

XMD-S 11.3.2 (SECOND RELEASE -2/21/2013)

BOM fixes and improvements:

- The BOM will only show component numbers if they are needed to differentiate between other rows.
- Capitalize DIA., LEN., etc. in the BOM (for new jobs/components only).
- The BOM will now only look to 3 decimal places when deciding to group plates into the same row or not.
- Fixed an issue with using the copy shortcut (Ctrl+C) in the BOM dialog.
- Fixed a bug where Set Hi/Lo in the Parting Line Editor, and pipe plug to pipe tap changes were not picked up by the BOM.
- In the Format Smart Pattern command, when the Save to Job option is used the BOM and 2d/3d renderings are updated automatically.
- Redraw Component on a Smart Pattern will now check to see if BOM information needs to be updated.
- Fix BOM bugs related to Moldbase Editor changes and a Delete/Undo operation.

Moldbase and Parting-Line Editor fixes:

- Fix crash that happened when user chose to ignore/delete conflicting components during moldbase changes.
- Fix bug where users couldn't get rid of XMD generated PL locks if mold was surfaced.
- Copied Guided Ejection bushings no longer wind up in clamp plate when the moldbase is modified.
- Fixed bug that resulted in improperly removing clamp slots from the solid.
- Fix bug so users can edit the PL lock angular dimension.

Misc. fixes:

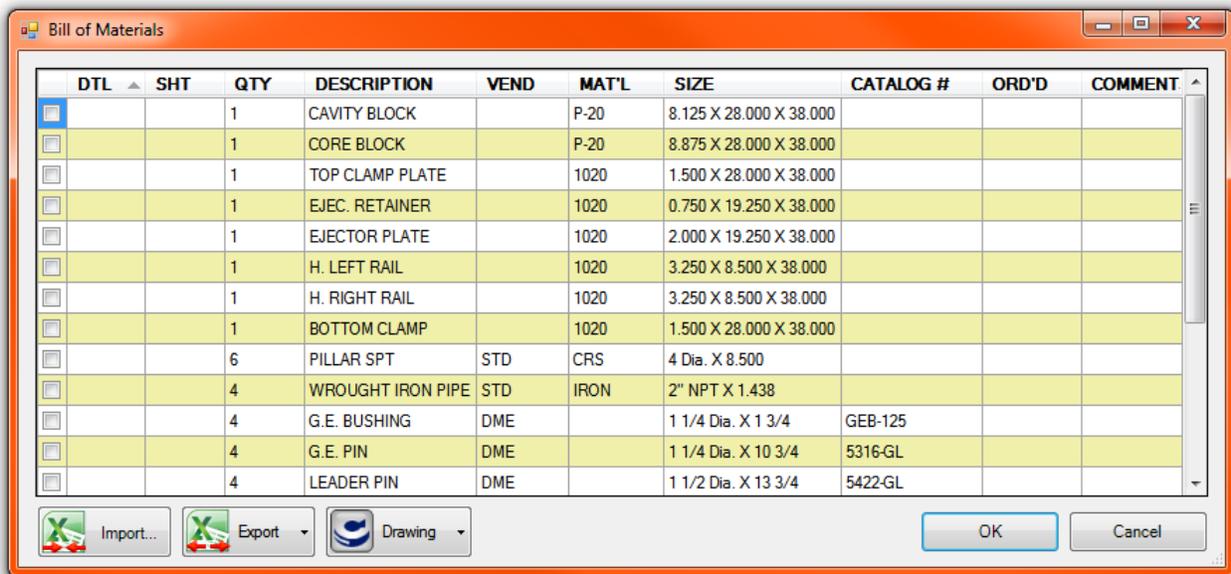
- Value in "Custom Size" panel of Resize dialog is no longer cut off.
- There is no longer a 30 character restriction on plate names.
- About dialog updates.
- Fix bug where Convert Solid to XMD Component was not reading the Part Number field.
- Stop suggesting incorrect drawing depths for newly added drawings.
- Fix some access violations that could occur in certain situations.
- Hole calculation step is faster, particularly on jobs with a large number of waterlines.
- Fix bug where certain components were not being created on the proper level and/or had a missing level name.

XMD-S 11.3.1 (FIRST RELEASE - 1/21/2013)

This release features some exciting new features that should be a welcome addition to the mold designer's tool kit. The most prominent are highlighted below:

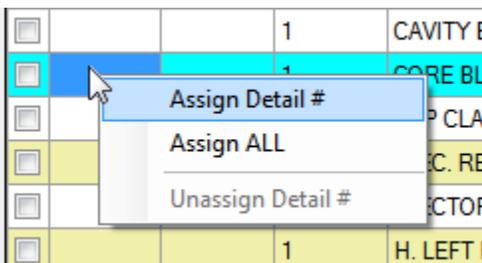
BILL OF MATERIALS

The BOM has been revamped in XMD 11.3 in order to give users much more control over managing it. To do so, we've created a powerful new dialog that is accessible from XMD's Tools menu:



From here you can do a variety of things:

Assign Detail Numbers: This is done by clicking a cell in the detail number field. You can single select or multi-select by clicking and dragging. You can also **Unassign Detail Numbers** from here.



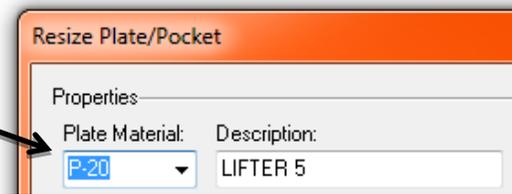
Note that the unnumbered rows are kept in a specific order:

- 1) Cavity and core first
- 2) The rest of the moldbase plates in stack order
- 3) Manufactured components
- 4) Purchased components by vendor and size

Edit Cells: While some cells are read-only (such as Sheet, Quantity, and Size), most of the cells in the table allow you to make custom edits to what XMD generated by default. This gives the designer powerful new capabilities in making changes to the design. It helps to see some examples.

Let's suppose we created 12 inserts and forgot to change the default material from 1020 to P-20. In previous version's you'd have to do Modify->Size on each one, but now you can just make the change in the BOM and voila! You're done!

1	BOTTOM CLAMP		1020
12	LIFTER		P-20
6	PILLAR SPT	STD	CRS



Most edits to the BOM table will be pushed throughout the design

Some types of edits cannot be pushed throughout the design and will be flagged with red text. These types of edits are necessary when you want to order components that XMD doesn't fully support yet. For example, Keyed Ejector Pins:

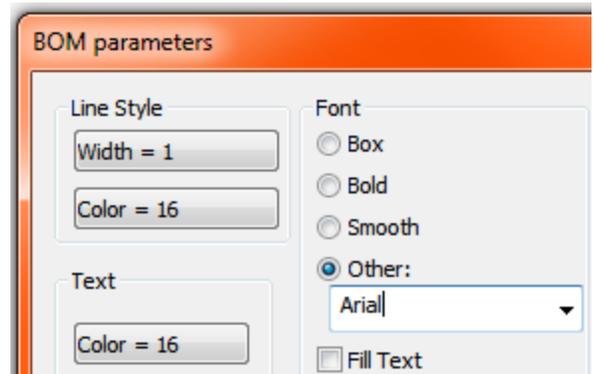
DESCRIPTION	VEND	MAT'L	SIZE	CATALOG #	ORD'D	COMMENTS
KEYED EJECTOR PIN	DME	H-13	3/8 Dia. X 14	EXK25M14		
LEADER PIN	DME		1 1/2 Dia. X 13 3/4	54		* Value was edited and does not match the model Default Value: "EX25M14"
LOCATING RING	DME			65		

Not all edits can be pushed throughout the model but are maintained until the default value changes

Draw BOM in the Design: This is now done through the "Drawing" button and will draw exactly what is shown in the dialog in the drawing of your choice:

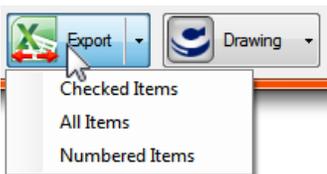


2	-	1	CORE BLOCK	-	P-20
1	-	1	CAVITY BLOCK	-	P-20
DTL	SHT	QTY	DESCRIPTION	VEND	MAT'L



NEW: You can now pick a custom font to draw the BOM with

Export to Excel: Outputting your BOM to Excel is a breeze. Simply hit the "Export" button and choose an option for which rows you'd like to send out.



To export steel only, you can detail only those rows and select "Numbered Items", or you can check their checkboxes and select "Checked Items".

<input checked="" type="checkbox"/>	1		1	CAVITY BLOCK
<input checked="" type="checkbox"/>	2		1	CORE BLOCK
<input checked="" type="checkbox"/>	3		1	TOP CLAMP PLATE
<input checked="" type="checkbox"/>	4		1	EJEC. RETAINER
<input checked="" type="checkbox"/>	5		1	EJECTOR PLATE
<input checked="" type="checkbox"/>	6		1	H. LEFT RAIL
<input checked="" type="checkbox"/>	7		1	H. RIGHT RAIL
<input checked="" type="checkbox"/>				BOTTOM CLAMP
<input checked="" type="checkbox"/>				PILLAR SPT
<input checked="" type="checkbox"/>				PILLAR SPT

Import from Excel: This exciting new feature should help you keep the design in-sync with changes made down-stream. For example, purchasing may have changed a vendor or two, and added some notes.



To import such changes, hit the "Import" button and select the edited Excel file. A dialog will then open displaying imported spreadsheet and any and all changes are highlighted:

MEDIUM DUTY SPRING	DME			SMD1004
MEDIUM DUTY SPRING (1.25" O.D. x 4.0FL)	DME			SMD2006
MEDIUM DUTY SPRING (2.00" O.D. x 7.0FL)	DME			SMD5020

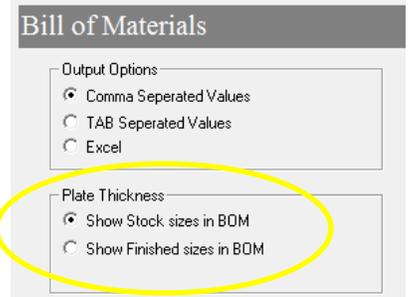
Value updated from imported Excel sheet.
Design: "DANLY"

Upon reviewing the changes, and resolving any conflicts, you can either Accept or Reject the import.

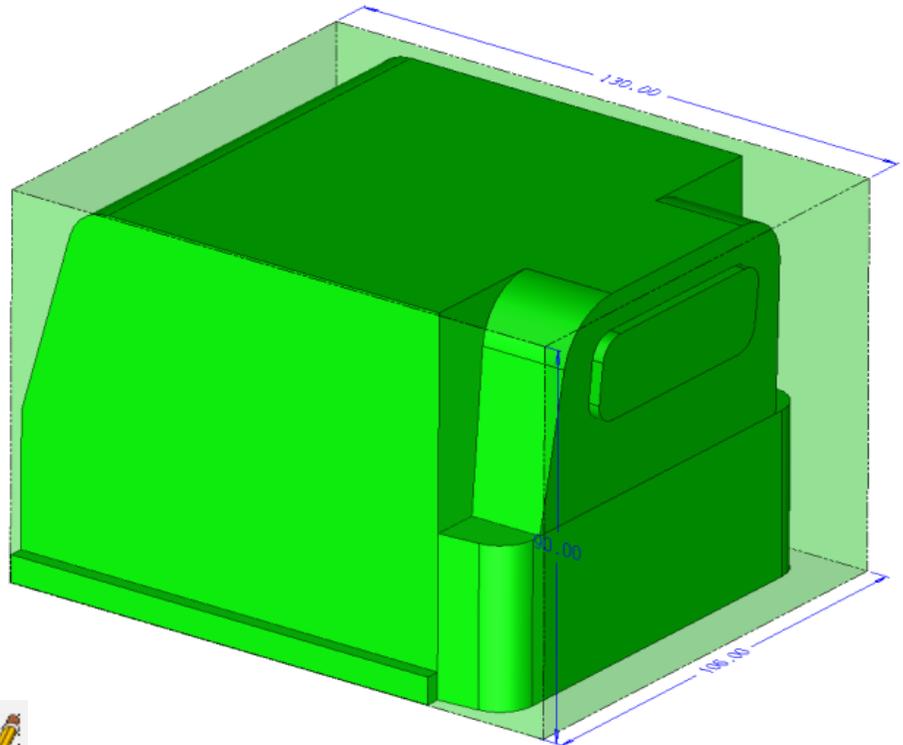
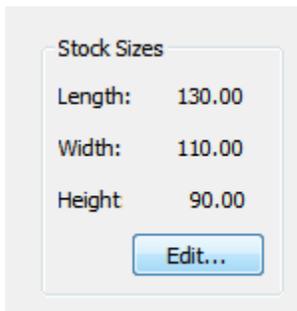
STOCK SIZES

XMD now supports user-defined stock sizes on all plates and custom components. Currently, the stock size is only used for the BOM, but in the future we hope to make use of it for the Export Plate command as well as eyebolt charts.

To have the BOM reflect the stock sizes or not is configurable in the XMD Config program (see picture on the right).



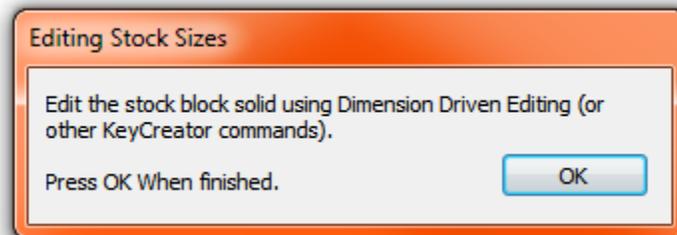
To edit stock sizes, run the Resize Component command and pick a plate or custom component. Click the "Edit" button on the stock panel (pictured below) and you will be presented with the solid overlaid with a semi-transparent stock solid with dimensions:



Adjust the stock sizes using KeyCreator's Dimension Driven Editing (DDE) command, which XMD will start for you automatically.



You simply click the dimensions and type in the desired value. Note that DDE is sensitive to which side of the dimension you click on. If you click on the middle, both ends are adjusted. But if you click on one end or the other, then only that end is adjusted, making it easy to add the stock all on one side.



Once finished adjusting the stock block, hit the OK button to return to the Modify Size dialog where you should see your new stock size reflected

PARTING LINE EDITOR

In addition to fixing a number of bugs, we've also made some improvements that should make things much easier.

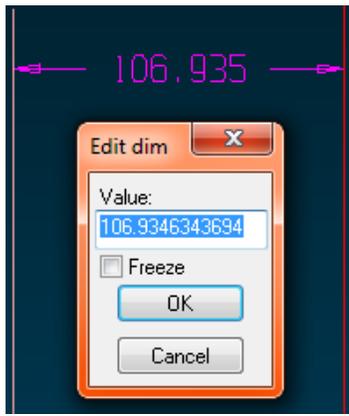
Right-side Dimension Now Measures from Z=0: This change now makes it much easier to control your back of block locations as the measured size is equivalent to where the back of block is in the Z. If you want your back of block to be at Z=150mm, just click the dimension and put that in.

Formerly the dimension was measuring from the top of the parting line locks to back of blocks, which was not nearly as useful.

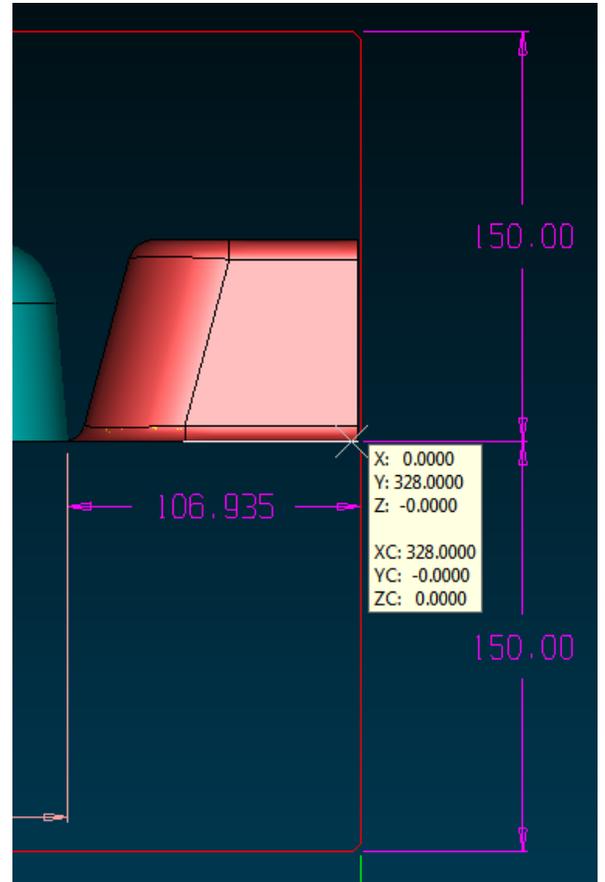
Greater Precision: The Parting Line Editor no longer rounds the values you type in to 2 or 3 decimal places, which was often a source of huge

headaches. The solids will now be adjusted to exactly what you type in.

We've rounded precise values to one decimal place more than what we would round nominal values. This way, you can still notice when a dimension is not a nominal value, but the editor is not cluttered with extremely long numbers. When a precise value is clicked, the full value is displayed in the Edit Dim dialog, as seen in the picture to



the left.



Important Bug Fixes Related to Backs of Blocks:

- Changes will no longer result in the backs of blocks overlapping other stack plates.
- Fixed bug where pipe plugs, taps, and baffle blades were not adjusted to match the backs of blocks.

SAVE AS



In order to simplify things, and get more users aware of the old Prepare Job functionality, we've merged the two commands. Save As is often used to put out a new revision and it's at that time you often want to clean up the job directory. This can now be performed from within one command.

Also, to allow you to re-render all the plate and custom component drawings, we've made it so that you can select "All Drawings" from the Redraw Component command.



CUSTOM COMPONENT LIBRARIES

We've added some support to make it easier to create custom component libraries. The easiest way to do it is to take an existing solid that XMD has written KeyCreator solid properties to and save it off somewhere. XMD will now read these properties every time the Convert Solid to XMD Component command is run on it so you won't have to type the information in ever again!

OTHER IMPROVEMENTS

- Parting-Line and Moldbase Editor improvements:
 - XMD will no longer round numbers entered into the “Edit Dim” dialog.
 - The drawn dimensions will show to an extra decimal place if value is not round at the default precision.
 - The right-most dimensions in the editor are now measuring from Z=0 to back of block.
 - Fixed bug where pipe plugs, taps, and baffle blades were not adjusted properly.
 - Many other bug fixes.
 - Return user to previous drawing upon leaving the PL editor.
- Performance of various animated component placement functions has been greatly improved
- The Move Components to Plate Level command now lets you select cavity and core halves in addition to a specific plate.
- Allow users to copy converted components (mirror copy still disabled).
- Updated catalog numbers for DME pins.
- Projected components will now be automatically re-projected through the Replace Plate (if the Generate New option is used) and Tip Component commands.

BUG FIXES

- Many BOM/ballooning bugs fixed.
- We're now respecting the plate name typed in the copied plate name dialog.
- Fix problem with certain SHCS for DME bases showing up as non-standard sizes
- Fix problem of EP reams occasionally not appearing.
- Fix bug with deleting XMD pockets.
- Fix bug with Show Metric checkbox in Resize Plate dialog when adding a custom component.
- Fix crash when working with tapered pockets.
- Speed optimization for cutting surfaces on start job (and no more flashing)
- Fixed bug where we could create bushings that were bigger than the pin they were for.

XMD-S 11.0 (1/9/2013)

- XMD now fully reads and measures your solid core and cavity blocks. This means that the parting line editor will now draw its dimensions based on the solid model.
- Cavity and core blocks are now drawn to the actual thickness if they are designed not to have an overlap.
- Set Hi/Lo will now resize XMD-generated cavity/core blocks.
- Thru holes are now created for ejector pins that stop short of the surface.
- The undo/redo system will now re-use a converted components solid if still available.
- View Plates now gives users the option to choose Cavity or Core half plates.
- XMD is smarter about putting converted components and user plates on proper levels.
- When converting solids to XMD components, XMD will now suggest values for the fields based on solid properties and the level name.
- The old waterline commands are now asking for the plate, and considering the plate solid for the waterline start location and length.

XMD-S 10.5 (7/20/2012)

- Full 64-bit support.
- The Export Plate command has been completely redesigned, and gives the user many options relating to file type, hole type, and filenames.
- A new Plate Export Configuration utility has been added to the XMD Config program (in Moldbase -> Miscellaneous). This tool can be used to completely customize how plates are exported.
- New "Prepare Job" command which can re-render all the 2D plate drawings and clean out unnecessary files from the job directory. This command should be run before sending the file out.
- XMD is starting to attach BOM information to the component solids.

PLATE IMPROVEMENTS

- **XMD is much better at coping with poor quality plate solids when generating 2D drawings.** You should no longer have missing plate lines as a result, but the quality of the drawing may suffer. If this is the case, you will be notified of which plate solid is causing the problem.
- A lot of care has been put into maintaining plate face/body colors throughout the design process.
- XMD-drawn user plates will now retain custom solid edits that have been made to them.
- Winged ejector plates are now measured to include the extrusions, and changing ejector box sizes now works based on their interior size.
- Plate lists are now sorted alphabetically in the Export Plate and Hole Management dialogs.

MISCELLANEOUS IMPROVEMENTS

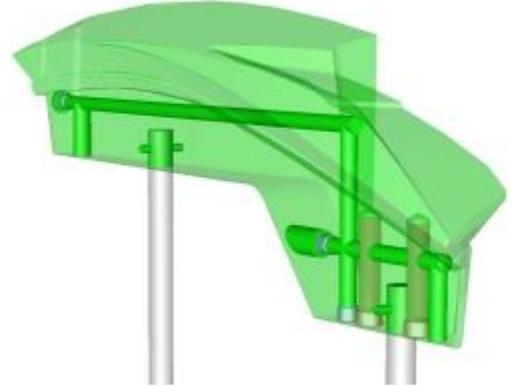
- Major performance improvements.
- Smart Pattern browse dialog now remembers the last directory you were in and is now resizable.
- When placing angled bubblers/waterlines, the start position now snaps to the edge of the plate solid.
- Default generic hole movement to single instead of group.
- Improved progress bars for loading plate solids and rendering 2D drawings.
- Generic holes and screws are smarter about which drawings they're shown to.
- Shoulder bushings are now seeing the surfaces when starting a job / inverting the LP assembly.

XMD-S represents a comprehensive overhaul of the Expert Mold Designer to intelligently incorporate full 3D solid modeling. This switch makes XMD much more powerful than the previous versions. (This is why we added the -S). Designers have a more efficient way of working with the design. Yet all the old ways are still available so upgrading should be easy.

SOLID PLATES

All plates in XMD are now rendered as solid blocks.

- Transparency is used to better see the complete mold. Hole faces are opaque so they can be clearly seen.
- You no longer need to solidify plates to get an idea of what the finished product will look like.



Changes made through **KeyCreator solid modeling tools** are recognized. XMD will reflect your changes in:

- Hole creation - all holes are now automatically designed to match the solid model.
- Section drawings and plate details – see the wings you put on your ejector plate in the core plan for example.
- The Bill of Materials – plate sizes are automatically updated in response to your changes.

XMD-S boasts the unique and powerful ability to interpret your mold blocks correctly without requiring you to integrate the part data into the solid. As a result, the preliminary mold design can begin immediately without waiting for surfacers to complete their job, and without requiring designers to heal the part geometry.

This means you can start the design quickly, update the data easily, put in ejector pins and cooling correctly, and not bear the burden of modeling with heavy block data. Yet when the block is finished, XMD-S also accepts and uses the block with integrated surfacing.

XMD will maintain changes you make to the solid

- Resizing the plate will only offset the outer faces, leaving the interior details intact.
- Backups are saved in a .sat file every time you have finished modifying the solid.

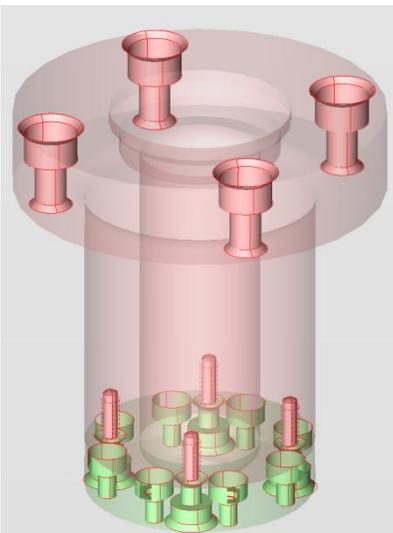
HOLES IN THE SOLID

XMD-S completely revamps our logic to calculate holes. Now that XMD is no longer limited by incomplete models, holes will automatically and intelligently match the full 3D geometry of all the plates, mechanisms, part data and parting surfaces. The results are far better than previous versions offered, and well ahead of other mold design systems too.

As a result of using the solid model, XMD now does a much better job at determining which plate a hole belongs in. In XMD-S you're going to spend a lot less time fiddling with hole assignments.

Our hole calculation algorithms intelligently apply information in part and parting surfaces whether they are attached to closed solid blocks or modeled independently.

XMD still does a great job of responding to component changes. For example, when a component is moved, the hole at the old location is filled and trimmed before it is subtracted in the new location. If the plate condition is different at the new location, XMD will react accordingly.



SECTION DRAWINGS AND PLATE DETAILS

XMD now uses the solid model to create all 2D drawings. In all previous versions, XMD would not give you much more than a rectangle, leaving it up to designers to manually sketch the missing features. Thanks to XMD-S, those days are behind us! All user features in the plates are automatically reflected in every 2D drawing. The drawings are also kept up to date, reacting to every change made to the plates.

Section drawings

- Created by slicing the solid plates at the specified depth and angle.
- Full support for jogged and partial sections.
- Cleaned up automatically by removing unwanted hole curves.

Plan drawings

- Created by a hidden line rendering of the solid plates.
- Lines are solid when visible, dashed when hidden.
- Hole and plate chamfers are removed from the rendering to create a clean, crisp drawing.

Plate details

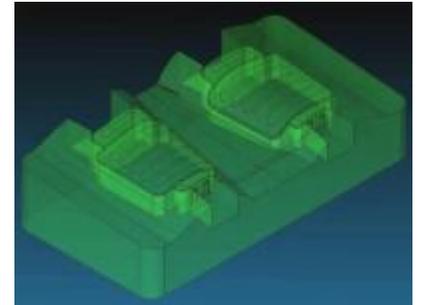
- Now use the actual solid plate to create the various views and dimensioning users are accustomed to.
- Holes are blanked or unblanked depending on the designer's specifications.

CONVERT ANY SOLID INTO AN XMD GEOMETRY

Demo video: <http://www.youtube.com/watch?v=mkMeEtPcxXA>

With this command, a designer can take any solid in the job and bring it into XMD as a custom component (e.g., slide, insert, manifold). XMD will treat it like it does the mold plates. This means:

- Automatically measures the custom component for the BOM.
- Associates a name and material with it.
- Applies selective transparency to better see your mold.
- Cuts clean section drawings directly to the solids.
- Geometry can be imported from any CAD system or created directly in KeyCreator.
- Can be updated any time with new geometry.
- Resizes mold plates on request, keeping everything associative, and keep your models intact.
- Generates complete plate details.
- Backs up models for data security.
- Automatically creates holes for components, in the solid.
- Automatically detect changes you make to solid models, and updates size information.



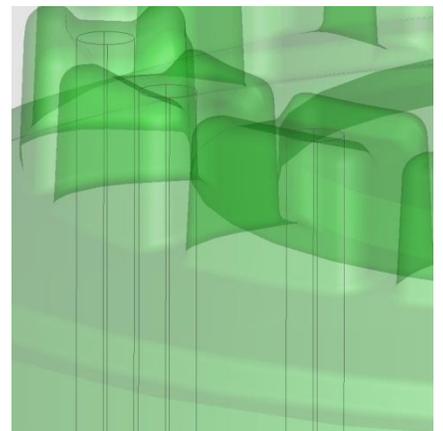
SOLID MANAGEMENT TOOLS

This new menu allows designers some control over how XMD handles their plate solids [and other custom components]. Currently, lets them replace their plate with an updated model, and control whether or not XMD should automatically subtract holes from the plate.

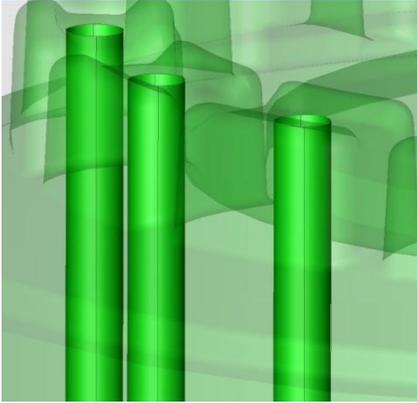
Master Model

XMD now manages a *master* model which is the custom component without solid holes subtracted, and may be freely edited with KeyCreator solid modeling tools. Some of the advantages of working on the *master* model are:

- faster updates
- prevention of solid modeling errors



- they are kept up to date, which comes in handy if you need to revert a recent change



Finished Model

At any time, users can switch to using the *finished* solid, which takes the *master* solid and puts holes in it. XMD will attempt to keep the holes up to date but may have trouble on complex, surfaced geometry. Fortunately, if errors occur in the *finished* model, you can reload the *masters* to correct them. The *finished* model is useful for:

- better viewing in 3D
- outputting to drilling

Replacing Solids

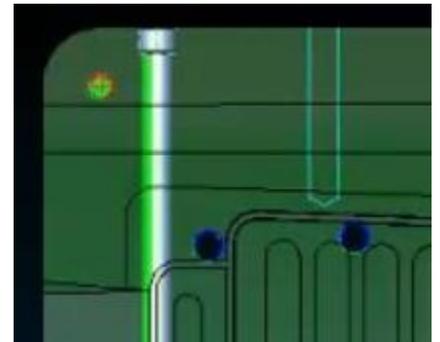
Demo video: <http://www.youtube.com/watch?v=2mZGwuAoG9M>

This command allows you to pick a solid in the job to use in place of a current plate solid. This is useful when there is a revision change, or when you need to restore a plate from backup.

SMART WATER

Demo video: http://www.youtube.com/watch?v=k_8pucyIUj4

- Can add to any plate, slide, or insert in the design, and will respect the geometry of the plate, part and parting surfaces.
- Has an ejector pin style animation which previews the length of the waterline.
- Thru waterlines behave similarly to the old waterline commands (vertical, horizontal, normal to view), but will respect the solid model, which means they will be trimmed automatically.
- Blind waterlines automatically adjust their length to stay a safe distance from the part/parting line surfaces as well as the edge of the plate, and will also snap to end inside the last intersecting waterline (if any).
- Both thru and blind waterlines may have their depth adjusted (in the same manner as the Autowater function) to stay a safe distance away from surfaces (optional).
- Can easily switch waterline directions using the ~ tilde key.
- Respects the construction plane and system depth, allowing waterline circuits to quickly be designed in plates that are on compound angles.



OTHER IMPROVEMENTS

View Plates

- Formerly called View Holes, this lets you select one or more 3D plates to view.
- Now has the ability to show the components that are in the plate in addition to the plates themselves.
- Now remembers the last plates you chose to look at.

Generic Holes

- New Face-Pt placement method (default for 3D view) allowing for rapid hole placement in 3D.
- Thru holes will now use the solid model to determine their length, both when placed and when moved.

Smart Patterns

- Rotation angle is always based from component direction when using different angle increment values.

Baffle blades

- Now drawn in 3D

Projected Components (ejector pins, bubblers)

- Performance is greatly improved while animating, even on jobs with complex surfaces.
- Projected length of animation is more accurate

Waterlines

- More intelligent about creating and removing drill points.
- When moved/copied, they now use the new Smart Water animation routine.

Move/Copy Component

- Many move and copy commands have been extended to work in 3D view. They now work similarly to how you are used to working in 3D with KeyCreator.

Moldbase Editor

- Modifying the moldbase no longer resets your view/levels to 3D.
- Resizing plates no longer redraws them from scratch, thereby keeping any customizations.

Hole Assignments

- Renamed to Hole Management
- Can now be used to force a hole to recalculate itself to the solid model.
- Are not needed as much now that XMD uses the solid model.
- Are no longer retained when components are copied (since they are commonly copied to a different plate)

Redraw Component

- Can now be used on plates to restore the saved master plate.

Level System Improved for 3D Design

- Plates are now grouped by which half of the mold they belong to (cavity half or core half).
- Components are now grouped by which plate they are in.

Part Sections

- New routine developed to accurately cut and trim part sections.
- Fixed bugs which were causing gaps in the parting line.

2D holes no longer created

- With plate details now using the solid model, these are no longer needed.
- On bigger jobs, there could be tens of thousands of these entities, so getting rid of them helps to free up a significant amount of memory.

Component Selection

- Fixed some commands to allow users to select hole geometry in place of the component geometry (Show to View and Redraw Component for example).