



EC Design to Fabrication

This document contains summary information on new features, late-breaking product information, updates, and troubleshooting tips not covered in the Trimble® EC Design to Fabrication documentation.

Introduction

These release notes describe the features and enhancements that are new in version 9.0 of EC-Design to Fabrication. For further support information, go to mep.trimble.com/support/.

EC Design to Fabrication

Design to Fabrication Version 9.0 is a full installation for new customers and applies software enhancements and corrections for customers who are upgrading from an earlier release (V8.1 or earlier version) of all the Design to Fabrication software components, including MEP Design to Fabrication, EC CAD, PartManager, and DuctMaker. Your license and specific installation may include some, or all, of these components.

Quick Links

[EC CAD Specific Features and Changes](#)

[EC DuctMaker Specific Features and Changes](#)

[EC Design to Fabrication Upgrade Procedure](#)

EC-CAD New features and changes

The following improvements have been made to the EC-CAD Product:










New Features

- Acoustic Lining - Liner Name added to CAD and CAM

EC-CAD and DuctMaker can now work with different Liners of the same thickness. To set this up, first add your desired Lining material in the Allowances section of DuctMaker or PartManager:

Version: 9.0

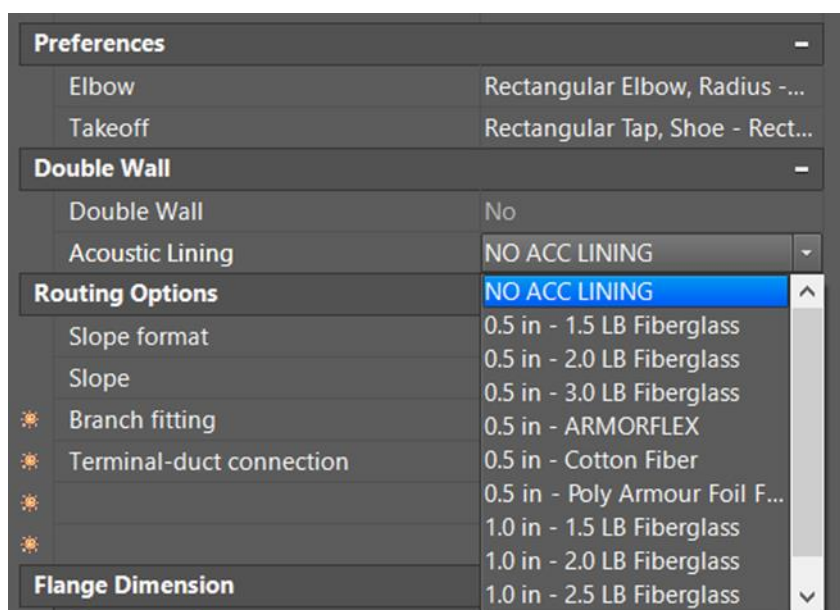
Date: October 2018

Liners				
Name	Color	Thickness	Density	DWOffset
0.5 in - 1.5 LB Fiberglass		0.5	1.5	0
0.5 in - 2.0 LB Fiberglass		0.5	2	0
0.5 in - 3.0 LB Fiberglass		0.5	3	0
0.5 in - ARMORFLEX		0.5	0	0
0.5 in - Cotton Fiber		0.5	0	0
0.5 in - Poly Armour Foil Face		0.5	0	0
1.0 in - 1.5 LB Fiberglass		1	1.5	0
1.0 in - 2.0 LB Fiberglass		1	2	0
1.0 in - 2.5 LB Fiberglass		1	2.5	0

Then setup your Liner Sheets in the Shop Standards section:

Liner Sheets			
Name	Liner	Width	Length
0.5 in - 1.5 LB Fiberglass	0.5 in - 1.5 LB Fiberglass	60	120
0.5 in - 2.0 LB Fiberglass	0.5 in - 2.0 LB Fiberglass	60	120
0.5 in - 3.0 LB Fiberglass	0.5 in - 3.0 LB Fiberglass	60	120
0.5 in - ARMORFLEX	0.5 in - ARMORFLEX	60	120
0.5 in - Cotton Fiber	0.5 in - Cotton Fiber	60	120
0.5 in - Poly Armour Foil ...	0.5 in - Poly Armour Foil ...	60	120
1.0 in - 1.5 LB Fiberglass	1.0 in - 1.5 LB Fiberglass	60	120
1.0 in - 2.0 LB Fiberglass	1.0 in - 2.0 LB Fiberglass	60	120
1.0 in - 2.5 LB Fiberglass	1.0 in - 2.5 LB Fiberglass	60	120

When drawing in EC-CAD you can now pick Acoustic Lining from the list in the Property Palette:



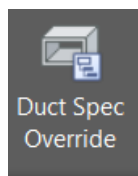
Acoustic Lining can be applied while drawing or applied later to an existing duct run.

In DuctMaker Acoustic Lining will be selected from the pull down as in previous versions:



- Dual Wall - Ability to override the interior spec portion of fittings

While EC-CAD has always had the ability to setup the interior specification of your double wall duct. You can now override these specifications using the DuctSpecOverride command in EC-CAD. All duct and fittings now allow this capability.



- Dual Wall - Ability to add or subtract from inner shell of round and oval duct.

A new parameter has been added to the round and oval connectors called: DW Duct Inner Adj. This parameter will be applied to the inner wall round and oval duct (not fittings). A positive value will grow the duct while a negative value will take away from the overall duct length. When you break your duct into full joints the inner wall typically finishes at the same length as the outer shell. If you want the inner shell to grow or to be shorter you can apply the correct value to the connector that is assigned to the inner shell.

The length of the inner shell will equal: Outer shell finished length + Inner C1 Height + Inner C2 Height + Inner C1 Adj + Inner C2 Adj

- Dual Wall - Specification override improvement

DuctSpecOverride now only shows the inner parameters for double wall duct and duct fittings.

- Fitting Enhancement – Round and Oval Tees and Crosses can now increase

All Round and Oval Tees and Crosses now allow the ability for the inlets and outlets of the body to increase or decrease.

- Fitting Enhancement - Oval Transitions

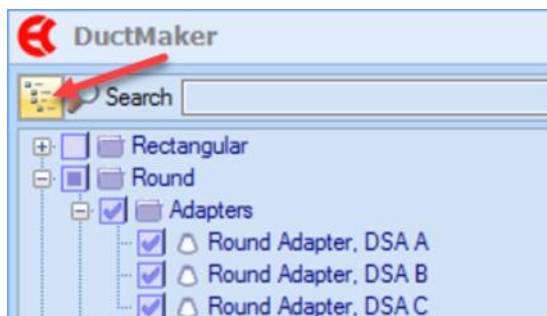
The following changes have been made to the Oval Transitions:

- The Oval Transition, Twist fitting has been removed from EC-CAD.
 - The Oval Transition, Type In and Type Out parameters in DuctMaker have been made read only.
 - The Oval Transition now allows the Minor to be larger than the Major on both the inlet and outlet.
 - The Type In and Type Out parameters will read Normal if the Major > Minor and will read Twist if the Major < Minor.
 - Type In and Type Out are now schedule-able parameters in EC-CAD.
 - Under-sizing will treat the smaller value on the inlet and outlet as the Minor for under-sizing and treat the larger value on the inlet and outlet as the Major for under-sizing.
-
- Liner Add – The sign has been changed for the Liner Add value

The Liner Add value in the connector table will either add to the liner or subtract from the liner for each fitting connector. In EC-CAD version 9.0 a positive value for Liner Add will grow the liner while a negative value for Liner Add will subtract from the length of the liner.

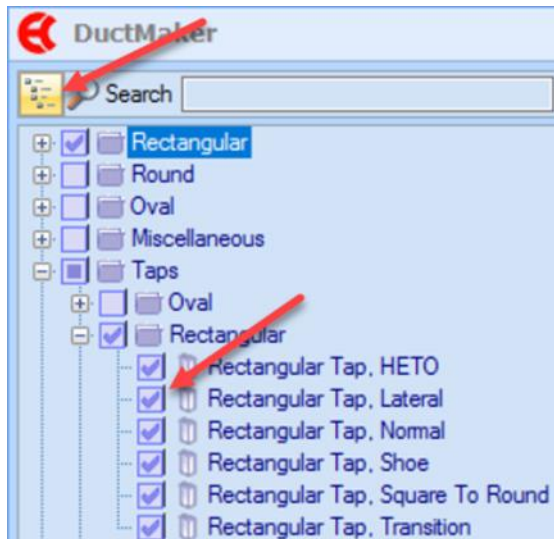
- New Fittings – Round, DSA Adapters

Three new Round, Dual Wall to Single Wall (DSA) Adapters have been added to CAD and CAM. To utilize these fittings, you will need to activate them in your Manufacturer Defaults.



- New Fitting - Rectangular Tap, Lateral

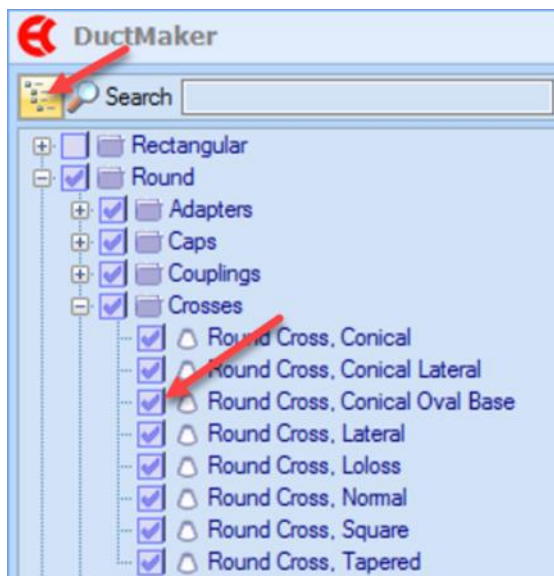
A new Rectangular Tap, Lateral fitting has been added to CAD and CAM. To utilize this fitting, you will need to activate it in your Manufacturer Defaults.



This fitting is identical to the Rectangular Tap, Normal but having this fitting allows contractors to setup different preferences for a straight tap vs a lateral tap.

- New Fitting – Round Cross, Conical Oval Base

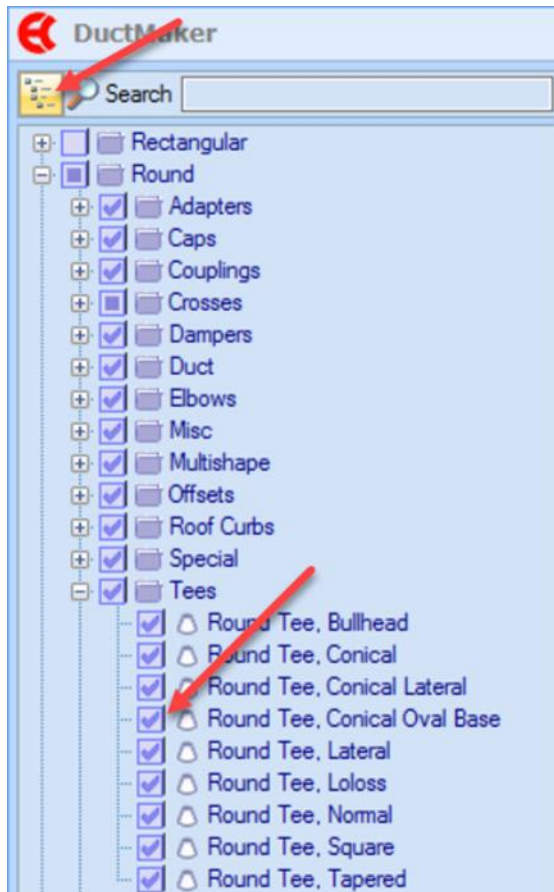
A new Round Cross, Conical Oval Base fitting has been added to CAD and CAM. To utilize this fitting, you will need to activate it in your Manufacturer Defaults.



This fitting is much like the Round, Cross Conical but the branches have an oval base. This fitting can be used to make the base of the conical taps “larger” than the body of the cross, by adjusting the Base Major parameters.

- New Fitting – Round Tee, Conical Oval Base

A new Round Tee, Conical Oval Base fitting has been added to CAD and CAM. To utilize this fitting, you will need to activate it in your Manufacturer Defaults.



This fitting is much like the Round, Tee Conical but the tee branch has an oval base. This fitting can be used to make the base of the conical tap “larger” than the body of the tee, by adjusting the Base Major parameter.

Resolved Issues

- CAD/CAM Issues Involving Oval Tap, Loloss, Minor > Major, Tap Saddles, and Vertical Oval Duct
- The weld schedule on the pipe spool template does not have the correct classifications checked

Known Issues

- AutoCAD MEP Object Viewer Liner and Insulation Display

Liner and insulation will not display correctly on Round and Oval Gored Elbows, Radius Elbows, and Ogee Transitions when viewing them via the AutoCAD MEP object viewer.

- Duct Routing Performance

You may experience some jumpy cursor movement when routing depending on the complexity of your duct specs and the performance of your computer hardware.

- Insulation Display on Attached Views and XREF Files

Insulation will not display correctly on Round and Oval Gored Elbows, Radius Elbows, and Ogee Transitions on attached views and XREF files.

EC-DuctMaker New features and changes

The following improvements have been made to the EC-DuctMaker Product:










New Features

- Access Doors, Panels, and Taps – Placement improvements

The ability to re-position taps, access holes, and access panels on end caps and other fittings has been greatly improved.

- Acoustic Lining - Liner Name added to CAD and CAM

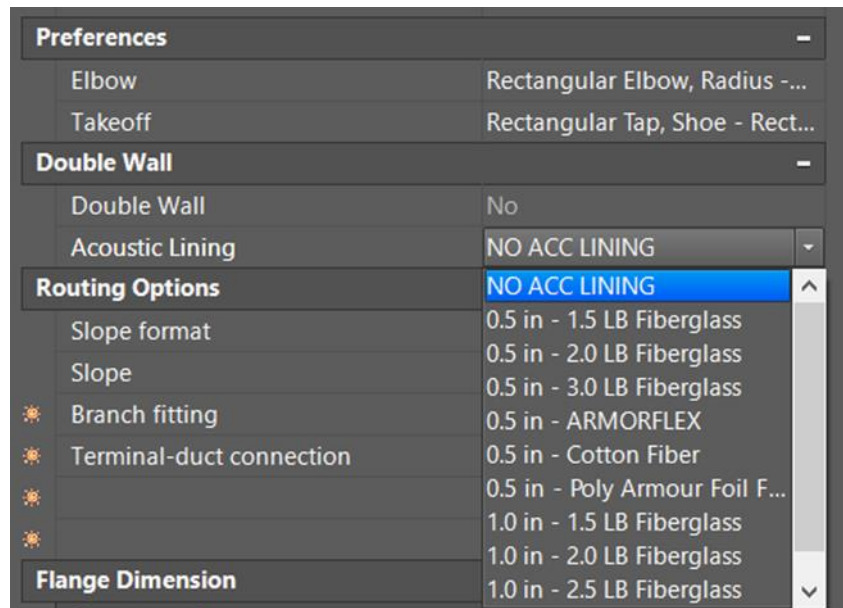
EC-CAD and DuctMaker can now work with different Liners of the same thickness. To set this up, first add your desired Lining material in the Allowances section of DuctMaker or PartManager:

Liners				
Name	Color	Thickness	Density	DWOffset
0.5 in - 1.5 LB Fiberglass		0.5	1.5	0
0.5 in - 2.0 LB Fiberglass		0.5	2	0
0.5 in - 3.0 LB Fiberglass		0.5	3	0
0.5 in - ARMORFLEX		0.5	0	0
0.5 in - Cotton Fiber		0.5	0	0
0.5 in - Poly Armour Foil Face		0.5	0	0
1.0 in - 1.5 LB Fiberglass		1	1.5	0
1.0 in - 2.0 LB Fiberglass		1	2	0
1.0 in - 2.5 LB Fiberglass		1	2.5	0

Then setup your Liner Sheets in the Shop Standards section:

Liner Sheets			
Name	Liner	Width	Length
0.5 in - 1.5 LB Fiberglass	0.5 in - 1.5 LB Fiberglass	60	120
0.5 in - 2.0 LB Fiberglass	0.5 in - 2.0 LB Fiberglass	60	120
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1.0 in - 1.5 LB Fiberglass	1.0 in - 1.5 LB Fiberglass	60	120
1.0 in - 2.0 LB Fiberglass	1.0 in - 2.0 LB Fiberglass	60	120
1.0 in - 2.5 LB Fiberglass	1.0 in - 2.5 LB Fiberglass	60	120

When drawing in EC-CAD you can now pick your Acoustic Lining from the list in the Property Palette:



Acoustic Lining can be applied while drawing or applied later to an existing duct run.

In DuctMaker Acoustic Lining will be selected from the pull down as in previous versions:



- Alignment Marks – Added to Oval Mitered Elbows

Alignment Marks have been added to the Oval Elbow, Mitered fitting. The Alignment Marks can be setup and adjusted in the Shop Standards -> Fitting Settings.

- Combine Faces to work with exterior, interior, and liner

DuctMaker, Shop Standards, Fittings Settings now has two parameters:

CombineFaces
LinerCombineFaces

For the following fittings:

Oval Elbow, Gored
Oval Elbow, Mitered
Oval Offset
Round Elbow, Gored
Round Elbow, Mitered
Round Offset

These parameters can be set to True or False. When CombineFaces is set to True then the exterior and interior fittings will have their faces combined to share common cut lines in DuctMaker. When CombineFacesLiner is set to True then the liner for these fittings will also have their faces combined to share common cut lines.

- Drivers - Improvements to the Vulcan 1000B driver

The following information has been added to the Lockformer – VS Control 2 Type 1.cs file for use with the Vulcan 1000B Controllers:

TS = Sheet Size
SU = Sheet Used
DATE RUN: Date Lot file was created
JOB: Job
SHEET NO: Sheet Number
GA = Gauge
MA = Material
BN = Blank Number
PN = Piece Number

With this the information displayed on the control panel, it will be more useful and allow the ability to go back and burn individual blanks.

- Dual Wall - Ability to add or subtract from inner shell of round and oval duct.

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The length of the inner shell will equal: Outer shell finished length + Inner C1 Height + Inner C2 Height + Inner C1 Adj + Inner C2 Adj

- Fitting Enhancement – Round and Oval Tees and Crosses can now increase

All Round and Oval Tees and Crosses now allow the ability for the inlets and outlets of the body to increase or decrease.

- Fitting Enhancement - Oval Transitions

The following changes have been made to the Oval Transitions:

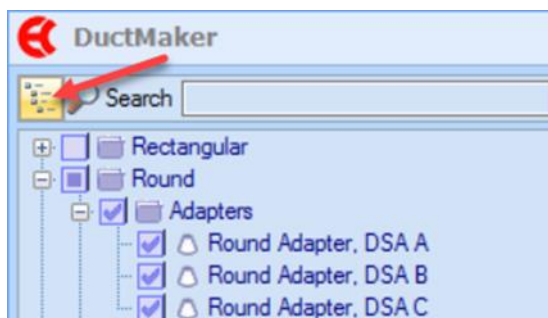
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- Liner Add – The sign has been changed for the Liner Add value

The Liner Add value in the connector table will either add to the liner or subtract from the liner for each fitting connector. In EC-CAD version 9.0 a positive value for Liner Add will grow the liner while a negative value for Liner Add will subtract from the length of the liner.

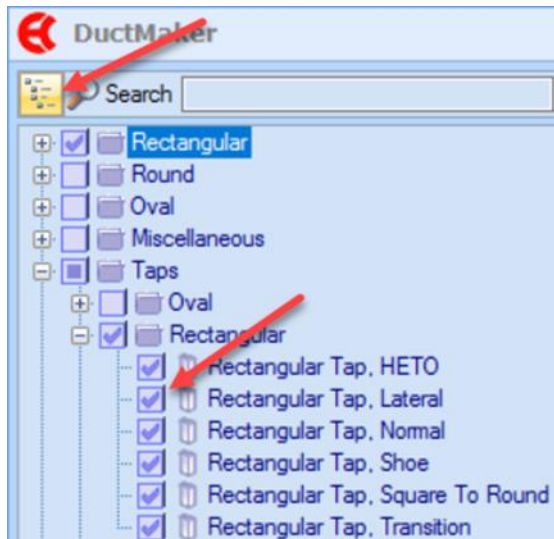
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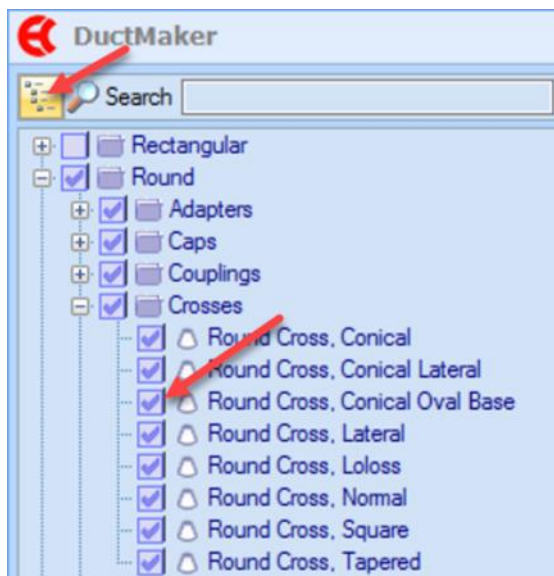
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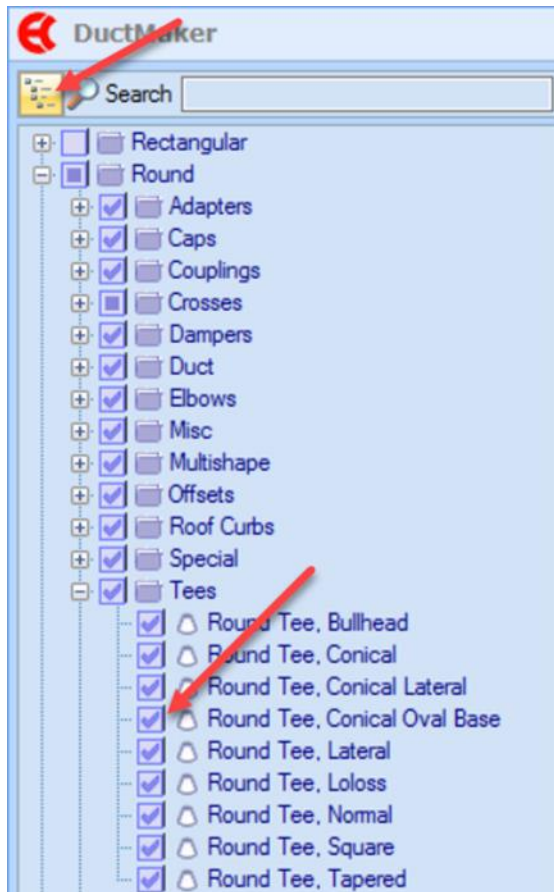
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This fitting is much like the Round, Tee Conical but the tee branch has an oval base. This fitting can be used to make the base of the conical tap “larger” than the body of the tee, by adjusting the Base Major parameter.

- Report and Label - Canvas Connector improvements

The following changes have been made to the labels and reports regarding the canvas connectors:

- Stretch Out has been added as a property for the Labels and will report the stretch out of your canvas connectors.
- The Report Parameter, Stretch Out now reports the stretch out of canvas connectors
- The Fitting Sheer Report now has the option to include (or not) the Rectangular Canvas Connector
- Roll Marks – Added to the Oval End Cap

Roll Marks have been added to the Oval Cap fitting. The Roll Marks can be setup and adjusted in the Shop Standards -> Fitting Settings.

- Oval Equivalence Table – Improvements

The Oval Equivalence Table has parameters that need to be setup for the Major and Minor parameters. Prior to this version a fitting’s Major parameter always read the table’s Major values and a fitting’s Minor Parameter always read the table’s Minor values. This version makes

an adjustment so that the larger of the Major or Minor parameter will read the Major values from the Oval Equivalence Table and the smaller of the Major or Minor parameter will read the Minor values from the Oval Equivalence Table. This is to accommodate situations where the fitting is built with the Minor being larger than the Major.

Resolved Issues

- CAD/CAM Issues Involving Oval Tap, Loloss, Minor > Major, Tap Saddles, and Vertical Oval Duct.
- Coil Line - Iowa Precision coil line output has been corrected.
- Labels - Properties Connector In and Connector Out are now working properly.
- Labels - Round Cross, Tapered Joints now show properly on the fitting label.
- Type Parameter - Inner Wall Rectangular Tap, Normal TYPE parameter now updates properly.

Known Issues

- CenterLineInput = FALSE

CenterLineInput in the Shop Policies is currently not working as expected when it is set to TRUE. We have set the CenterLineInput in the database to FALSE and recommend the user to set CenterLineInput to FALSE until it is implemented in a future release.

- Duct Dimension Rule for Taps on Existing Specifications

We have removed the Duct Dimension rule from the taps portion of the specification, but some users may already have a specification setup that has taps using the Duct Dimension rule. The existing Duct Dimension rules for taps will still work as expected, but we recommend deleting these rules and creating new rules that use the new specification rule Duct Dimension Outlets.

Languages

This release of the product is available in the following languages:

- English

Upgrade procedure

EC Design to Fabrication

Design to Fabrication Version 9.0 is a full installation for new customers and applies software enhancements and corrections for customers who are upgrading from an earlier release (V8.1 or earlier version) of all the Design to Fabrication software components, including MEP Design to Fabrication, EC CAD, PartManager, and DuctMaker. Your license and specific installation may include some, or all, of these components.

General Release Information

This release is being provided as a full installation (via the setup.exe) so that both new and upgrading customers can apply the latest software to their system using the Design to Fabrication Setup user interface.

Software Distribution

This software update is available for download from the [Customer Portal](#) as a **Design to Fabrication V9.0 2019** Installation zip file.



Customer Portal Access

The [Customer Portal](#) is an area of the web site available to Subscription Customers, providing software updates, documentation and video resources. To gain access, simply fill out a short registration form to requests access. Once approved, you can then log in with your user name and password at any time. To register, copy the link below into your Internet browser:

<http://eccccustomerportal.worldsecuresystems.com/register.htm>

Prior Release Notes Documentation

This document describes the enhancements and updates when moving from Version 8.1 to Version 9.0. For customers upgrading from a release earlier than Version 8.1, you can access and review new features and functionality for each prior release on the [Customer Portal](#).

Design to Fabrication Components Overview

The Design to Fabrication software system provides a streamlined workflow that allows users to move from design to fabrication with one set of products.

MEP Design to Fabrication is the tool for converting MEP engineering designs (duct and pipe systems from Revit, or generic AutoCAD MEP duct systems) to Fabrication-ready drawings using automated routines, saving significant fabrication detailing resources and time. MEP Design to Fabrication works inside both Autodesk's Revit and AutoCAD MEP software. Customers have the choice of purchasing their CAD seat(s) with or without an **MEP Design to Fabrication** license.

EC CAD includes several software components. **Fabrication for AutoCAD MEP** software is integrated directly inside AutoCAD MEP, to give users enhanced detailing capability and tools to work with real-world specifications and sizing for duct, and real manufacturer mechanical content. Customers choose to install only the elements of Fabrication for AutoCAD MEP that they are licensed for and plan to use - Pipe, Duct, or Combo (for both Pipe and Duct functionality). **PartManager** is the user interface to the manufacturer library and database that is used by Fabrication for AutoCAD MEP, providing easy access and organization and management of all parts, fittings, valves and shop defaults being used for project design. **EC Project** is the software tools and database for transferring As-built Sheet Metal drawings into Revit as native Revit objects. A limited license of **EC DuctMaker** is also included with EC CAD. This limited license provides EC CAD users with the ability to review their fabrication pickoffs in DuctMaker and to gain full CAD and CAM access to the manufacturer library and database.

EC DuctMaker is the CAM software tool, providing a fabrication interface used to build a highly-customized duct library that can be shared with design team colleagues, via Fabrication for

AutoCAD MEP Sheet Metal. DuctMaker contains a comprehensive library of Oval, Round and Rectangular fittings and duct as well as specialty parts. It accepts Fabrication for AutoCAD MEP pickoff lists, estimating downloads, and allows for more editing if required. The software downloads fittings directly to the shop floor plasma cutters, liner cutters and coil lines, and uses barcode scanners to track the inventory of items during fabrication.

Compatibility

Operating System

The software was primarily tested under the Windows 10 64-bit operating system. It is also supported under Windows 7, 8 and 8.1.

Microsoft SQL Server

The software was primarily tested with Microsoft SQL Server version 2016. It is also supported under Microsoft SQL Server Versions 2008 R2, 2012, and 2014.

Prior to Version 8.0, the EC Design to Fabrication software was only supported with Microsoft SQL server Version 2008 R2. While there is no immediate need to upgrade to a later version of SQL server to work with Version 9.0 we do recommend planning your upgrade to a newer version of SQL server.

Note: Microsoft SQL Server is not backwards compatible. The database that ships with our program is version 2008 R2. Once you attach it to a newer version of SQL server you will not be able to attach or use it with an earlier version of SQL. Make backups of your database and plan accordingly before moving to a newer version of SQL.

EC Design to Fabrication software now ships with the installer for SQL Server Express 2016. This version is recommended for all new installations.

For those customers migrating to a newer version of SQL Server, we recommend that you first upgrade your software completely to Version 9.0 and then migrate your Version 9.0 database to the newer version of SQL Server.

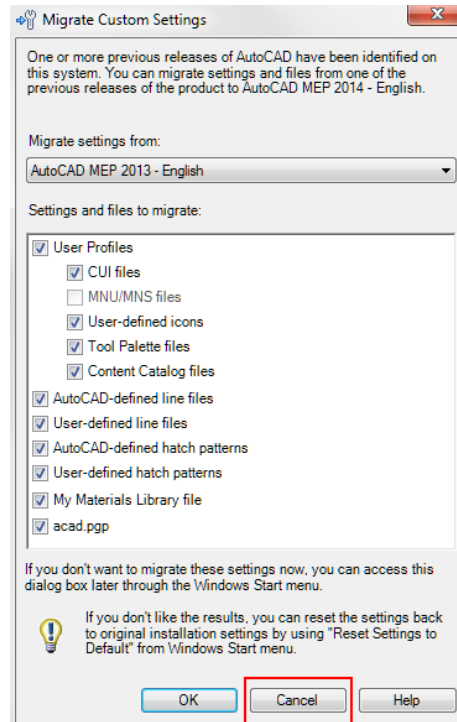
Autodesk Software

This release supports Autodesk **AutoCAD MEP 2019** and **Autodesk Revit 2019** software. It was primarily tested using AutoCAD MEP 2019 Version 8.1.48.0 and Autodesk Revit 2019 Version 19.0.0.405.

AutoCAD MEP Migration Assistant Issue

Autodesk has reported that verticals of AutoCAD, including AutoCAD MEP, should NEVER use the Migration Assistant. Use of the Migration Assistant will cause problems with the software, requiring a complete uninstall and reinstall.

When upgrading AutoCAD MEP, if you are prompted with the Migrate Custom Settings dialog box shown at right, click **Cancel**.



Autodesk Learning Resources

In addition to this document, be sure to review the Autodesk resources listed below to learn more about the features and functionality of the base software which Design to Fabrication runs within:

- [AutoCAD MEP Support and Learning](#)
- [Revit MEP Support and Learning](#)

http://knowledge.autodesk.com/support/autocad-mep/?p=BLDSYS&p_disp=AutoCAD%20MEP&sort=score
http://knowledge.autodesk.com/support/revit-products/?p=RVT&p_disp=Revit%20Products&sort=score

Upgrade Preparation

HASP Key License Update

A HASP key license is required for use with this version. The HASP key update must be done first, before updating the software components. Refer to the Upgrade Installation Guide or contact Customer Support for information on how to obtain and apply HASP key license updates before upgrading the software.

Backing Up Your Data

IMPORTANT NOTE TO ALL UPGRADE CUSTOMERS: Before installing, remember to create a backup of your database, and any custom content you may have added to the **Styles** and **Template** folders used by Fabrication for AutoCAD MEP, located in the following directories, to retain any customization you may have applied to these files:

C:\Program Data\EastCoast\Fabrication for MEP <version#>\Styles

C:\Program Data\EastCoast\Fabrication for MEP <version#>\Template

For more detailed information on database backup procedures, refer to the following technical document for assistance:

Backing up your SQL Database

<http://eccccustomerportal.worldsecuresystems.com/LiteratureRetrieve.aspx?ID=94855>

Upgrade Installation Documentation

Customers who have Version 7.0 or higher can upgrade to this version using the instructions in the *Upgrade Installation Guide*, which can be viewed or downloaded from the [Customer Portal](#).

Once logged into the Customer Portal, to access Installation documentation, click **Installation & Migration** on the left, and then on the right, select the installation guide that pertains to your installation.

- **Design to Fabrication Upgrade Installation Guide** - For customers who are using one or more components in the Design to Fabrication software system.
- **DuctMaker Upgrade Installation Guide** - For customers who are only using and upgrading EC DuctMaker

NOTE: If you are upgrading from an earlier version than Version 7.0, please contact Customer Support for assistance.

Welcome

Getting Started

Resources for Customers

Downloads

Software

Content

Developer Tools

Support Resources

[Installation & Migration](#)

Open Forums

Release Notes

Tech Docs & Videos

User Guides

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Release notice

This is the October 2018 release (Revision A) of the Release Notes. It applies to version 9.0 of the EC-CAD software.