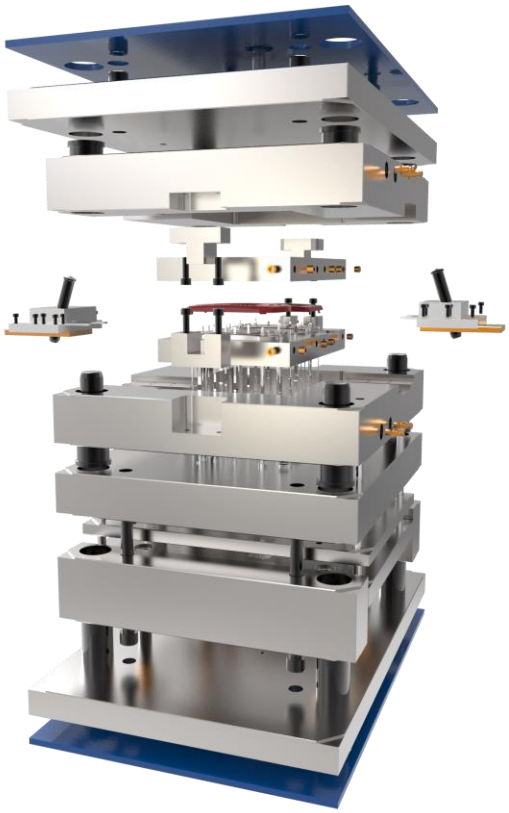
EMX 10 M021

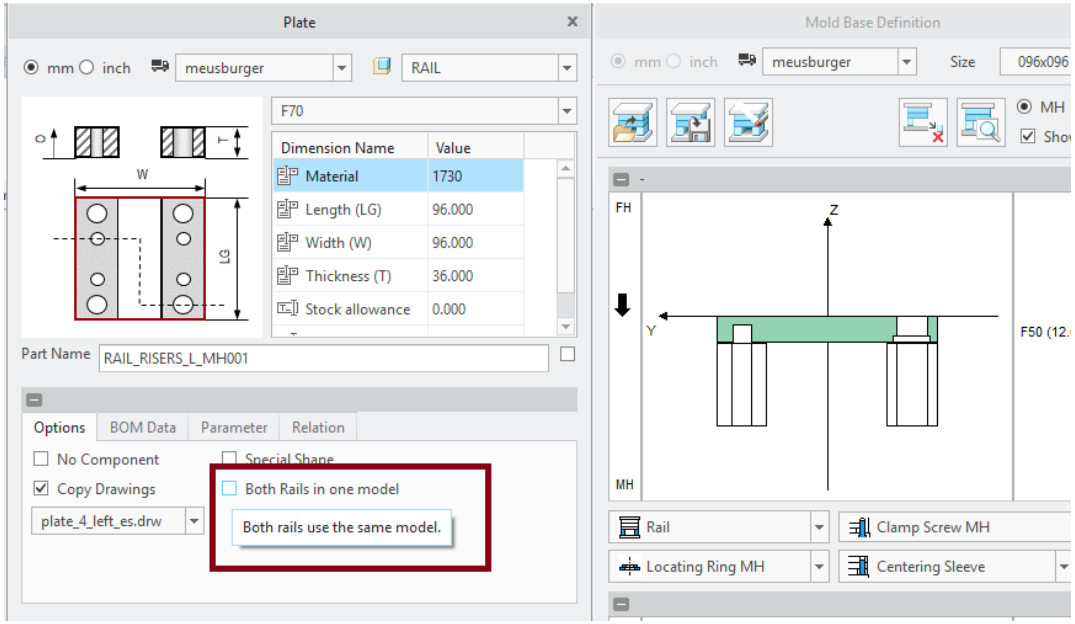
What's New?

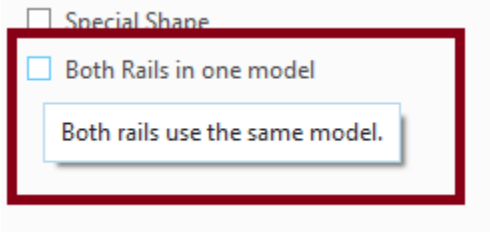


Enhancements

“Use One Model Rail” can be modified from Rail Plate Dialog

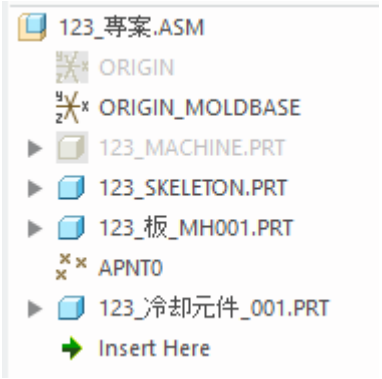
- The EMX Option USE_ONE_MODEL_RAIL only sets the default for check button
- Different types of rail models can be assembled to one mold base

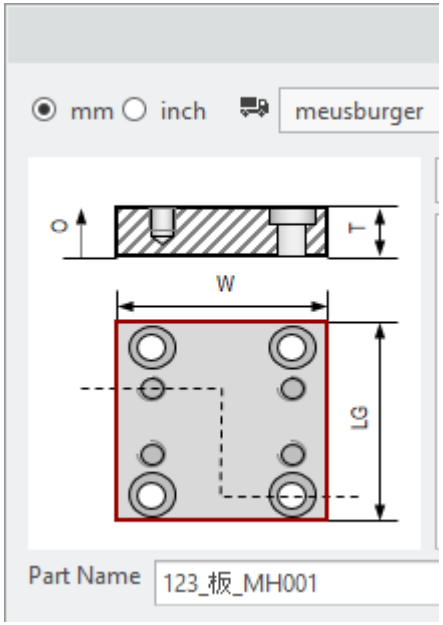


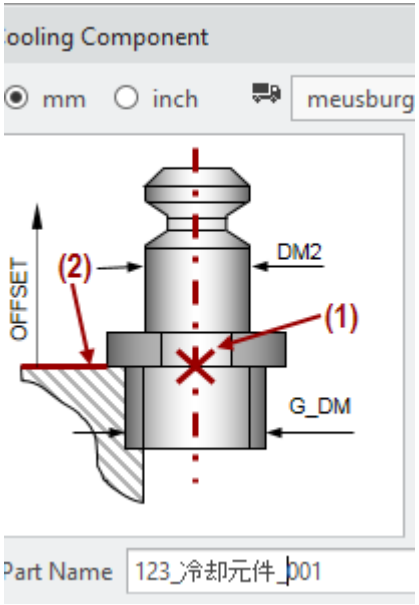


Enhancements

Unicode characters are supported for file names, parameter names and parameter values.







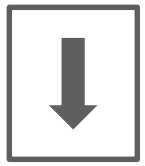
Enhancements

In BOM Dialog use UP and DOWN arrow keys to jump to next cell at top or bottom.

- Reduces clicks when working in the BOM
- Current cell value is confirmed and next cell is activated

PARTID	BOM_NAME	S
01-0001	Aufspannplatte Auswerferseite	M
01-0001	Auswerfergplatte Auswerferse...	M
01-0001	Auswerferplatte Auswerferseite	M
01-0001	Leiste Auswerferseite	M
01-0001	Leiste Auswerferseite	M
01-0001	Zwischenplatte Auswerferseite	M
01-0001	Rahmenplatte Auswerferseite	M
01-0001	Rahmenplatte Duesenseite	M
01-0001	Leiste Duesenseite	M
01-0001	Leiste Duesenseite	M
01-0002	Aufspannplatte Duesenseite	M
01-0001	Auswerfergplatte Duesenseite	M
01-0001	Auswerferplatte Duesenseite	M

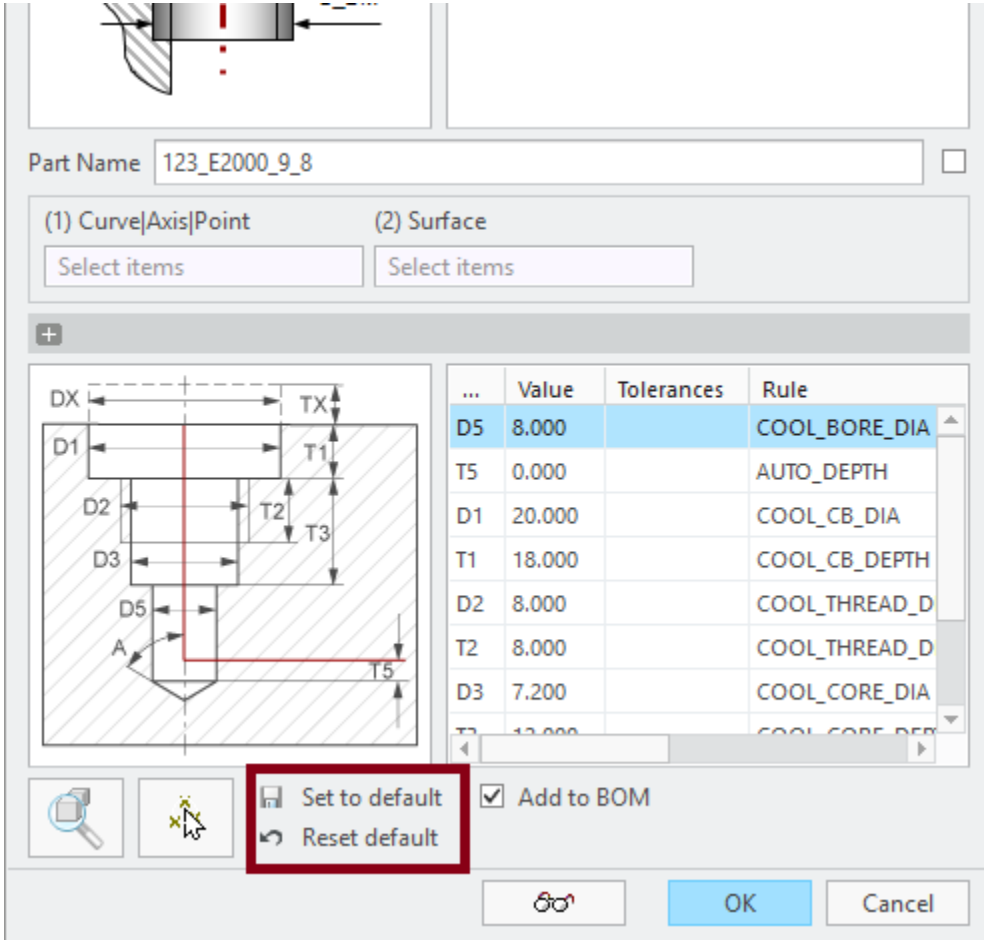
01-0001	Auswerferplatte Auswerferseite	
01-0001	Leiste Auswerferseite	
01-0001	Leiste Auswerferseitep	
01-0001	Zwischenplatte Auswerferseite	
01-0001	Rahmenplatte Auswerferseite	



01-0001	Auswerferplatte Auswerferseite
01-0001	Leiste Auswerferseite
01-0001	Leiste Auswerferseite
01-0001	Zwischenplatte Auswerferseite
01-0001	Rahmenplatte Auswerferseite

Enhancements

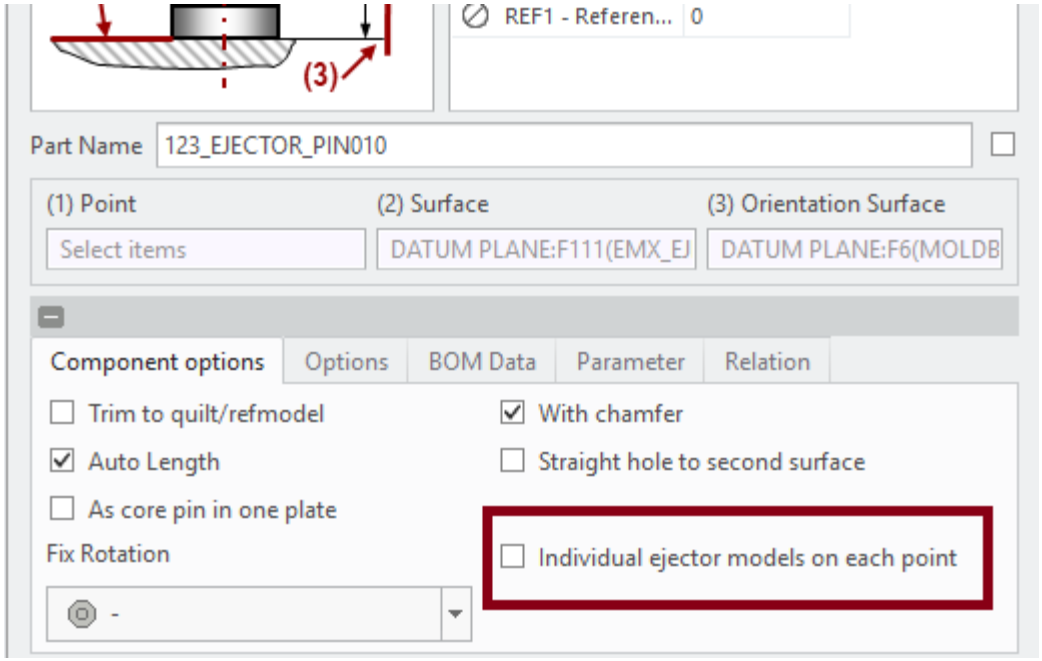
New button in Component Dialog to reset saved component instances to default.



Enhancements

Ejector pins defined on multi point features can be forced to be created as individual models.

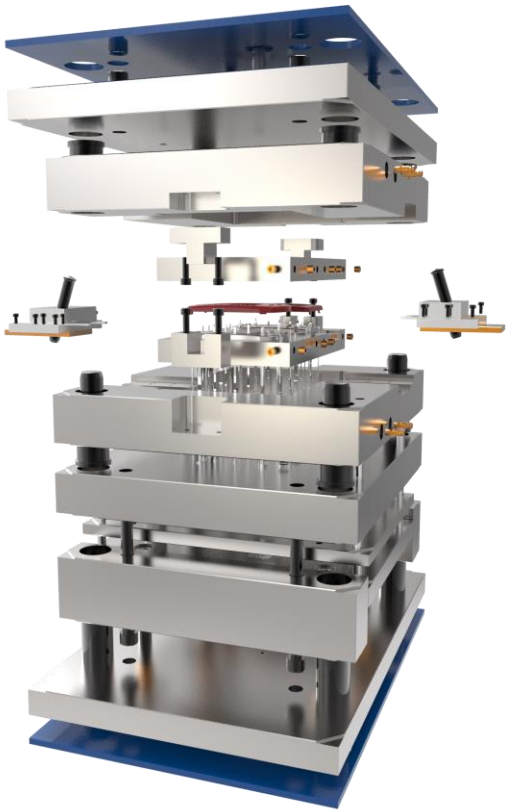
- Previously option ENABLE_MULTI_EJP behavior in EMX Options
- The EMX Option ENABLE_MULTI_EJP only the sets default for check button



Components

New components

- MEUSBURGER cooling components E20749 and E2074D.



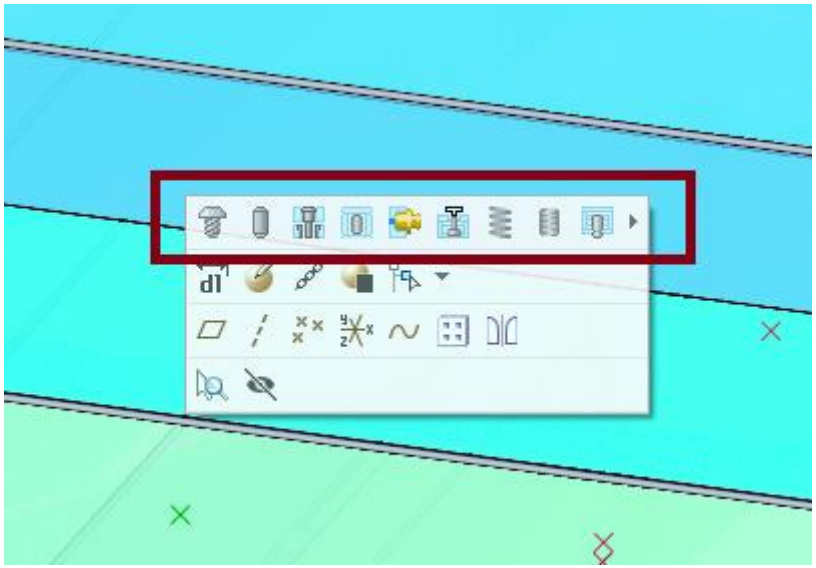
EMX 10 M020

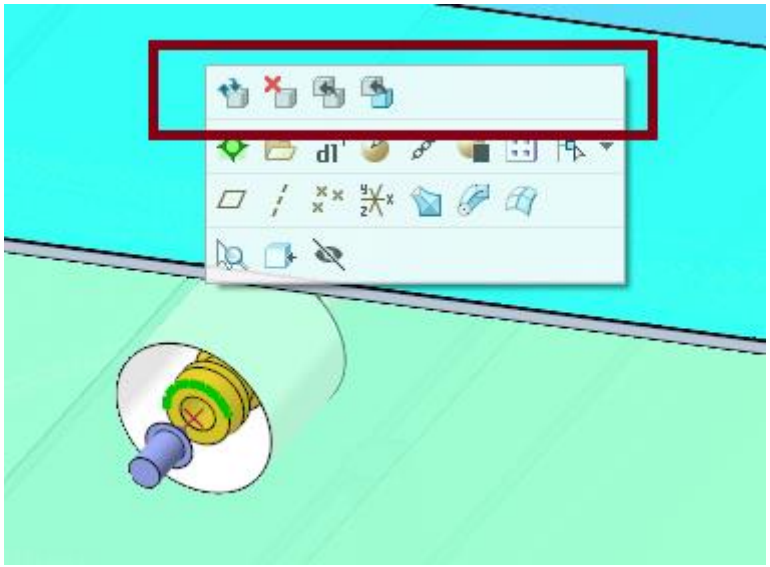
What's New?

Enhancements

Enable Mini Tool Bar with EMX 10 and Creo 4.0

- Select Datum Points and Axis
- Create Components by Mini Tool bar commands
- Selection of selected datums is immediately stored in Component Dialog

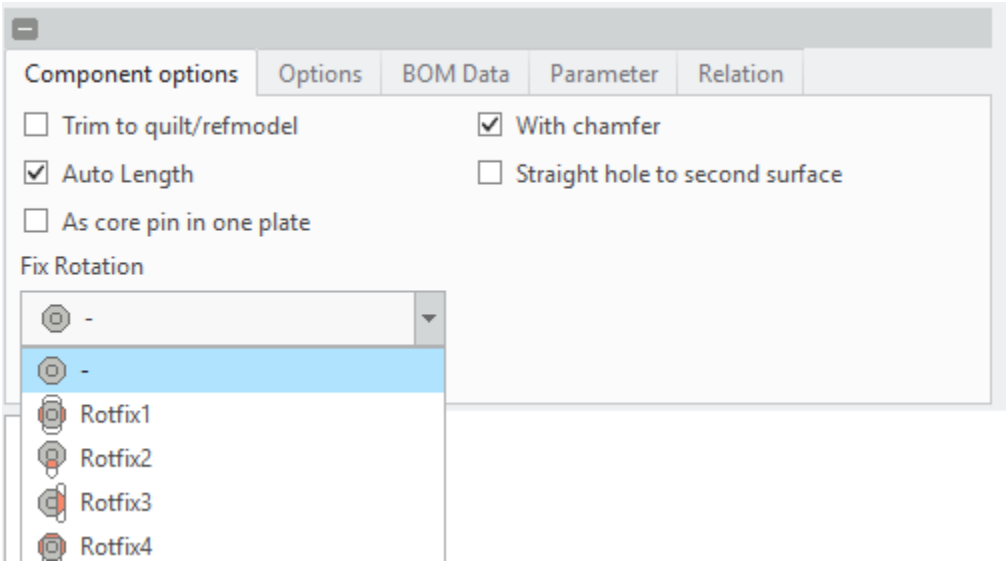




Enhancements

Improve Ejector UDFs and Options

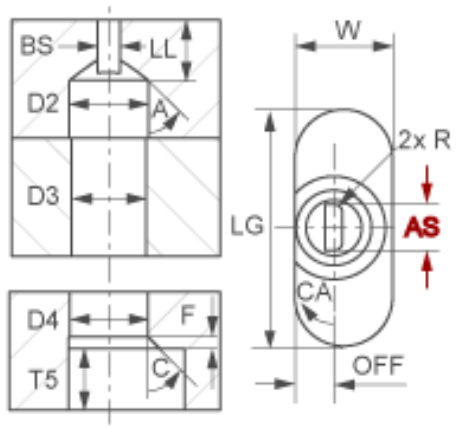
- New Rotation Fixture Type
- New Chamfer Option
- Visualization of Trim Option
- Separate Rotation Fixture Angle for all UDF Types
- Improved Preview Sketch UDFs
- Separate Tabs for Component Options and Assembly Options

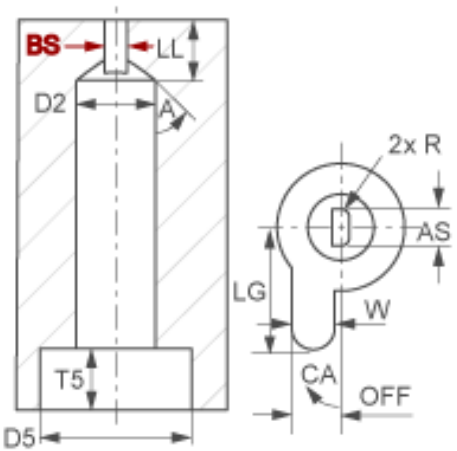


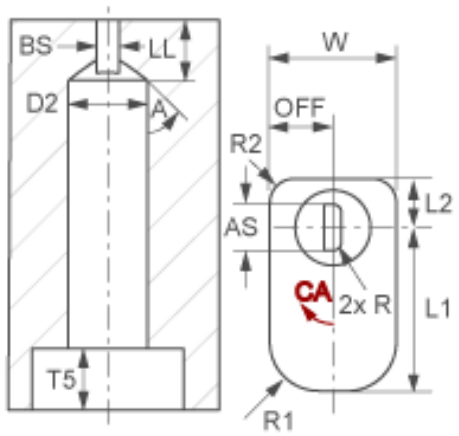
Enhancements

New UDF Images for Cooling Components, Guides, Ejector Pins and Dowel Pins

- Verification of all visualized UDF dimensions
- New Design



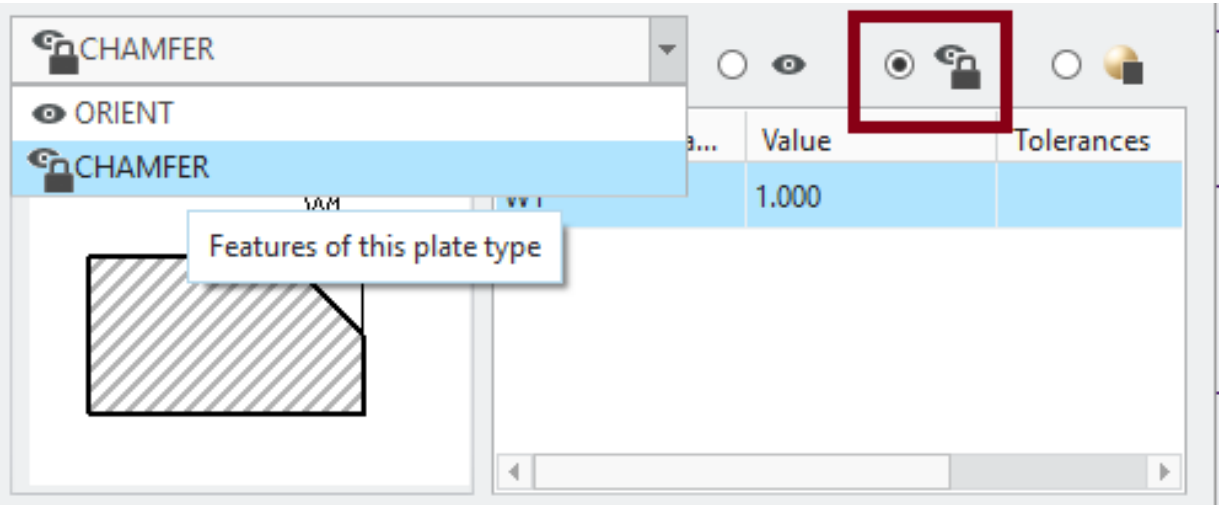




Enhancements

New Feature Visibility Status Type “Visible Locked” in Plate Dialog

- Feature can be resumed and locked.
- It will not be suppressed when changing the size of the plate



Components

STRACK

- Update of existing ejectors
- New Springs: SN2520, SN2540, SN3560, SN3580, SN2590, SN2600, SN2625
- New Side Interlocks: W44, Z38,Z46

EBERHARD

- Update of existing ejectors
- New Ejectors: 6116, 6118, 612R, 6143, 6178, 6261, 6271, 6281, 6331, 6335, 6341, 6351, 6361, 6371, 6381, 6441, 6622

MEUSBURGER

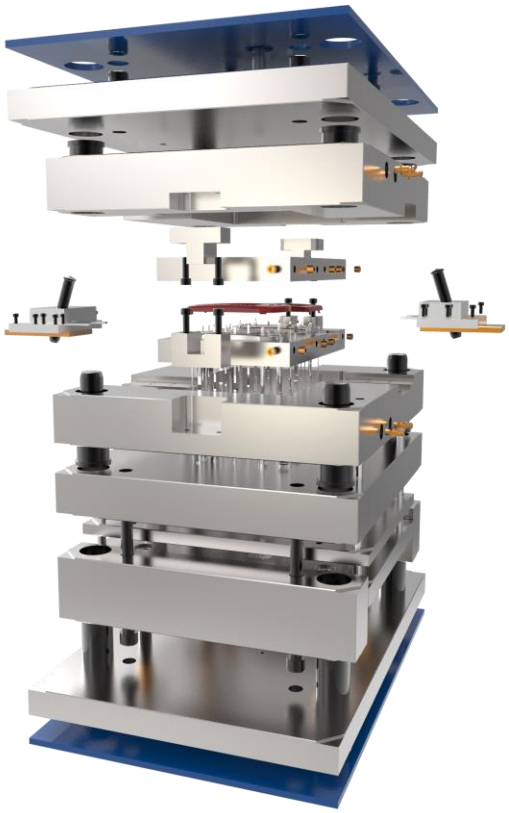
- Update component and plate data to latest state

LKM

- Clamping Slots available for side gate plates

KNARR

- Update component data to latest state



EMX 10 M013

What's New?

Components

Side Interlock

- Strack Z38, Z46, W44

Top Interlock

- Agathon 7992, 7993
- Meusburger E1311

Library

- Hasco Z67 (Circlip)

Screw

- Hasco Z715, Z725 (Hoistring)

Guide

- Hasco Z016, Z025

Ejector Pins

- Hasco Z400, Z410, Z492, Z4655, Z4656

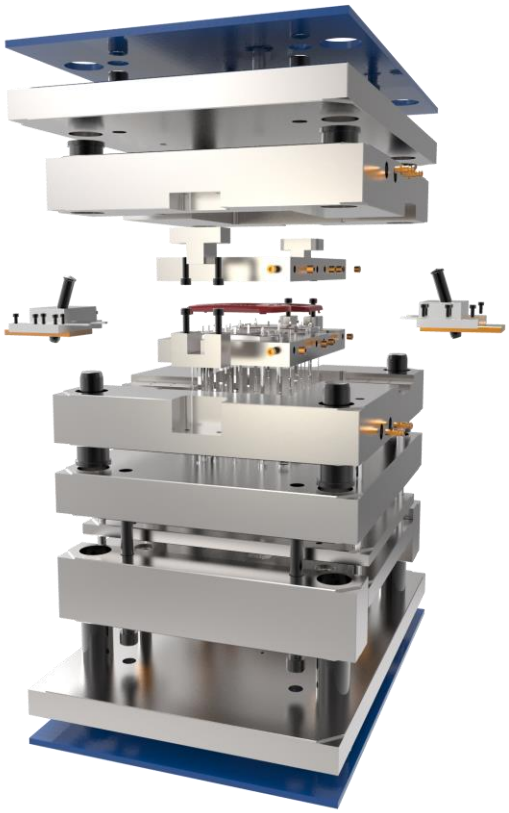
Components

Updated Instances

- HASCO guide components Z011, Z012, Z013 and Z022.
- HASCO screw Z31 and Z32.
- HASCO ejectors Z40, Z41 and Z42.

EMX 10 M012

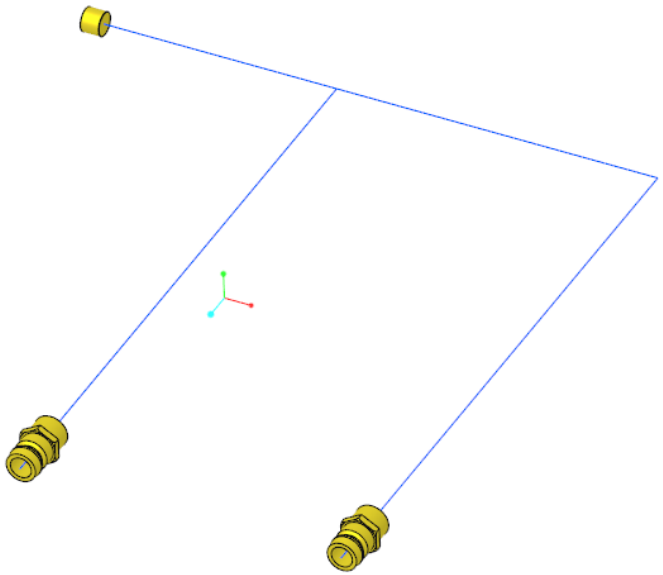
What's New?

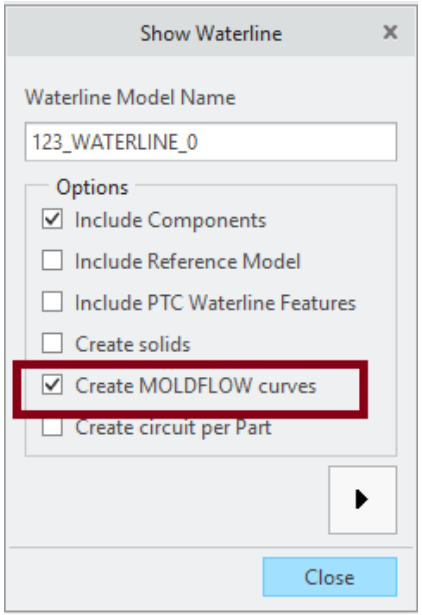


Enhancements

Export waterline curves for Moldflow analysis

- New option in “Show Waterline” feature
- Curves of waterline circuits are created when option is enabled

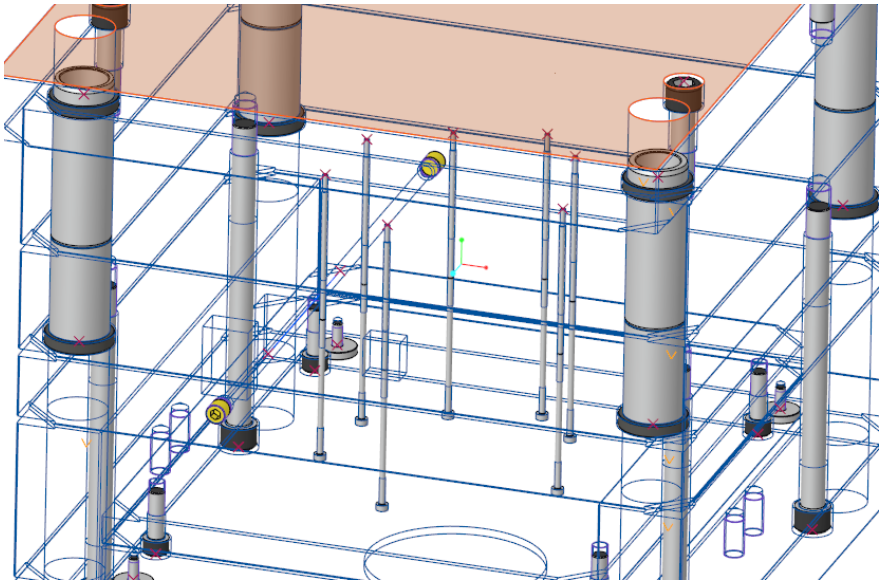


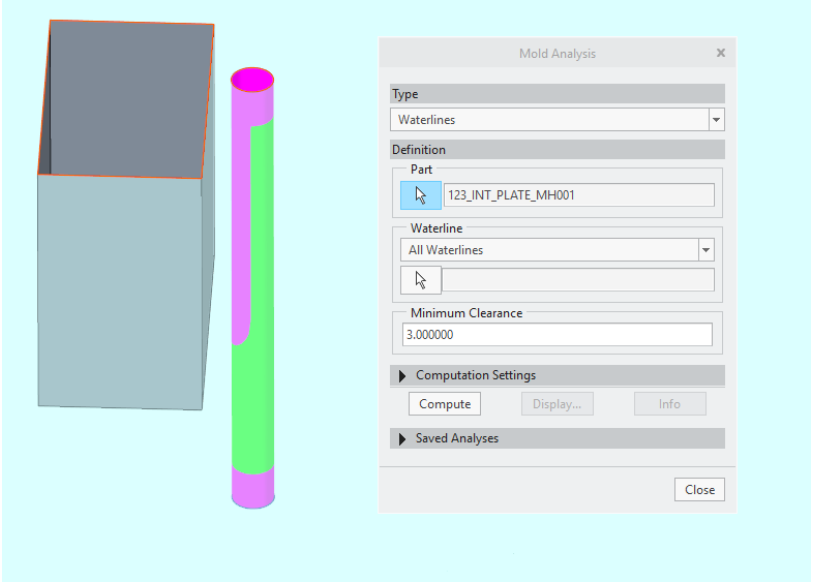


Enhancements

New Option: INCLUDE_EJECTOR_BORES_IN_MOLD_ANALYSIS

- All bores created by EMX ejectors are tagged with parameter
- When using wall thickness check in Tool Design, ejector bores are considered as well.



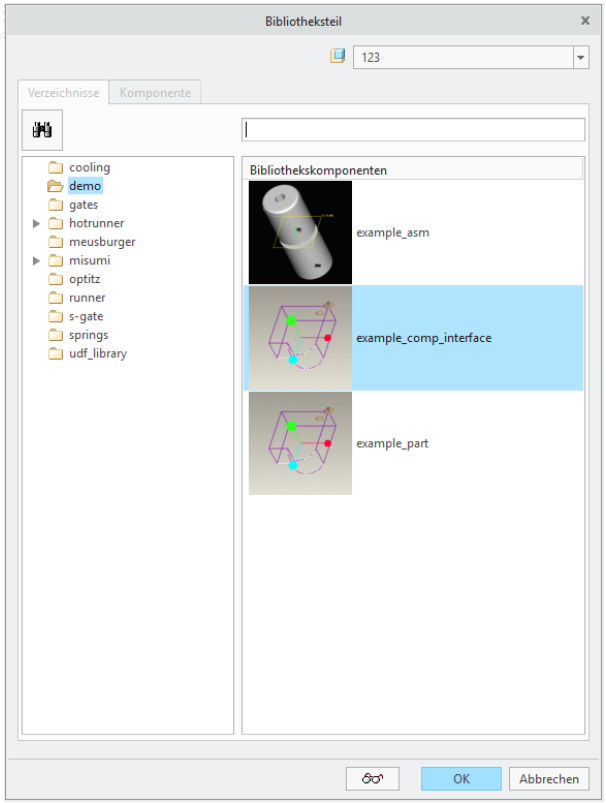


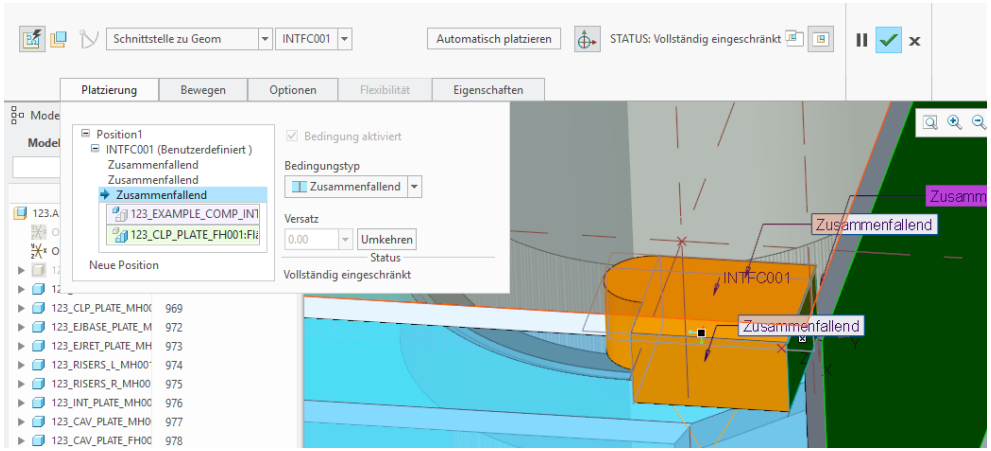
Enhancements

Library components can be placed with Component Interface

- Prepare library parts with Creo component interface
- Example can be found:

<emx_install> \mm\library\demo\example_comp_interface

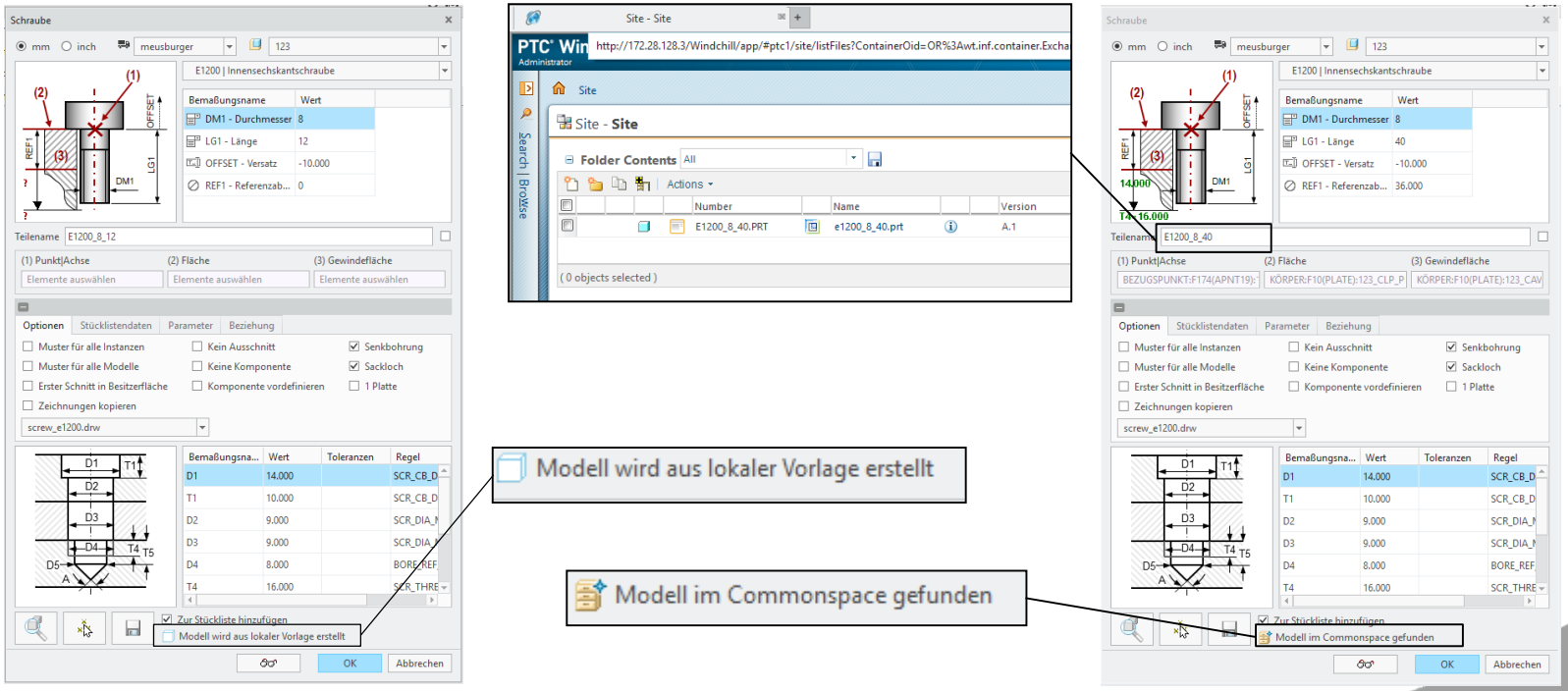




Enhancements

Improve behavior when standard parts are retrieved from Windchill or “search_path” folder.

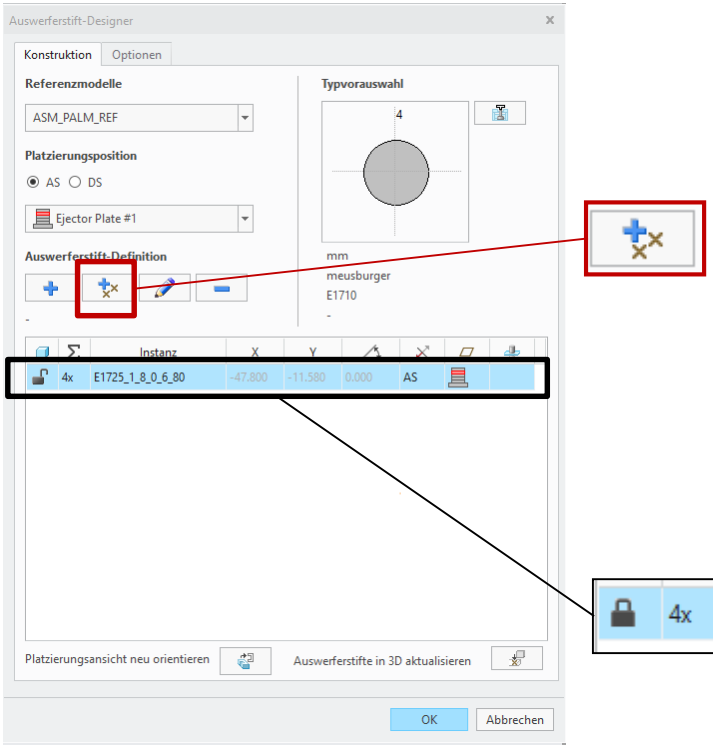
- When standard part is found in Windchill or search_path folder and active option PDM_SYSTEM is used source status is displayed in Component Dialog.

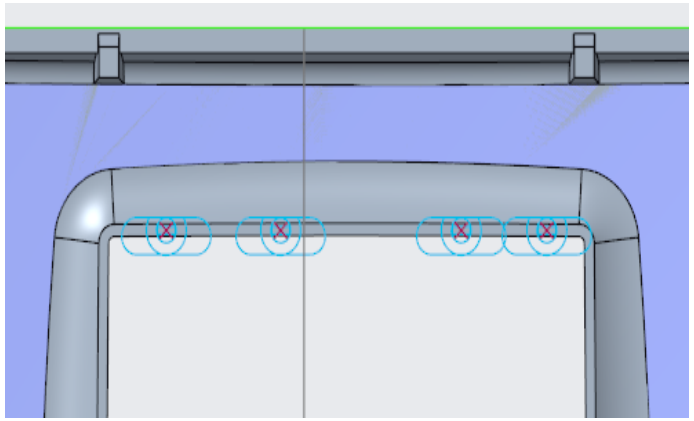


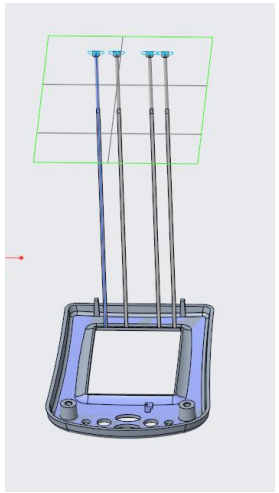
Enhancements

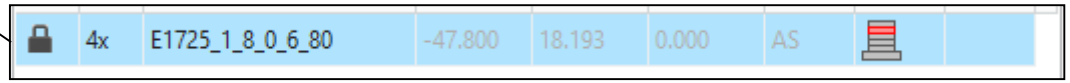
New Button in Ejector Pin Designer: Placement of ejector pins on existing points (Sketched points or multiple points features)

- Existing Points can be selected. Multi point features are supported.
- Ejector Pin Designer assembles multiple ejectors in one step
- All advantages of parametric sketches.









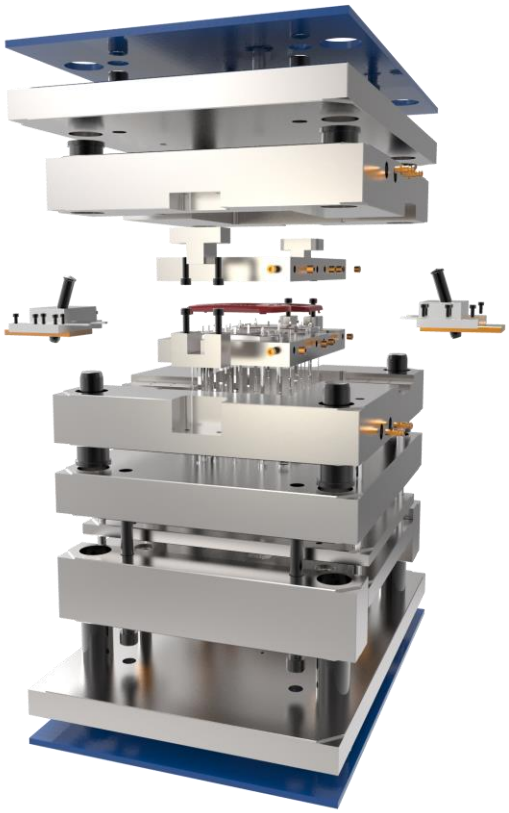
Components

Top Interlock

- AGATHON 7990

EMX 10 M011

What's New?



New Components

Compact slider sets

- Meusburger E3080 with E3082/E3084
- Meusburger E3072 with E3074/E3076/E3078
- Meusburger E3070 with E3074/E3076/E3078
- Meusburger E3360
- Meusburger E3330
- Meusburger E3300
- Meusburger E3045, E3047, E3048 and E3049 – locking for slider
- Meusburger E30110 - slider set

Library Components

- Meusburger E2730 - Cable box as library component
- Meusburger E2682 - Distance plate round
- Meusburger E2680 - Distance plate rectangular
- Optiz DATI1000, DATI2000, DATI2900 and DATI3000 - date stamps

New Components

Guides

- Meusburger E1064 - Guide unit for FW moldbases
- Meusburger E1115, E11202, E11206 and E1170
- Meusburger E1150 - Guide for knockouts with predefined screws

- Strack Z69, Z68, Z4315, Z4085, Z4078-R, Z4078, Z4077-R, W35, W35-R, W33, W33-R, W32, W31, W30, W25, W24, W23, W21 and W20

- Knarr 264180, 51001, 51003, 51011, 510110W, 51100, 51110, 511100W, 51112, 51113W, 51114, 51210, 51211, 51702, 51711, 51712, 51713, 51722, 51911, 51912, 51932, 51934 and 551110.

New Components

Support Pillars

- Meusburger E1512 and E1513
- Strack Z19

Ejectors

- Meusburger E1700DLC, E17103, E1710DLC, E17262, E17262DLC, E17264, E1727DLC, E1728DLC and E1742
- Strack - R1628, R1634, Z6015 and Z6017
- More Knarr ejectors

Dowel Pins

- Meusburger E1301
- Strack R523

New Components

Locating Rings

- Meusburger E1367, E1372, E1377 and E1382
- Strack Z10, Z11, Z16
- More Knarr Locating Rings

Springs

- Meusburger E1536, E15365, E1537, E15375, E1358, E15385 and E1539

Support Bush

- Meusburger E1662, E1663 and E1664

Cooling Components

- Meusburger E23.. - USA-type
- Strack Z7714, Z7720, Z7725, Z7748 and Z7771

New Components

Plates

- Meusburger FW and FB mold bases with plate features

Screws

- Meusburger E1225, E1226, E1251, E1252, E1274 and E1275

Top Interlock

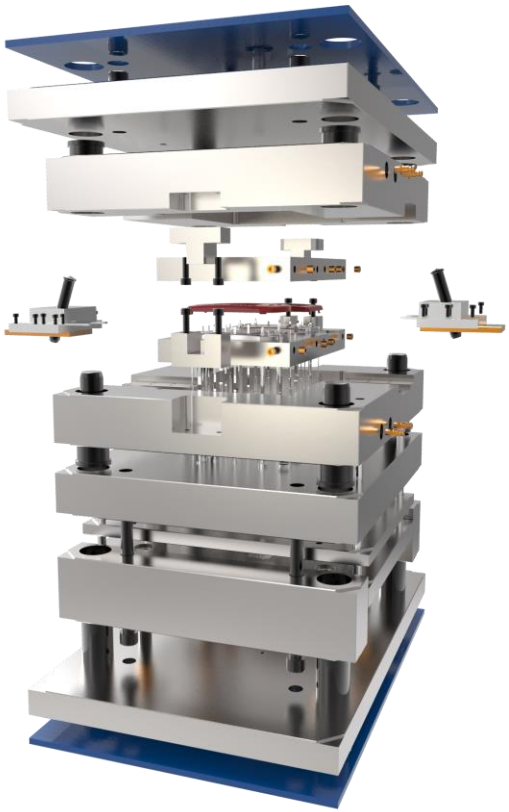
- Meusburger E1306

Side Interlock

- Meusburger E1308, E1315 and E1320

Knockout

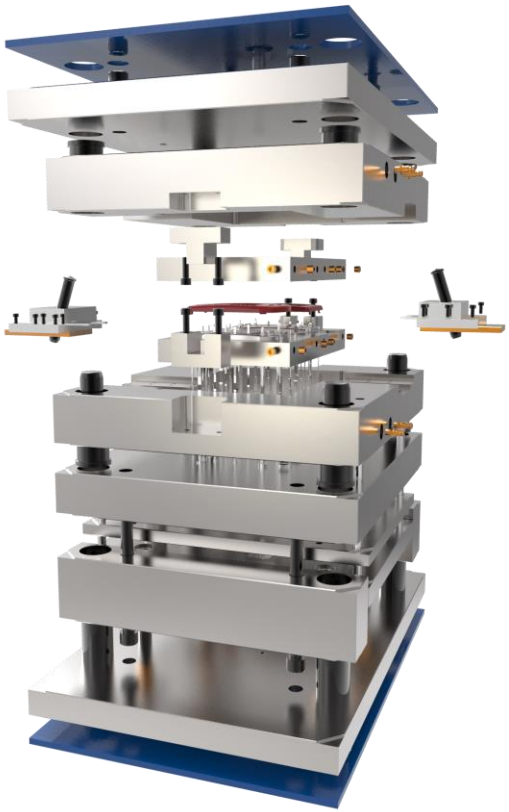
- Meusburger E1516 and E1517 for FW mold bases.



EMX 10 M010

What's New?

- New Features
- Components



EMX 10 M010

What's New?

- New Features
- Components

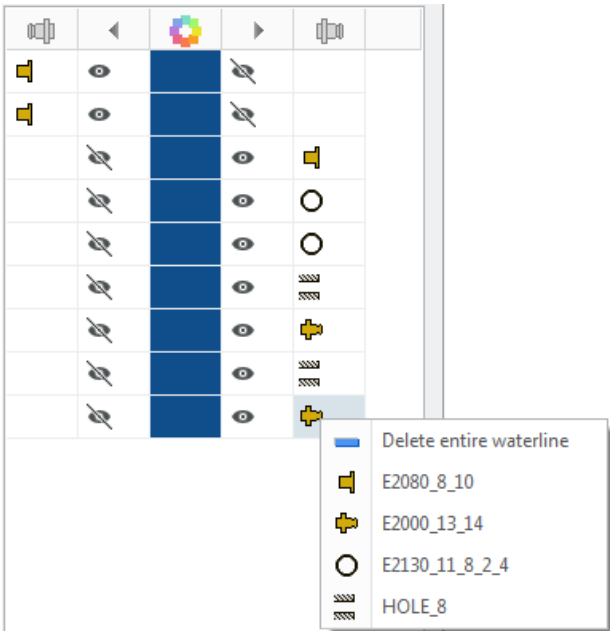
1. Enhanced Waterline Designer

Quick Selection of Components from Waterline List

- Predefine up to 4 default components in EMX Option

WATERLINE_DESIGNER_DEFAULT_COMPONENT	mm|meusburger|E2080_8_10&&mm|meusburger|E2000_13_14&&mm|meusburger|E2130_11_8_2_4&&mm|meusburger|HOLE_8

- Use Right Mouse Button in table and assign quickly



→ Design a complete cooling cooling circuit without opening the Component Dialog once!

1. Enhanced Waterline Designer

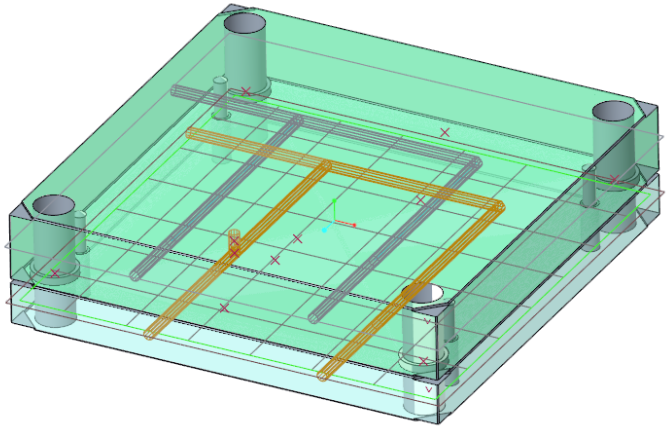
Define Waterlines on Existing Curves

(Only with B&W Direct License)

- Use existing curves in sketches as waterline reference
- New button → Select curves in current working model

- Vertical waterlines will be attached to the existing curves and updated parametrically when sketch is modified

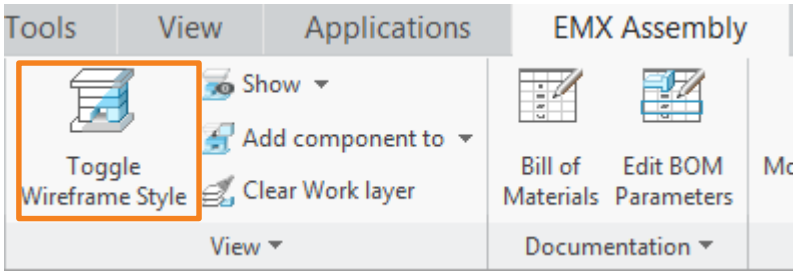
→ Benefit from parametric sketches and easy definition of cooling circuits



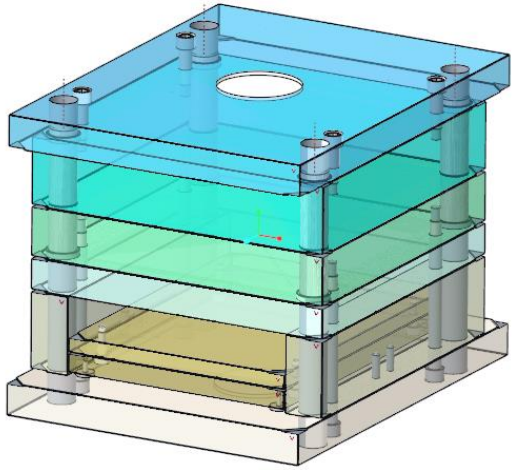
2. Toggle Wireframe Style

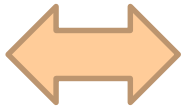
Fast Toggle of Wireframe Style from the Ribbon

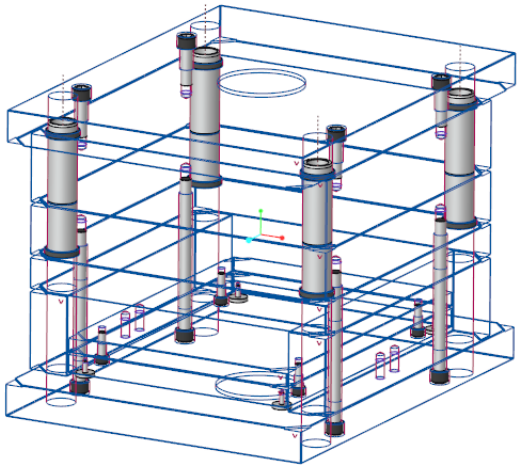
(Only with B&W Direct License)



No need to open the View Manager anymore







3. New Rule-Based Layer Concept

New Option USE_RULEBASED_LAYER_CONCEPT

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- No more hardcoded layer names
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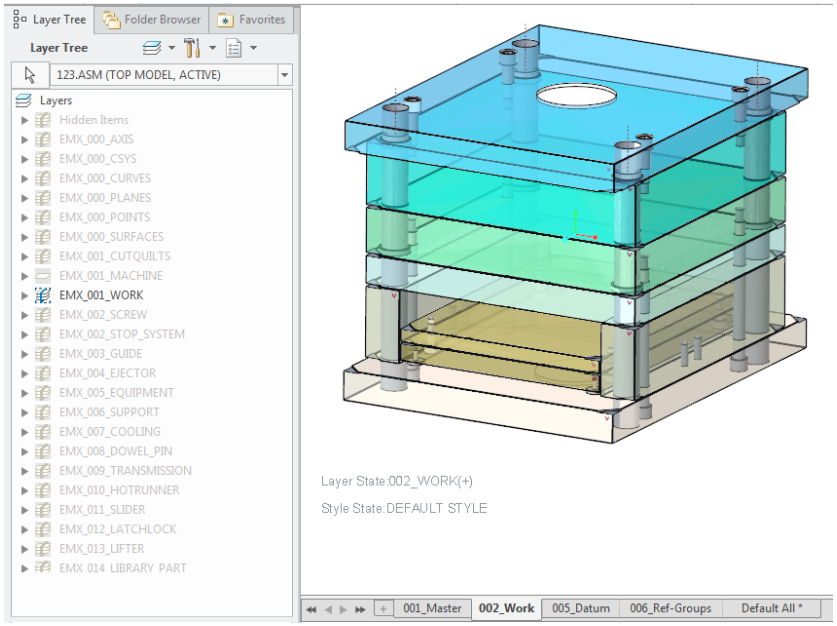
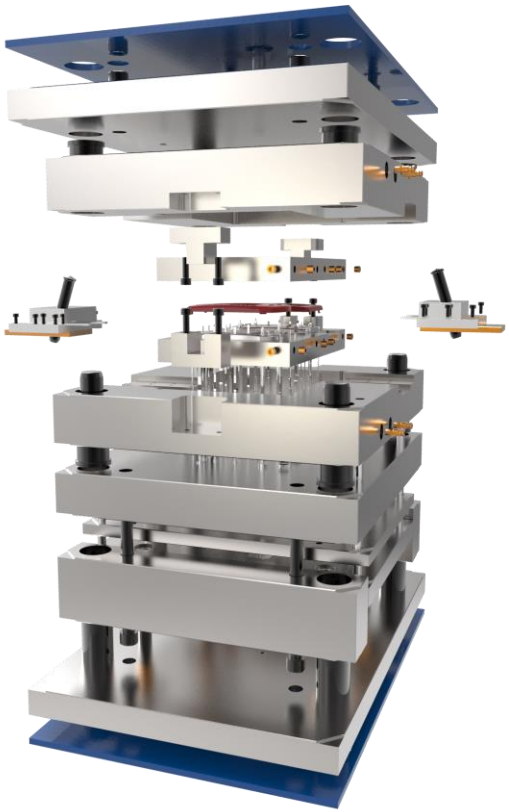
- WORK layer only shows recently created datums

→ Avoids confusion with tons of datums in large assemblies





EMX 10 M010

What's New?

- New Features
- Components

Components

New Components

- Hasco – Z14W: Guide bush
- Hasco – Z09: Side interlock
- Rabourdin – 1071, 1005, 1061, 651, 671 and 601: Guide Components
- Knarr – 37711, 33111: Ejector Pins
- Knarr – 38488, 38781, 38881: Ejector Sleeves
- Progressive – SLX: X-Style Side Interlock
- Meusburger – E2800: Stäubli cooling components
- Strack – Z4290 Typ1: Compact Slider

Components

Improved Components

- Meusburger – 3011, 3012, 3130: Slider Assembly
- Hasco – single_locking: Slider Assembly
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  - EMX Assembly can contain subassemblies now
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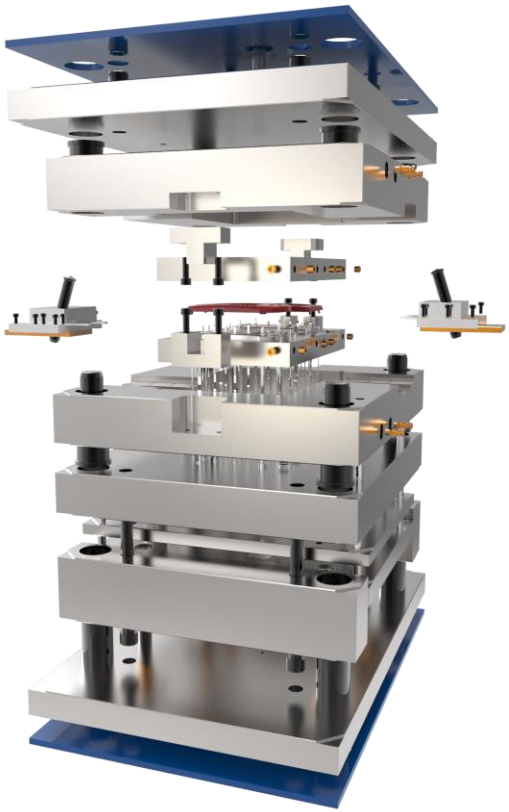
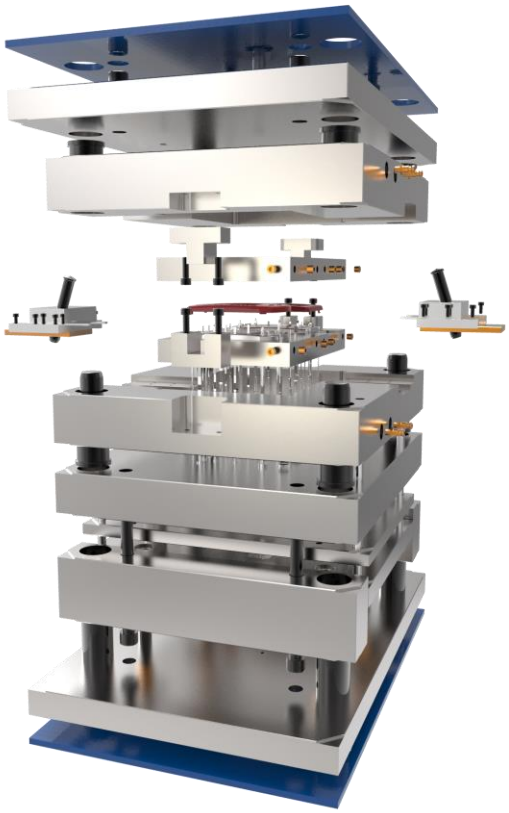


EMX 10 F001

What's New?

- New Features
- Components



EMX 10 F001

What's New?

- New Features
- Components

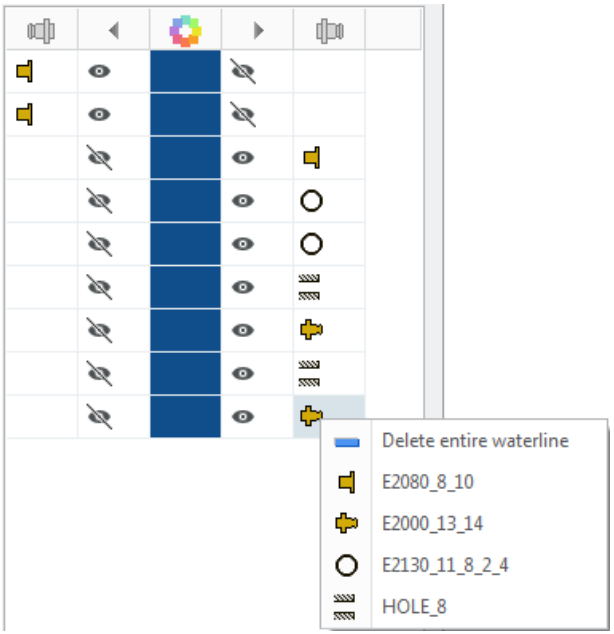
1. Enhanced Waterline Designer

Quick Selection of Components from Waterline List

- Predefine up to 4 default components in EMX Option

WATERLINE_DESIGNER_DEFAULT_COMPONENT	mm|meusburger|E2080_8_10&&mm|meusburger|E2000_13_14&&mm|meusburger|E2130_11_8_2_4&&mm|meusburger|HOLE_8

- Use Right Mouse Button in table and assign quickly



→ Design a complete cooling cooling circuit without opening the Component Dialog once!

1. Enhanced Waterline Designer

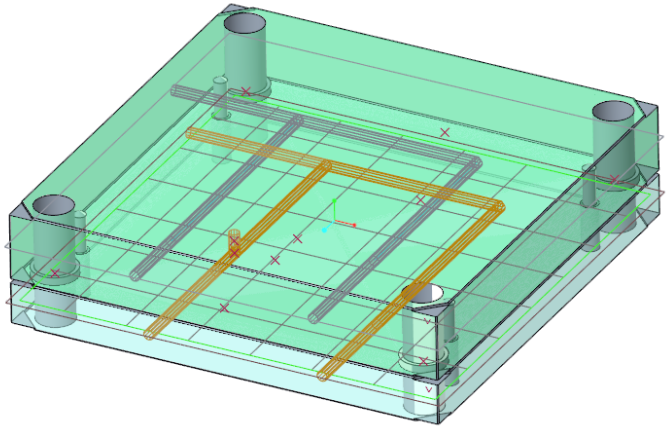
Define Waterlines on Existing Curves

(Only with B&W Direct License)

- Use existing curves in sketches as waterline reference
- New button → Select curves in current working model

- Vertical waterlines will be attached to the existing curves and updated parametrically when sketch is modified

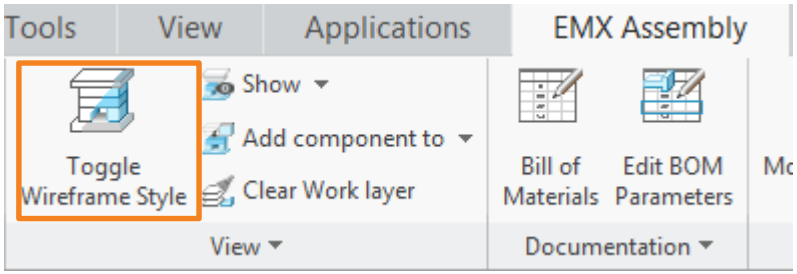
→ Benefit from parametric sketches and easy definition of cooling circuits



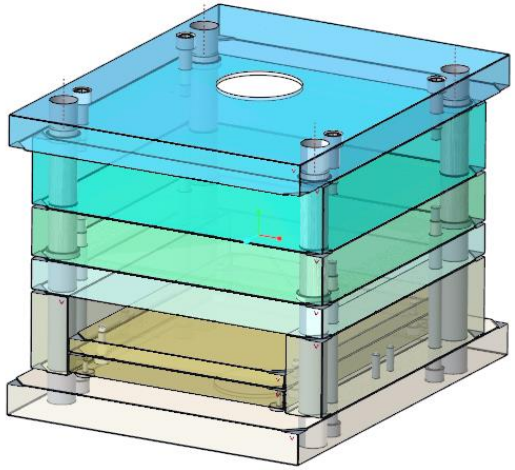
2. Toggle Wireframe Style

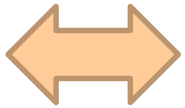
Fast Toggle of Wireframe Style from the Ribbon

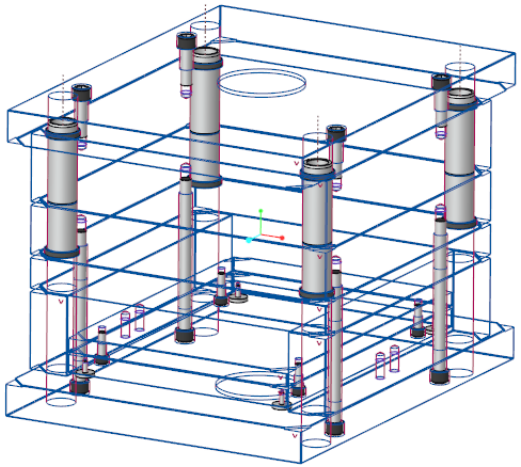
(Only with B&W Direct License)



No need to open the View Manager anymore







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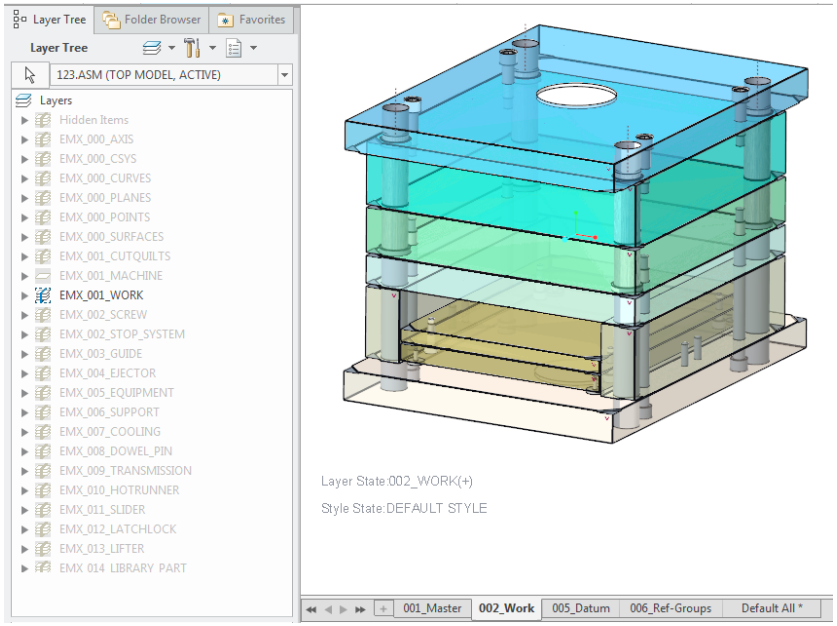

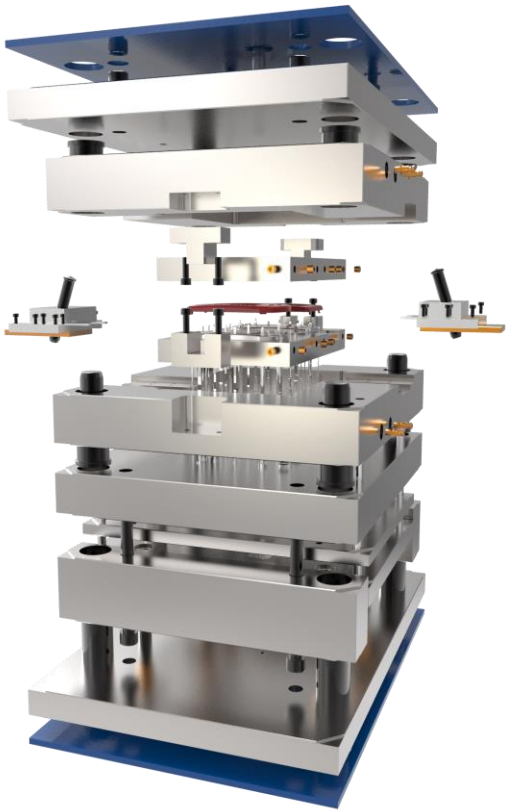

EMX 10 F001

What's New?

- New Features
- Components

2. Deutsch

- Neue Funktionalität
- Komponenten

Components

New Components

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- Hasco – Z09: Side interlock
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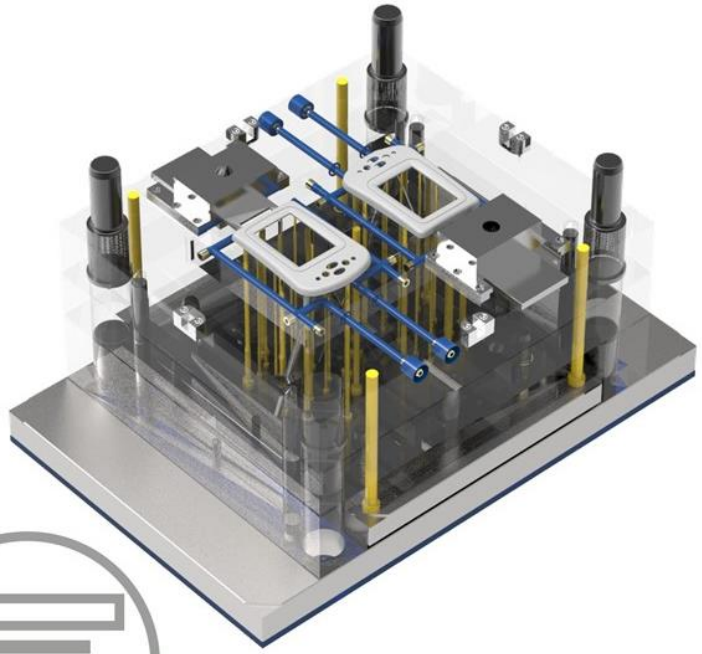
- Meusburger – E1820, E1840 Latchlocks

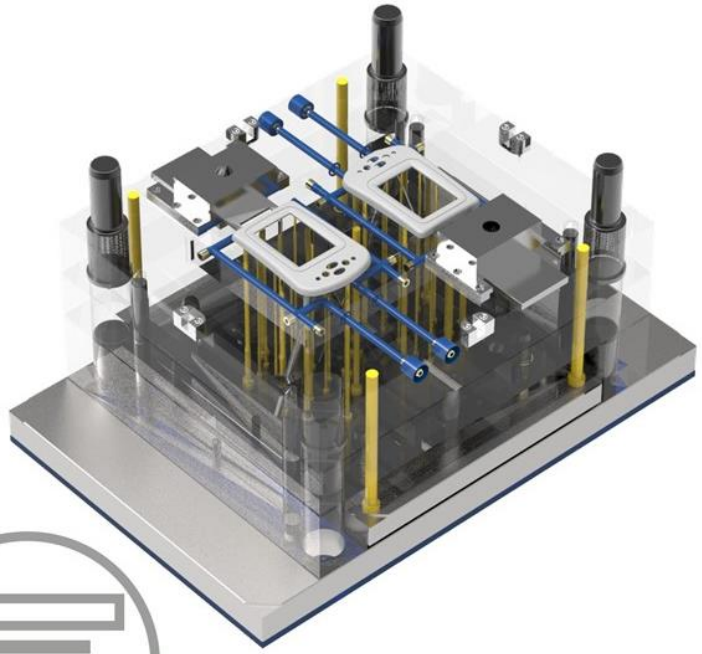
EMX 10 F000



What's New?

- New Features
- Components

EMX 10 F000



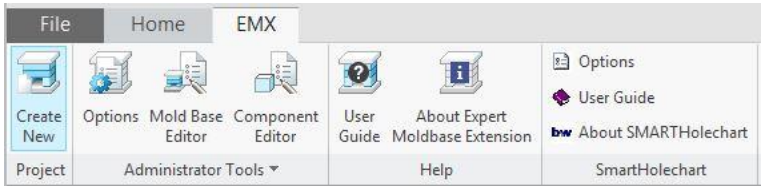
What's New?

- New Features
- Components

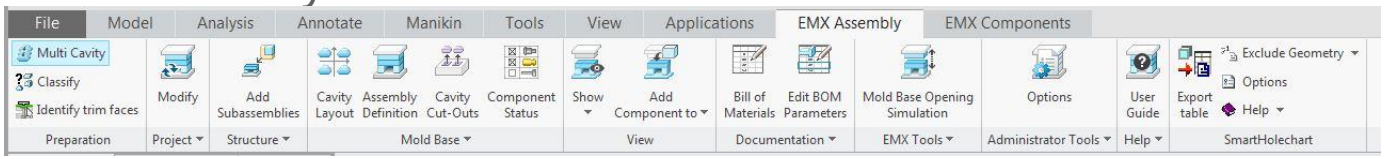
1. Improved EMX Ribbon

- New Design
- Improved Workflow

New Session



EMX Assembly



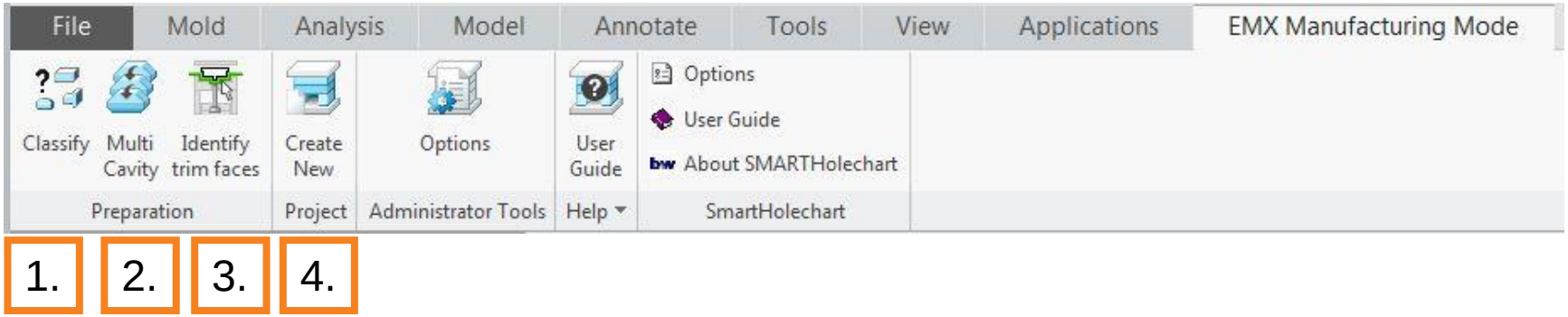
EMX Components

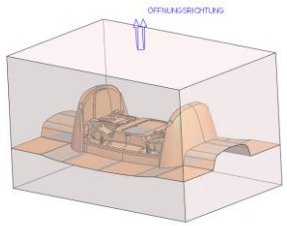
EMX Manufacturing

EMX Part Mode

1. Improved Workflow

Preparation in Manufacturing Mode



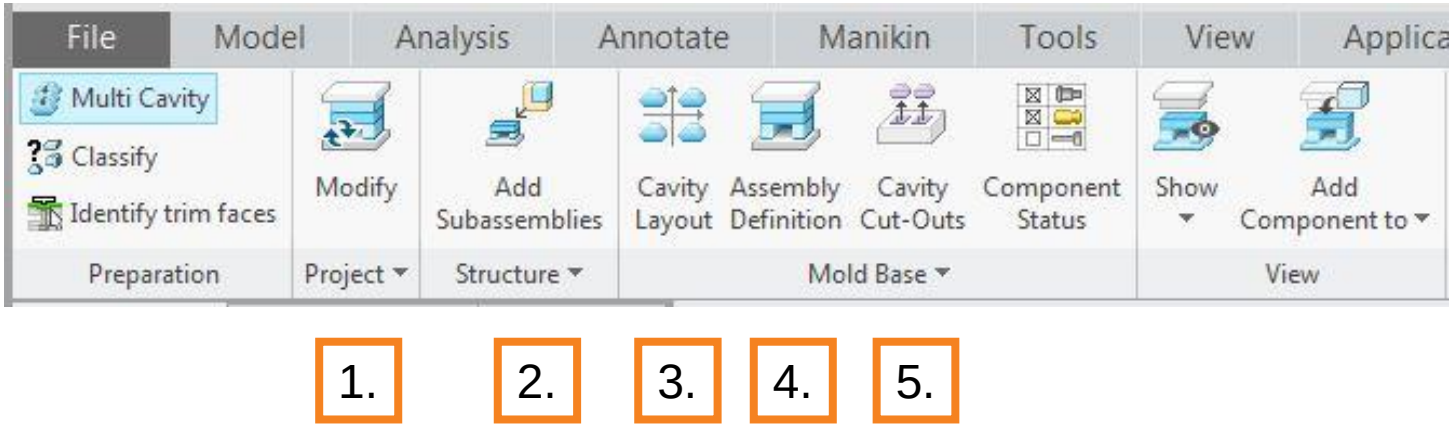


Insert Assembly from TDO

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

1. Improved Workflow

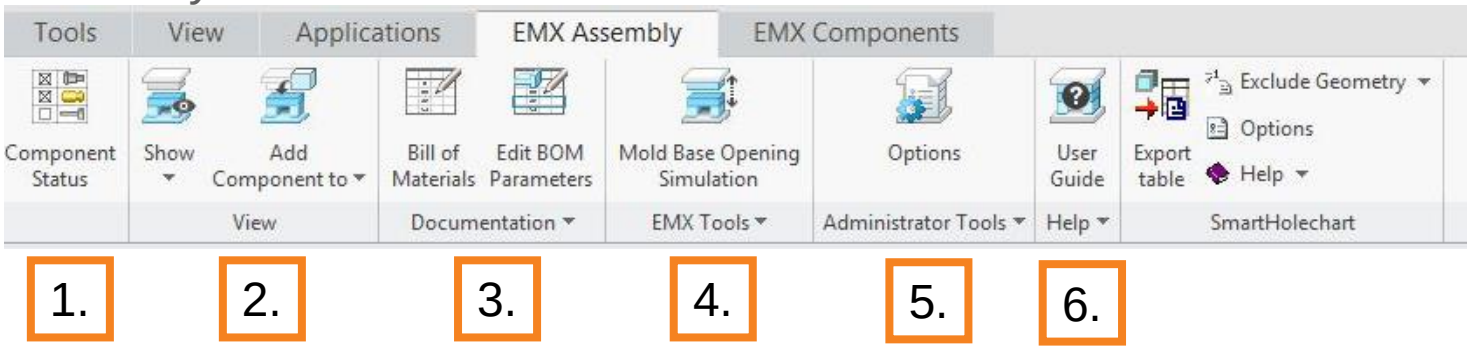
Mold Base in Assembly Mode



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)

1. Improved Workflow

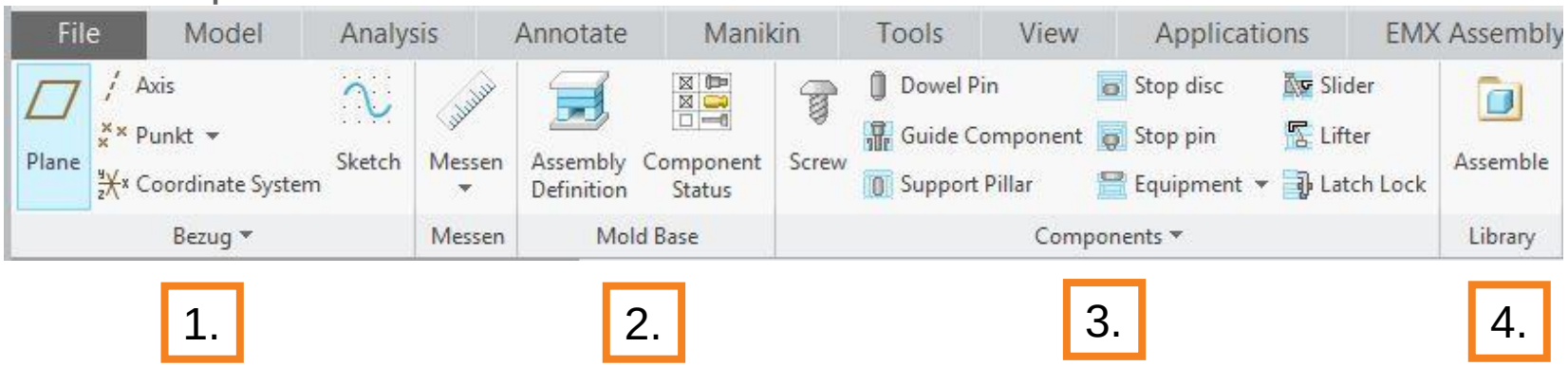
Assembly Mode Part 2



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 10.0)

1. Improved Workflow

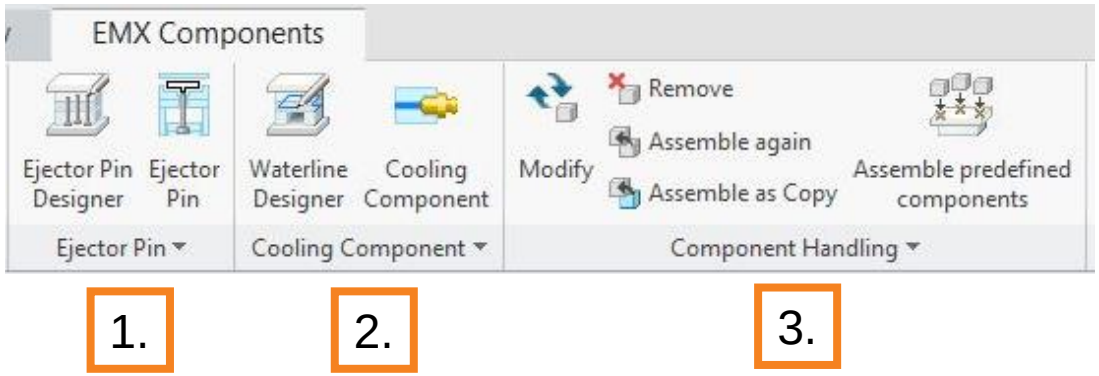
EMX Components Part 1



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

1. Improved Workflow

EMX Components Part 2



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

2. 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

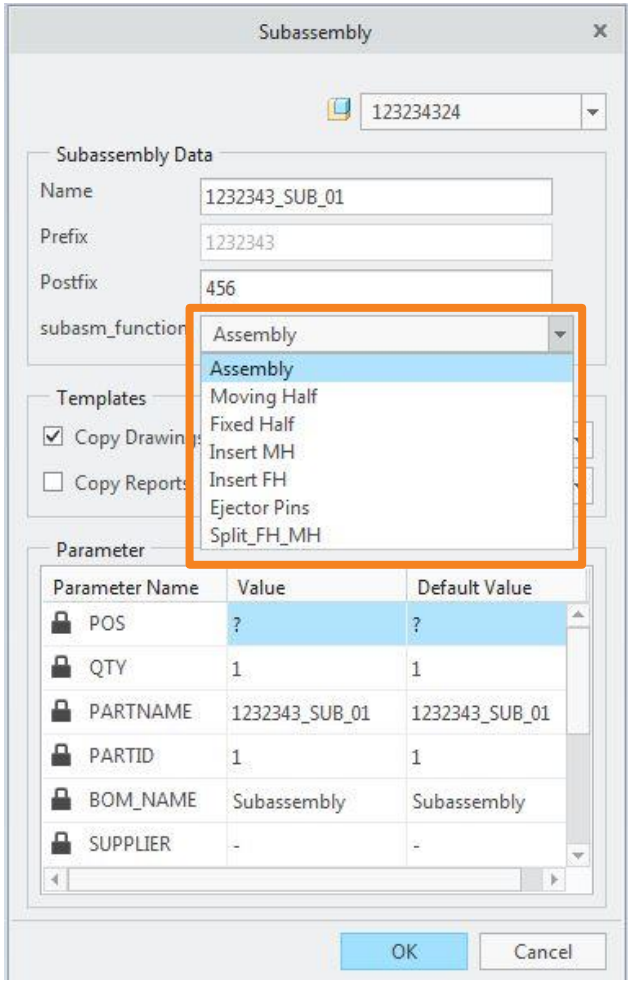
Use Solidify instead

→ More stable. Trimming is also possible when ejector cross-section exceeds the model volume

3. Enhanced Sub Assemblies

New in EMX 10:

Assign function to subassembly

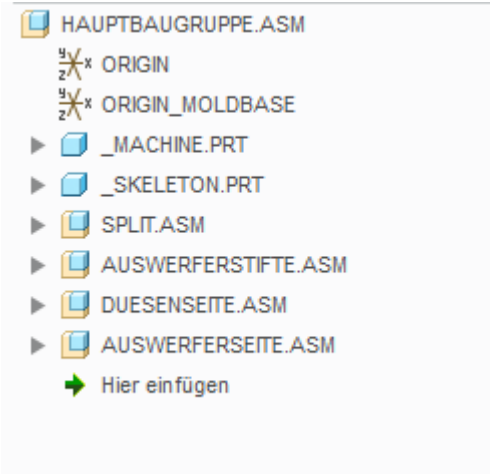


1. Moving Half
2. Fix Half
3. Ejector Pins

3. Enhanced Subassemblies

Main assembly with 3 subasms and assigned functions

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

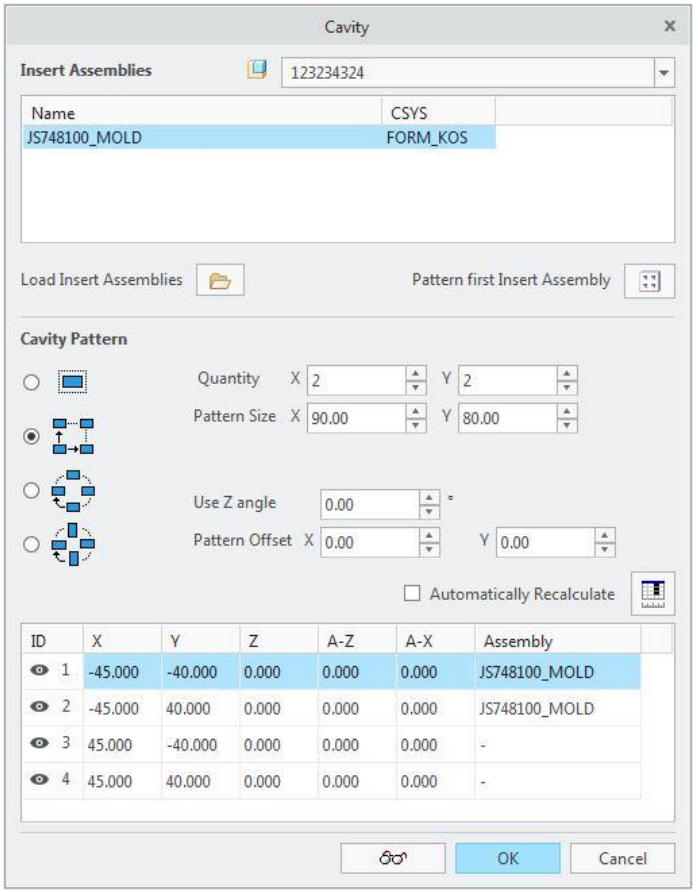


- Automatic pre-selection of MH/FH subasms when assembling from Mold Base Definition Dialog
- Automatic pre-selection for ejector pins

4. Cavity Layout Dialog

Simplified Placement of Insert Assemblies

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

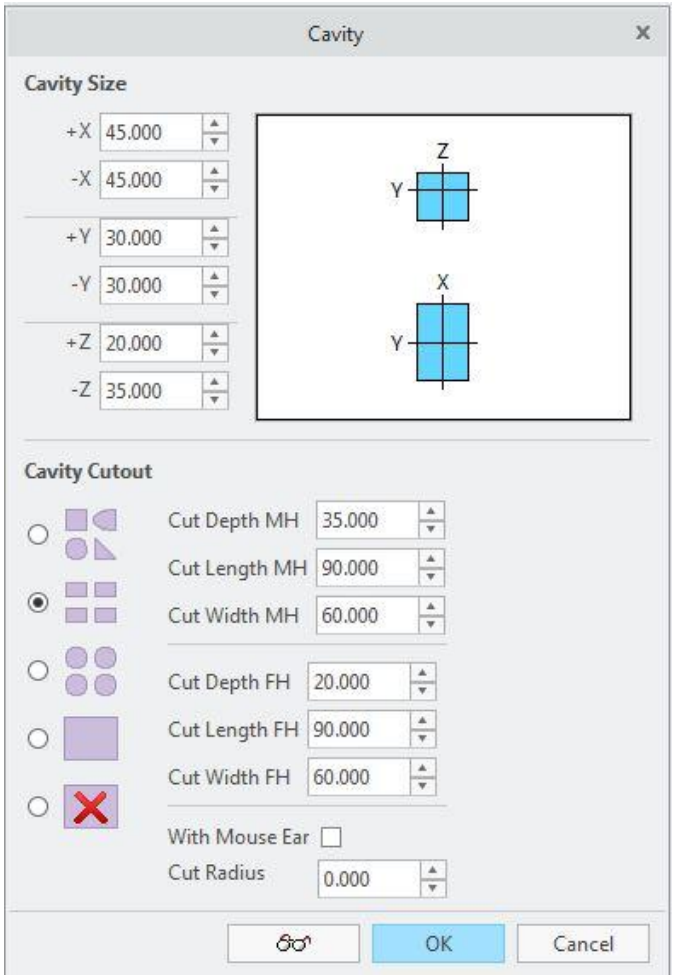


5. Cavity Cutout Dialog

Individual Dialog for Cavity Cutouts

- Functionality as known
- Cutout Types as known

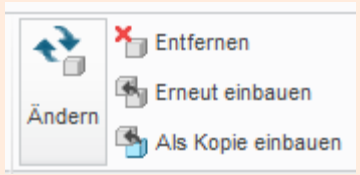
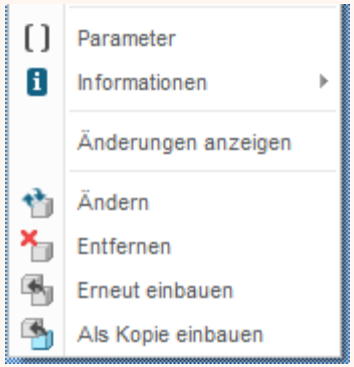
New: 3D Preview



6. New Component Handling

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

6. New Component Handling

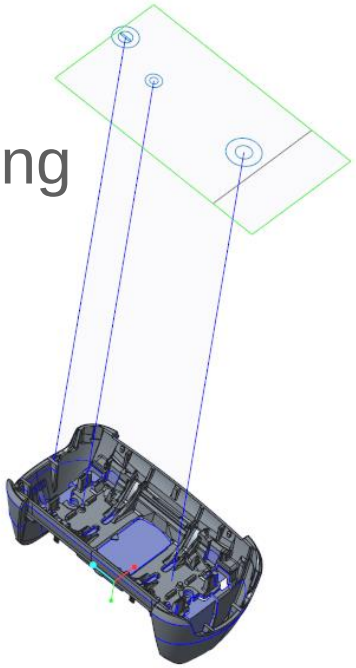
	EMX 9	EMX 10
Ribbon		
Rechte Maus		

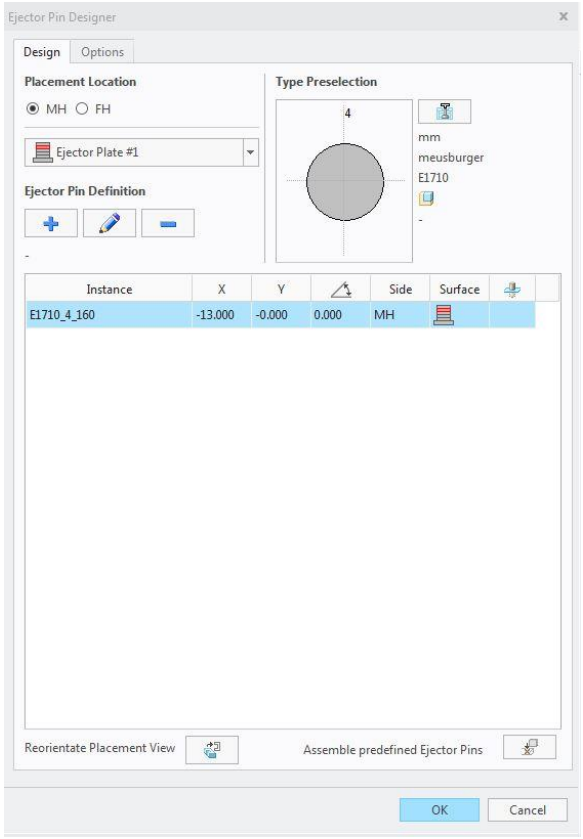
7. Ejector Pin Designer

Dynamic Definition of Ejector Pins

New Main Feature in EMX 10

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



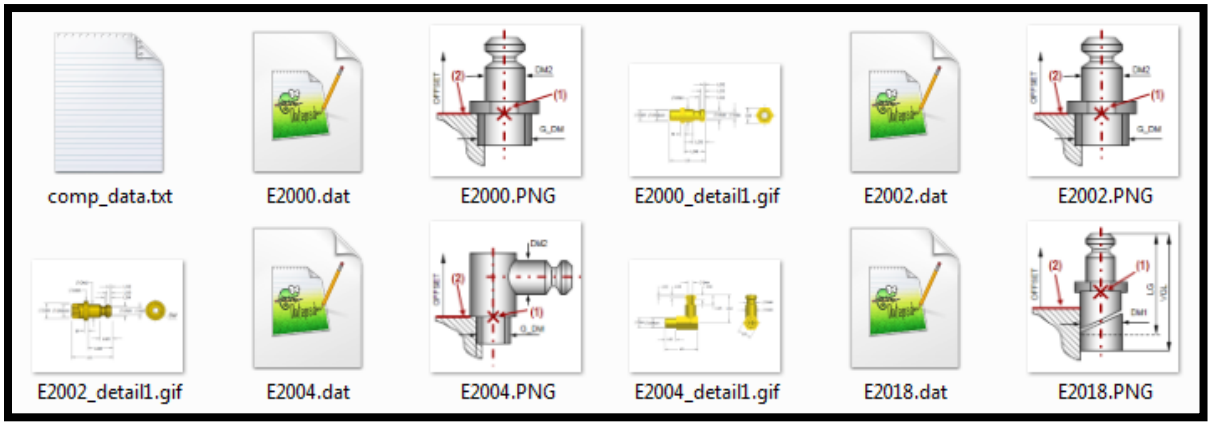


8. New Data Structure

Migration from comp_data.txt & udf_data.txt to *.dat Files

In EMX 10 each component an individual *.dat file will be shipped. This file contains all required information to handle:

a) The component data (assembly constraints, nominal values, instances, etc.)
b) The entire cut-information (UDFs , UDF options, etc.)

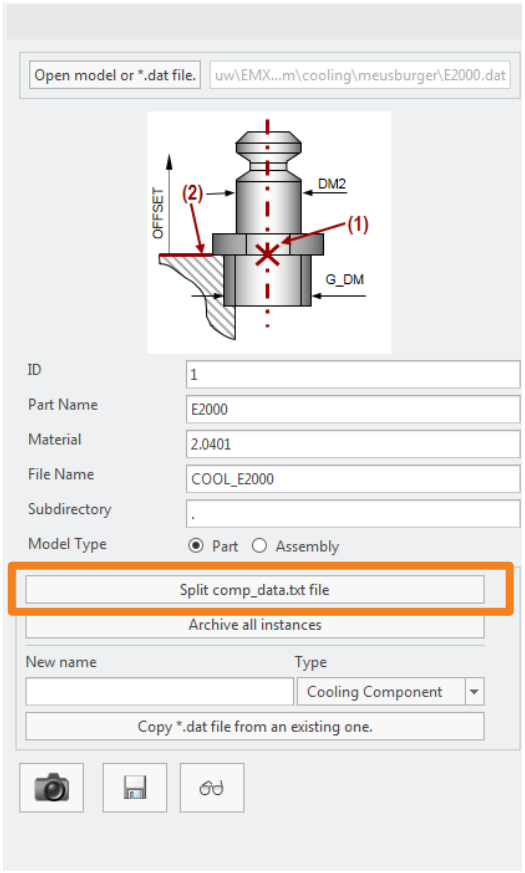


9. Convert to EMX 10 Data Structure

Conversion of old comp_data.txt files can be done step by step

- Open EMX → Administrator Tools → Component Editor

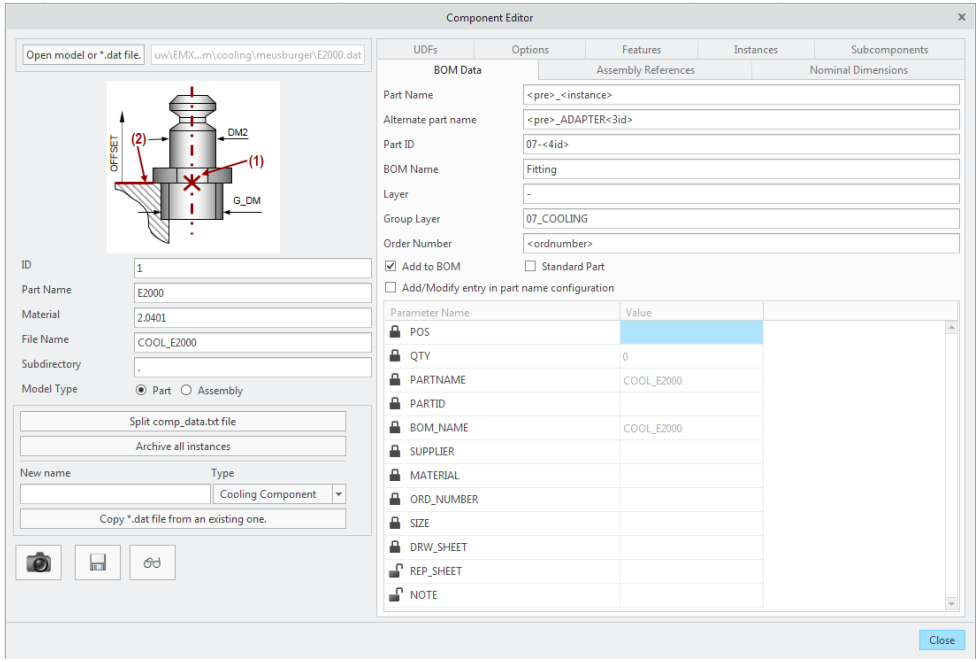
- Select Button Split comp_data.txt file
- Select a EMX 9 formatted comp_data.txt file in File Open Dialog



→ Splitting process is triggered

10. Facelift for new Component Editor

Conversion of old comp_data.txt files can be done step by step

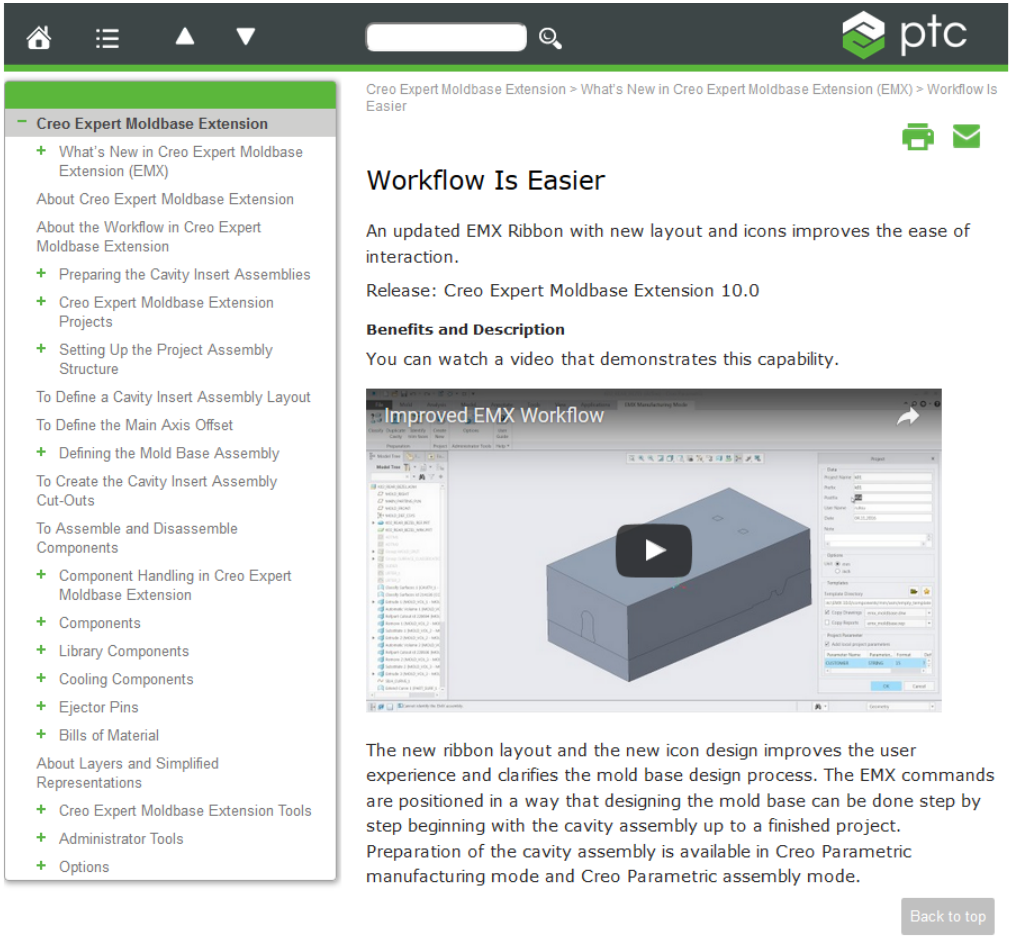


New Features:

- Copy Component from existing template
- Work on UDF cutout information
- Archive all instances from a component

10. New EMX Help Center

EMX 10 comes with the new EMX Help Center



- Handy Search functionality
- What's new Videos

11. Smart Holechart 10.0

Integrated new Version in EMX 10

- 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

11. Smart Holechart 10.0

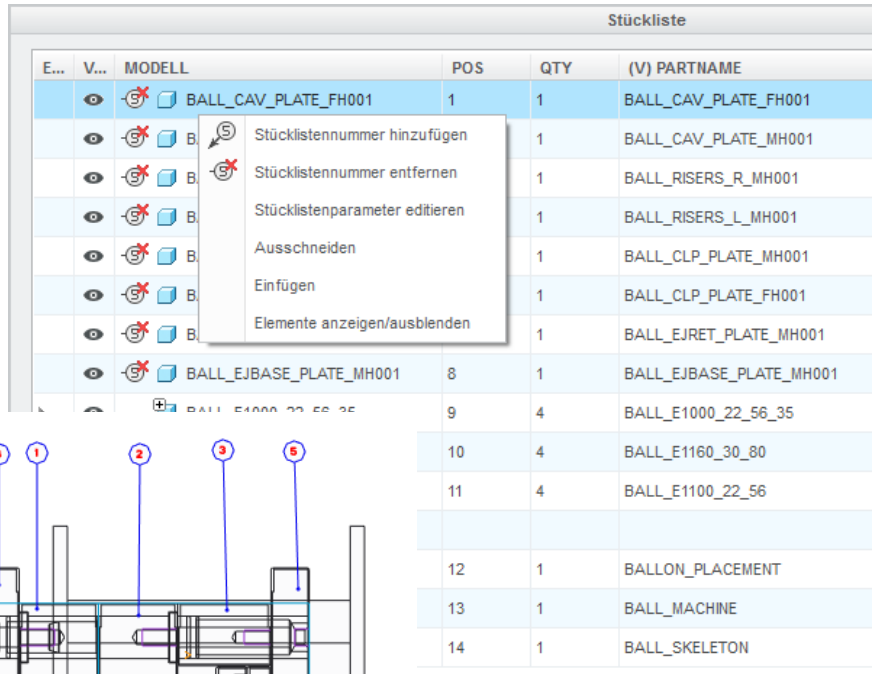
SHC – Default EMX Configuration

- Smart Holechart 10 comes with a default EMX - adapted configuration
- UDFs and Holes created by EMX can recognized easily

12. Placement of BOM Balloons

Improvements

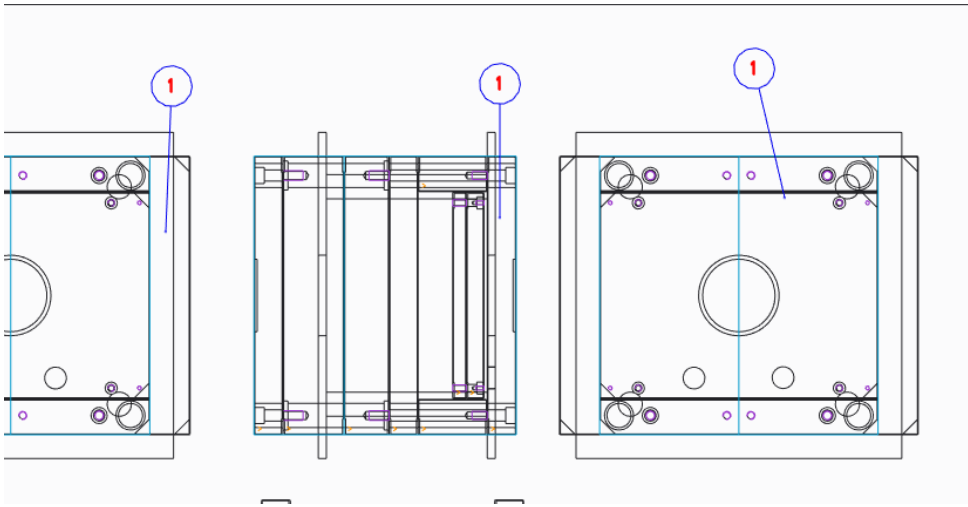
- Functions to RMB
- Multiple Selection and Placement in a Loop
- Place Balloon multiple times for summarized components
- New Design



12. Placement of BOM Balloons

Improvements

- Place same balloon of component multiple times in different views



Bill of Materials

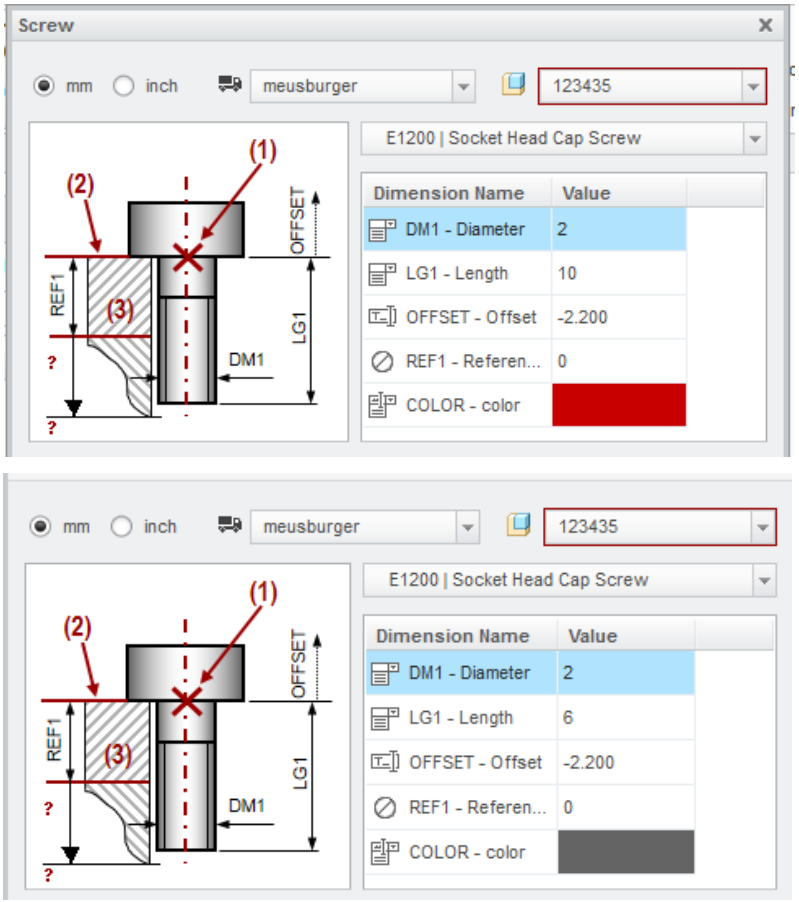
E...	V...	MODELL	POS	SIZE
		BALLON_CLP_PLATE_MH001	1	156.000x156.000x27.000
		BALLON_EJRET_PLATE_MH001	3	156.000x92.000x9.000
		BALLON_RISERS_R_MH001	4	156.000x40.000x34.866
		BALLON_RISERS_L_MH001	5	156.000x40.000x33.509
		BALLON_INT_PLATE_MH001	6	156.000x156.000x27.000
		BALLON_CAV_PLATE_MH001	7	156.000x156.000x46.000
		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	*

13. 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

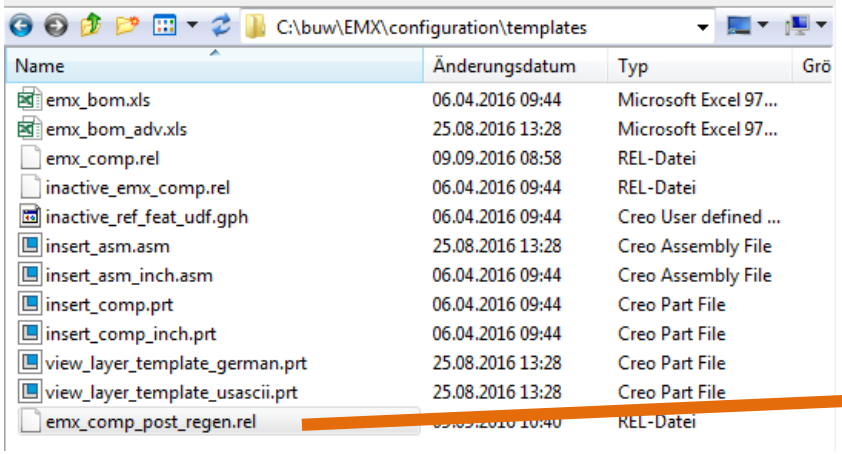


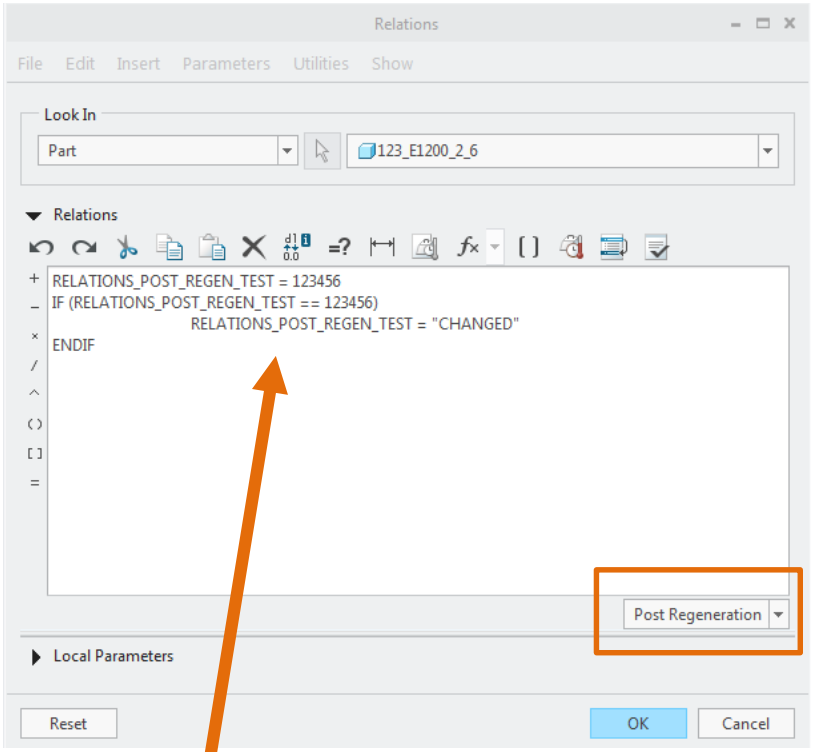
14. Add Relations to Post Regen Area

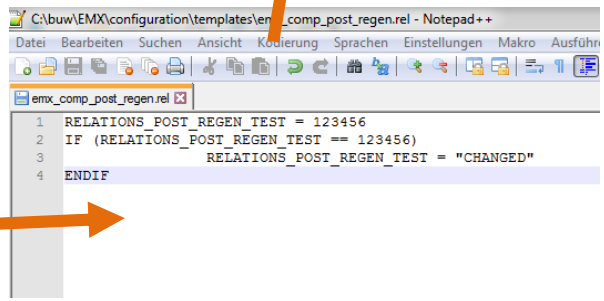
Improvements

- Add Relations to Post Regeneration Area with specified files

1. emx_comp_post_regen.rel
2. plate_post_regen.rel
3. etc.







15. Windchill Autonumber Renaming

Improvements

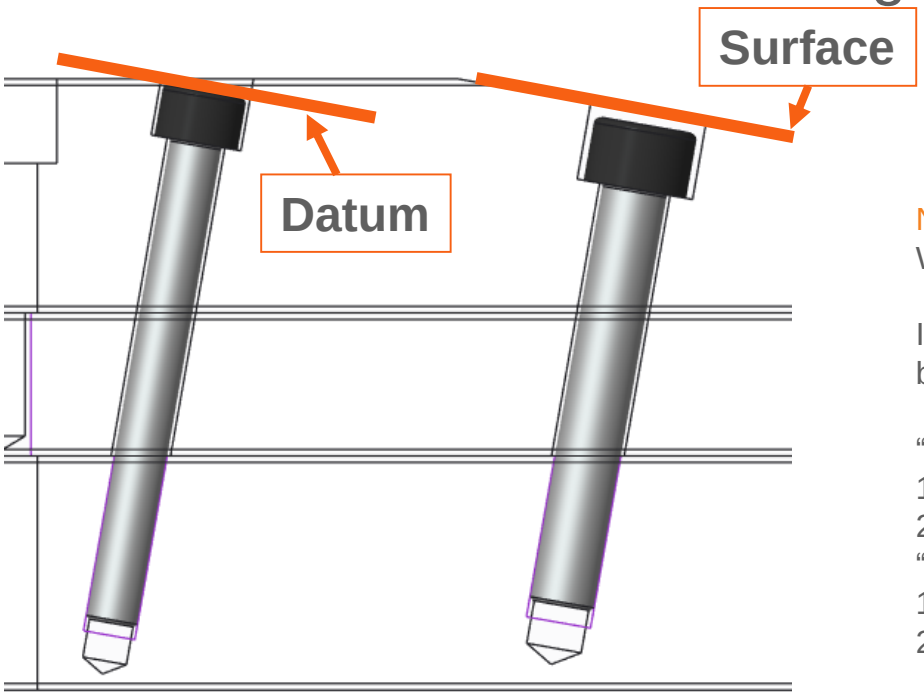
- New Option WINDCHILL_AUTONUMBER
- When working with Windchill and option is set to YES EMX uses next valid name in Windchill for renaming
- Windchill Common Name is set by standard naming mechanism defined in partnames.cfg
- Use keyword WINDCHILL_AUTONUMBER as rule in partnames.cfg to apply auto renaming for individual components

16. Angular Cutouts for Guides and Screws

Enhancement

Screws and Guides can now be placed on Axis/Points and Planes which are not orthogonal to each other.

→ Cutouts will be created with given angle.



Note

Works with EMX standard configuration.

If you use a custom configuration following UDFs need to be added to custom config:

“<emx_install>\components\mm\screw\udf
1. screw_straight_hole_coax.gph
2. screw_thread_bore_coax.gph

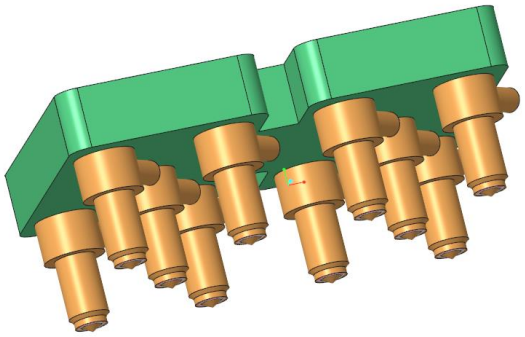
“<emx_install>\components\mm\guides\udf
1. guide_straight_hole_coax.gph
2. guide_blind_hole_coax.gph

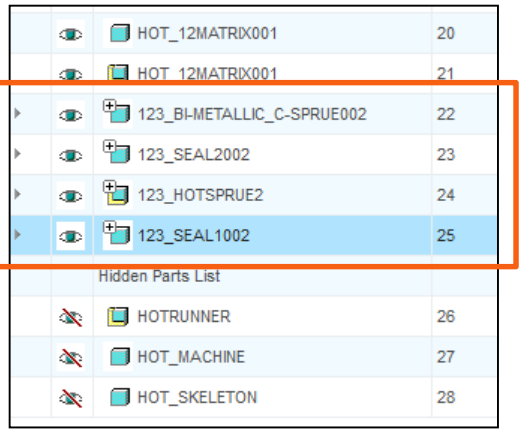
17. Ignore Subcomps of ASMs in BOM

Enhancement

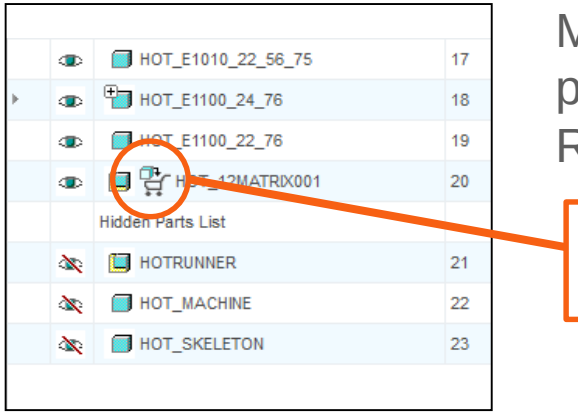
Purchased assemblies can be marked in BOM

→ All subassemblies and sub components will be ignored in BOM





Default: All parts and subassemblies are listed in BOM.



Mark assembly as purchased part with RMB functionality.

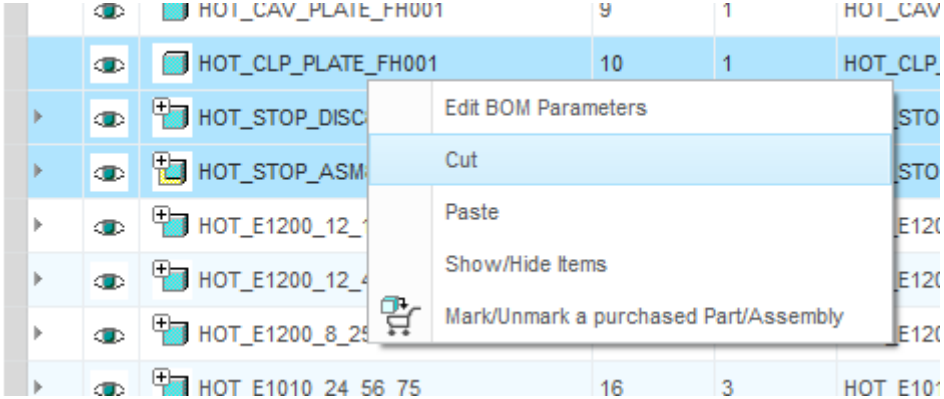
Status displayed with Icon.

18. Cut and Paste with Ctrl+X / Ctrl+V in BOM

Enhancement

Cut and Paste can now be done with keyboard shortcuts Ctrl+X and Ctrl+V.

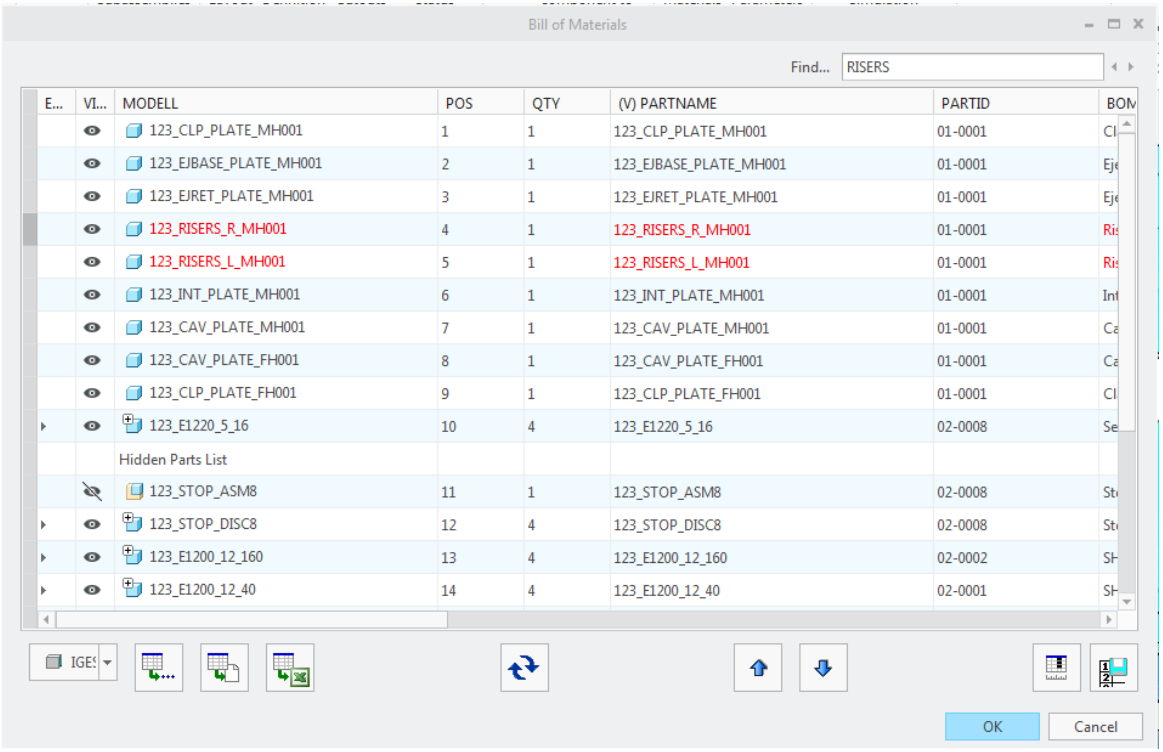
→ Quick repositioning of BOM entries.



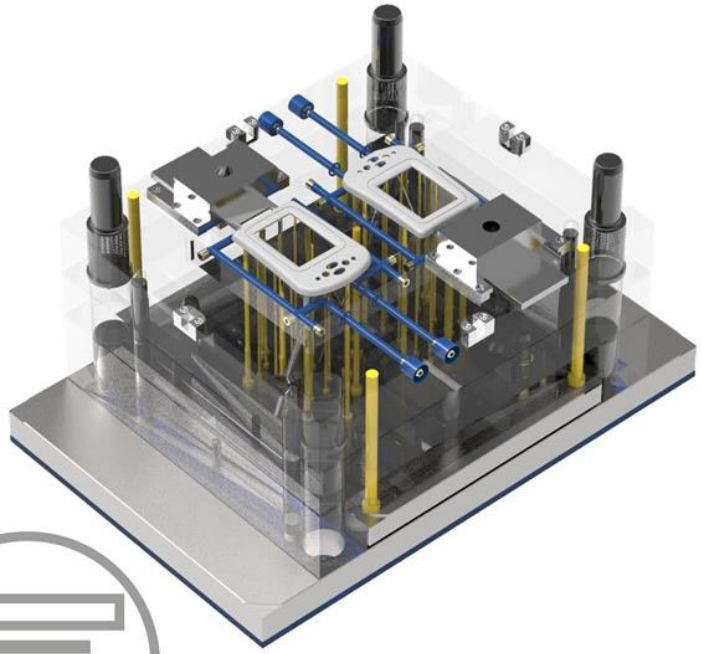
19. Search Feature in BOM Dialog

Enhancement

Search for Keywords in BOM to find entries.
Found entries are highlighted in list.



EMX 10 F000



What's New?

- New Features
- Components

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
- Strack - Z17, Z18 Locating Rings
- Strack - Z45 side interlock components

Components

New Components

- Meusburger – Guide E1032: Inclined Pin
- Meusburger – Locating Ring E1362
- Meusburger – Screw E1514: Threaded Bolt
- Meusburger – Cooling E2800: Stäubli Connector
- Knarr – Ejector Pin 36555
- Knarr – Ejector Pin 36599
- Knarr – Ejector Pin 37414
- Knarr – Ejector Pin 37555
- Knarr – Ejector Pin 37888
- WEMA – Cooling S3102: Sealing Plug
- WEMA – Cooling S3105: Diverting Plug
- WEMA – Cooling S3111: Core Cooling Element
- WEMA – Cooling S3113: Core Cooling Element
- WEMA – Cooling S3115: Baffle Cooling Element
- WEMA – Cooling S3117: Spiral Baffle Cooling Element

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
- Hasco – Locating Ring K100
- Hasco - Side Interlock Z18/19
- Hasco – Cooling O-Ring Z98
- LKM – Side interlocks
- Meusburger - Insulation Plates E1402 E1403 E1407 E1408

Components

Updated Components:

- Misumi – Ejector Pins Type Verified
- Meusburger - Ejectors E1712 add Rotation Fixtures option
- Meusburger – Top Interlock E1310
- PCS – Ejector Pins: All Types Verify and Updated
- PCS – Support Pillars
- PCS – Locating Rings

Components

Updated Plates:

- Futaba - Catalog – All sizes checked and updated
- Meusburger - Plates updated
- Meusburger - E2071 Add option Counter/Second Bore