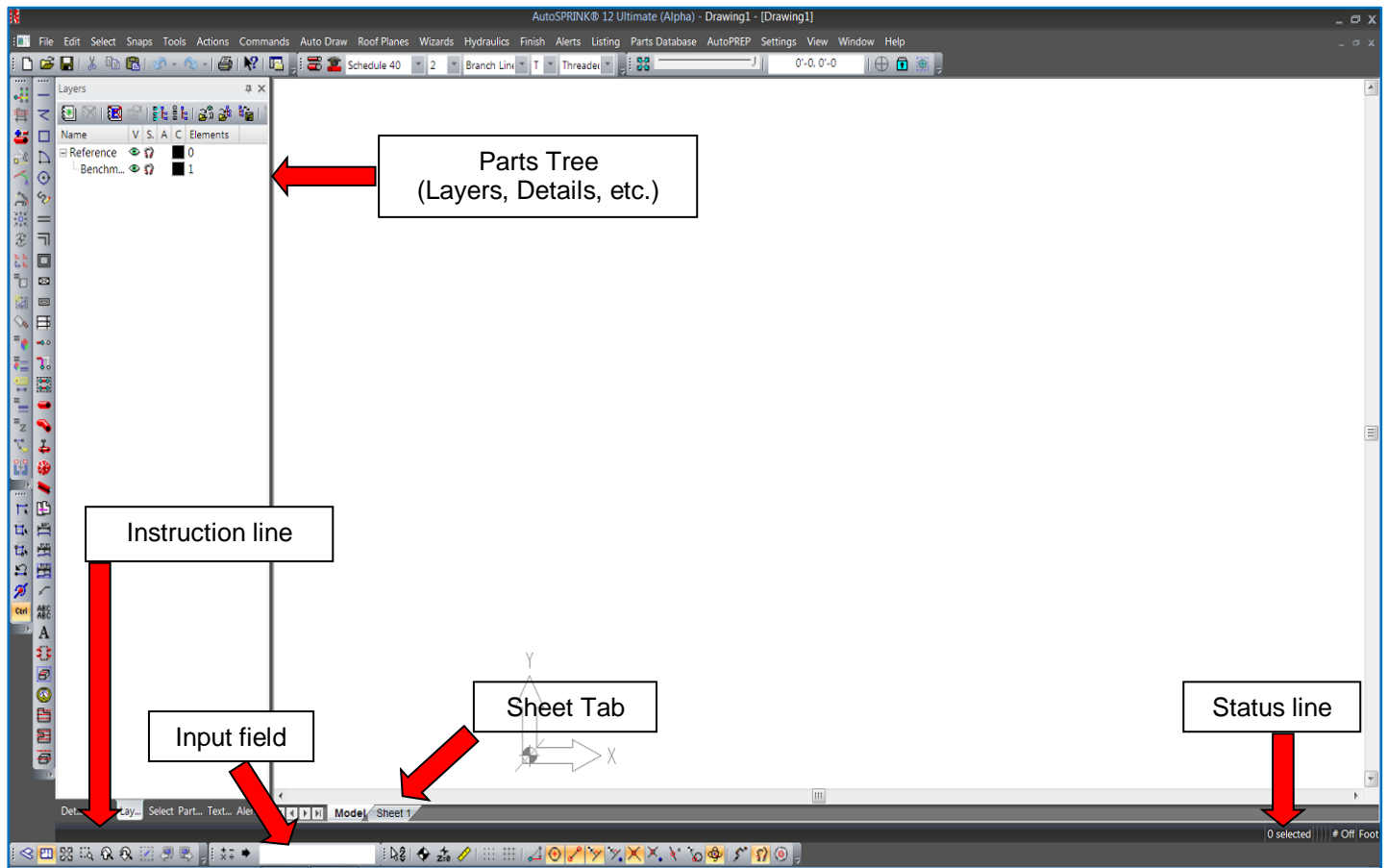
3. **Right-click** the AutoSPRINK desktop shortcut icon
  - Go to **Properties** then the **Compatibility** tab, and set to **Run as Administrator**
  - Check any **disable** boxes
4. Change windows desktop theme (Windows 7)
  - Change from Aero Theme to Windows Basic Theme

## Help

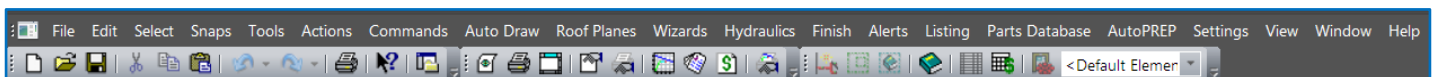
What's This? Button: 

*Click, then click the toolbar button are interested in. The associated help topic will open automatically.*

## The AutoSPRINK interface



### Main menu   [Click here for Video](#)



Menu items are grouped according to the types of operations they perform.

**CLICK** on the desired title or **PRESS** [ALT] followed by the underlined letter in the menu name.  
*If a direct keyboard shortcut is available, it will be shown to the right of the menu item.*

### Toolbars   [Click here for Video](#)

Toolbars can be activated then docked around the drawing space

- **RIGHT-CLICK** the toolbar area to see all available toolbars
- The toolbar may change shape to accommodate the location and orientation of the space
- With the cursor hovering over any button, the description of the specific function will appear
- Active buttons will appear in full color. Unavailable buttons will appear grayed out indicating that the particular function is not activated or appropriate to the selection in the drawing space

## Mouse functions and gestures



### Click

- Start / end a command
- Select an element
- View properties of element (double-click on element)
- Restart command (double-click in white space)

### Middle Click / Wheel

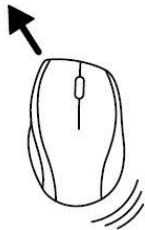
- Zoom in / out (option with Shift)
- Mouse gestures (Middle-click drag)
- Pan
- 3-D orbit of selected element
- Select pipe group, pipe size, and draw

### Right-Click

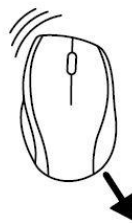
- End a continuous command
- View properties of selected element
- Selection tools
- View tools
- Snaps
- Capture camera settings
- Copy/Paste
- [Click here for Video](#)

## Mouse gestures

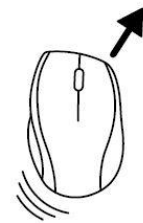
- **CLICK AND HOLD** the middle mouse button (wheel).
  - Move the cursor in the desired direction
  - Release the middle mouse button
- \*Traveling a great distance with the gesture is not necessary.*



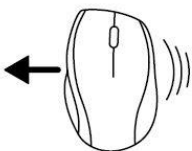
**Isometric View**  
(middle mouse + up/left)



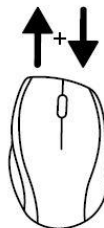
**Plan View**  
(middle mouse + down/right)



**Zoom Window**  
(middle mouse + down/right)  
(start and end describe the window)



**Zoom Previous**  
(middle mouse + left)



**View Properties of Selection**  
(middle mouse + up then down)



**Zoom All**  
(middle mouse + down/left)

## **Mouse gestures (cont'd)**

**Pan:** [Shift] + middle mouse button, then move the mouse

**3D Orbit:** [CTRL] + middle mouse button. If an element is selected, it will become the center of the orbit. The benchmark may also be placed at the desired center of orbit.

**Zoom:** middle mouse wheel. The camera will zoom to the cursor location.  
***If [SHIFT] is held down, the rate of zoom is reduced.***

## **Basic commands**

**Delete:** [DEL]

**Copy:** [CTRL] + C

**Paste:** [CTRL] + V

**Select All:** [CTRL] + A

**Undo:** [CTRL] + Z

*Note that using [ESC] to cancel a command will also clear the Input field. Dimensions, coordinate values, etc. would need to be re-typed. Use of the [ESC] key is discouraged.*

## **Keyboard function keys**

**F1** – Help

**F7** – Endpoint snap On / Off

**F2** – Place Benchmark

**F8** – Perpendicular 2D snap On / Off

**F3** – Snaps On / Off

**F9** – Perpendicular 3D snap On / Off

**F4** – Special element snap On / Off

**F10** – Intersection 2D snap On / Off

**F5** – Refresh the screen

**F11** – Intersection 3D snap On / Off

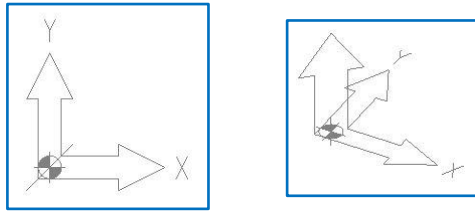
**F6** – Center snap On / Off

**F12** – Near snap On / Off

## **Input field**

- Moving, or copying elements a specified direction and distance
- Any coordinates entered must be in X, Y, Z order
- Stretching applicable elements a specified direction and distance
- Using offset snap by typing s preceding a distance
- Moving elements to absolute zero by typing A0

## The Benchmark



The Benchmark is similar to the UCS in other CAD software with additional capabilities. Its location and user-defined or altered properties can govern and or impact commands. It functions as a reference point, base point of rotation, insertion point, and import / export coordinate.

To initiate placement of the benchmark to any location:

**RIGHT-CLICK**, then **CLICK** Move Benchmark

**CLICK** desired location

## Properties of elements

The properties dialogue box can be viewed by:

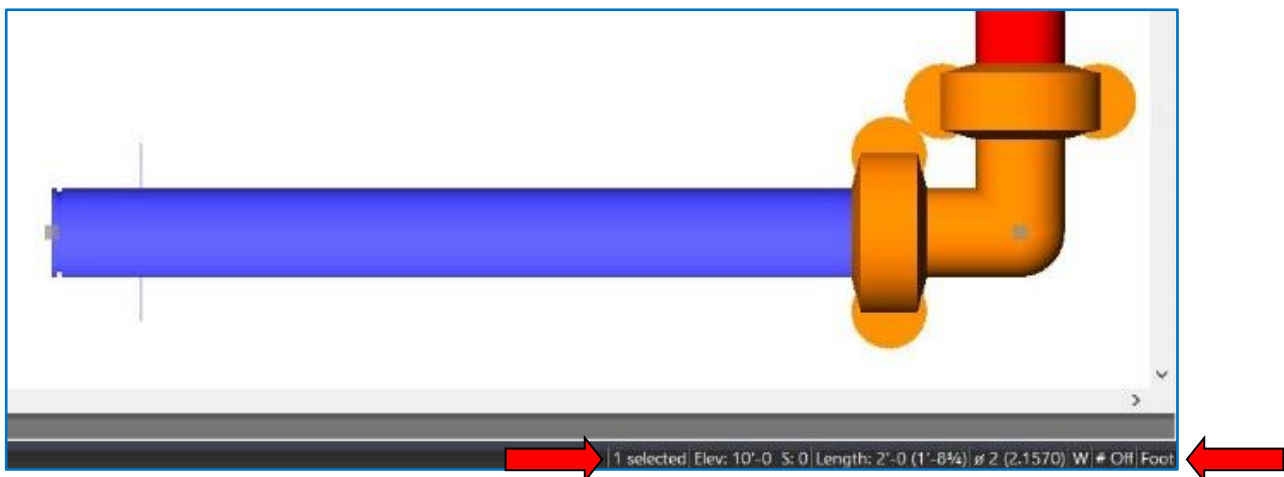
- Double-click on an element or elements
- Right-click on selected element, then select **Properties**
- Middle mouse gesture (up, then down)



## The status line

Located in the bottom right hand corner of the screen, this displays information about selected items. In the example below, a 2" pipe was created and then selected

Its elevation is 10'-0" C-L above the floor, it is 2'-0" in total length, (1'-8-3/4" cut length), 2" nominal diameter, (2.1570" internal diameter), and it's in the 'W' pipe group.



**Layer tree**


Note that very few items in AutoSPRINK are required to be on any specific layer.

Elements on layers may be hidden, locked, selected or unselected, deleted, etc.


Layers

Name	Visibility	Snap	Access	Color	Elements
0	V	S			1315
Text Line	V	S			1
Beam	V	S			1
Reference	V	S			0
Column	V	S			7
WALL	V	S			268
GRID	V	S			73
GRIDDIM	V	S			112
LOWWALL	V	S			13
TXT	V	S			220
JST	V	S			128
COL	V	S			31
BM	V	S			24
RCP	V	S			26
Occupancy...	V	S			2
Pipe Labels	V	S			83
SUPPLY	V	S			0
PIPE	V	S			0
FITTINGS	V	S			0
VALVE	V	S			0
Hyd Calcs	V	S			0


Details Symbols Layers Select Parts Book Textures Alerts




Visibility  
(On & Off)



Locked  
(Cannot select)



Locked  
(Can select but not manipulate)



Snapability  
(Snap to elements on this layer)

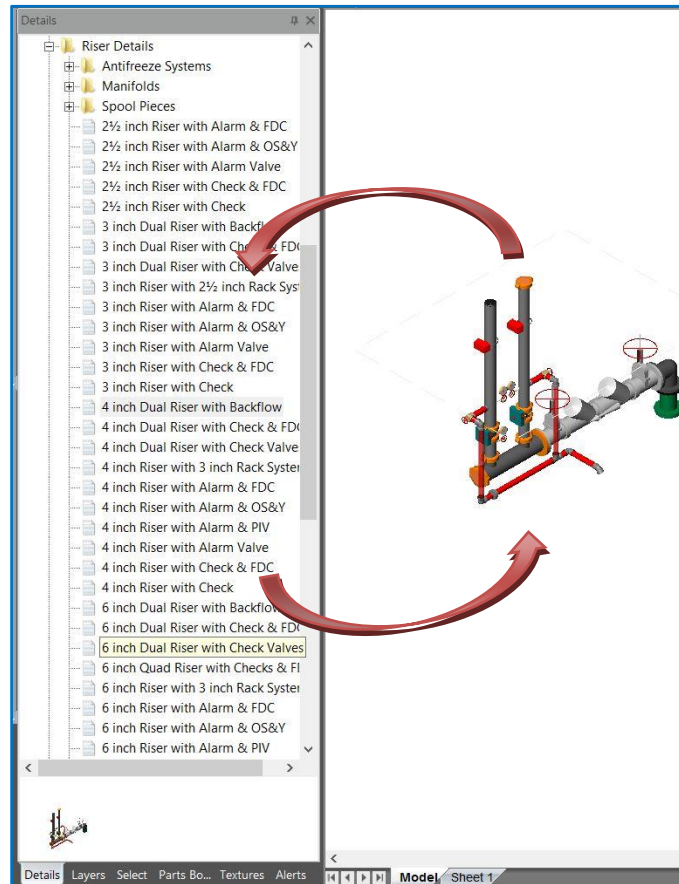


## Details tree

This contains pre-designed or assembled details for hangers, pumps, risers, UG piping, etc.

These can be dragged and dropped into any drawing.

Conversely, drawings, details, and parts can be dragged from a drawing and dropped into a folder for later use.



## Snap



This toolbar is used to turn On and Off various snap behaviors. Snaps act as a magnet attracted to different points. **RIGHT-CLICK** in blank space, then **CLICK** Toggle Snaps to turn all of them On and Off.



**Ortho:** Forces drawing or dragging along the X-axis or Y-axis relative to the point where you started



**Center (also midpoint):** snaps to the center or midpoint of an element



**End (location) point:** snaps to the end or vertex of an element



**Perpendicular 2D**



**Perpendicular 3D:** will snap to the same elevation as an existing element



**Intersection 2D:** snaps to the intersection of two or more existing elements



**Intersection 3D:** will snap to the same elevation as an existing element



**Near:** snaps to any point of an element. Use this sparingly! Should normally be off until needed.

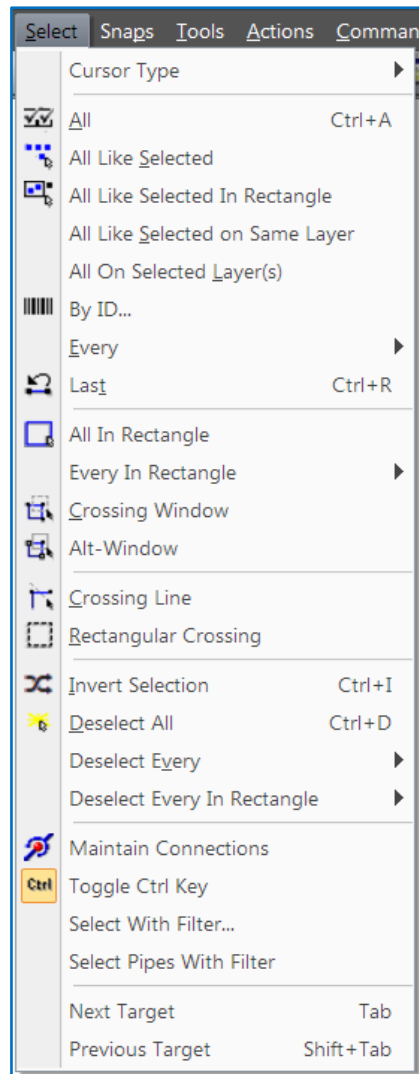


**Special Element (should always remain On)**



**Snap into Symbol** will allow snapping within a symbol or **XREF**

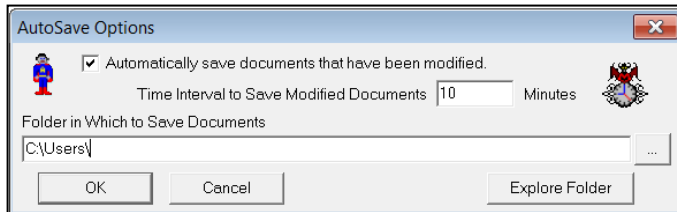
## Selection tools and filters



## Selection methods

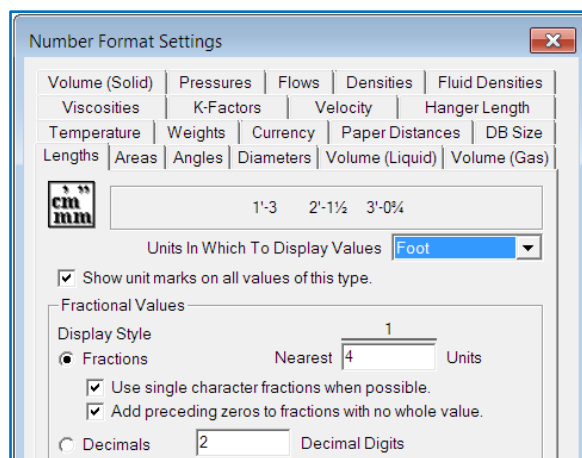
- **Select, Crossing Line** – selects elements crossed by a dashed selection polyline
- **Select, Crossing Window** – selects elements crossed by the boundaries off a dashed selection window
- **Rectangular Window** – selects elements completely contained within the selection window
- **[ALT] Window** – *stretches* elements partially contained within the selection window
- **Select Pipe With Filter** – enables the selection of pipe by type and / or size
- **Select With Filter** - create a list of elements to be selected

## AutoSave



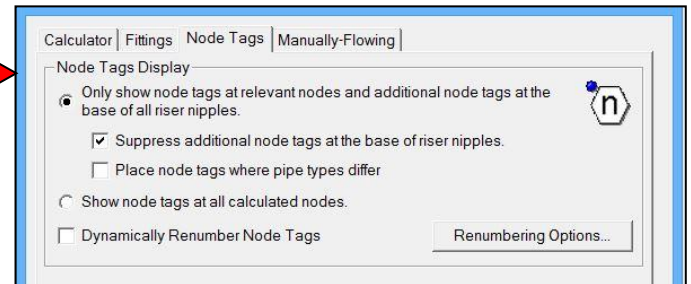
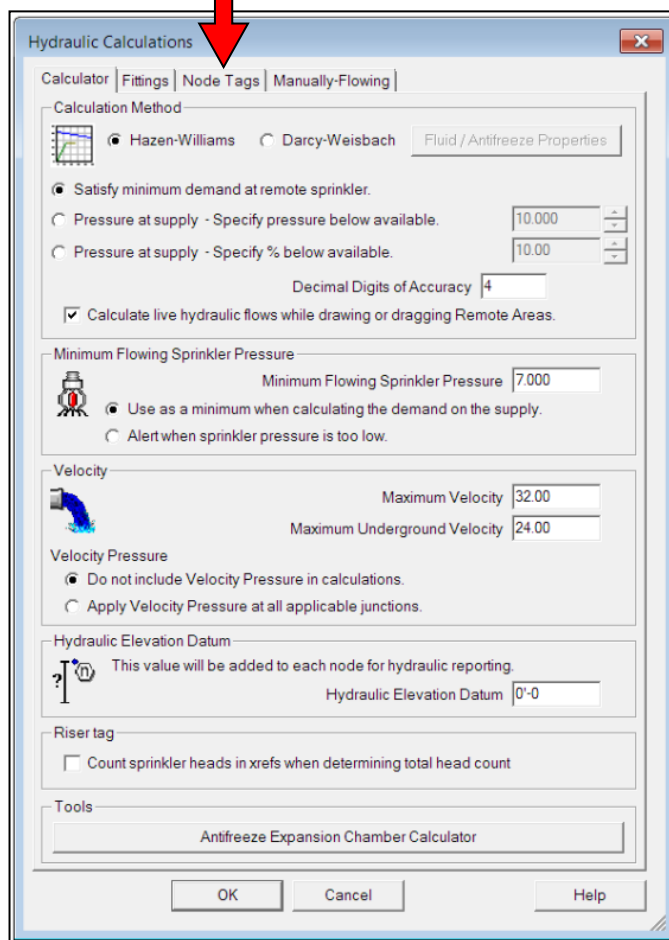
*Provides options for automatically saving a backup file of your drawing*

## Format settings



- **Lengths and hanger lengths** - - Defines the rounding value of pipes and hangers on the screen and therefore plotted page. It *does not* affect stock listing.
- **Diameters** – Controls the rounding value of the pipe diameters. Do not set below **1/4**.

## Hydraulic settings



## Recommended node tag settings

**Fabrication settings**

Preferred Fitting Type

Select preferred type of default fitting\* 

Cast Iron

\* For fittings which have any connection to an underground pipe, the preferred type of default fitting will be Ductile Iron.

Grooved Fitting Preference

☒ Standard ☐ FireLock(TM) ☐ FireLock(TM) then Standard

☐ Use Grooved Concentric Reducer instead of a Grooved Reducing Coupling

OK

Cancel

Help

**Fittings tab**

Fabrication Standards

Pipeline

Pipes

Fittings

Sway Brace

Pipe Sizing

Pipe & Hanger Lengths

Region Settings

Pipe Sticks

Outlet Exclusions by Pipe Material

Pipe Fabrication

Pipe Group 

T

Delete Group

Add Group

Select pipes that should use fittings in place of outlets.

Set All Pipes to Use Fittings

☒ Limit End Prep List

T

☒ Drops

G

☐ Cross Mains

T

☒ Sprigs

G

☐ Feed Mains

T

☒ Branch Lines

G

☐ Feed Risers

T

☒ Riser Nipples

PE

☐ Underground

Special Conditions

☐ Force fittings at riser nipple and Branch Line intersections☐ Force size on size pipe outlets.☐ Allow Auto Fittings to change pipe ends to Blank End if possible.

Smart Pipe

New

Delete

Defaults

Size	Material	La...	Wi...
1	Schedule 40	0	
1¼	Schedule 40	0	
1½	Schedule 40	0	
2	Schedule 40	0	
2½	Schedule 10	0	
3	Schedule 10	0	
4	Schedule 10	0	
6	Schedule 10	0	

These pipes to override above defaults

Ty...	Material	La...	Wi...
DR	Schedule 40	0	
SP	Schedule 40	0	
RN	Schedule 40	0	
UC	UNION	0	

Maximum Branch Line Size: 

2

 Set Ground Start z: 

0'-0

Save Settings to File

Restore Program Defaults

OK

Cancel

Help