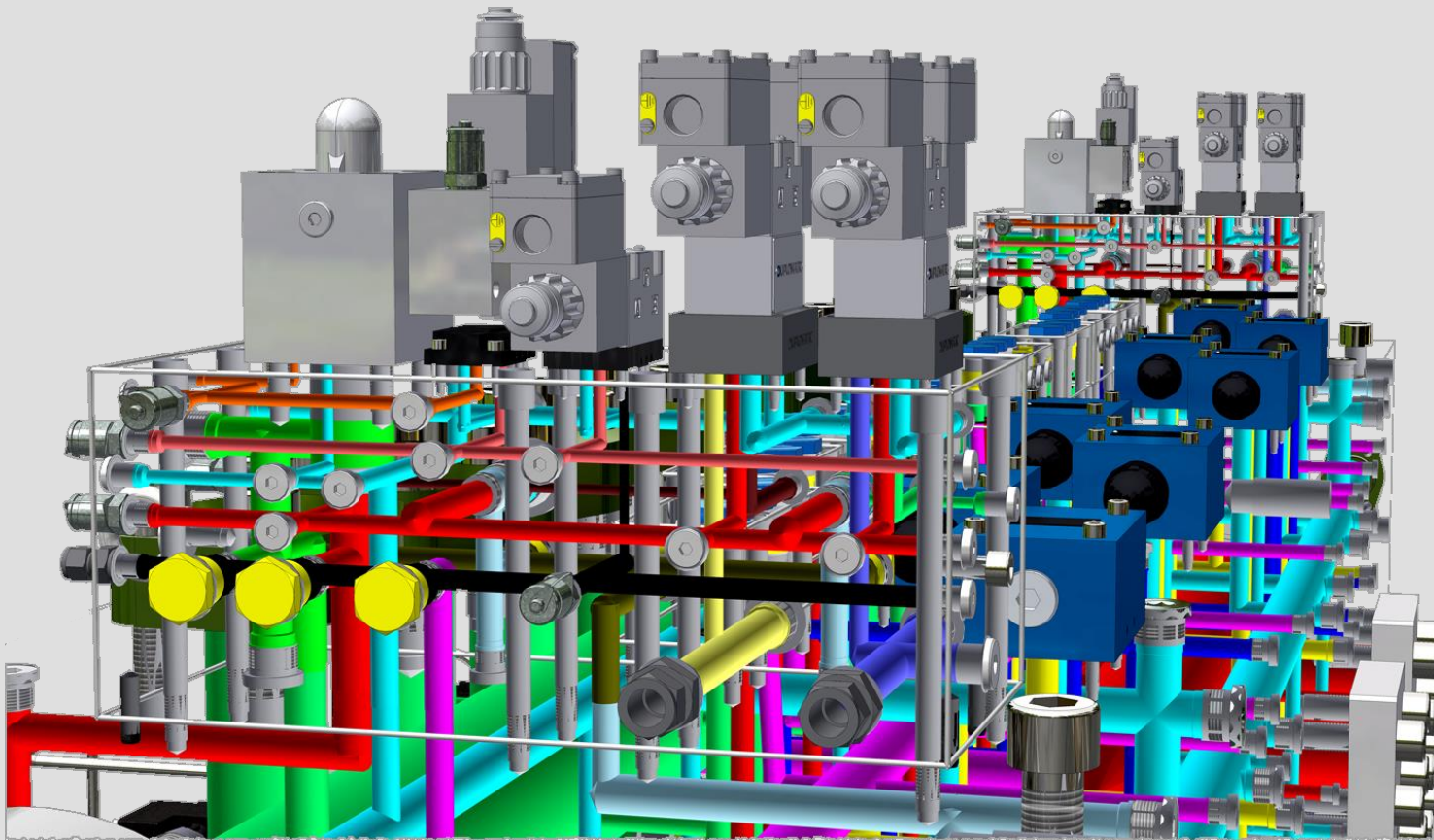


# MDTools® 790

## What's New



\* Manifold Assembly designed with MDTools, courtesy Duplomatic MS SpA.



# MDTools® 790 What's New

## Create Machining Callouts

Automatic Grouping of similar Bolt Holes and Locating Pins within a Footprint

Automatic Grouping for Bolt Holes and Locating Pins in Similar Footprints on a Face

## Update Machining Callouts

Automatic Grouping for Bolt Holes and Locating Pins in Similar Footprints on a Face

Automatic Grouping of Similar Bolt Holes and Locating Pins within a Footprint

Alpha Angle Hole Callouts Based on Drawing Sheet Orientation

## SQL Library

SQL Supported as Library Format

Import Cavities to and from MDTools SQL library

SQL Database Selection

## Miscellaneous

No Need to Recolor Cavities when Opening a Block

MLM detects Dot/Comma separator

Customize Counterbore in Drill Chart

Improved Thread Description

Vault 2023 and 2024 Compatibility

# Create Machining Callouts

Automate various grouping behaviors with Drawing Creation



# Grouping of Cavities within a Footprint

Identical Bolt Holes and Locating Pins can now be grouped within a Footprint

Machining Callout Settings

Operation	Prefix		Suffix		Remarks
	Prefix	Suffix	Prefix	Suffix	
0			<StyleOver	,	
1			<StyleOver	,	
2			<StyleOver	,	
3			<StyleOver	,	
4			<StyleOver	,	
5			<StyleOver	,	
6			<StyleOver	,	

M/c. Sequence Rows: Rows 0

Assigned Order: Operation, Diameter, Depth, Remarks

Depth:  Full Diameter Depth,  Depth to tool tips (For STEP0 & STEP12),  Depth to tool tips (For STEP0 to STEP12)

Precision: Diameter 2.12, Angle 2.12, Depth 2.12

Text Height 3

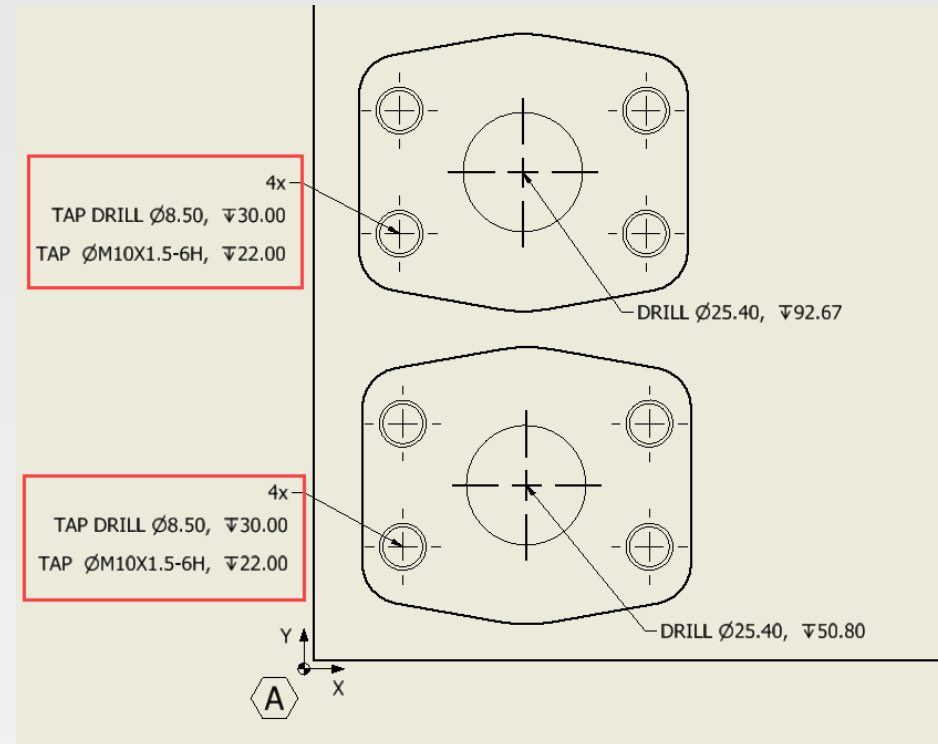
Leading Zeros  Trailing Zeros

Angle:  Show Alpha for Compound Angle Only

**Grouping**

- Group Bolt and Locating Pin Holes
  - In a Footprint
  - In Similar Footprints on a Face

OK Cancel





# Grouping Cavities Within Multiple Footprints

Identical Bolt Holes and Locating Pins within multiple Footprints can be grouped on the same face

Machining Callout Settings

Operation	Prefix		Suffix		Diameter	Prefix		Suffix		Depth	Prefix		Suffix		Remarks	Prefix		Suffix		
0					<StyleOver					<StyleOver										
1					<StyleOver					<StyleOver										
2					<StyleOver					<StyleOver										
3					<StyleOver					<StyleOver										
4					<StyleOver					<StyleOver										
5					<StyleOver					<StyleOver										
6					<StyleOver					<StyleOver										

M/c. Sequence Rows: Rows 0

Assigned Order: Operation, Diameter, Depth, Remarks

Depth:  Full Diameter Depth,  Depth to tool tips (For STEP0 & STEP12),  Depth to tool tips (For STEP0 to STEP12)

Precision: Diameter 2.12, Angle 2.12, Depth 2.12

Text Height: 3

Leading Zeros  Trailing Zeros

Angle: Angle Prefix &lt;, Beta Caption β, Alpha Caption α,  Show Alpha for Compound Angle Only

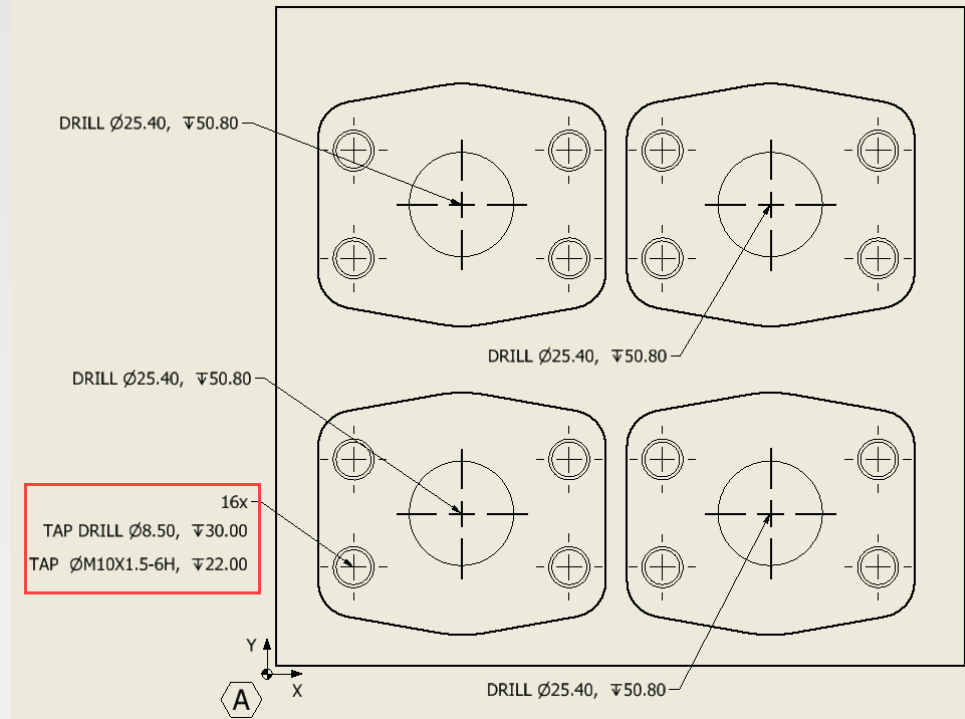
Grouping

Group Bolt and Locating Pin Holes

In a Footprint

In Similar Footprints on a Face

OK Cancel



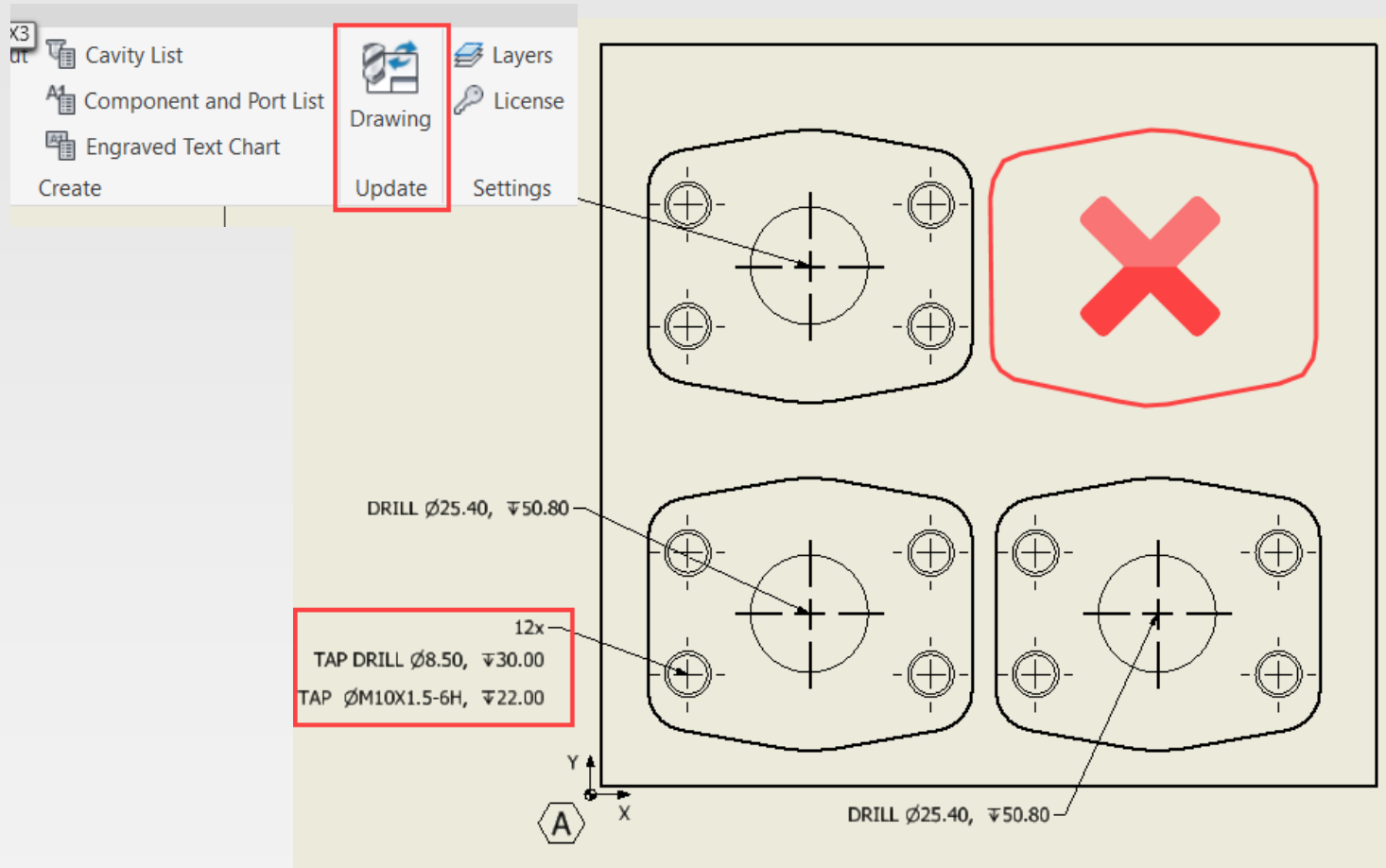
# Update Machining Callouts

Automate grouping behaviors with Update Drawing

NEW

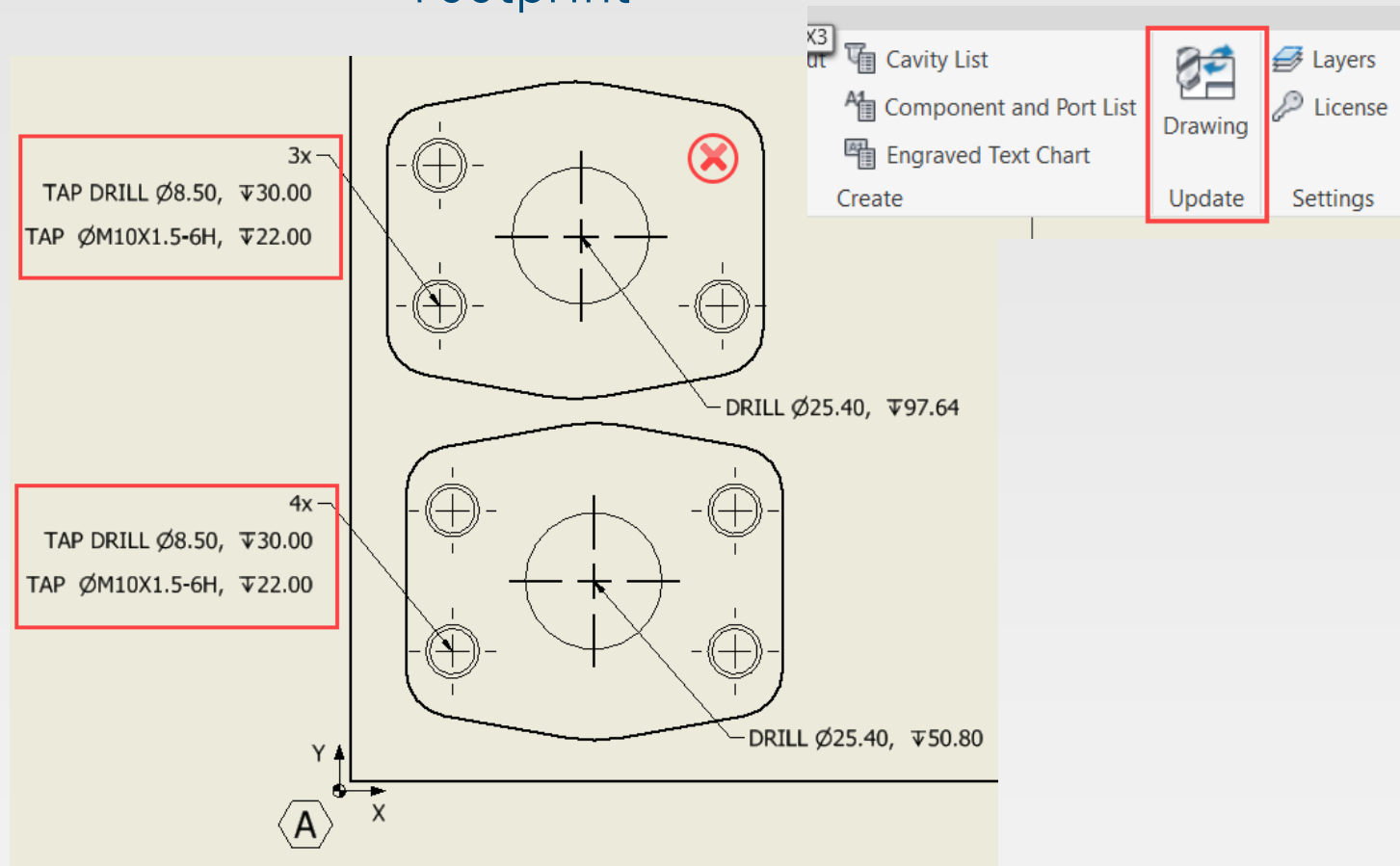
# Update Grouping within Footprints on a Face

Update Drawing groups Bolt Holes and Locating Pins within similar Footprints on a face



# Update Grouping within a Footprint

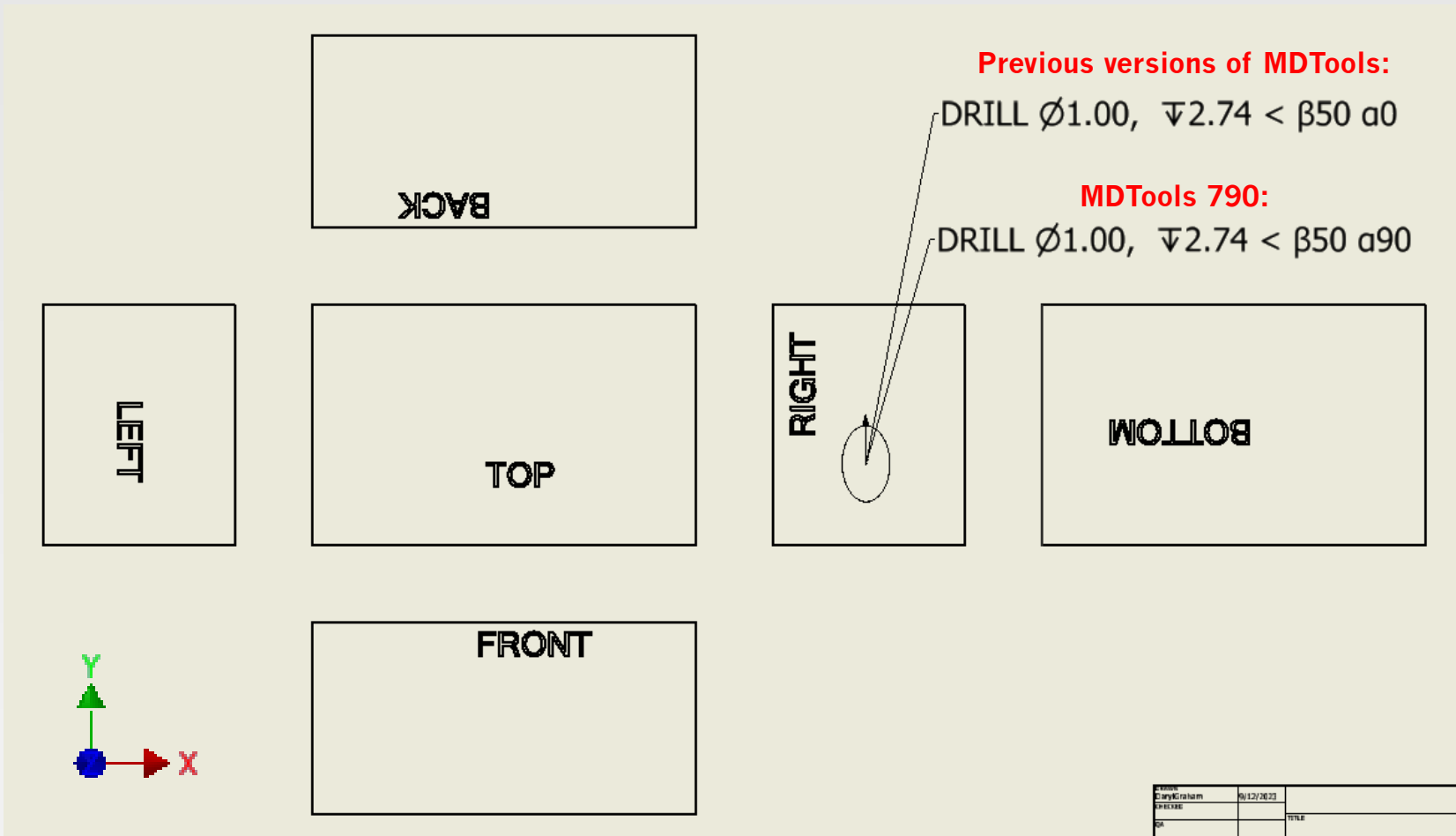
## Update Drawing groups Bolt Holes and Locating Pins within a Footprint





# Alpha Angle Representation in Rotated View

Alpha Angle now reported based on horizontal (x) axis of the drawing sheet (relevant for change of base view)



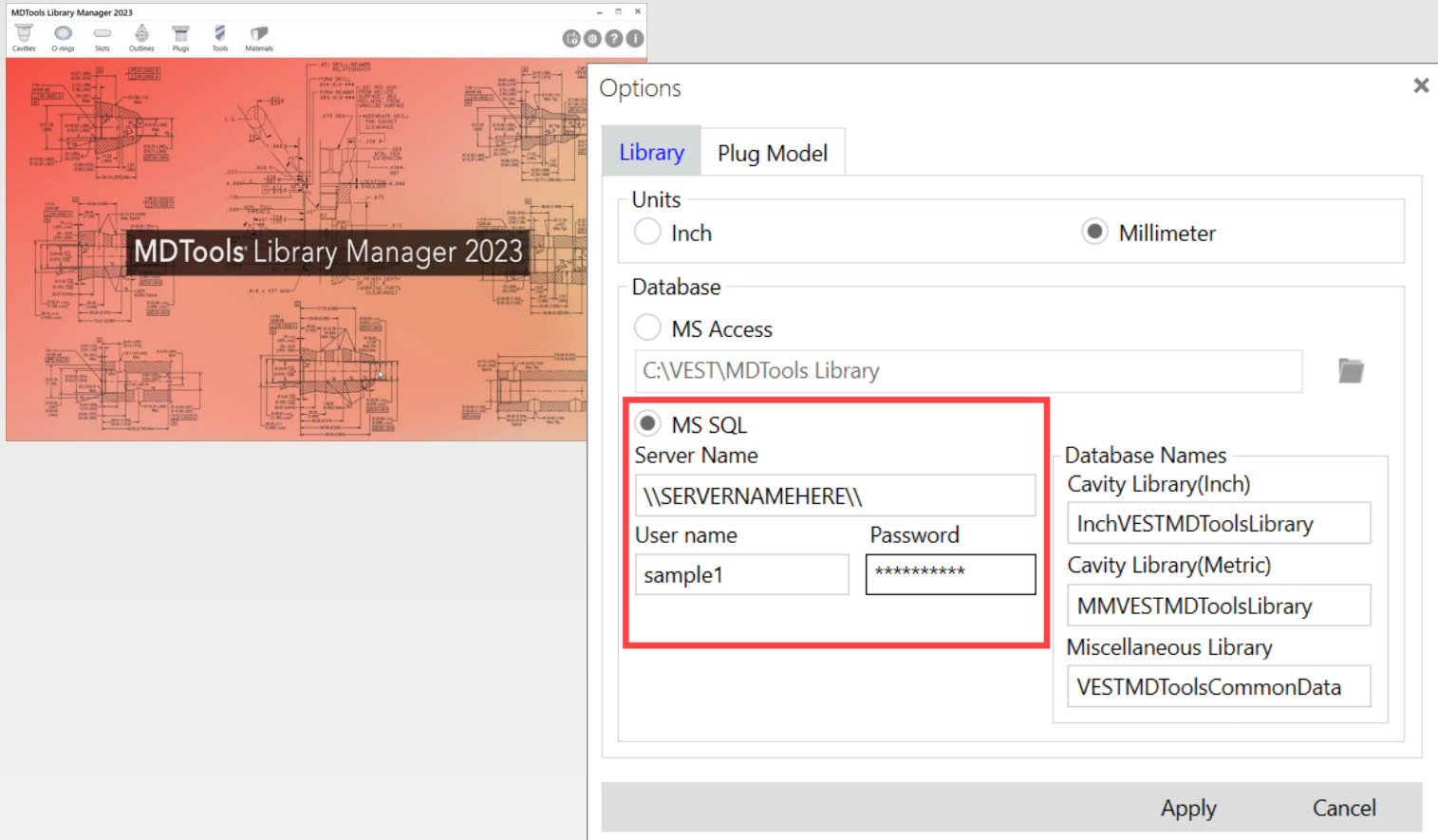
# New SQL Library Support

MDTools® now supports SQL Libraries

NEW

# SQL Now Supported as Cavity Library Format

## 2023 Library Manager and MDTools now support SQL Libraries





# Import Cavities to and from SQL Library

Easily use the MDTools Library Manager to Import individual cavities or entire Libraries between SQL and Access Libraries

Import Cavities/Footprints

**Source**

MS Access  MS SQL

Database name: MMVESTMDToolsLibrary

Library: Bolt Holes (Metric)

**Destination**

Create library if not present

Overwrite cavity if present

**Cavities/Footprints**

Cavity Name	Library Name
<input checked="" type="checkbox"/> BoltHoleImportfromAcc	Bolt Holes (Metric)
<input checked="" type="checkbox"/> M10x1.5-6H	Bolt Holes (Metric)
<input checked="" type="checkbox"/> M12x1.75-6H	Bolt Holes (Metric)
<input checked="" type="checkbox"/> M14x2.0-6H	Bolt Holes (Metric)
<input checked="" type="checkbox"/> M16x2.0-6H	Bolt Holes (Metric)
<input checked="" type="checkbox"/> M18x2.5-6H	Bolt Holes (Metric)
<input checked="" type="checkbox"/> M20x2.5-6H	Bolt Holes (Metric)
<input checked="" type="checkbox"/> M24x3.0-6H	Bolt Holes (Metric)
<input checked="" type="checkbox"/> M30x3.5-6H	Bolt Holes (Metric)
<input checked="" type="checkbox"/> M36x4.0-6H	Bolt Holes (Metric)
<input checked="" type="checkbox"/> M4x0.7-6H	Bolt Holes (Metric)
<input checked="" type="checkbox"/> M5x0.8-6H	Bolt Holes (Metric)
<input checked="" type="checkbox"/> M6x1.0-6H	Bolt Holes (Metric)
<input checked="" type="checkbox"/> M8x1.25-6H	Bolt Holes (Metric)
<input checked="" type="checkbox"/> TestHoleMadeinSQL	Bolt Holes (Metric)

Delete cavity after importing

None

Import Cancel



# Enhanced Database Selection

SQL cavity database now fully integrated in MDTools

The screenshot shows the MDTools Settings dialog box with the following configuration:

- Library & Units** (selected tab)
- Database**
  - MS Access**
    - Library Path: C:\VESTMDTools Library (with Browse... button)
  - MS SQL**
    - Server name: [Empty field]
    - Username: [Empty field] Password: [Empty field]
    - Database Names:
      - Cavity Library (Inch): InchVESTMDToolsLibrary
      - Cavity Library (Metric): MMVESTMDToolsLibrary
      - Miscellaneous library: VESTMDToolsCommonData
- Design Units**
  - Inches  **MM**
  - Minimum Wall Thickness: 4.78
  - Minimum Break Tolerance: 1.59
- Precision**
  - Location: 3.123
  - Drill Depth: 2.12
  - Inclination: 0

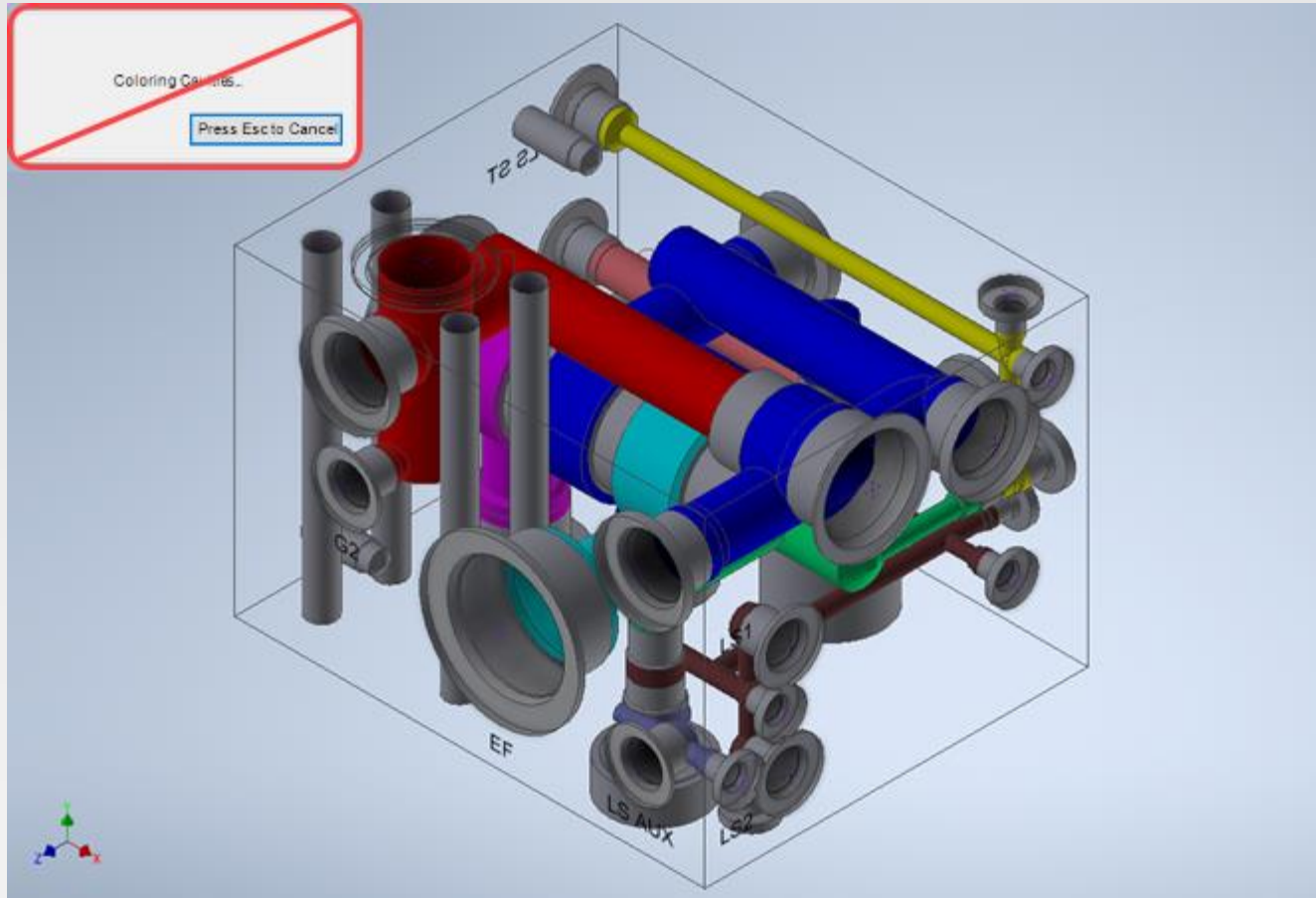
Buttons: Apply, Cancel

# Miscellaneous

...additional MDTools® enhancements

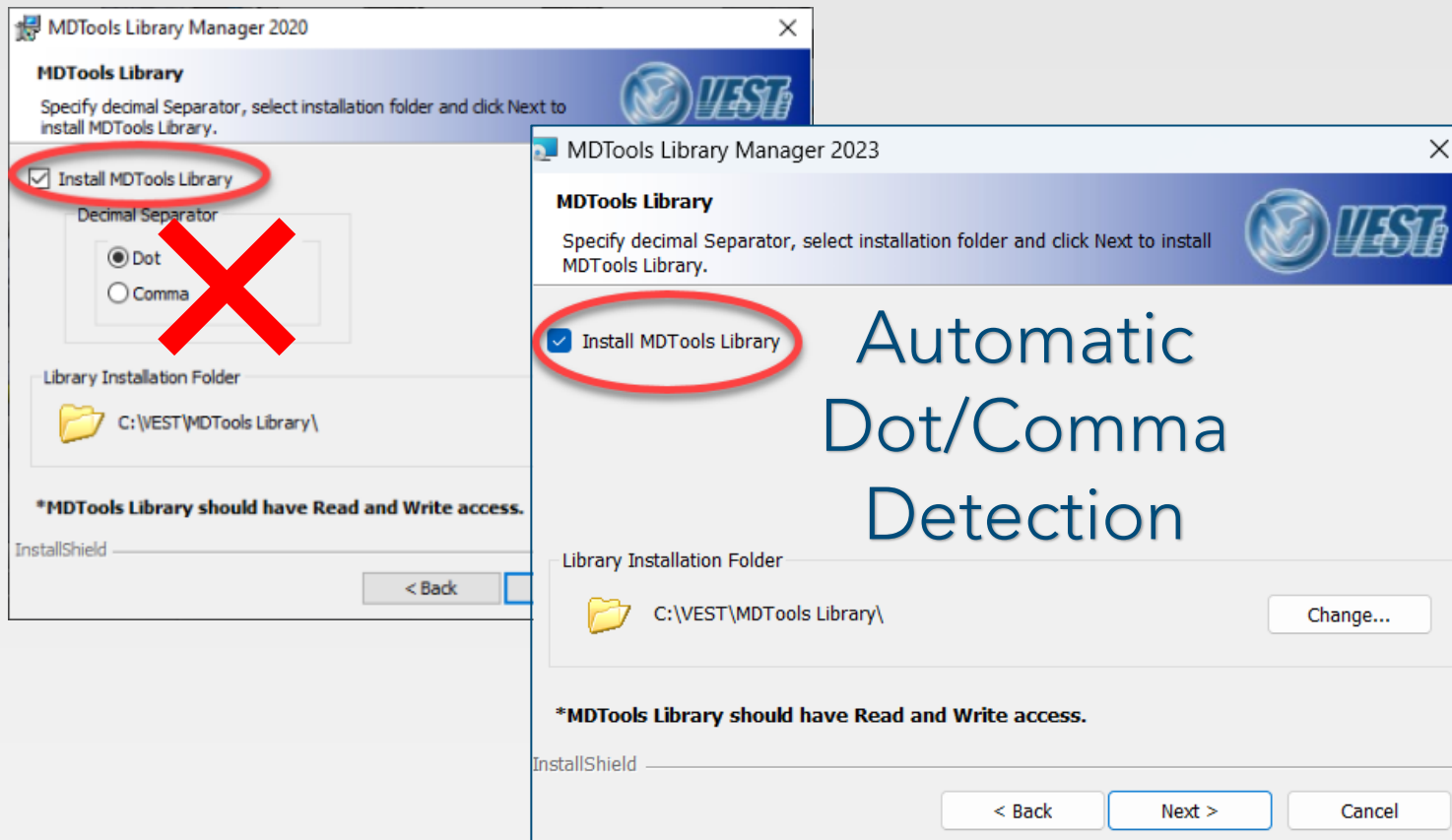
# No Recoloring when Opening a File

Load times are now faster as cavities are no longer recolored when opening a file with the new coloring system



# MLM detects Dot/Comma separator

Installation uses regional settings to detect Dot/Comma separators, no longer defaults to Dot upon installation.






NEW

# Customize Counter Bore in Drill Chart

Specify Counter Bore row position in Machining Sequence

Add Counter Bore

C'Bore Diameter   > 2.362

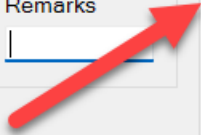
C'Bore Depth

Operation	Diameter	Depth	Remarks
C'BORE	\$STEP0	\$STEP0	<input type="text"/>

Machining Sequence

Index	Operation	Diameter	Depth	Remarks
<input type="radio"/> 0	DRILL	\$STEP12	\$STEP12	
<input checked="" type="radio"/> 1	C'BORE	\$STEP0	\$STEP0	
<input type="radio"/> 2	FORM PORT	ISO 6149-1-M	\$STEP0	
<input type="radio"/> 3	TAP	M42x2-6H	\$STEP3	
<input type="radio"/> 4				
<input type="radio"/> 5				
<input type="radio"/> 6				

OK Cancel





# Improved Thread Description

More accurate thread description in MDTools and Library Manager

## Previous versions of MDTools:

Thread Detail			
Step#	Size	Pitch	Class
0	10	M10x1.5	6H

## MDTools 790:

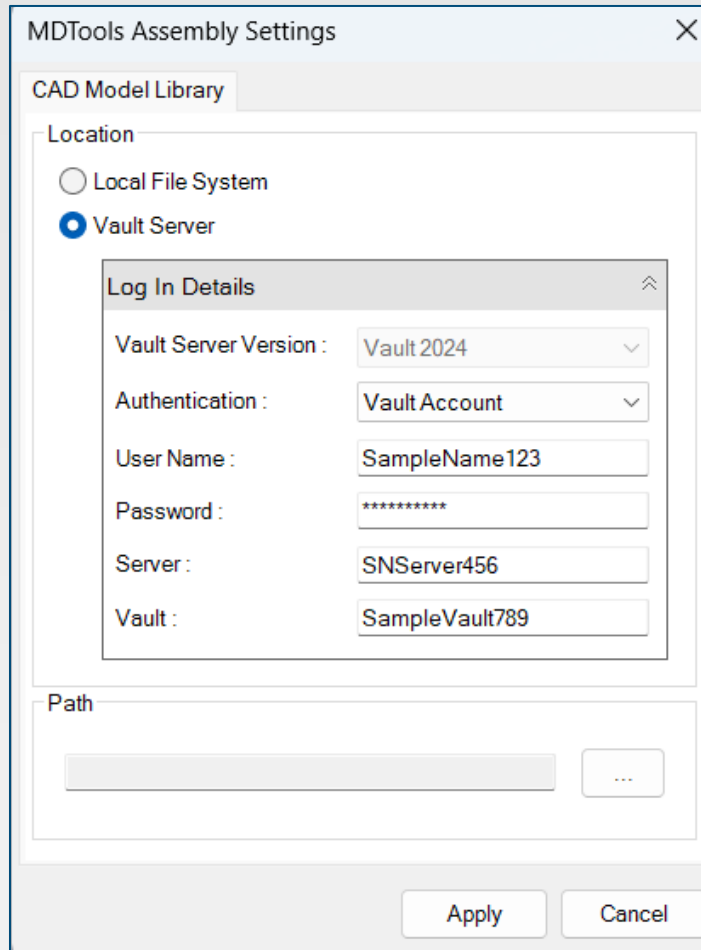
Thread Detail			
Step#	Size	Designation	Class
0	10	M10x1.5	6H





# Vault 2023 & 2024 Compatibility

Use CAD Models from Vault Server within MDTools Assembly



# MDTools® 790

Premier 3D manifold design software

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