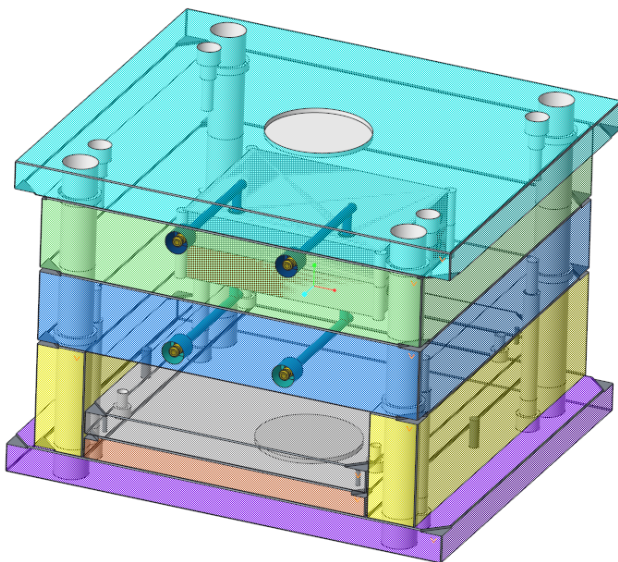


## Today's EMX Agenda



**9.00 - 10.30: EMX 9 Best Practices & new Features – Part 1**

**10.30 - 10.45: Coffee Break**

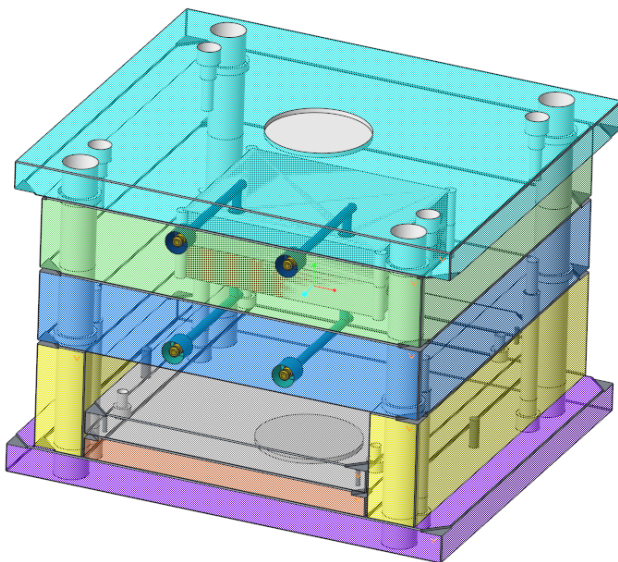
**10.45 - 12.15: EMX 9 Best Practices & new Features – Part 2**

**12.15 - 13.15: Lunch Break**

**13.15 - 14.45: EMX 9 Advanced Features  
EMX 10 Preview & Ideas**

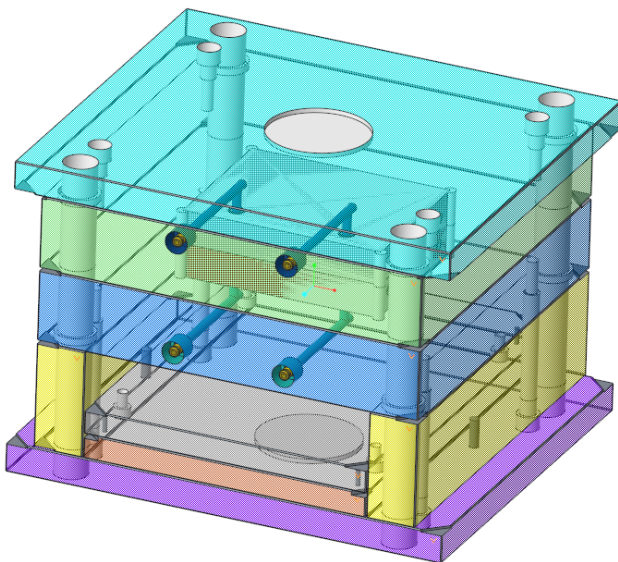
# EMX9 M010

## Best Practice & new Features



Florin Tudose  
Thomas Schneyer  
Hannes Weber

## Agenda



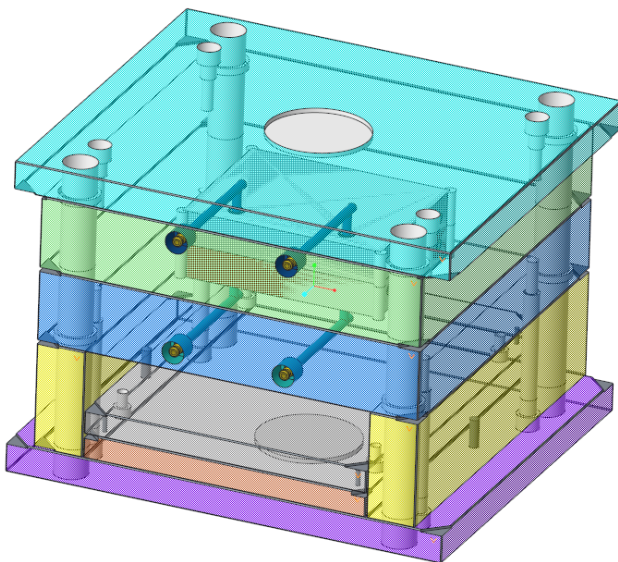
### Best Practice

- Classify and Multi Cavity Process
- Improved Handling of BOM Parameters
- New Part Names Configuration
- Working with Windchill

### New Features

- The Mold Base Designer
- New EMX Options
- Handling Component Updates
- Ejector Pins Design in Part Mode
- QA Measures

## Agenda



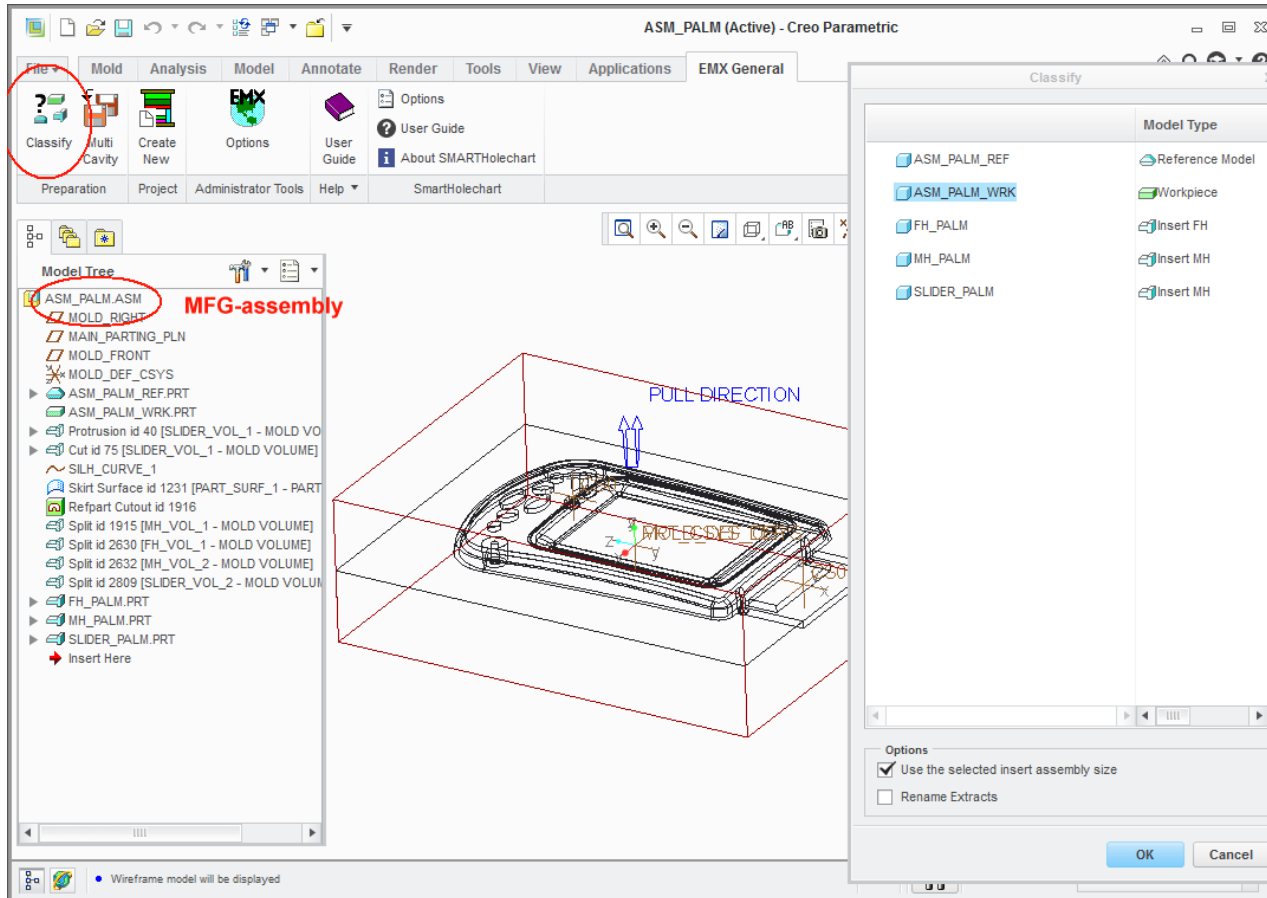
### Best Practice

- Classify and Multi Cavity Process
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### New Features

- The Mold Base Designer
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# Change in the process: Classifying

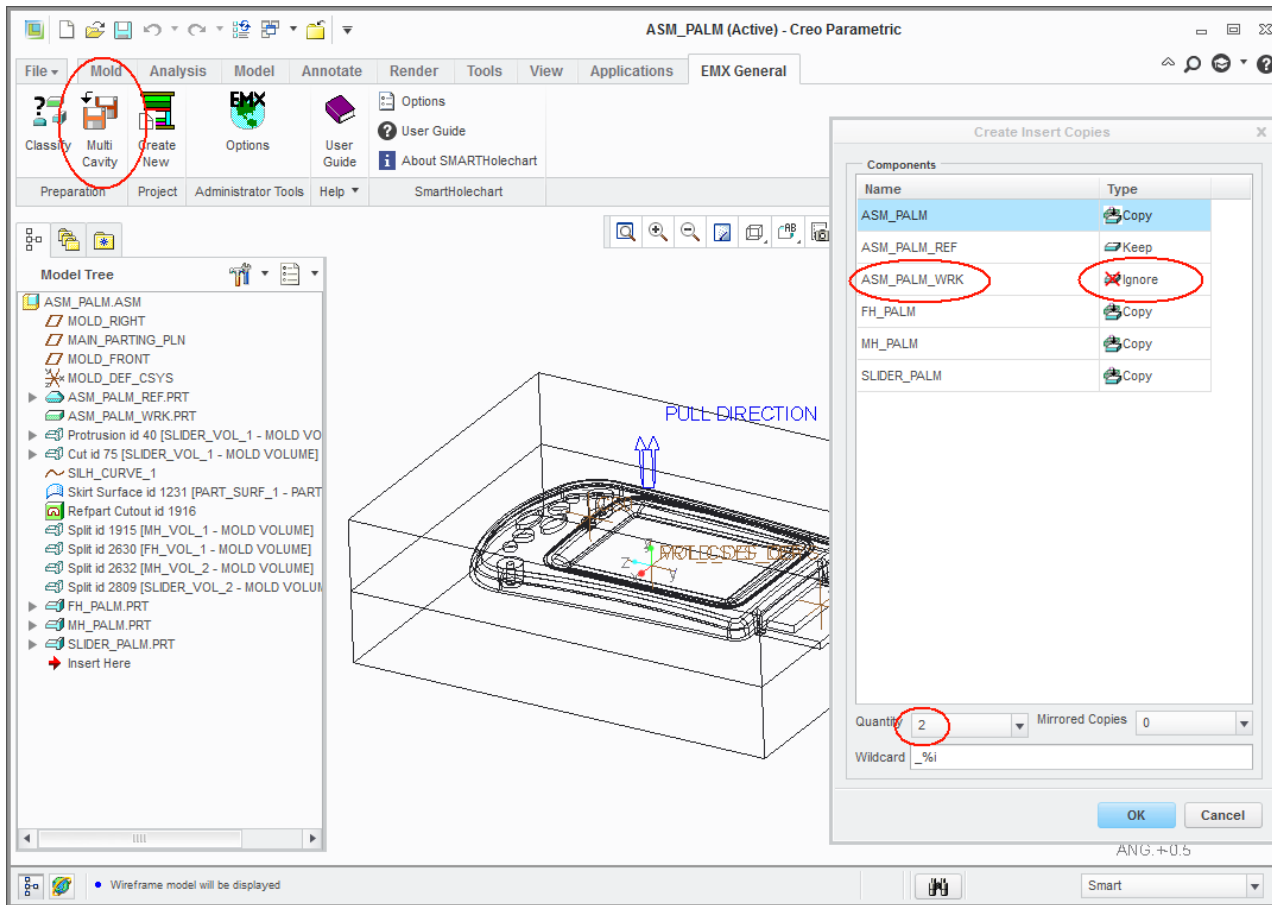


In the past many users have used the classifying of the project to put components to the fix-moving half. This is not the correct way to do it.

From now on, Classify can be used on the Core-/Cavity insert assembly (MFG) BEFORE creating the EMX project. This avoids the problem mentioned before.



# Change in the process: Multi Cavity - 1



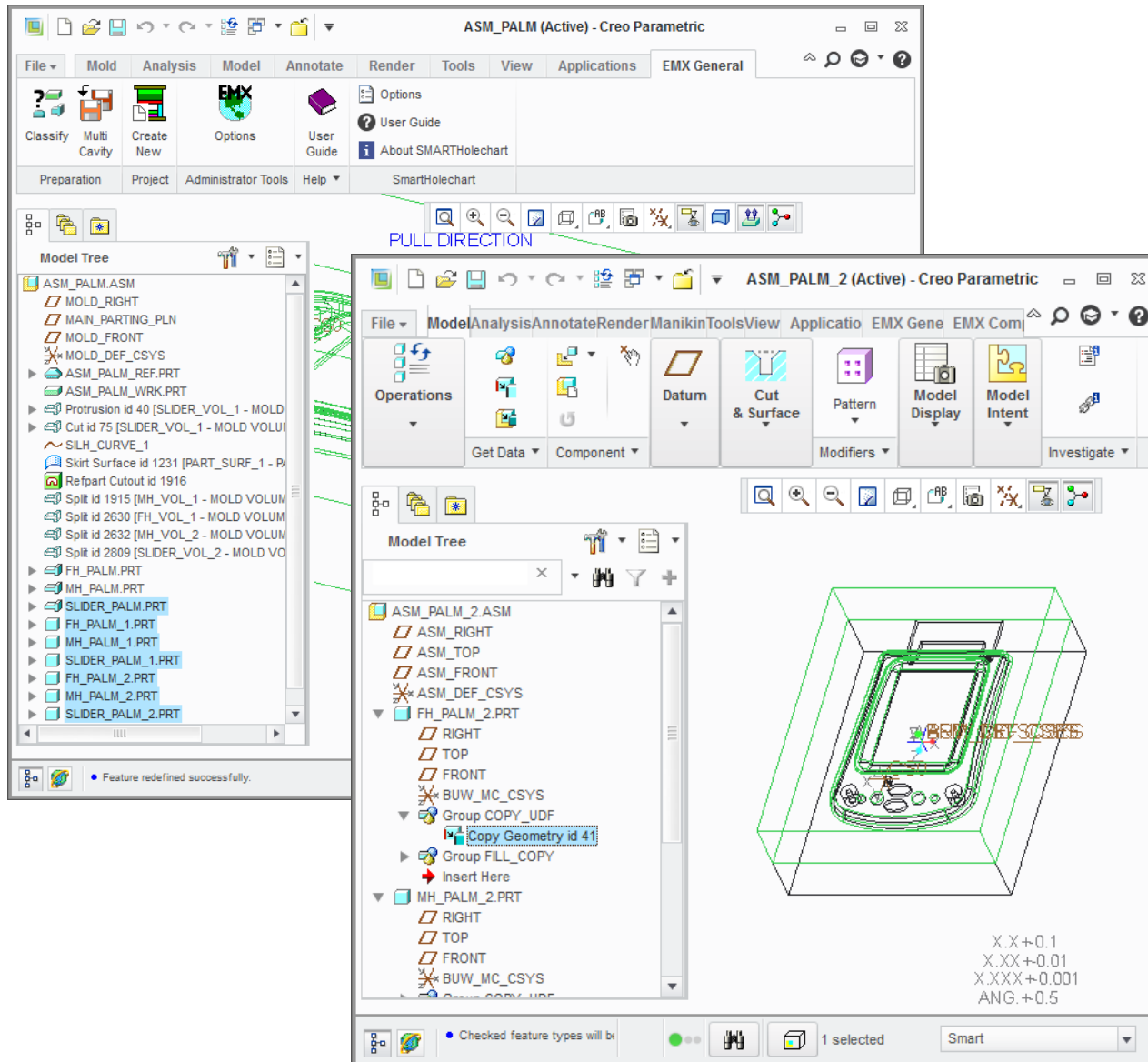
Even when create a single cavity mold, we recommend to create a copy of the original Core / Cavity insert with the Multi Cavity function.

- Advantages are: Work piece is eliminated
- The assembly copy has simplified features, so regeneration time is reduced
- Using EMX cannot corrupt the MFG-assembly

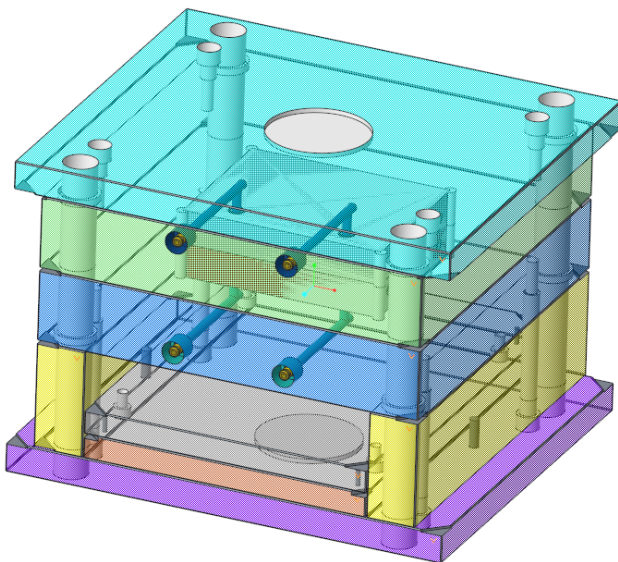
# Change in the process: Multi Cavity - 2

Copies of the Insert models are added to the insert-assembly

The copied assemblies have only Copy Geom features included



## Agenda



### Best Practice

- Classify and Multi Cavity Process
- Improved Handling of BOM Parameters
- New Part Names Configuration
- Working with Windchill

### New Features

- The Mold Base Designer
- New EMX Options
- Handling Component Updates
- Ejector Pins Design in Part Mode
- QA Measures



## Improved handling of BOM Parameters - 1

---

When adding a plate, component, library part each dialog box has a „Parameter“-sheet. Until now, user input for this parameter-values in the dialog boxes had not been considered properly.

→ customers have not trust the BOM at all and still use EXCEL for their BOM

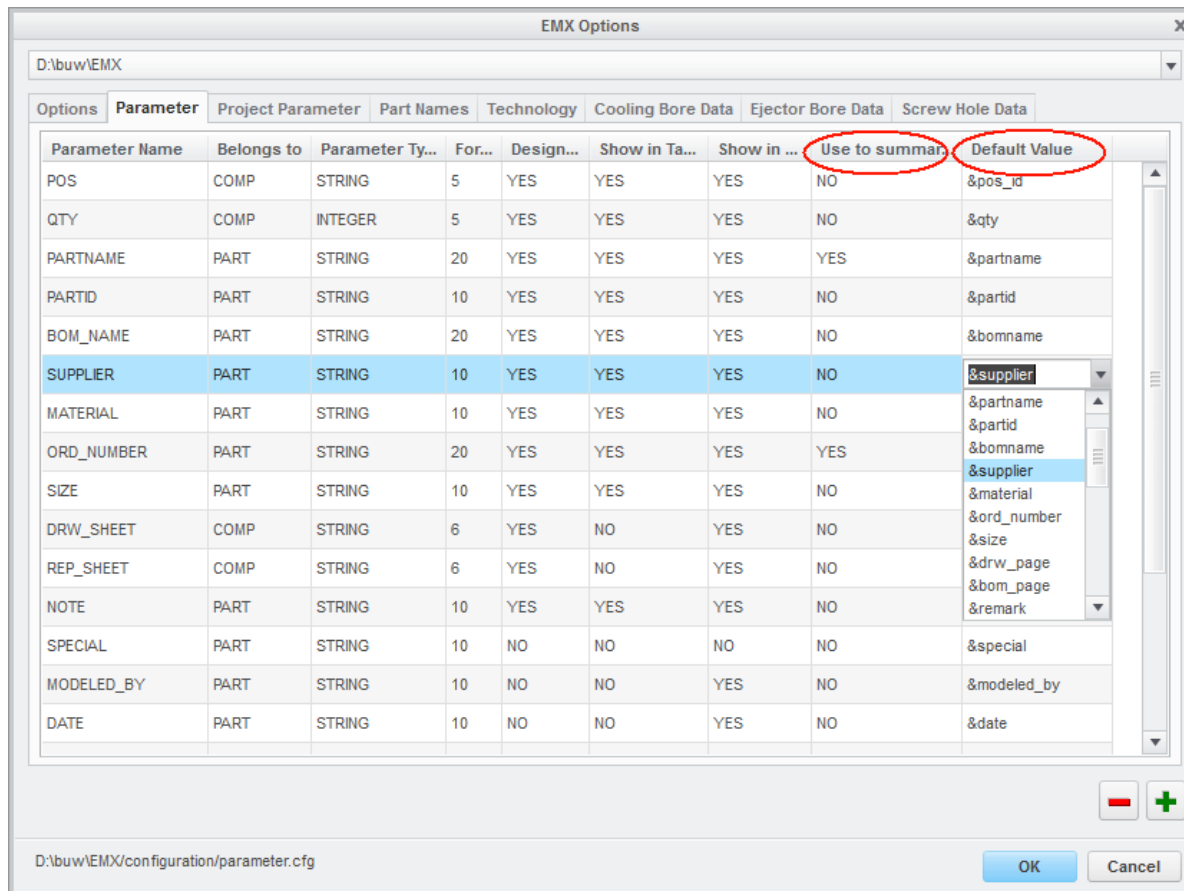
We like to „force“ users to use EMX BOM more often so they benefit from the nice functionality. The following steps should be part of each training.

See the following pages for the major steps.

A decorative curved line in the bottom right corner, consisting of a grey arc and an orange arc.

# Improved handling of BOM Parameters - 2

**STEP 1:** The admin must define the EMX Options → Parameters carefully. The meaning of the Rule („Default Value“) in the last column and the „Use to summarize“- column must be explained!



The screenshot shows the 'EMX Options' dialog box with a table of parameters. The 'Use to summarize' and 'Default Value' columns are circled in red. The 'SUPPLIER' row is highlighted in blue, and its 'Default Value' dropdown menu is open, showing a list of options including '&supplier', '&partname', '&partid', '&bomname', '&material', '&ord\_number', '&size', '&drw\_page', '&bom\_page', and '&remark'.

Parameter Name	Belongs to	Parameter Ty...	For...	Design...	Show in Ta...	Show in ...	Use to summarize	Default Value
POS	COMP	STRING	5	YES	YES	YES	NO	&pos_id
QTY	COMP	INTEGER	5	YES	YES	YES	NO	&qty
PARTNAME	PART	STRING	20	YES	YES	YES	YES	&partname
PARTID	PART	STRING	10	YES	YES	YES	NO	&partid
BOM_NAME	PART	STRING	20	YES	YES	YES	NO	&bomname
SUPPLIER	PART	STRING	10	YES	YES	YES	NO	&supplier
MATERIAL	PART	STRING	10	YES	YES	YES	NO	&partname &partid &bomname &supplier &material
ORD_NUMBER	PART	STRING	20	YES	YES	YES	YES	&ord_number &size
SIZE	PART	STRING	10	YES	YES	YES	NO	&drw_page &bom_page &remark
DRW_SHEET	COMP	STRING	6	YES	NO	YES	NO	&special
REP_SHEET	COMP	STRING	6	YES	NO	YES	NO	&modeled_by
NOTE	PART	STRING	10	YES	YES	YES	NO	&date
SPECIAL	PART	STRING	10	NO	NO	NO	NO	
MODELED_BY	PART	STRING	10	NO	NO	YES	NO	
DATE	PART	STRING	10	NO	NO	YES	NO	

# Improved handling of BOM Parameters - 3

**STEP 2:** When defining a plate, component etc. ... users should understand the meaning of the „Locked“-symbol in the dialog boxes.

Plate dialog box showing parameters for a plate component. The 'Parameter' tab is active, displaying a table of parameters. The 'BOM\_NAME' parameter is highlighted with a red circle, and its value 'Cavityplate MovingHalf' is also circled. A red circle also highlights the 'Add to BOM' checkbox at the bottom.

Parameter Name	Value	Default Value
POS	0	0
QTY	0	0
PARTNAME	TUTOR_CAV_PLATE...	TUTOR_CAV_P...
PARTID	00	00
<b>BOM_NAME</b>	<b>Cavityplate MovingHalf</b>	Cavityplate Movi...
SUPPLIER	Meusburger	Meusburger

Screw dialog box showing parameters for a screw component. The 'Parameter' tab is active, displaying a table of parameters. The 'MATERIAL' parameter is highlighted with a red circle, and its value '12.9' is also circled. A red circle also highlights the 'Add to BOM' checkbox at the bottom.

Parameter Name	Value	Default Value
PARTID	4010	4010
BOM_NAME	SHC Screw	SHC Screw
SUPPLIER	meusburger	meusburger
<b>MATERIAL</b>	<b>12.9</b>	12.9
ORD_NUMBER	E1200/2x6	E1200/2x6
SIZE	?	?

Library Component dialog box showing parameters for a library component. The 'Parameter' tab is active, displaying a table of parameters. The 'MATERIAL' parameter is highlighted with a red circle, and its value '???' is also circled. A red circle also highlights the 'Add to BOM' checkbox at the bottom.

Parameter Name	Value	Default Value
MATERIAL	???	???
ORD_NUMBER	SD3x10	SD3x10
SIZE	?	?
DRW_SHEET	?	?
REP_SHEET	?	?

# Improved handling of BOM Parameters - 4

**STEP 3: Finish the content of the entire BOM in the BOM dialog box. Edit values by double click ... or right click and „Edit BOM parameters“-function.**

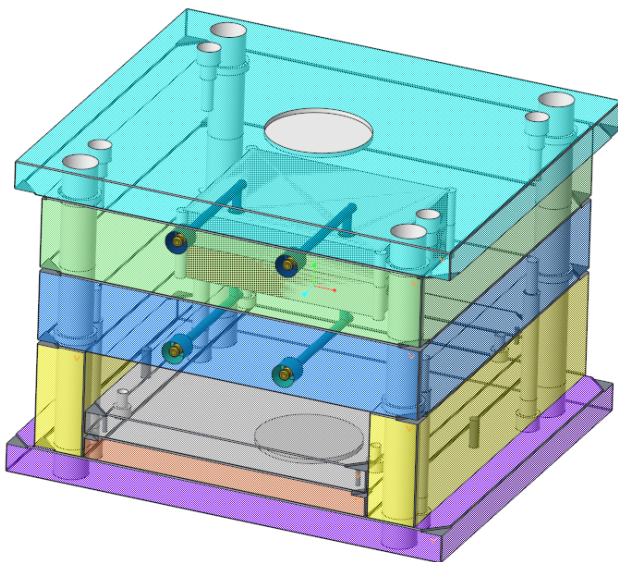
The screenshot shows the 'Bill of Materials' dialog box with a table of components. The 'Edit BOM Entry' dialog is open over the 'ASM\_PALM\_REF' component. A red arrow points from the 'Edit BOM Parameters' menu item to the 'Edit BOM Entry' dialog.

E...	V...	MODELL	POS	QTY	(V) PARTNAME	PARTID	BOM_NAME
		ASM_PALM_1	1	1	ASM_PALM_1	*	ASM_PALM_1
		TUTOR_CLP_PLATE_MH000	2	1	TUTOR_CLP_PLATE...	00	Clampingplate MovingHalf
		TUTOR_RISERS_L_MH000	3	1	TUTOR_RISERS_L...	00	Risers MovingHalf
		ASM_PALM_REF	4	2	ASM_PALM_REF	*	ASM_PALM_REF
		TUTOR_RISERS_R_MH000	5	1	TUTOR_RISERS_R...	00	Risers MovingHalf
		TUTOR_CAV_PLATE_MH000	6	1	TUTOR_CAV_PLATE...	00	Cavityplate MovingHalf
		TUTOR_EJBASE_PLATE_MH001	7	1	TUTOR_EJBASE_PL...	01	EjectorRetainerPlate MovingHalf
		TUTOR_EJRET_PLATE_MH001	8	1	TUTOR_EJRET...	01	EjectorRetainerPlate MovingHalf
		MH_PALM_1	9	1	MH_PALM_1		
		SLIDER_PALM	10	1	SLIDER_PALM		
		FH_PALM_1	11	1	FH_PALM_1		
Hidden Parts List							
		TUTORIAL	12	1	TUTORIAL		TUTORIAL
		TUTOR_SKELETON	13	1	TUTOR_SKELETON		TUTOR_SKELETON

Parameter Name	Value	Default Value
POS	6	6
QTY	1	1
PARTNAME	TUTOR_CAV_PLATE...	TUTOR_CAV...
PARTID	00	00
BOM_NAME	Cavityplate MovingHalf	Cavityplate Mc...
SUPPLIER	Meusburger	Meusburger
MATERIAL	1730	1730
ORD_NUMBER	F50/346x346x66-1730	F50/346x346x...
SIZE	346x346x66	346x346x66
DRW_SHEET	?	?
REP_SHEET	?	?
NOTE		
MODELED_BY	hannes	hannes
DATE	05.09.2015	05.09.2015
PROJECTNAME	TUTORIAL	TUTORIAL
SIDE	ES	ES
LIST_EXAMPLE	AB-123	AB-123
CUSTOMER	ABC	ABC

## Agenda



### Best Practice

- Classify and Multi Cavity Process
- Improved Handling of BOM Parameters
- New Part Names Configuration
- Working with Windchill

### New Features

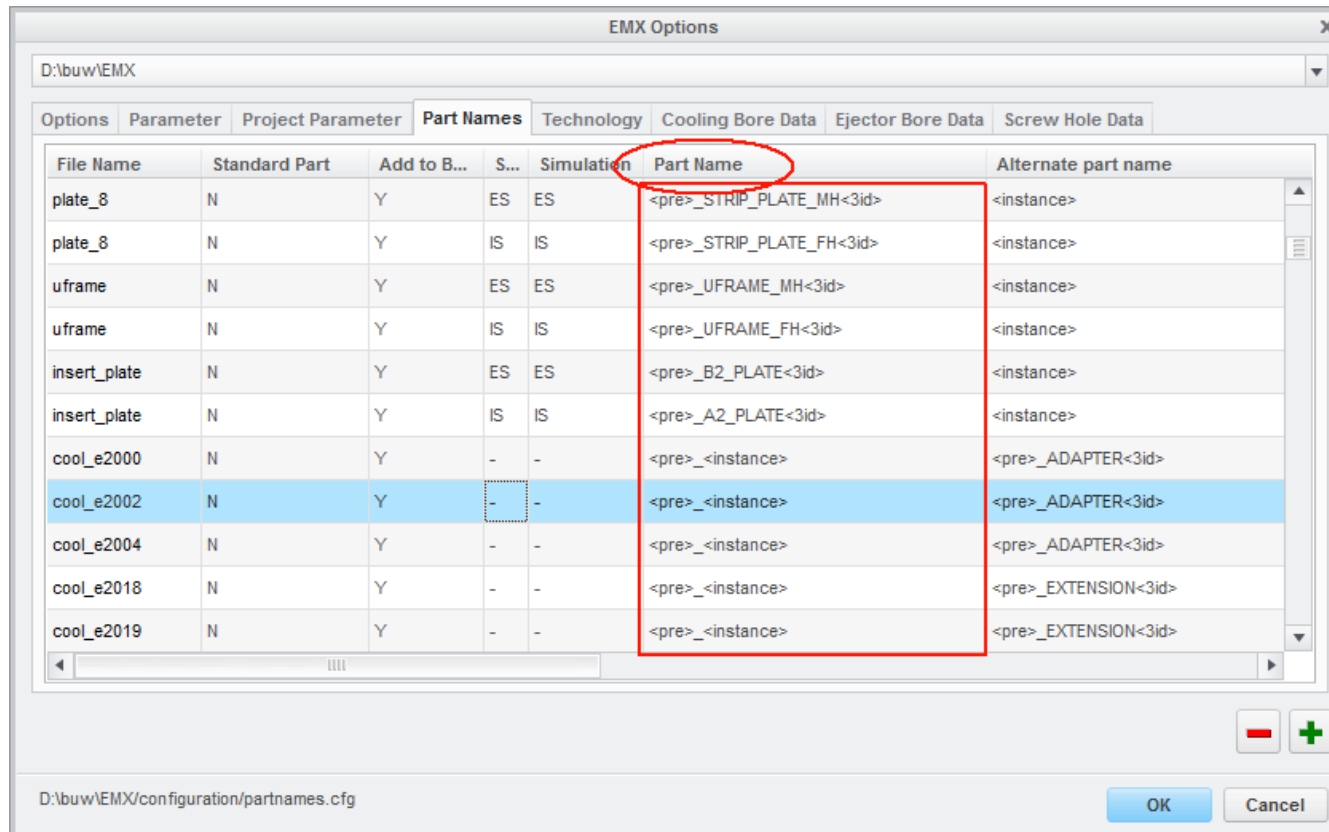
- The Mold Base Designer
- New EMX Options
- Handling Component Updates
- Ejector Pins Design in Part Mode
- QA Measures



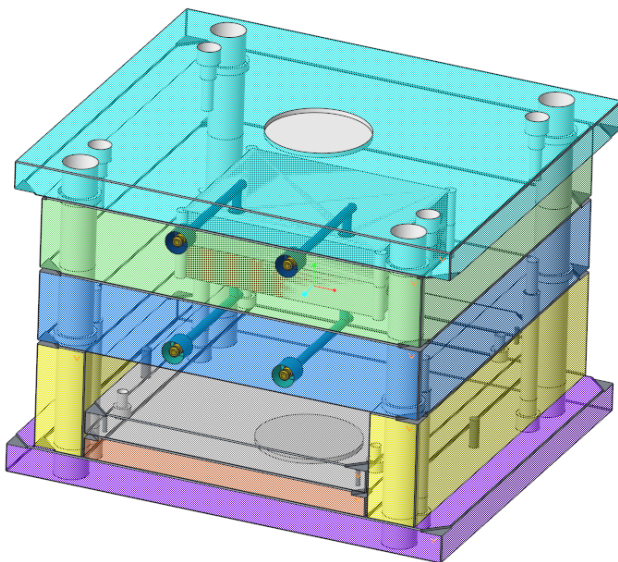
# New Part Names Configuration

If the default part name for a component has the wildcard <xid> included, each model will get a new name (i.e. ADAPTER\_001, ADAPTER\_002 etc.). Even the models have identical geometry.

**Avoid this by new part names with <instance>-wildcard!**



## Agenda



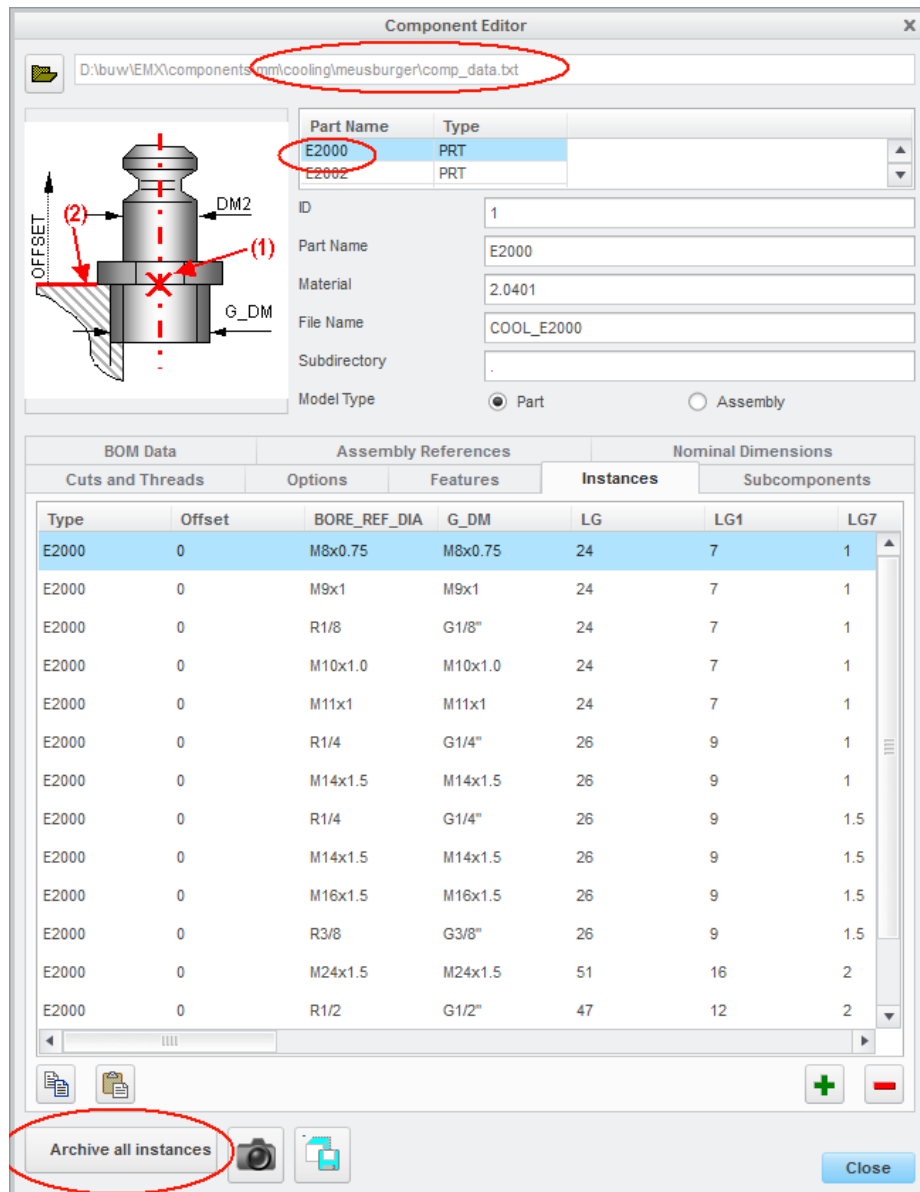
### Best Practice

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# Working with Windchill - 1



## STEP1

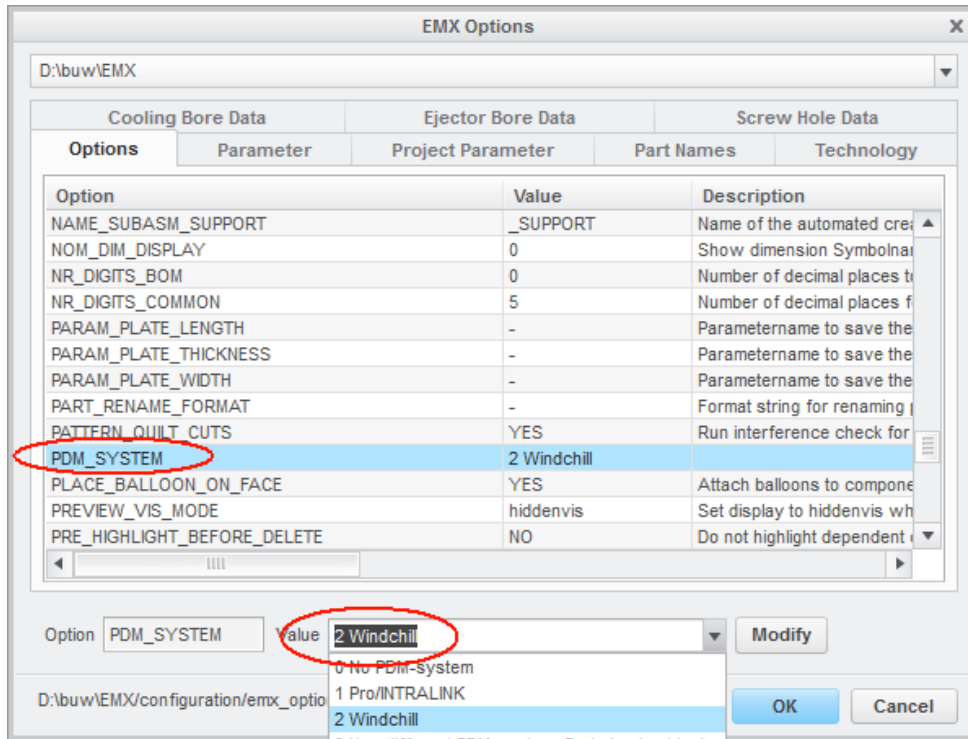
Create all instances of the standard-parts with the Component Editor:

Open a comp\_data-file, select the desired component, press „Archive all instances“

This instances models (with correct parameters, dimensions, material) will be written to the ARCHIVE\_PATH defined in EMX Options.

Then add this parts to the Windchill Commonsplace manually.

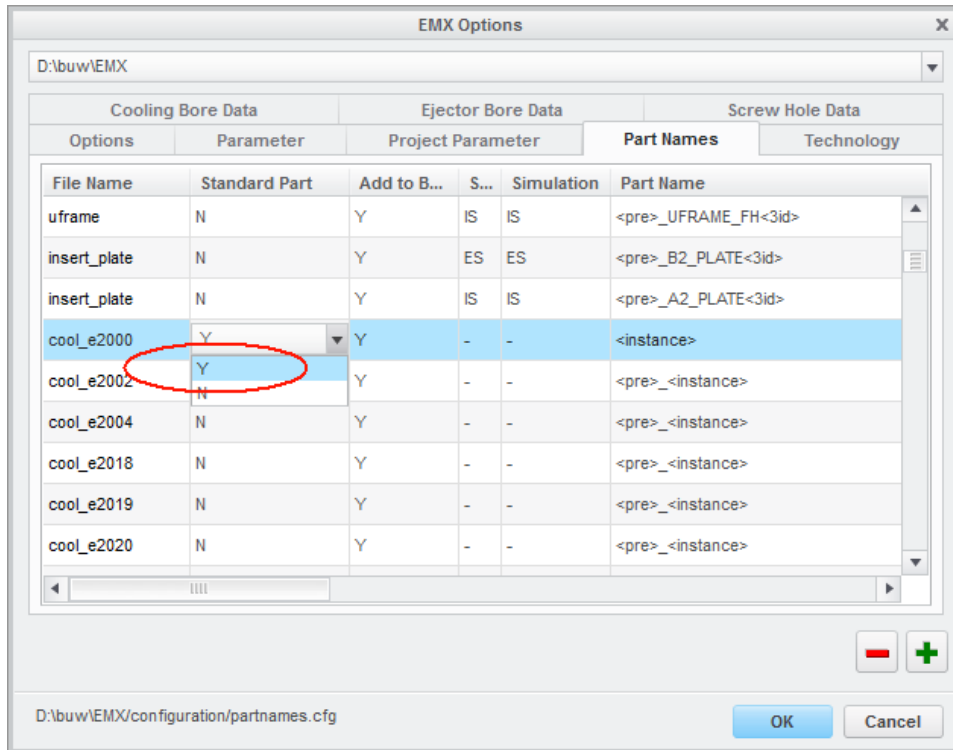
# Working with Windchill - 2



## STEP2

Set Option PDM\_SYSTEM = 2

# Working with Windchill - 3



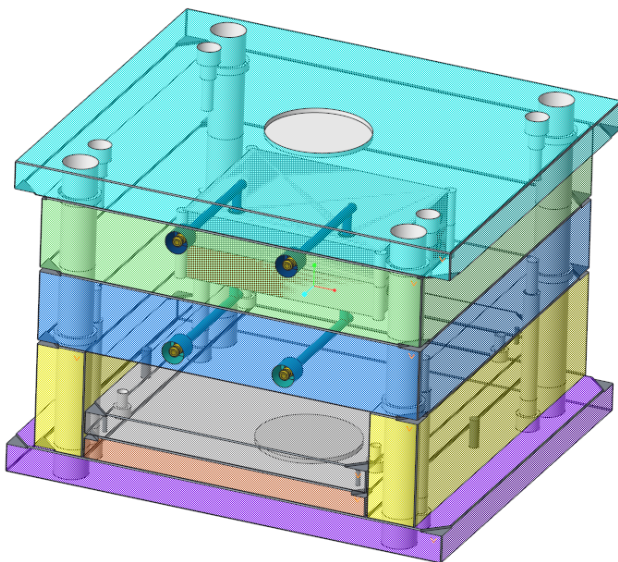
## STEP3

Set the value for „Standard Part“ in Part Names-Configuration to „Y“.

(When doing so, EMX will search for the component in the commonspace and do not modify dims or parameters when assemble this part!)



## Agenda



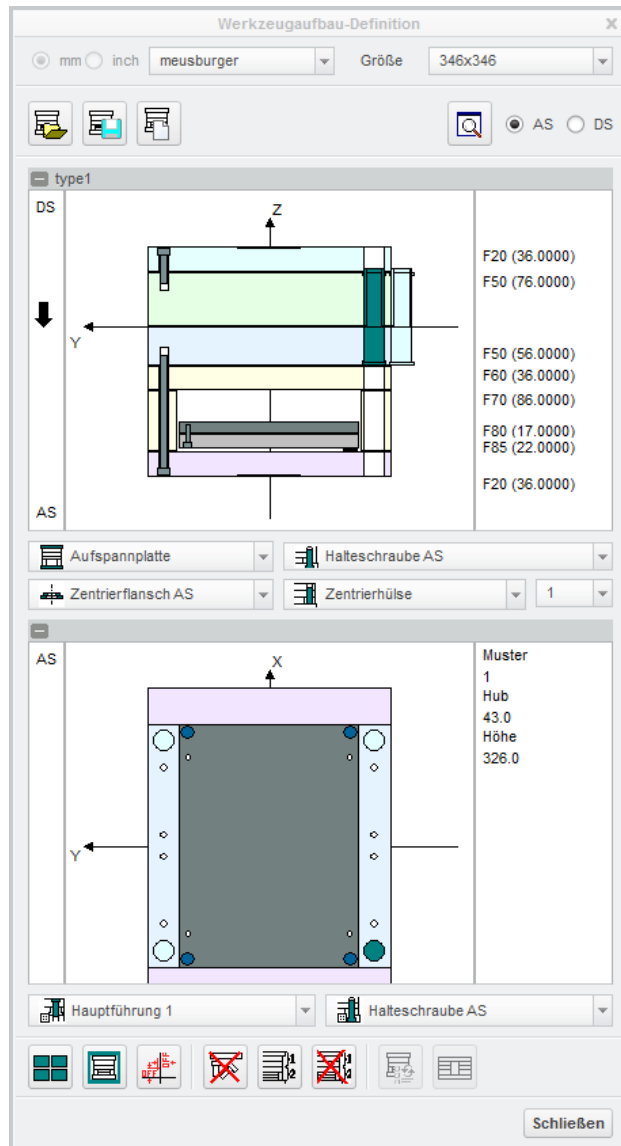
### Best Practice

- Classify and Multi Cavity Process
- Improved Handling of BOM Parameters
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### New Features

- The Mold Base Designer
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# New Mold Base Designer - 1



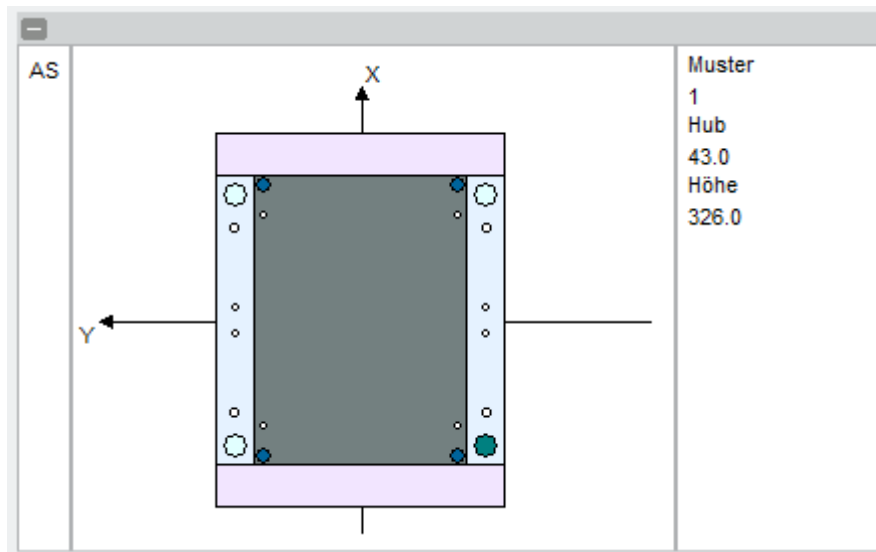
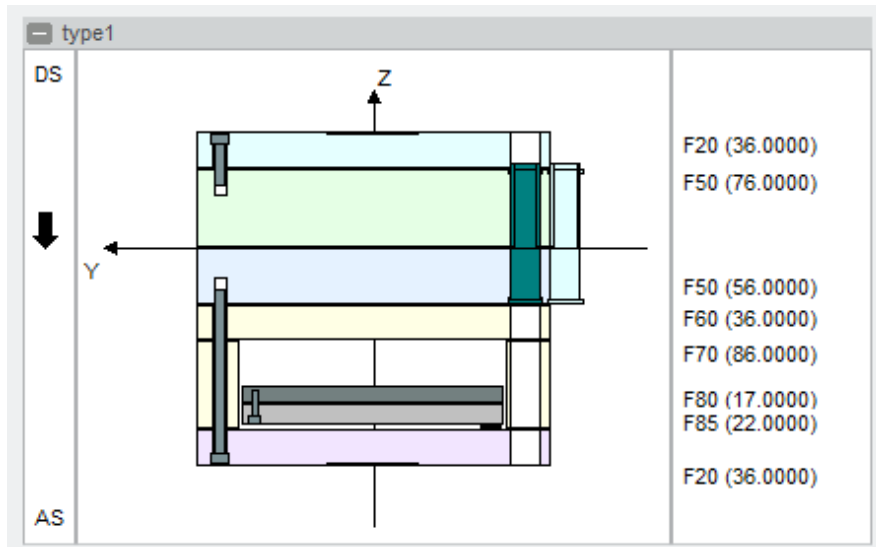
## Why Redesign?

- User Experience needs to be improved.
- Information is displayed insufficiently.
- Pushbuttons are not positioned clearly.

# New Mold Base Designer - 2

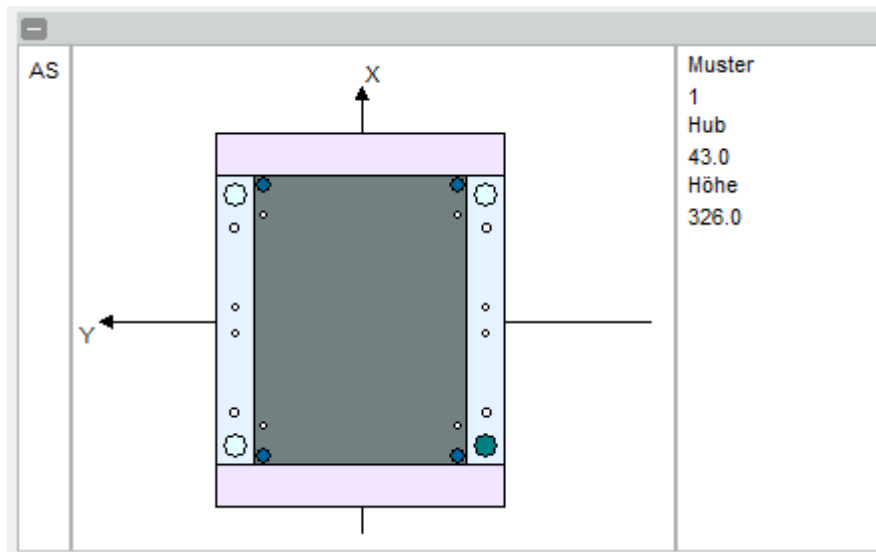
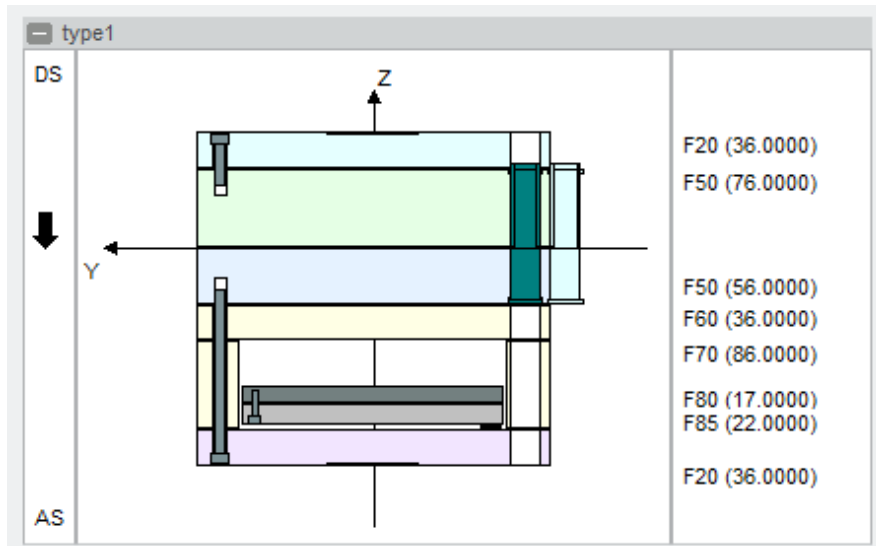
## What is new?

- Plates are display in predefined colors
- Color are defined in “technology.cfg”



→ Improved orientation

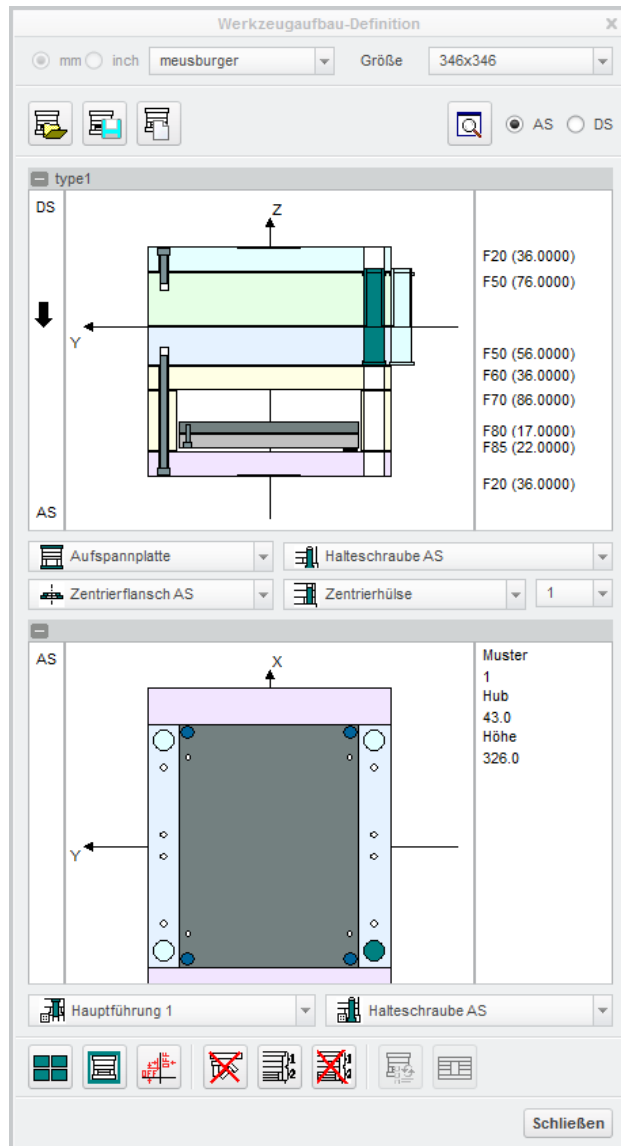
# New Mold Base Designer - 3



## What is new?

- Information is displayed on clear positions
  - Plate type and thickness
    - Clear order
    - Minimal distance while zooming
  - View direction and side info separated from mold view
- No more repainted Texts
- Better overview anytime

# New Mold Base Designer - 4



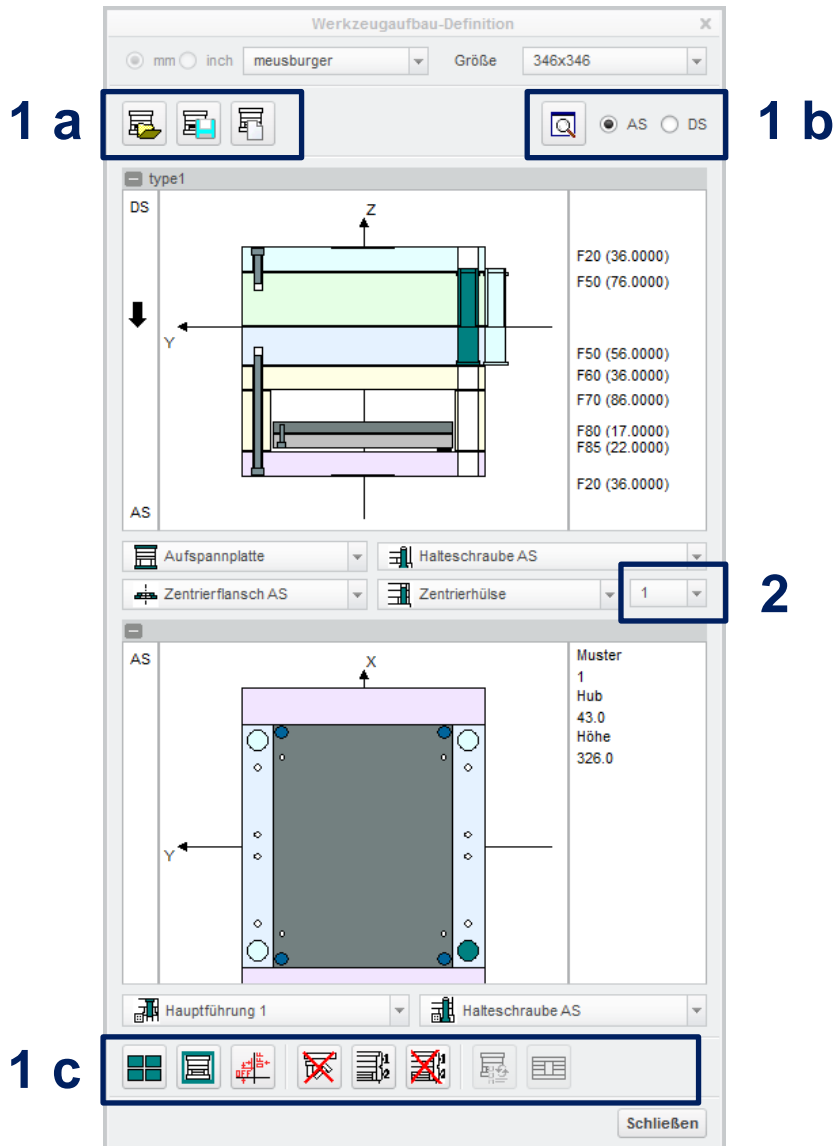
## What is new?

- Improved Drawing areas
- Zooming and Moving without Flickering

→ No more annoying distractions

→ Stay focused on work





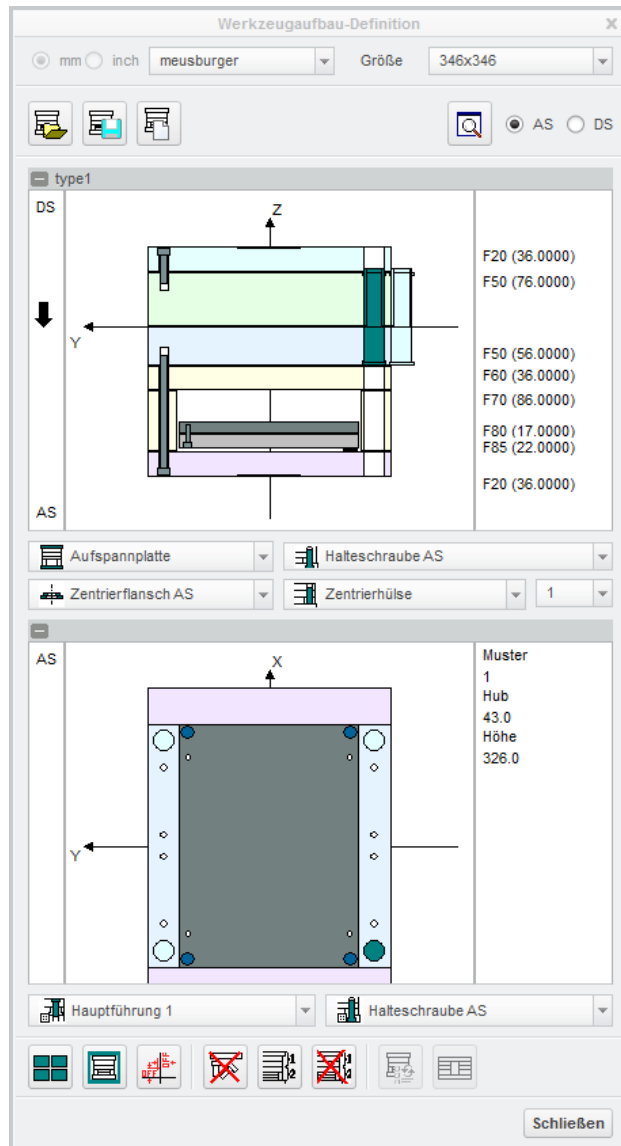
## What is new?

1. Restructuring of Pushbuttons in context
  - a. Load, Save, Erase Mold Base - Buttons
  - b. 2D View management – Buttons
  - c. Mold Base Design Buttons
2. „Active Pattern“ right next to „Guides“ Pull-down

→ Easy to use

→ Better workflow

# New Mold Base Designer - 6

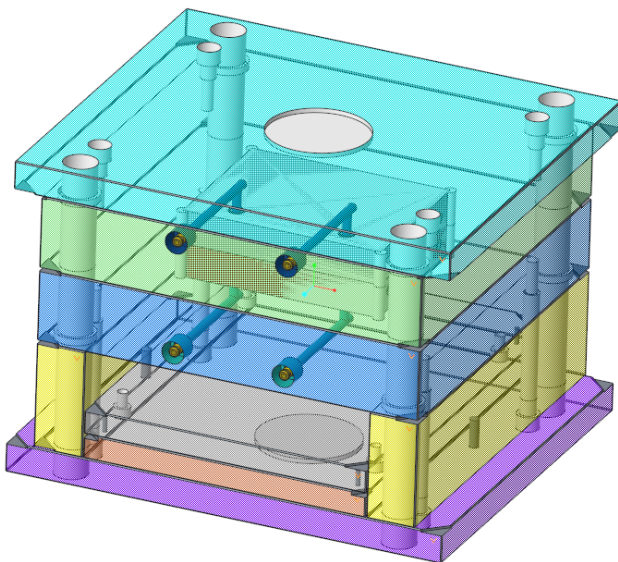


## Conclusion

- Rounds up the central Dialog of EMX
- Customers benefits from improved environment he works with all day

Let's have a look at the result

## Agenda



### Best Practice

- Classify and Multi Cavity Process
- Improved Handling of BOM Parameters
- New Part Names Configuration
- Working with Windchill

### New Features

- The Mold Base Designer
- **New EMX Options**
- Handling Component Updates
- Ejector Pins Design in Part Mode
- QA Measures

# New EMX options

---

1. **CHECK\_DWG\_WHEN\_OPEN\_BOM** checks if drawings for the BOM Models are present
2. **DEFAULT\_EMXNAME, DEFAULT\_PREFIX** useful to predefine name and prefix for project
3. **DEFAULT\_WATERLINE\_...** Options are used for the Waterline Designer
4. **EJP\_NOTE\_POST\_STRING** and **EJP\_NOTE\_PRE\_STRING** extend the &remark parameter
5. **EMX\_CHECK\_DWG\_TYPES** allows creating only the drawings only for the needed parts
6. **EMX\_HIDE\_ASSEMBLIES\_IN\_BOM** set on yes moves all subassemblies on hidden list
7. **ENABLE\_NON\_CATALOG\_PLATES** handles the case of using a non catalog plate
8. **EXCL\_SIZE\_CALC\_PARAM** skips recalculation of size parameter for standard parts
9. **NR\_DIGITS\_BOM** is used to calculate **SIZE** parameter and allows the value 0
10. **LIBRARY\_THUMB\_SIZE** allows to set the size of the generated library part thumbnails
11. **PATTERN\_QUILT\_CUTS** handles the way the cuts are created for patterned components
12. **QUICK\_PROMPT** allows the user decide if selection of references should happen in loop
13. **SHOW\_PRY SLOT** main switch to toggle the assembling of the pryslots on and off
14. **TEST\_MODE** new debug functionality – useful when encountering bugs or crashes
15. **USE\_ASM\_WATERLINE\_MDL** allows creating two models for ES and IS of the waterline
16. **USE\_P\_PLATE\_STACK** must be used carefully because cuts dims from \*\_bore.cfg files

# New EMX options - CHECK\_DWG\_WHEN\_OPEN\_BOM

1. CHECK\_DWG\_WHEN\_OPEN\_BOM checks if drawings for the BOM Models are present

BOM Option Name	Checked/Default	Description
CHECK_DWG_WHEN_OPEN_BOM	YES	Check if a drawing exist for each part when opening the BOM

The screenshot shows the 'Bill of Materials' dialog box with a table of parts. A red arrow points from the 'CHECK\_DWG\_WHEN\_OPEN\_BOM' option in the table above to a drawing icon in the 'MODELL' column of the BOM table.

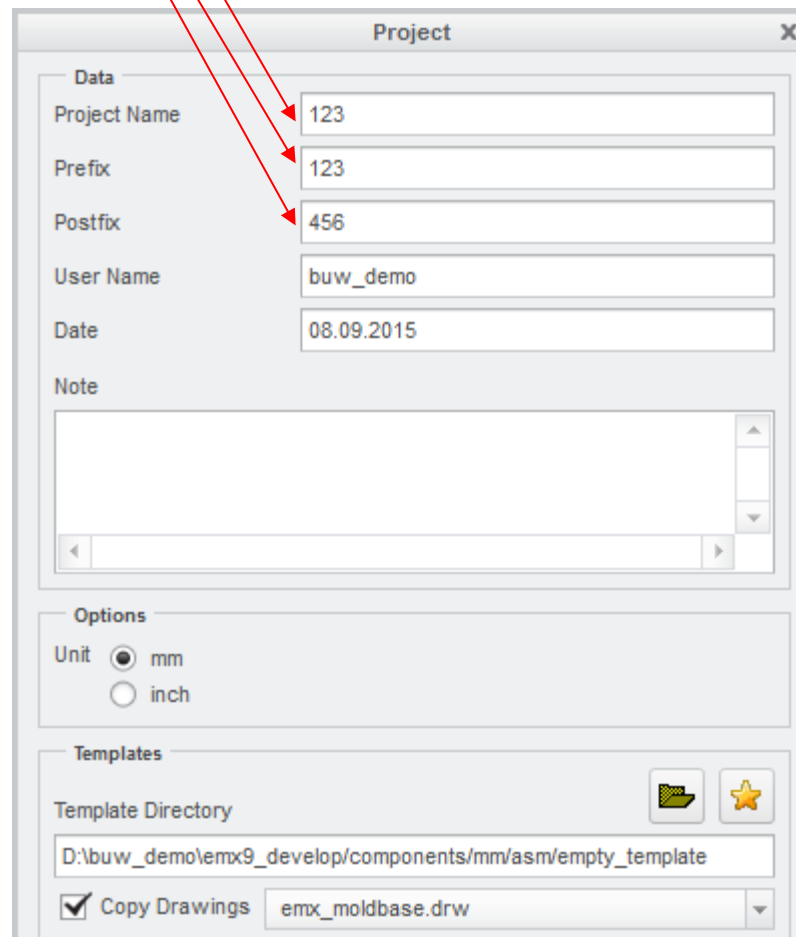
E...	V...	MODELL	POS	QTY	PARTNAME
▶	👁	📁 ASM_PALM_1	1	4	ASM_PALM_1
▶	👁	📁 ASM_PALM_REF	2	4	ASM_PALM_REF
▶	👁	📁 ASM_PALM_WRK	3	4	ASM_PALM_WRK
▶	👁	📁 DEMO_RISERS_R_MH001	4	2	DEMO_RISERS_R_MH001
	👁	📁 DEMO_CAV_PLATE_MH001	5	1	DEMO_CAV_PLATE_MH001
	👁	📁 DEMO_EJRET_PLATE_MH001	6	1	DEMO_EJRET_PLATE_MH001
	👁	📁 DEMO_EJBASE_PLATE_MH001	7	1	DEMO_EJBASE_PLATE_MH001
	👁	📁 DEMO_CLP_PLATE_MH001	8	1	DEMO_CLP_PLATE_MH001
	👁	📁 DEMO_CAV_PLATE_FH001	9	1	DEMO_CAV_PLATE_FH001
	👁	📁 DEMO_CLP_PLATE_FH001	10	1	DEMO_CLP_PLATE_FH001
	👁	📁 DEMO_INT_PLATE_MH001	11	1	DEMO_INT_PLATE_MH001
	👁	📁 DEMO_E1100_40_76	12	1	DEMO_E1100_40_76
	👁	📁 DEMO_E1010_40_56_75	13	1	DEMO_E1010_40_56_75
▶	👁	📁 DEMO_E1010_42_56_75	14	3	DEMO_E1010_42_56_75

Note: On large assemblies the BOM Dialog will take longer to open when this option is set to yes

# New EMX options

## 2. DEFAULT\_EMXNAME, DEFAULT\_PREFIX useful to predefine name and prefix for project

DEFAULT_EMXNAME	123	Default for the EMX Projectname
DEFAULT_PREFIX	123	Default for the Project Prefix
DEFAULT_POSTFIX	456	Default for the project postfix. Enter - to hide the input panel for the postfix



The screenshot shows a 'Project' dialog box with the following fields and values:

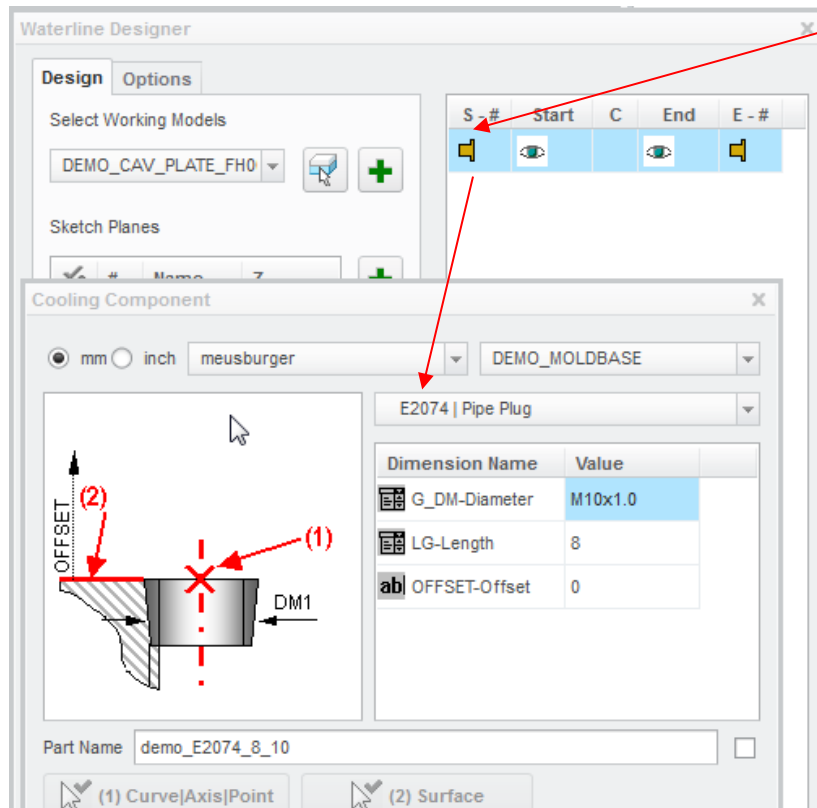
- Data**
  - Project Name: 123
  - Prefix: 123
  - Postfix: 456
  - User Name: buw\_demo
  - Date: 08.09.2015
  - Note: (empty text area)
- Options**
  - Unit:  mm,  inch
- Templates**
  - Template Directory: D:\buw\_demo\emx9\_develop/components/mm/asm/empty\_template
  - Copy Drawings:  emx\_moldbase.drw

Three red arrows point from the table above to the 'Project Name', 'Prefix', and 'Postfix' input fields in the dialog box, indicating that the values in the table correspond to the default values shown in the software interface.

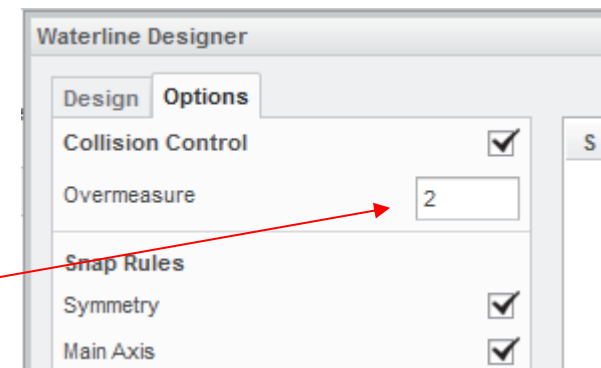
# New EMX options

## 3. DEFAULT\_WATERLINE\_... Options are used for the Waterline Designer

1. DEFAULT\_WATERLINE\_COMPONENT = mm|meusburger|E2074\_8\_10



2. DEFAULT\_WATERLINE\_OVERMEASURE = 2





# New EMX options

## 4. EJP\_NOTE\_POST\_STRING and EJP\_NOTE\_PRE\_STRING extend the &remark parameter

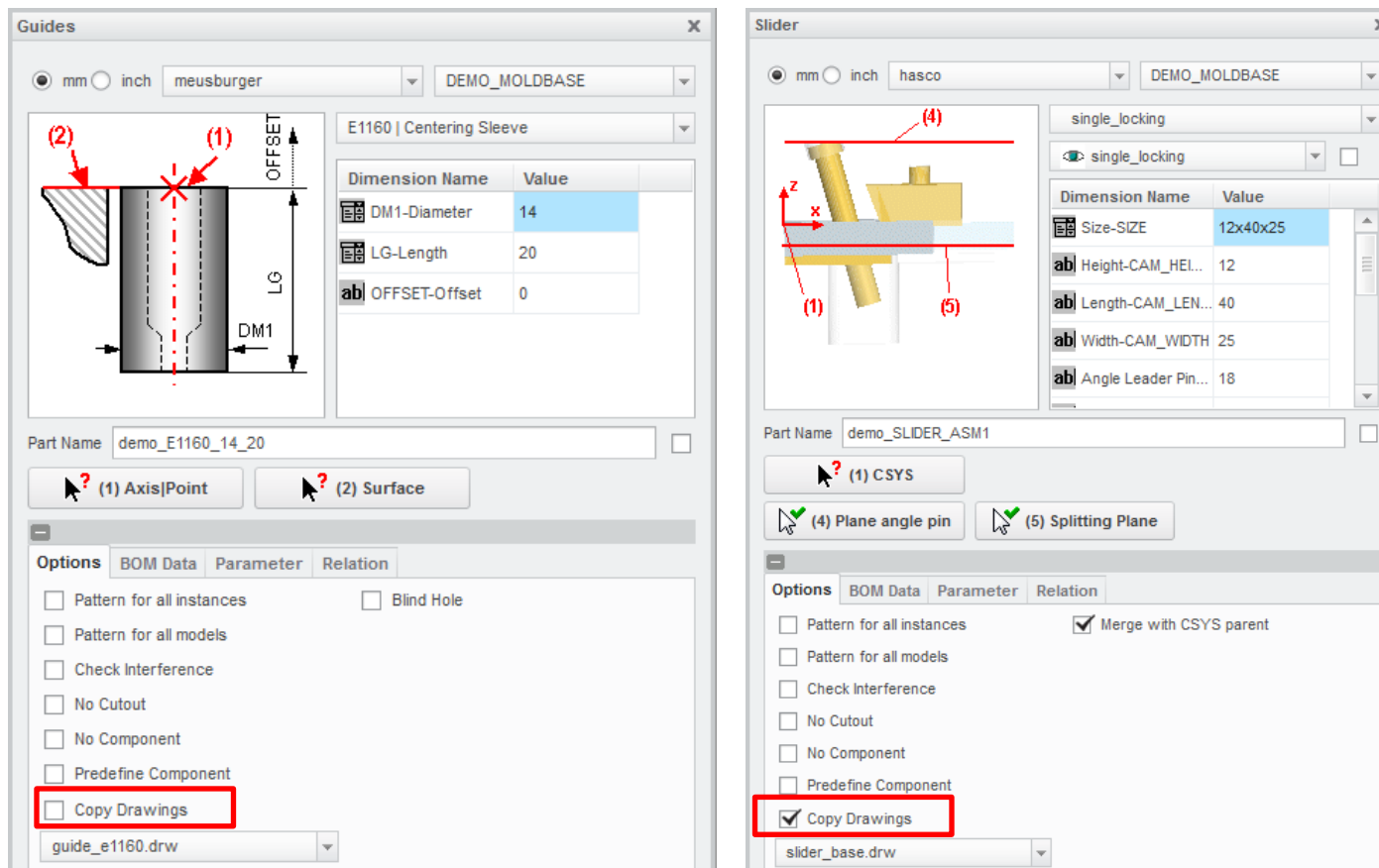
EJP_NOTE_PRE_STRING	ejp_pre	Text to be added before the real ejector pin length in the &remark-parameter
EJP_NOTE_POST_STRING	ejp_post	Text to be added after the real ejector pin length in the &remark-parameter

E...	V...	MODELL	POS	Q...	..	P...	(V)...	SUPPLIER	MAT...	(V) ORD_NUMBER	SIZE	NOTE	LIST_EXAMPLE
		DEMO_EJBASE_PLATE_MH001	16	1	...	01	Ejec...	Meusburger	1730	F85/596x596x36-1...	596x438x36		AB-123
		DEMO_EJECTOR_PIN010	17	1	...	410	Ejec...	Meusburger	1.2210	E1700/2,5x160	Ø6x158	ejp_pre 158.0000 ejp_post	AB-123
		DEMO_EJRET_PLATE_MH001	18	1	...	01	Ejec...	Meusburger	1730	F80/596x596x27-1...	596x438x27		AB-123

# New EMX options

## 5. EMX\_CHECK\_DWG\_TYPES allows creating only the drawings only for the needed parts

EMX\_CHECK\_DWG\_TYPES plates|library|slider|lifter List of all component types (e.g. guide|plates|slider|library) that will have the checkbox "Create"



Note: If the drawing is present the check will be set

# New EMX options

## 6. EMX\_HIDE\_ASSEMBLIES\_IN\_BOM set on yes moves all subassemblies on hidden list

Bill of Materials						
E...	V...	MODELL	POS	QTY	PARTNAME	PARTID
		123_CLP_PLATE_FH001	1	1	123_CLP_PLATE_FH001	01
		Hidden Parts List				
		123	2	1	123	
		123_SKELETON	3	1	123_SKELETON	
		123_SUBCOMP	4	1	123_SUBCOMP	
		123_SUBCOMP_GUIDE	5	1	123_SUBCOMP_GUIDE	
		123_SUBCOMP_EQUIP	6	1	123_SUBCOMP_EQUIP	
		123_SUBCOMP_SCREW	7	1	123_SUBCOMP_SCREW	
		123_MACHINE	8	1	123_MACHINE	
		123_SUBCOMP_DOWEL	9	1	123_SUBCOMP_DOWEL	
		123_SUBCOMP_COOL	10	1	123_SUBCOMP_COOL	
		123_SUBCOMP_EJECTOR	11	1	123_SUBCOMP_EJECTOR	
		123_SUBCOMP_SUPPORT	12	1	123_SUBCOMP_SUPPORT	
		123_SUBCOMP_LIB	13	1	123_SUBCOMP_LIB	
		123_SUBCOMP_STOP	14	1	123_SUBCOMP_STOP	

# New EMX options

## 7. ENABLE\_NON\_CATALOG\_PLATES handles the case of using a non catalog plate

The image shows two screenshots of the 'Plate' configuration window in a software application. The left screenshot shows the initial configuration with a thickness of 76.0000. The right screenshot shows the configuration after a change to a thickness of 200. Red boxes and arrows highlight these changes and their reflection in the BOM data.

**Left Screenshot (Initial Configuration):**

- Unit: mm
- Manufacturer: meusburger
- Material: 1730
- Length (LG): 596.0000
- Width (W): 596.0000
- Thickness (T): 76.0000
- Overmeasure: 0.0000
- Part Name: DEMO\_CAV\_PLATE\_FH001
- Order Number: F50/596x596x76-1730

**Right Screenshot (Modified Configuration):**

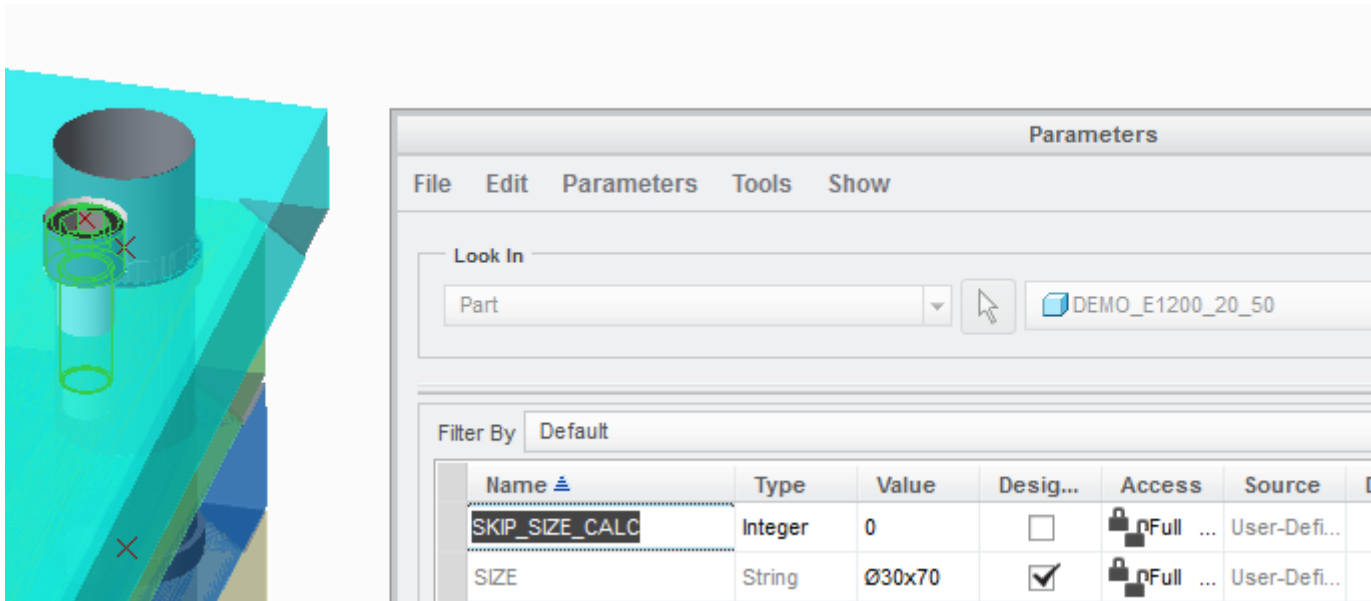
- Unit: mm
- Manufacturer: meusburger
- Material: 1730
- Length (LG): 596.0000
- Width (W): 596.0000
- Thickness (T): 200
- Overmeasure: 0.0000
- Part Name: DEMO\_CAV\_PLATE\_FH001
- Order Number: P/596x596x200-1730

The BOM Data section in the right screenshot shows the following values:

Field	Value
Part ID	01
BOM Name	Cavityplate FixHalf
Layer	-
Group Layer	02_PLATES
Order Number	P/596x596x200-1730

# New EMX options

## 8. EXCL\_SIZE\_CALC\_PARAM skips recalculation of size parameter for standard parts



Note: The value of this option must be set to the name of a parameter e.g. SKIP\_SIZE\_CALC

# New EMX options

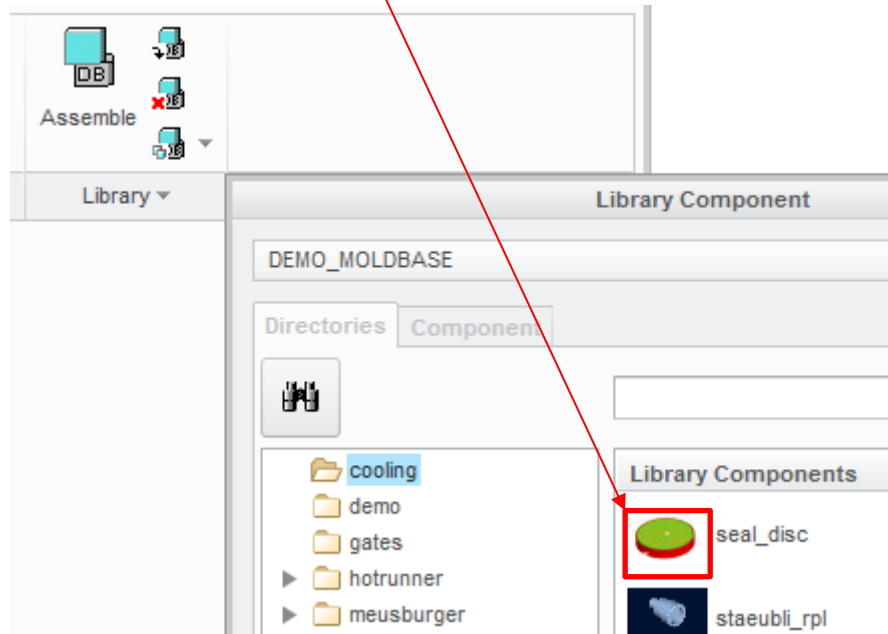
9. NR\_DIGITS\_BOM is used to calculate SIZE parameter and allows the value 0

Bill of Materials												
E...	V...	MODELL	POS	QTY	PARTNAME	PA...	(V) BOM_NAME	SUPPLIER	MATERIAL	(V) ORD_NUMBER	SIZE	NOTE
▶	👁	ASM_PALM_1	1	4	ASM_PALM_1	*	ASM_PALM_1	*	*	*		*
▶	👁	ASM_PALM_REF	2	4	ASM_PALM...	*	ASM_PALM_REF	*	*	*		*
▶	👁	ASM_PALM_WRK	3	4	ASM_PALM...	*	ASM_PALM_WRK	*	*	*		*
▶	👁	DEMO_RISERS_R_MH001	4	2	DEMO_RISE...	01	Risers MovingHalf	Meusburger	1730	F70/596x596/76x86-1730	156x40x35	
	👁	DEMO_CAV_PLATE_MH001	5	1	DEMO_CAV...	01	Cavityplate Moving...	Meusburger	1730	F50/596x596x56-1730	596x596x56	
	👁	DEMO_EJRET_PLATE_MH001	6	1	DEMO_EJRE...	01	EjectorBasePlate M...	Meusburger	1730	F80/596x596x27-1730	596x438x27	
	👁	DEMO_EJBASE_PLATE_MH001	7	1	DEMO_EJBA...	01	EjectorRetainerPlat...	Meusburger	1730	F85/596x596x36-1730	596x438x36	

# New EMX options

10. LIBRARY\_THUMB\_SIZE allows to set the size of the generated library part thumbnails

LIBRARY_THUMB_SIZE	100	Size in pixels of the thumbnail pictures of the library dialog.
--------------------	-----	---





# New EMX options

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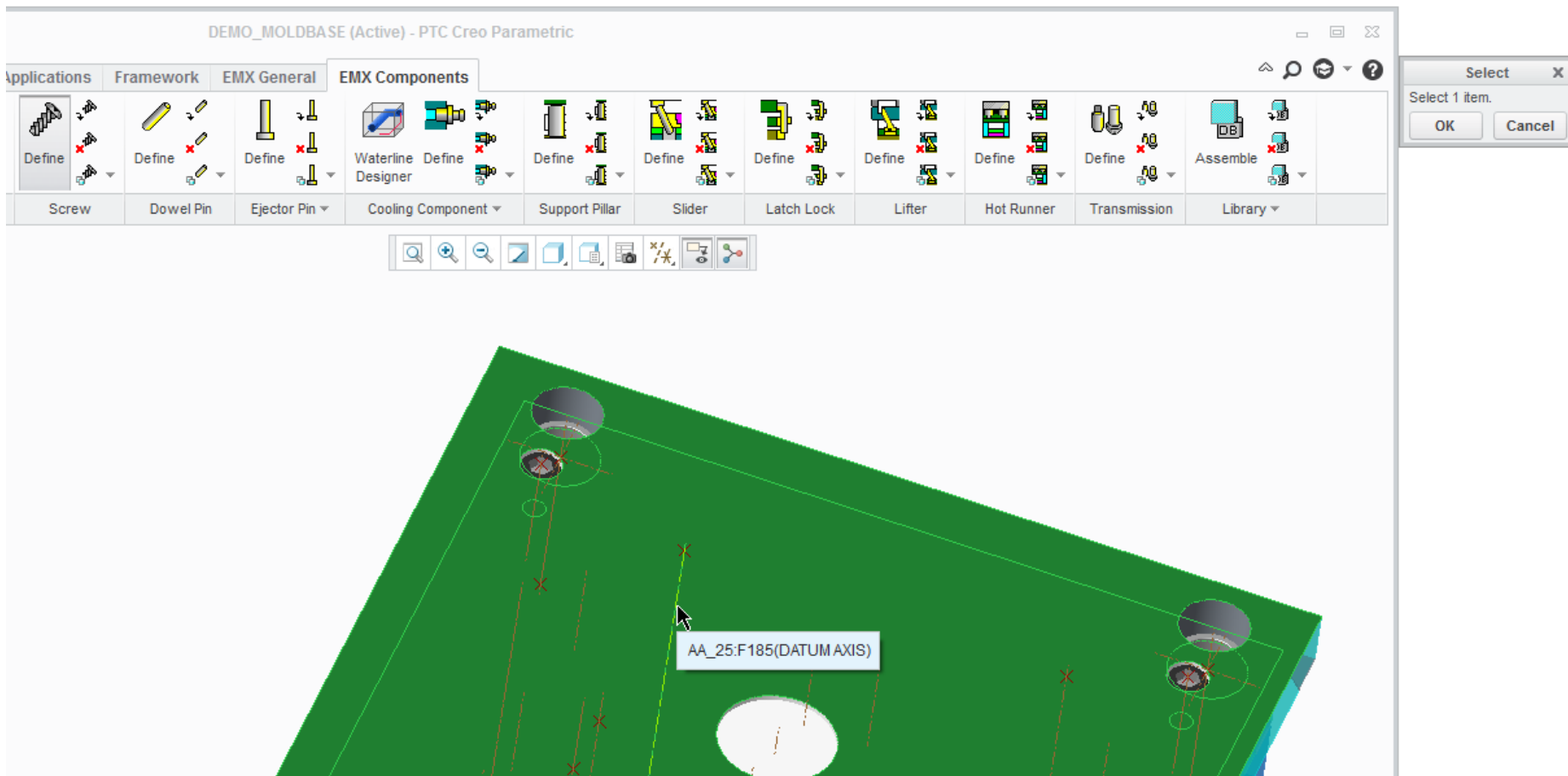
## 11. PATTERN\_QUILT\_CUTS handles the way the cuts are created for patterned components

1. When this Option is set on yes the system runs an interference check for the cuts and create then a repattern
2. When set on now, the system creates interference checks individually for every pattern member

# New EMX options

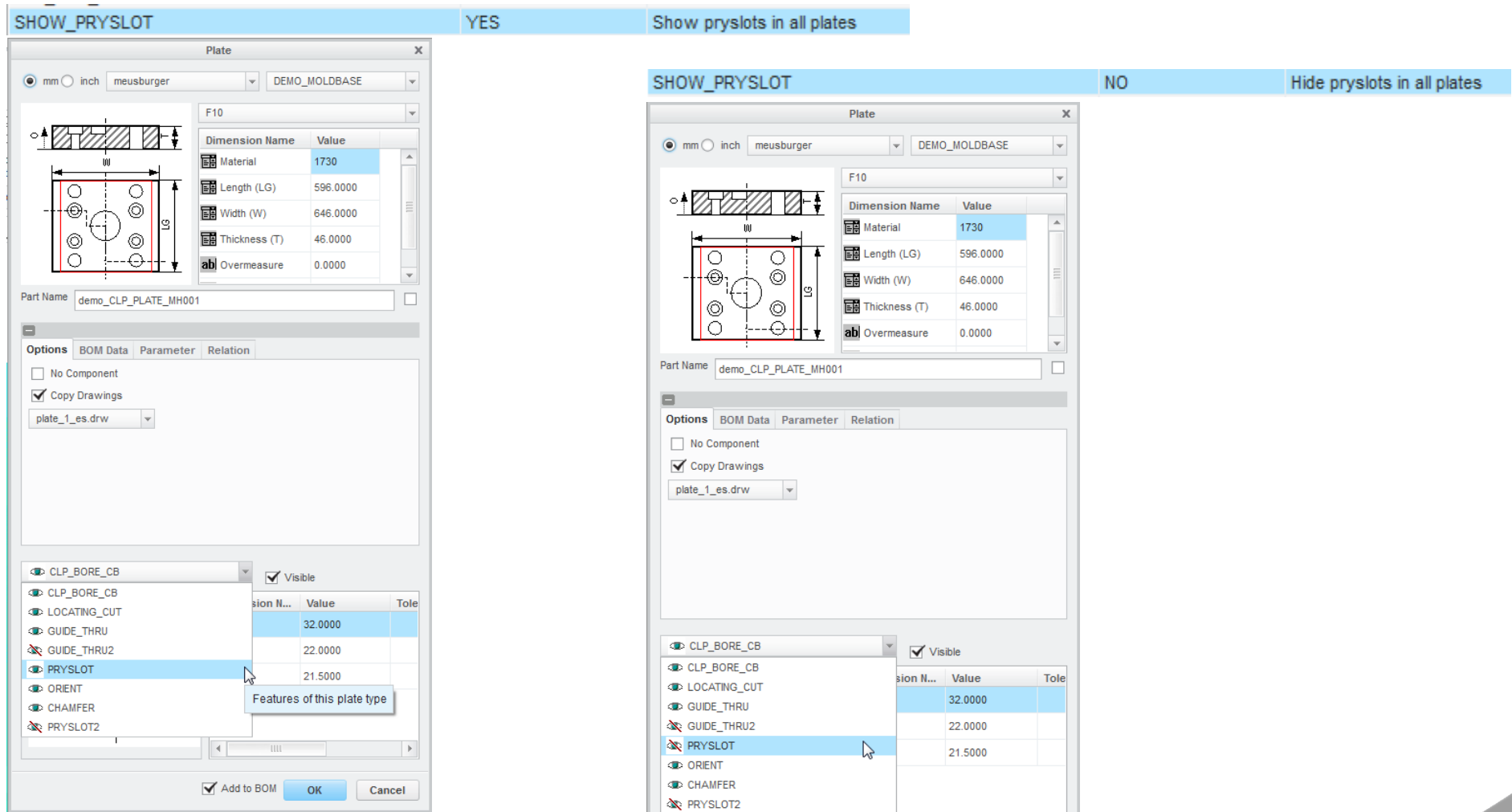
12. QUICK\_PROMPT allows the user decide if selection of references should happen in loop

When set on yes the system asks to select the assembly references before opening the Component dialog



# New EMX options

13. SHOW\_PRY SLOT main switch to toggle the assembling of the pryslots off.

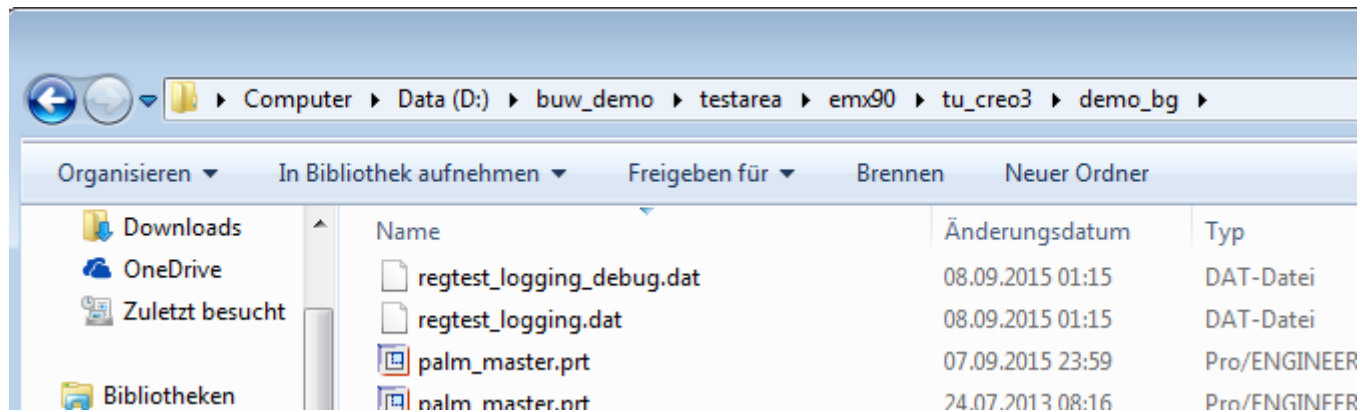


Note: If option is set on yes the system takes the setting from the feature\_data.txt file.

# New EMX options

## 14. TEST\_MODE new debug functionality – useful when encountering bugs or crashes

TEST\_MODE YES Save additional debug information in the Pro/ENGINEER trail file.

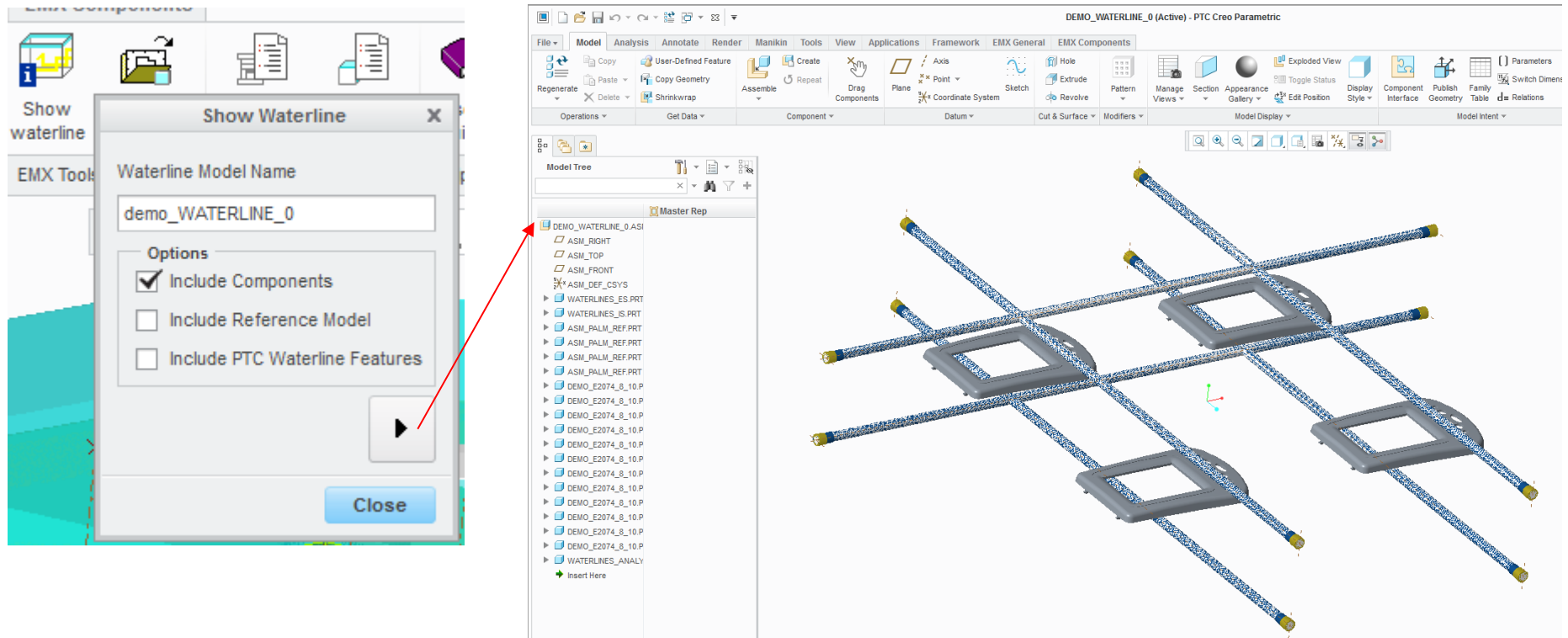


Note: If set on yes the system outputs various debug information in the working directory. If you find a bug or have a crash these files can help us find the issue easier and faster.

# New EMX options

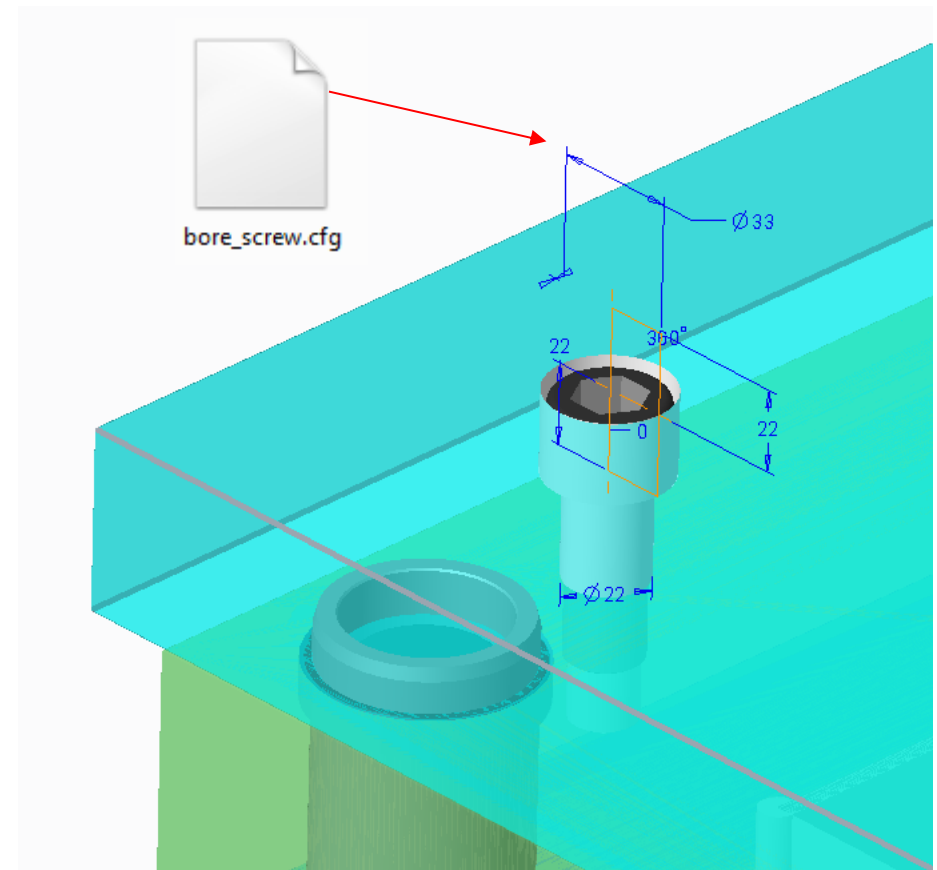
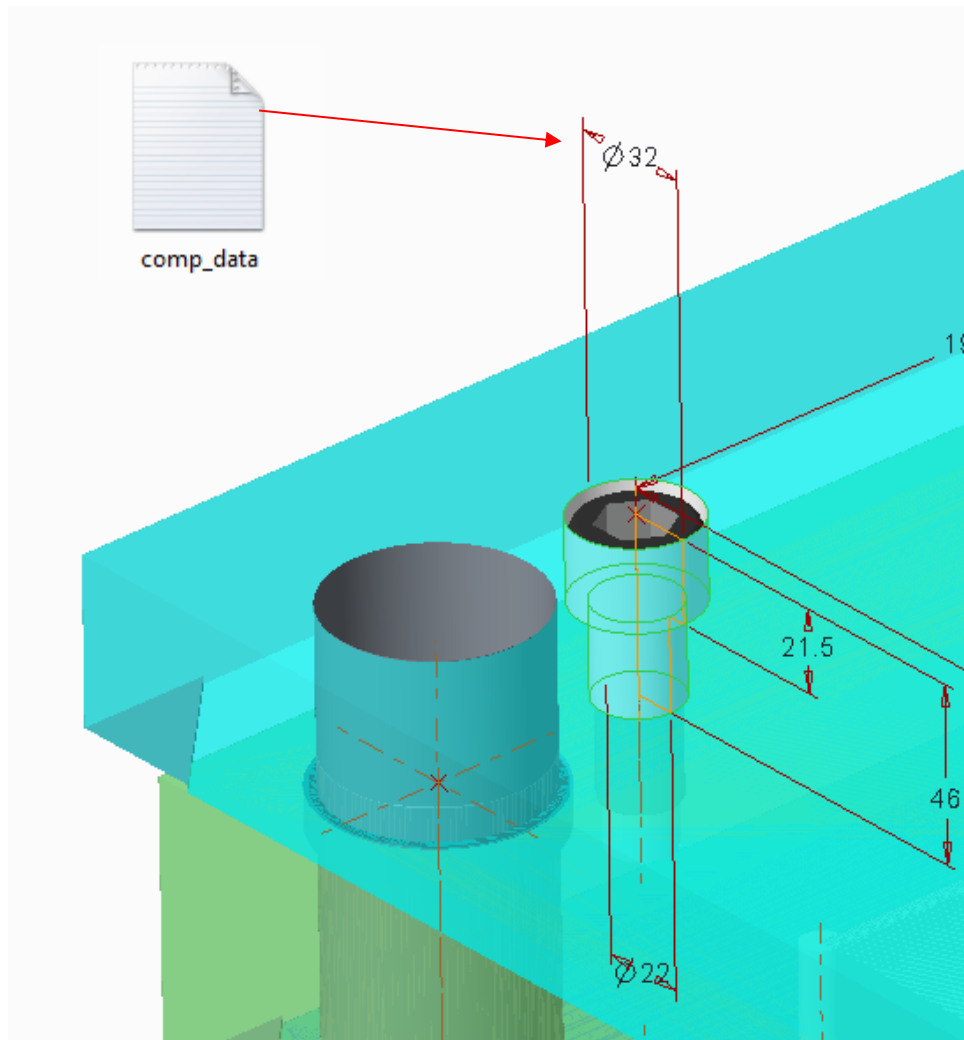
## 15. USE\_ASM\_WATERLINE\_MDL allows creating two models for ES and IS of the waterline

USE_ASM_WATERLINE_MDL	YES	Use assembly for waterline analysis and assemble refmodel and cooling comps
-----------------------	-----	---

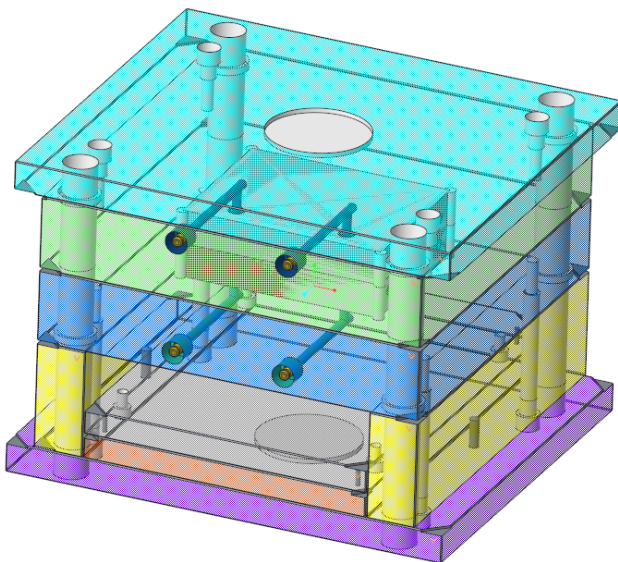


# New EMX options

16. USE\_P\_PLATE\_STACK must be used carefully because cuts dims come from \*\_bore.cfg files



## Agenda



### Best Practice

- Classify and Multi Cavity Process
- Improved Handling of BOM Parameters
- New Part Names Configuration
- Working with Windchill

### New Features

- The Mold Base Designer
- New EMX Options
- Handling Component Updates
- Ejector Pins Design in Part Mode
- QA Measures



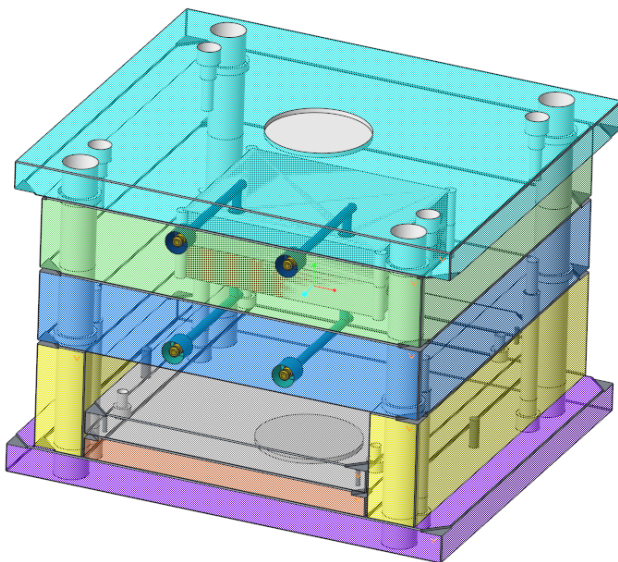
# Handling Component Updates

- Update and implement EMX components - Top priority task at B&W
- All request to implement new components or update existing ones are gathered and considered to be implemented in one of the next major releases
- Each new major release will contain a number of updated/new components which have top priority for most customers
- To decide the priority we need your help 😊
- Every component if updated or new implemented will be listed in a new document which will also be accesible from within the software

List of Updated Components

EMX version	Datecode	Date				
9.0	M010	05.12.2015				
Units	Type	Supplier	Component name	Geometry update	Configuration update	Newly added
mm	cooling	Meusburger	E2000	no	yes	no
mm	cooling	Meusburger	E2002	no	yes	no
mm	cooling	Meusburger	E20009	no	yes	no
mm	cooling	Meusburger	E2004	no	yes	no
mm	cooling	Meusburger	E2018	no	yes	no
mm	cooling	Meusburger	E2019	no	yes	no

## Agenda



### Best Practice

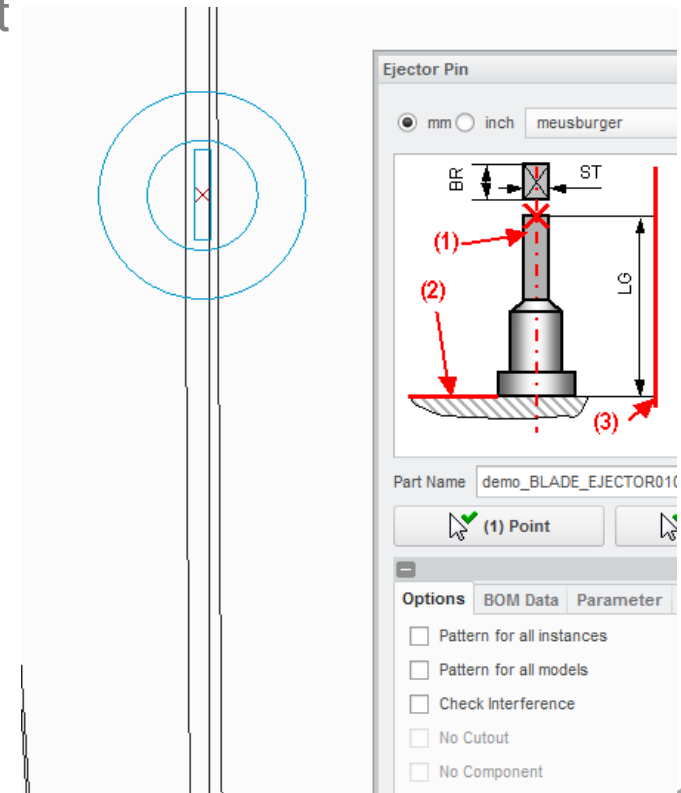
- Classify and Multi Cavity Process
- Improved Handling of BOM Parameters
- New Part Names Configuration
- Working with Windchill

### New Features

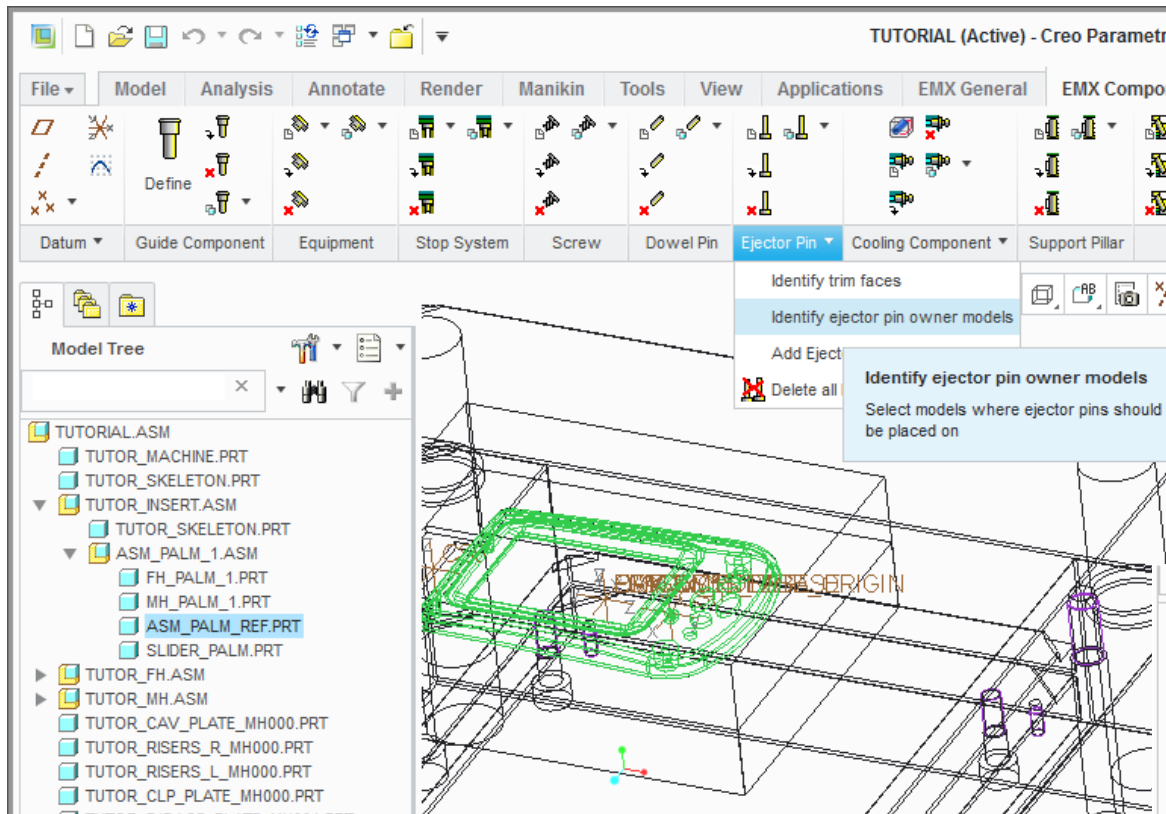
- The Mold Base Designer
- New EMX Options
- Handling Component Updates
- Ejector Pins Design in Part Mode
- QA Measures

# Ejector Pins Design in Part Mode

- Starting with EMX 9.0 F000 a layout curve can be assembled when placing an ejector pin directly in the reference model
- This feature enjoys a very positive feedback and interest from the customers
- This feature may be basically defined for every component, but is most suitable for ejector pins
- You can define one layout curve for each component template to catch every detail
- Changes of the diameter, or angle and width for blade ejectors are updated live by using the preview button
- Predefined layout curves are available for following templates  
 ejector\_1 (Hasco Z40)  
 ejct\_e1700 (Meusburger E1700)  
 ejector\_5 (Hasco Z46)
- This feature to be extended by the Ejector pin designer

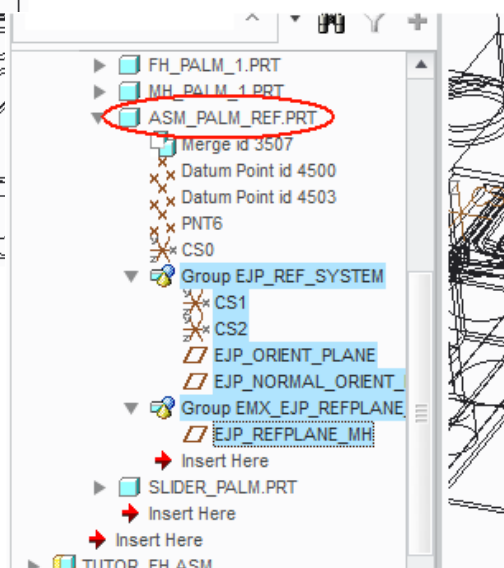


# Ejector Pins Design in Part Mode - 1



## STEP 1

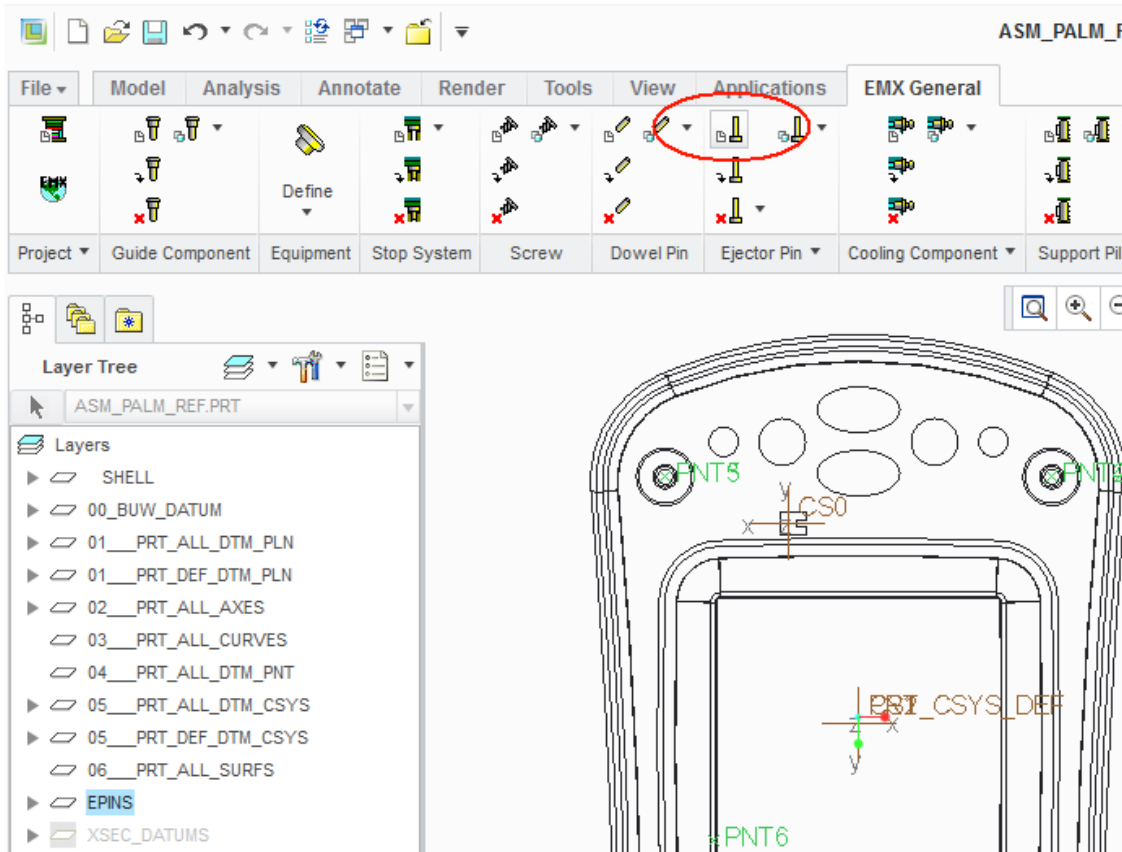
Identify the reference model or insert part where ejector pins should be predefined. EMX will add a copy of the ejector placement plane and a CSYS-System for placement



# Ejector Pins Design in Part Mode - 2

## STEP 2

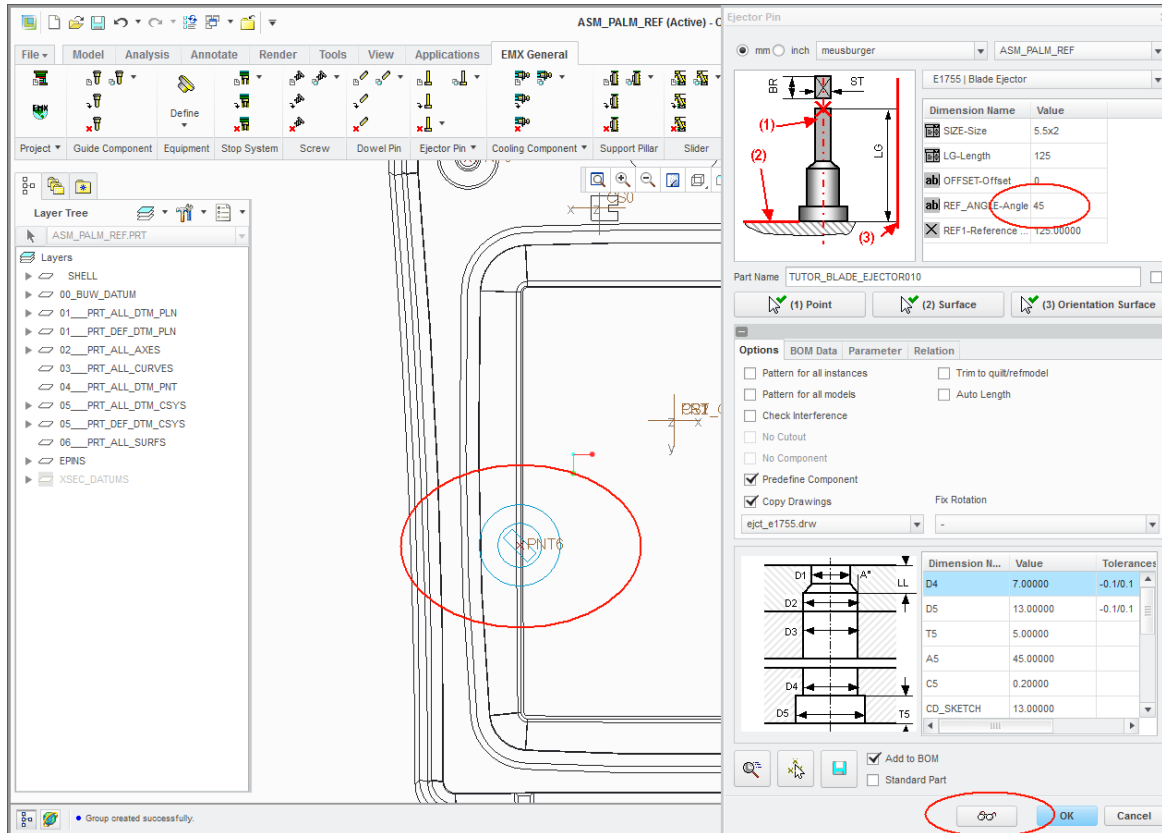
Open the model and select „Ejector Pin“>“Define“.



# Ejector Pins Design in Part Mode - 3

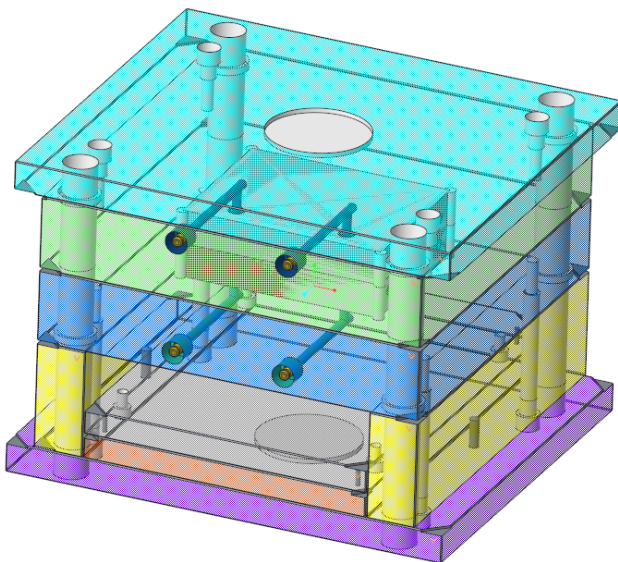
## STEP 3

After setting type, diameter, options, use the preview in Component dialog box so EMX can add a sketch to indicate the position and size of the predefined ejector pin.



[See movie](#)

## Agenda



### Best Practice

- Classify and Multi Cavity Process
- Improved Handling of BOM Parameters
- New Part Names Configuration
- Working with Windchill

### New Features

- The Mold Base Designer
- New EMX Options
- Handling Component Updates
- Ejector Pins Design in Part Mode
- QA Measures



## QA-Measures

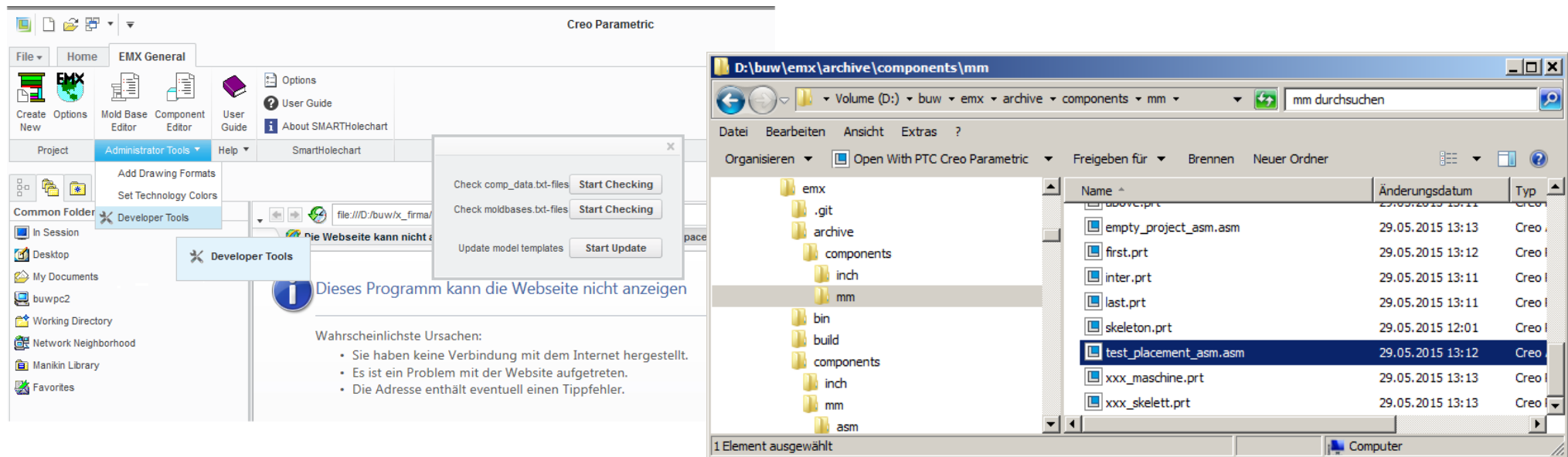
---

- » **Improve and ensure the quality of the software and of the component catalogs for EMX is another top priority goal at B&W**
- » **Because of the big amount of data automated tools were needed:**
  - Every single existing component including all its instances is assembled, and regenerated
  - Every single size of the existing plates is assembled and regenerated
  - Assembly references and dimensions are verified and corrected when failure
- » **Hasco and Mesuburger component data are automatically imported using data provided directly by the supplier. Updates are fast and reliable**
- » **Thanks to the Creo user interface every major release is tested using predefined trail files – regression tests**
- » **Tests verify the overall behaviour in the same standard use cases to catch crashes or different workflow but also content – saved dimensions, parameters, etc.**

# QA-Measures – Checking components

## » Checking components automatically

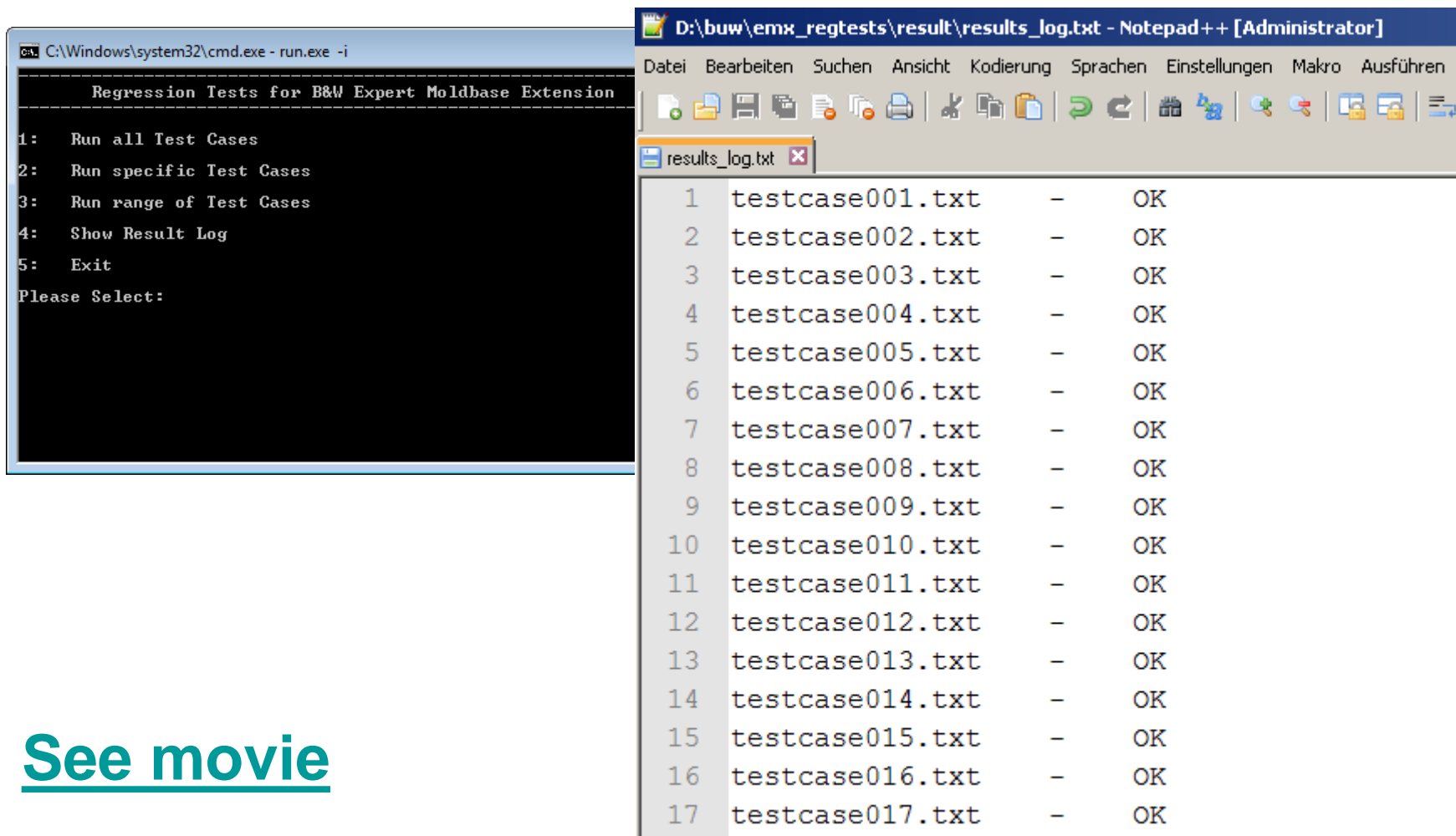
- Open the test assembly
- Push the checking button. Each one of the components under `<emx_installpath>\components\<unit>` are assembled and regenerated for every instance



[See movie](#)

# QA-Measures – Testing with Regtests

- » Regression tests are fully automated and convenient to run
- » They must deliver the same result for each release
- » They cover all the common tasks users do in EMX



The image shows two overlapping windows. The left window is a command prompt titled 'C:\Windows\system32\cmd.exe - run.exe -i' with the following text:

```

Regression Tests for B&W Expert Moldbase Extension
-----
1: Run all Test Cases
2: Run specific Test Cases
3: Run range of Test Cases
4: Show Result Log
5: Exit
Please Select:
  
```

The right window is a Notepad++ editor titled 'D:\buw\emx\_regtests\result\results\_log.txt - Notepad++ [Administrator]'. It displays a list of test results:

Line	Test Case	Status	Result
1	testcase001.txt	-	OK
2	testcase002.txt	-	OK
3	testcase003.txt	-	OK
4	testcase004.txt	-	OK
5	testcase005.txt	-	OK
6	testcase006.txt	-	OK
7	testcase007.txt	-	OK
8	testcase008.txt	-	OK
9	testcase009.txt	-	OK
10	testcase010.txt	-	OK
11	testcase011.txt	-	OK
12	testcase012.txt	-	OK
13	testcase013.txt	-	OK
14	testcase014.txt	-	OK
15	testcase015.txt	-	OK
16	testcase016.txt	-	OK
17	testcase017.txt	-	OK

[See movie](#)

## QA-Measures – Reporting issues

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- » Reporting issues is an important step for improving the overall quality of the software
- » To make reporting even there are a few additional steps which help us find faster the issue:
  - Add snapshots to the reports – they are worth 1000 words
  - If we cannot reproduce the error it would be best if you can provide us with the following files:
    - Trail file from the session where the issue was reproducible
    - If creo crashes the traceback.log file from the working directory
    - The files regtest\_logging.dat and regtest\_logging\_debug.dat from the working directory after setting the Option TEST\_MODE to yes
    - EMX.log file
  - In some rare cases we also need the Moldbase assembly or a simplified version of it.