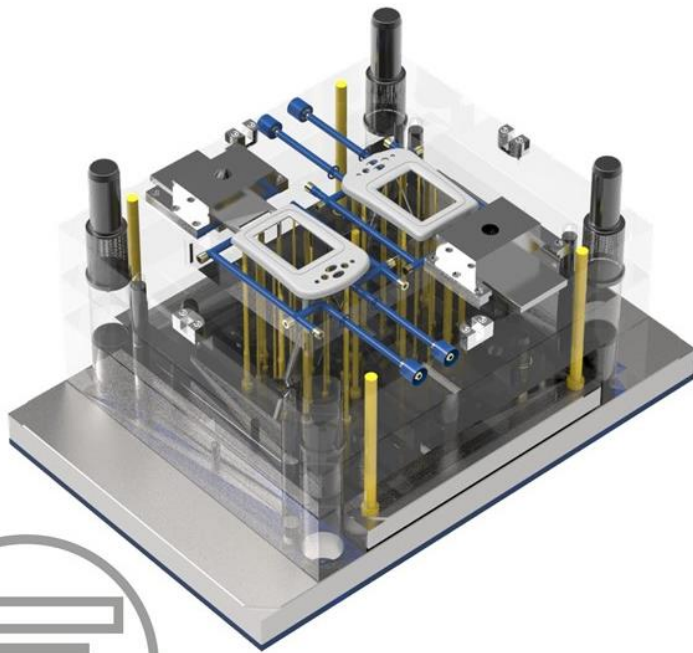


EMX 10 F000

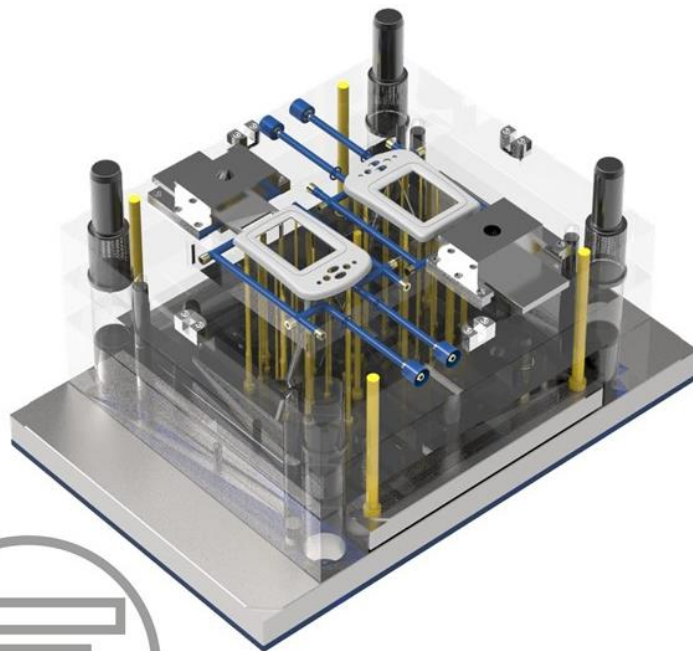


What's New?

- New Features
- Components
- Improvements
- More Info



EMX 10 F000



What's New?

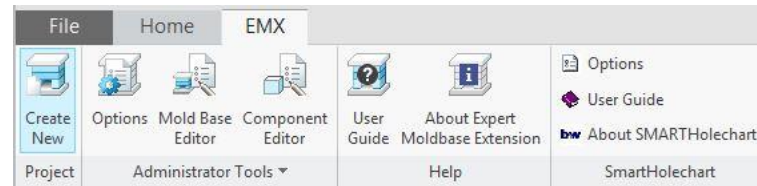
- **New Features**
- Components
- Improvements
- More Info



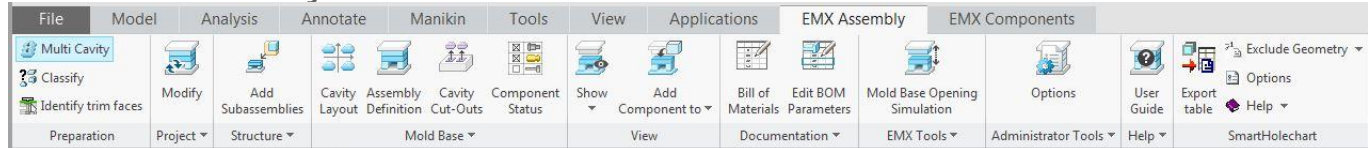
Improved EMX Ribbon

- New Design
- Improved Workflow

New Session



EMX Assembly



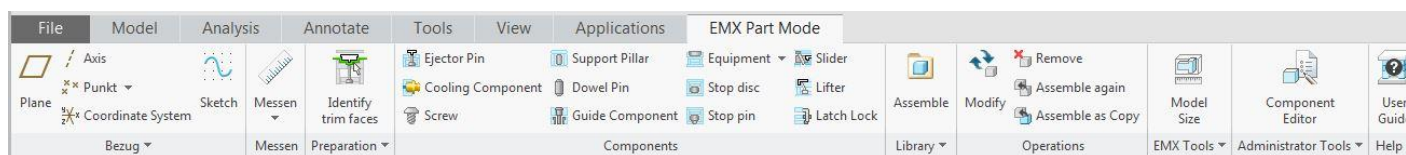
EMX Components



EMX Manufacturing

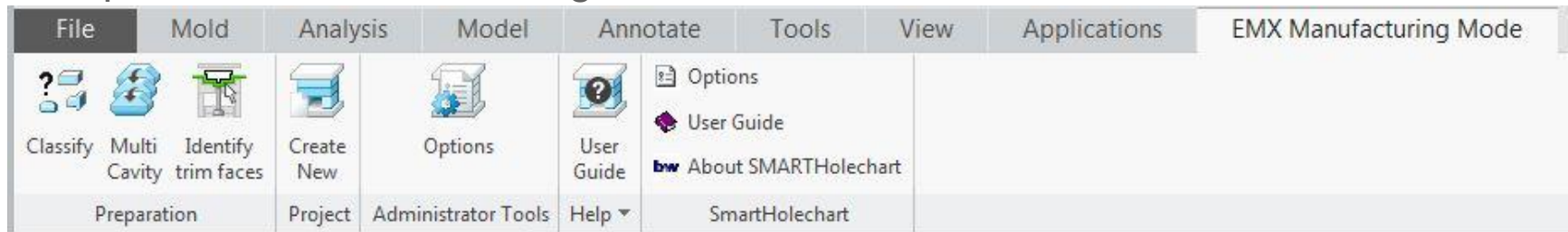


EMX Part Mode

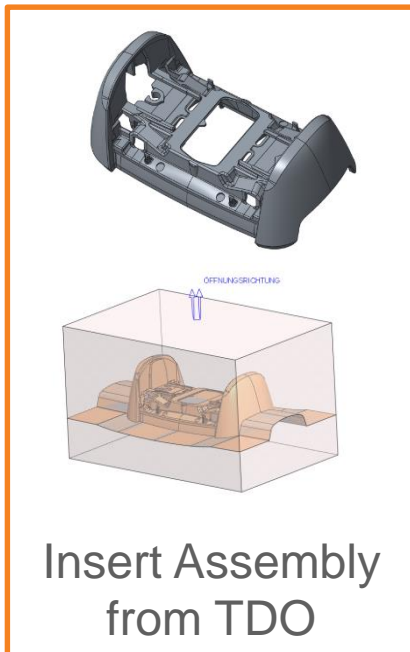


Improved Workflow

1. Preparation in Manufacturing Mode



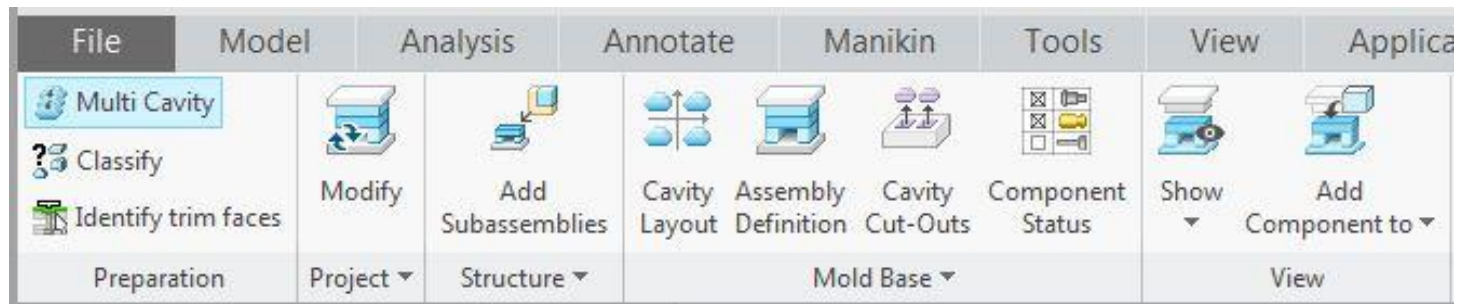
- 1.
- 2.
- 3.
- 4.



1. Classify Assembly
2. Multi Cavity Assemblies
3. Identify Trim Faces (**Enhanced**)
4. Create new Project

Improved Workflow

Mold Base in Assembly Mode

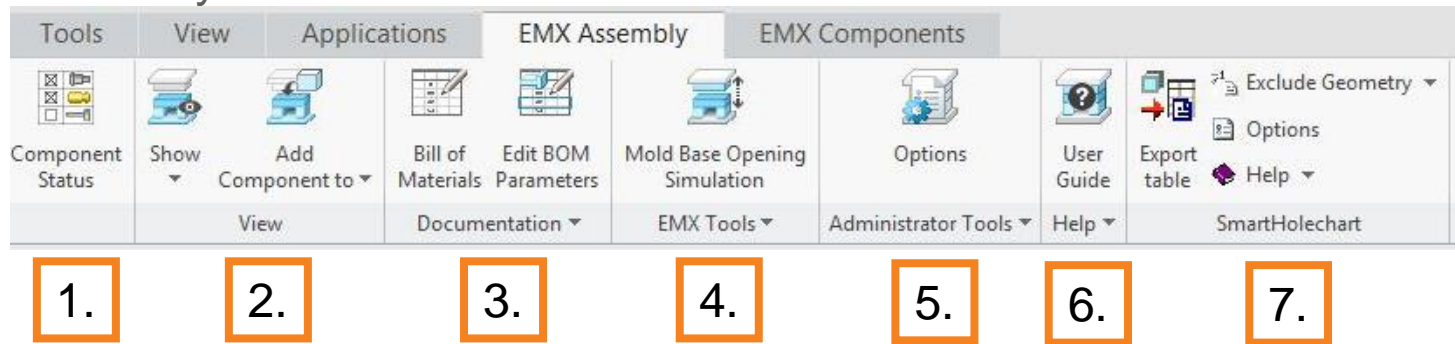


- 1.
- 2.
- 3.
- 4.
- 5.

1. Change Project
2. Set up Structure, Sub Assemblies (**Enhanced**)
3. Define Cavity Layout (**NEW**)
4. Define Mold Base(**Enhanced**)
5. Create Cavity Cuts (**NEW**)

Improved Workflow

Assembly Mode Part 2



1. Components Status

2. View

3. BOM

4. EMX Tools

5. Admin Tools

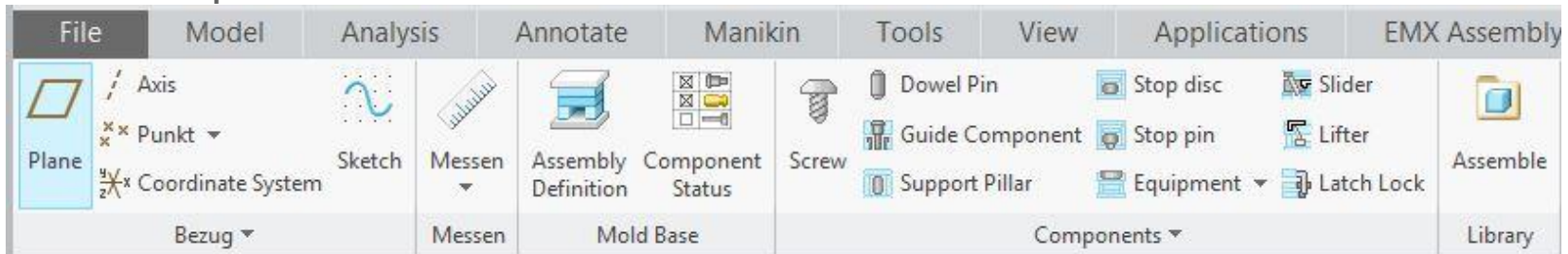
(EMX Options, Component Editor (**NEW**), Mold Base Editor)

6. Help and Info About

7. Smart Holechart (**New Version 9.0**)

Improved Workflow

EMX Components Part 1



1.

2.

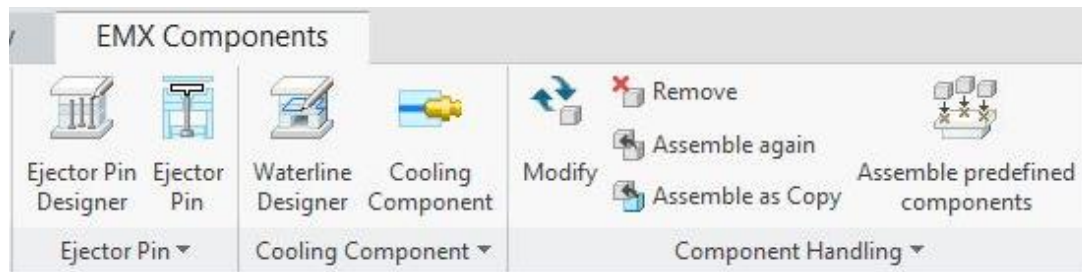
3.

4.

1. Datums und Measure (NEW)
2. Mold Base Definition und Component Status (NEW)
3. Assemble Components: All Types in 1 Group
4. Library Parts

Improved Workflow

EMX Components Part 2



1.

2.

3.

1. Ejector Pins: Definition via Component Dialog or Ejector Pin Designer (**NEW**)
2. Cooling: Definition vis Component Dialog or Waterline Designer
3. Component Handling (**NEW**) , Predefined Components

Identify Trim Faces

In EMX 9:

Hidden in EMX Components → Ejector Pin

Now:

Ribbon Group EMX Assembly → Preparation

Function:

Mark Surface Quilt as Trim Surfaces for Ejector Pins and Lifters

Effect:

Don't trim via TDO Feature

Use Solidify instead

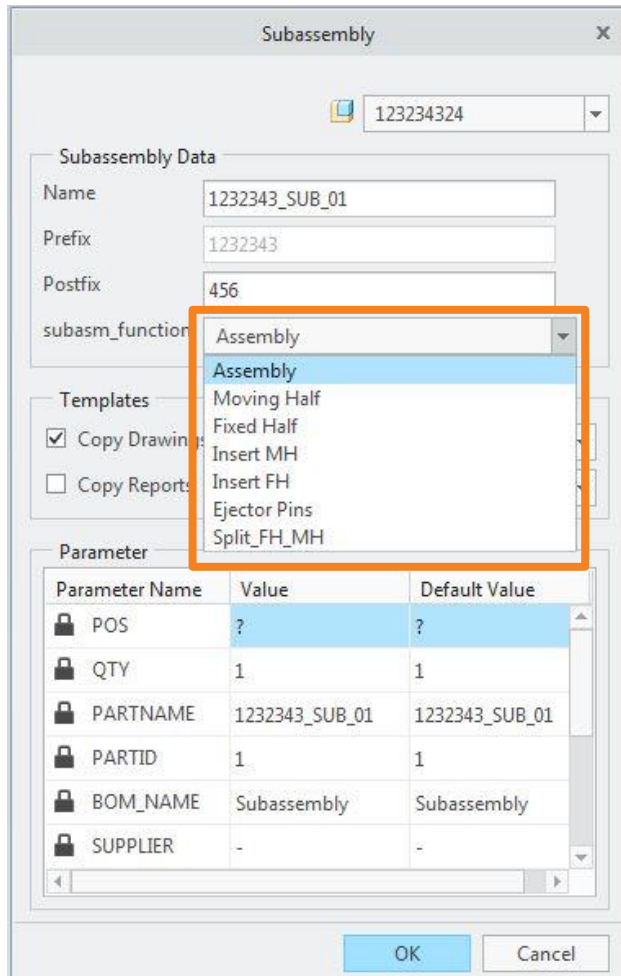


➔ More stable and trimming also possible when ejector exceeds the model volume

Enhanced Sub Assemblies

New in EMX 10:

Assign Function to Sub Assembly



Subassembly Data

Name: 1232343_SUB_01

Prefix: 1232343

Postfix: 456

subasm_function: Assembly

Templates

Copy Drawings

Copy Reports

Parameter

Parameter Name	Value	Default Value
POS	?	?
QTY	1	1
PARTNAME	1232343_SUB_01	1232343_SUB_01
PARTID	1	1
BOM_NAME	Subassembly	Subassembly
SUPPLIER	-	-

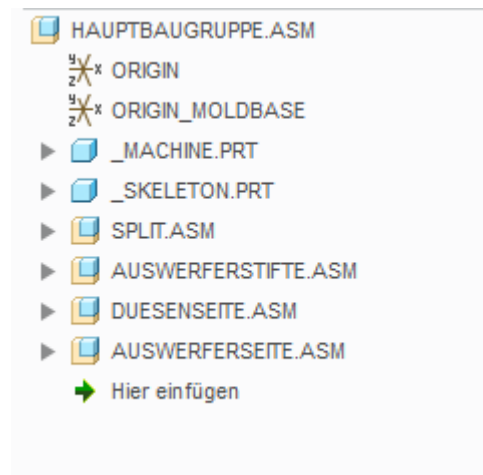
OK Cancel

1. Moving Half
2. Fix Half
3. Ejector Pins

Enhanced Sub Assemblies

Main Assembly with 3 Sub Asms and assigned Functions

1. Moving Half
2. Fix Half
3. Ejector Pin



- Automatic Pre Selection of MH/FH Sub Asms when assembling from Mold Base Definition Dialog
- Automatic Pre Selection for Ejector Pins

Cavity Layout Dialog



Simplified Placement of Insert Assemblies

- Define Pattern
- Load multiple Insert Assemblies
- Individual placement to cavity coordinate systems
- Assemble to main and sub assemblies
- Patternize insert assembly
- 3D Preview


Cavity


Insert Assemblies 123234324


Name	CSYS
JS748100_MOLD	FORM_KOS


Load Insert Assemblies  Pattern first Insert Assembly 


Cavity Pattern

 Quantity X 2 Y 2


 Pattern Size X 90.00 Y 80.00

 Use Z angle 0.00°

 Pattern Offset X 0.00 Y 0.00

Automatically Recalculate 

ID	X	Y	Z	A-Z	A-X	Assembly
1	-45.000	-40.000	0.000	0.000	0.000	JS748100_MOLD
2	-45.000	40.000	0.000	0.000	0.000	JS748100_MOLD
3	45.000	-40.000	0.000	0.000	0.000	-
4	45.000	40.000	0.000	0.000	0.000	-

 OK Cancel

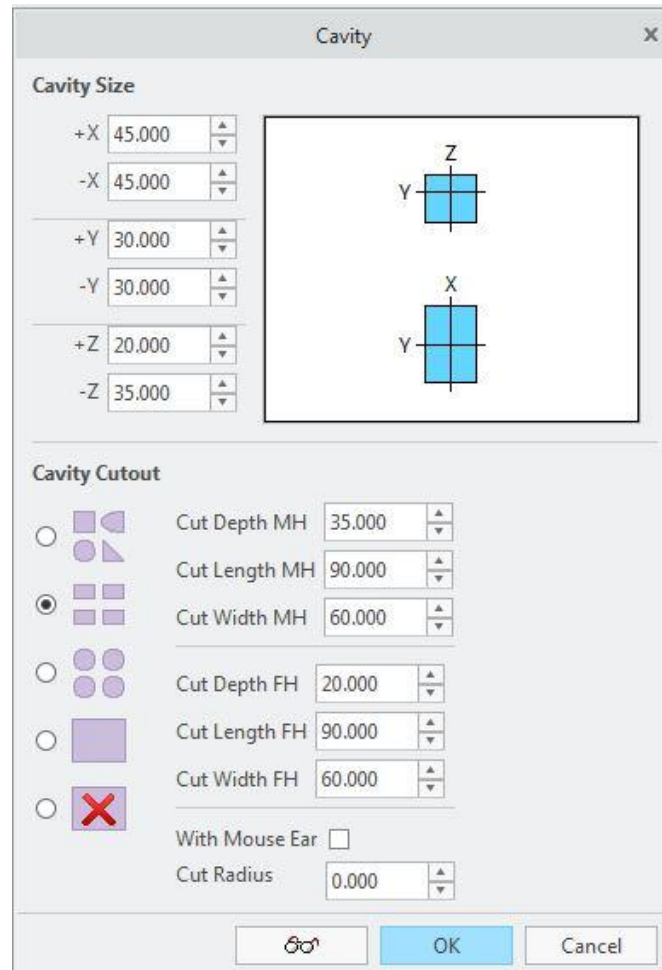
Cavity Cutout Dialog

Individual Dialog for Cavity Cutouts

- Functionality as known
- Cutout Types as known

New: 3D Preview

➔ Live Demo



The screenshot shows a dialog box titled "Cavity" with a close button (X) in the top right corner. It is divided into two main sections: "Cavity Size" and "Cavity Cutout".

Cavity Size: This section contains six input fields for defining the cavity dimensions, each with up and down arrow buttons. The values are: +X: 45.000, -X: 45.000, +Y: 30.000, -Y: 30.000, +Z: 20.000, and -Z: 35.000. To the right of these fields is a 3D preview window showing a blue rectangular cavity with coordinate axes X, Y, and Z.


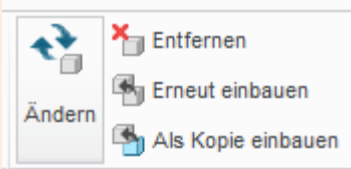

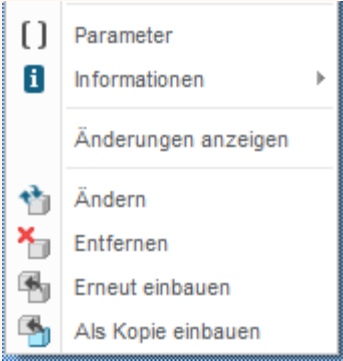
Cavity Cutout: This section offers five different cutout types, each represented by a radio button and a small icon. The first type (a square with a corner cut) is currently selected. The other types are: a square with a diagonal cut, a square with a rectangular cutout, a square with a circular cutout, and a square with a cross-shaped cutout. To the right of these icons are input fields for the dimensions of the cutout: Cut Depth MH (35.000), Cut Length MH (90.000), Cut Width MH (60.000), Cut Depth FH (20.000), Cut Length FH (90.000), and Cut Width FH (60.000). Below these fields are two checkboxes: "With Mouse Ear" (unchecked) and "Cut Radius" (0.000).

At the bottom of the dialog are three buttons: a help icon (a circle with a question mark), an "OK" button, and a "Cancel" button.

New Component Handling

	EMX 9	EMX 10
Ribbon	<p>Delete Modify As Copy Reassemble</p> <p>For each Component Type → Redundant</p>	<p>Delete Modify As Copy Reassemble</p> <p>1x for all Component Type → Looks much better</p>
RMB	<p>Only Delete Modify</p>	<p>All Functions Delete Modify As Copy Reassemble</p>

New Component Handling

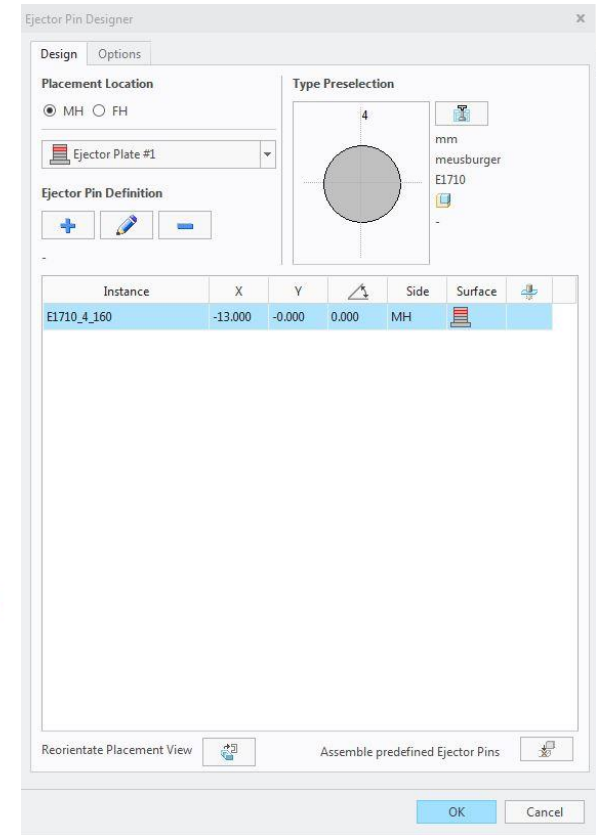
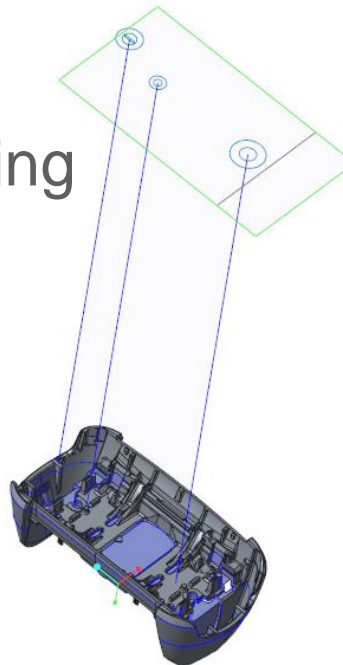
	EMX 9	EMX 10
<p>Ribbon</p>	 <p>The EMX 9 ribbon interface features a grid of icons for defining components. Each icon is accompanied by a 'Definieren' button. The components shown include various types of pipes, valves, and a 'Kühlkanal-Designer' (cooling channel designer). The 'Definieren' buttons are consistently placed below each icon.</p>	 <p>The EMX 10 ribbon interface shows a context menu for component handling. The menu includes the following options: 'Ändern' (Change), 'Entfernen' (Remove), 'Erneut einbauen' (Reinstall), and 'Als Kopie einbauen' (Install as copy). The 'Entfernen' option is marked with a red 'X' icon.</p>
<p>Rechte Maus</p>	 <p>The EMX 9 right-click context menu includes the following options: 'Parameter', 'Informationen' (with a right-pointing arrow), 'Änderungen anzeigen' (Show changes), 'Komponente ändern' (Change component), and 'Komponente entfernen' (Remove component).</p>	 <p>The EMX 10 right-click context menu includes the following options: 'Parameter', 'Informationen' (with a right-pointing arrow), 'Änderungen anzeigen' (Show changes), 'Ändern' (Change), 'Entfernen' (Remove), 'Erneut einbauen' (Reinstall), and 'Als Kopie einbauen' (Install as copy). The 'Entfernen' option is marked with a red 'X' icon.</p>

Ejector Pin Designer

➔ Dynamic Definition of Ejector Pins

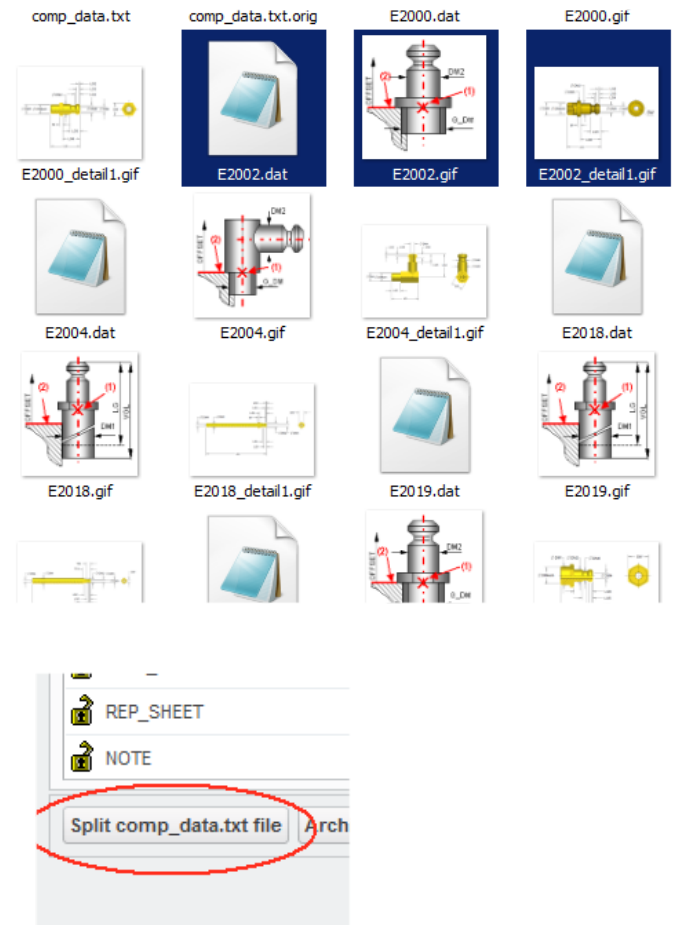
New Main Feature in EMX 10

1. Place Ejectors with 2D Preview
 2. Place to Fix Half and Moving Half
1. Supports 2nd ejector package
 2. Assemble to all sub asms



New data structure and new Component Editor

- Get rid of comp_data and udf_data and replace information in dat-files for each component type.
- Library format and other EMX comps format is unique
- Split customized comp_data files into new dat format

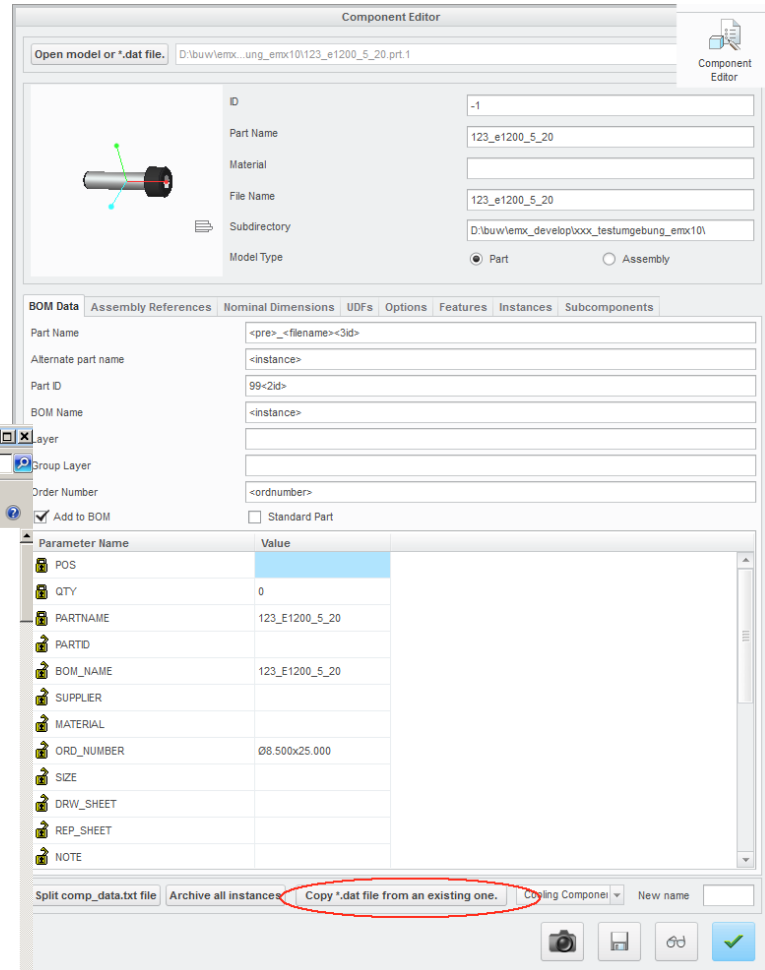
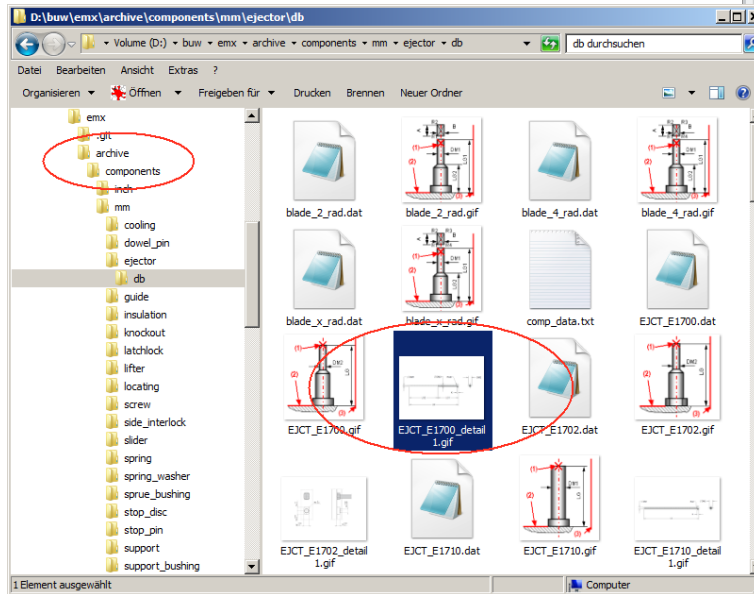


Facelift for new Component Editor

Most customers like to add new components that are similar to existing components from EMX.

With the new archive for all existing templates, the content of cutouts, instances, placement references can easily be copied from an existing comp.

When copy from archive, show for each template its usage in the supplier folders



Smart Holechart 9.0

Integrated new Version in EMX 10

→ Contact Oli Gräbner

- Collision Tables
- easy UDF Recognition
- Replace existing Tables
- Adapt Number of Table Columns during Refresh
- Direction-depended Bore Definition
- Automatic creation of Point/Axis in Bore Center
- Use Tolerances (e.g. H7) as criteria for bore types
- Man more Options



Placement of BOM Ballons

Improvements

- Functions to RMB
- Multiple Selection and Placement in a Loop
- Place Ballon multiple times for summarized components
- New Design

Stückliste

E...	V...	MODELL	POS	QTY	(V) PARTNAME
		BALL_CAV_PLATE_FH001	1	1	BALL_CAV_PLATE_FH001
		B...		1	BALL_CAV_PLATE_MH001
		B...		1	BALL_RISERS_R_MH001
		B...		1	BALL_RISERS_L_MH001
		B...		1	BALL_CLP_PLATE_MH001
		B...		1	BALL_CLP_PLATE_FH001
		B...		1	BALL_EJRET_PLATE_MH001
		BALL_EJBASE_PLATE_MH001	8	1	BALL_EJBASE_PLATE_MH001
		BALL_E1000_22_56_35	9	4	BALL_E1000_22_56_35
		BALL_E1160_30_80	10	4	BALL_E1160_30_80
		BALL_E1100_22_56	11	4	BALL_E1100_22_56
		BALLON_PLACEMENT	12	1	BALLON_PLACEMENT
		BALL_MACHINE	13	1	BALL_MACHINE
		BALL_SKELETON	14	1	BALL_SKELETON

Place Multiple Balloons for 1 Comp.

Improvements

- Place same balloon of component multiple times in different views

The image shows three technical drawings of a component, each with a blue circle containing the number '1' and a line pointing to a specific part. The drawings are: a front view on the left, a side view in the middle, and a top view on the right. The part being pointed to is a small circular feature on the component's surface.

Overlaid on the right is a 'Bill of Materials' window. The table below is a representation of the data in this window:

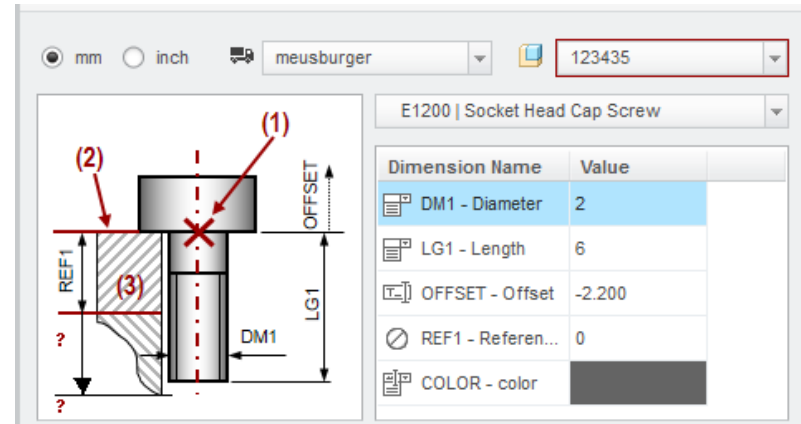
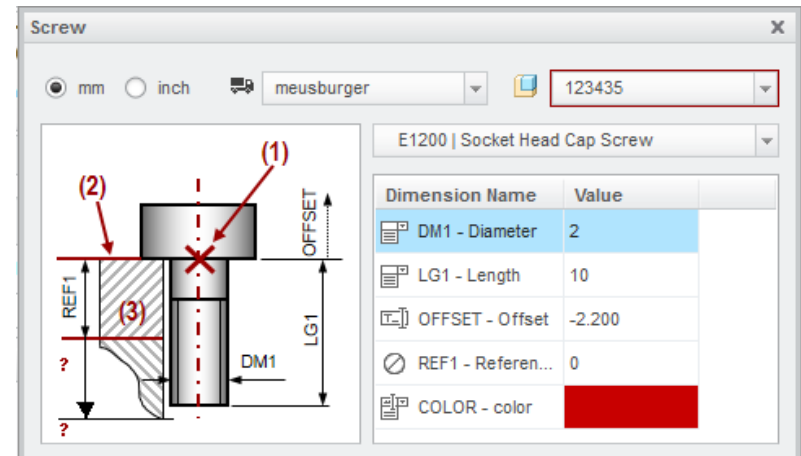
E...	V...	MODELL	POS	SIZE
▶	⑤	BALLON_CLP_PLATE_MH001	1	156.000x156.000x27.000
▶	✖	BALLON_ESBASE_PLATE_MH001	2	156.000x92.000x13.000
▶	✖	BALLON_EJRET_PLATE_MH001	3	156.000x92.000x9.000
▶	✖	BALLON_RISERS_R_MH001	4	156.000x40.000x34.866
▶	✖	BALLON_RISERS_L_MH001	5	156.000x40.000x33.509
▶	✖	BALLON_INT_PLATE_MH001	6	156.000x156.000x27.000
▶	✖	BALLON_CAV_PLATE_MH001	7	156.000x156.000x46.000
▶	✖	BALLON_CAV_PLATE_FH001	8	156.000x156.000x40.000
▶	✖	BALLON_CLP_PLATE_FH001	9	156.000x156.000x34.925
Hidden Parts List				
▶	✖	BALLON	10	*
▶	✖	BALLON_MACHINE	11	*
▶	✖	BALLON_SKELETON	12	*

Enable Cell Colors in Comp Dialog

Improvements

```
!listing of nominal dimensions
!NAME      DISPLAY_NAME  DIM_NAME  TYPE
EMX NOM_VALUES
E1200      diameter     DM1       PULLDOWN
E1200      length       LG1       PULLDOWN      >REF1
E1200      offset       OFFSET    EDIT
E1200      distance     REF1     DISABLED
E1200      color        COLOR    COLOR
EMX NOM_VALUES END
```

INSTANCE	ORD_NUMBER	USER_NUMBER	PRICE	COLOR
E1200_2_6	E1200/2x6	-	0	100,100,100
E1200_2_8	E1200/2x8	-	0	GREEN
E1200_2_10	E1200/2x10	-	0	RED
E1200_2_12	E1200/2x12	-	0	YELLOW
E1200_2_16	E1200/2x16	-	0	BLUE
E1200_2_20	E1200/2x20	-	0	ORANGE
E1200_2_5_12	E1200/2,5x12	-	0	RED
E1200_3_6	E1200/3x6	-	0	RED
E1200_3_8	E1200/3x8	-	0	RED
E1200_3_10	E1200/3x10	-	0	RED
E1200_3_12	E1200/3x12	-	0	RED
E1200_3_14	E1200/3x14	-	0	RED
E1200_3_16	E1200/3x16	-	0	RED
E1200_3_20	E1200/3x20	-	0	RED
E1200_3_25	E1200/3x25	-	0	RED
E1200_3_30	E1200/3x30	-	0	RED
E1200_3_35	E1200/3x35	-	0	RED
E1200_3_40	E1200/3x40	-	0	RED
E1200_4_6	E1200/4x6	-	0	RED
E1200_4_8	E1200/4x8	-	0	RED
E1200_4_10	E1200/4x10	-	0	RED
E1200_4_12	E1200/4x12	-	0	RED

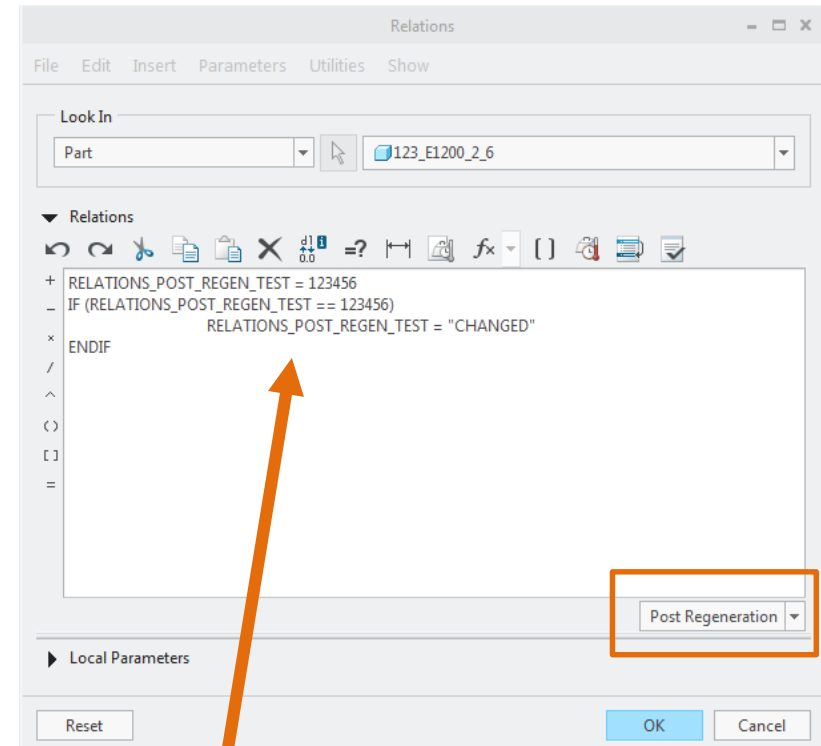


Add Relations to Post Regen Area

Improvements

- Add Relations to Post Regeneration Area with specified files
1. emx_comp_post_regen.rel
 2. plate_post_regen.rel
 3. etc.

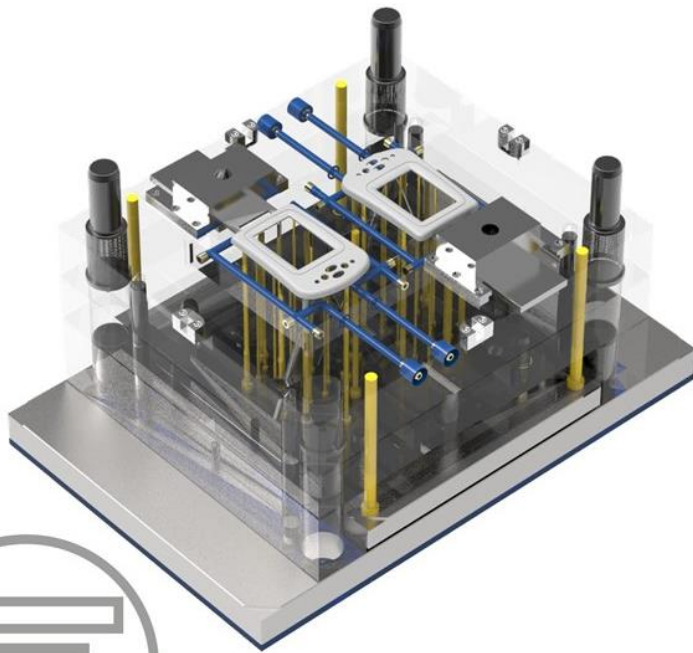
Name	Änderungsdatum	Typ	Grö
emx_bom.xls	06.04.2016 09:44	Microsoft Excel 97...	
emx_bom_adv.xls	25.08.2016 13:28	Microsoft Excel 97...	
emx_comp.rel	09.09.2016 08:58	REL-Datei	
inactive_emx_comp.rel	06.04.2016 09:44	REL-Datei	
inactive_ref_feat_udf.gph	06.04.2016 09:44	Creo User defined ...	
insert_asm.asm	25.08.2016 13:28	Creo Assembly File	
insert_asm_inch.asm	06.04.2016 09:44	Creo Assembly File	
insert_comp.prt	06.04.2016 09:44	Creo Part File	
insert_comp_inch.prt	06.04.2016 09:44	Creo Part File	
view_layer_template_german.prt	25.08.2016 13:28	Creo Part File	
view_layer_template_usascii.prt	25.08.2016 13:28	Creo Part File	
emx_comp_post_regen.rel	09.09.2016 10:40	REL-Datei	



```

1 RELATIONS_POST_REGEN_TEST = 123456
2 IF (RELATIONS_POST_REGEN_TEST == 123456)
3     RELATIONS_POST_REGEN_TEST = "CHANGED"
4 ENDIF
    
```

EMX 10 F000




What's New?

- New Features
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Components

New Components:

- Misumi – Cooling NPW and M-KOC
 - Misumi – Top Lock TPN
 - Misumi – Flat Ejector Pin ESHJ, ERZF and ERVB
 - Meusburger – Guide E10025
 - Meusburger – Ejector Pin E10125 (DLC Coated)
 - Meusburger – Spring E1546
 - Hasco – Guide Z040
 - Hasco – Locating Ring K107, K501, K506, K1000
 - Knarr – Ejector Pin 37999
- 
- A decorative curved line in the bottom right corner, consisting of a grey outer curve and an orange inner curve.

Components

Updated Components:

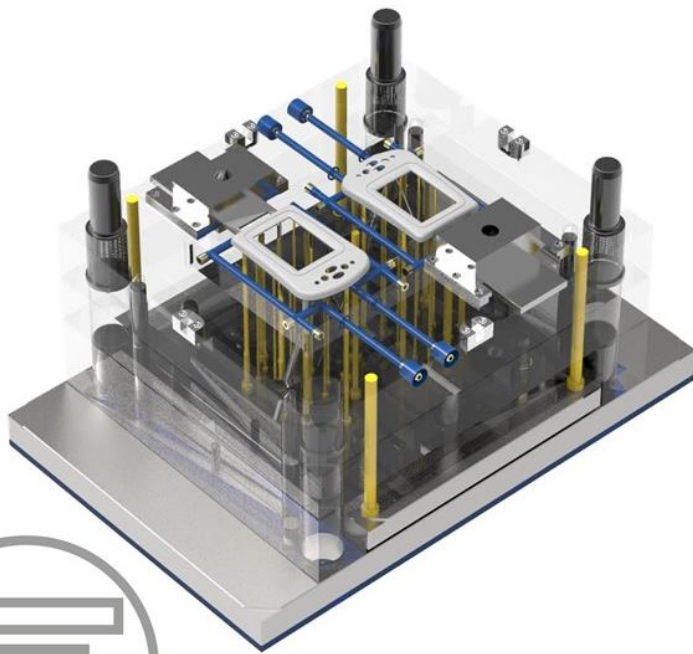
- Hasco – Locating Ring K100
 - Hasco - Side Interlock Z18/19
 - Hasco – Cooling O-Ring Z98
 - LKM – Side interlocks
 - Meusburger - Insulation Plates E1402 E1403 E1407 E1408
 - Meusburger – Top Interlock E1310
 - PCS – Ejector Pins: All Types Verify and Updated
 - PCS – Support Pillars
 - PCS – Locating Rings
 - Misumi – Ejector Pins Type Verified
- 
- A decorative curved line in the bottom right corner, consisting of a thick grey arc and a thin orange arc.

Components

Updated Plates:

- Futaba - Catalog – All sizes checked and updated

EMX 10 F000



What's New?

- New Features
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Improvements

- EMX 10 B000 Compatibility with **Windows 10**
- **Calculate Clamping Force**: Improved Accuracy
- **BOM**: Ballon Placement Functionality improved
 - RMB, Places Ballons Multiple times etc.
- **BOM**: Increase Speed
- **BOM**: PTC Diameter Symbol supported
- **BOM**: Display Windchill &common_name in BOM
- **Project Dialog**: Length of Postfix and Prefix is checked
 - Avoid Model names longer 32 characters
- **Waterline Designer**: Delete Waterlines in list via RMB
- **Improved Pattern Dialog**: Redesigned with Spinboxes

Improvements

Calculate Model Size: Save Volume as Parameter

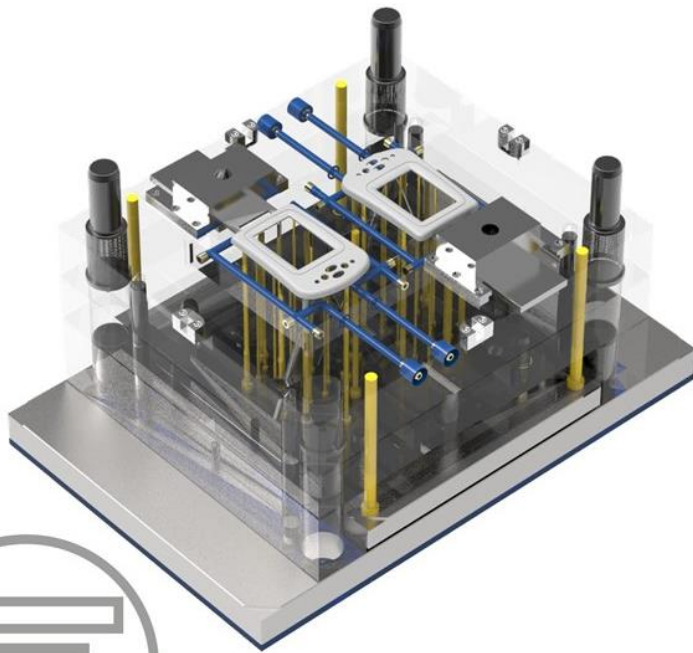
Component Dialog: Highlight subassembly pull-down in case of multiple Subassemblies

Component Dialog: New mm Images

Plate Dialog: New mm Images

Option Dialog: Non Default Values are highlighted

EMX 10 F000



What's New?

- New Features
- Components
- Improvements
- **More Info**

More Info

PTC EMX Community

- PTC Internal Discussions Platform for EMX
- Questions and Answers
- Videos und Presentations



PTC[®] Community

More Info

Large Document:

- 300 Pages PDF
- Collected Knowledge for EMX 9
- Walk Troughs
- Background Information
- EMX 10 Tutorial after Release (January 2017) planed
- 100 € per PDF und Data
- Contact: thomas@buw-soft.de

Expert Moldbase Extension 9

Tutorial
11.01.2016

