

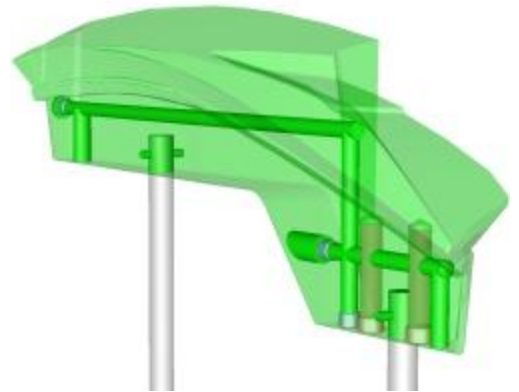
XMD-S 9.0 represents a comprehensive overhaul of the Expert Mold Designer to intelligently incorporate full 3D solid modeling. This switch makes XMD much more powerful than the previous versions. (This is why we added the -S). Designers have a more efficient way of working with the design. Yet all the old ways are still available so upgrading should be easy.

New Features

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.

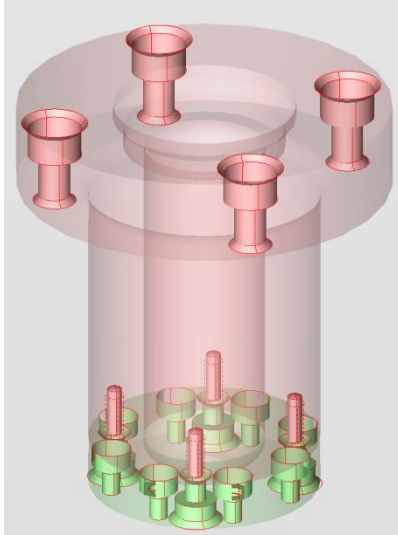
This means you can start the design quickly, update the data easily, put in ejector pins and cooling correctly, and not bear the burden of modeling with heavy block data. Yet when the block is finished, XMD-S also accepts and uses the block with integrated surfacing.

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

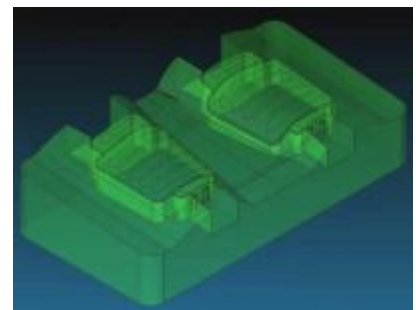
- Now use the actual solid plate to create the various views and dimensioning users are accustomed to.
- Holes are blanked or unblanked depending on the designer's specifications.

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 sold.
- Automatically detect changes you make to solid models, and updates size information.

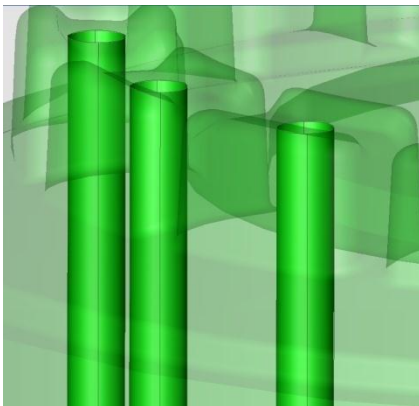
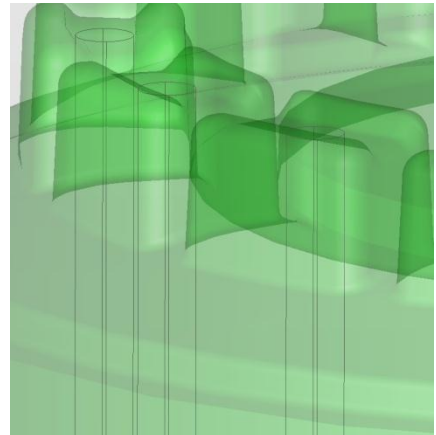
Solid Management Tools

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

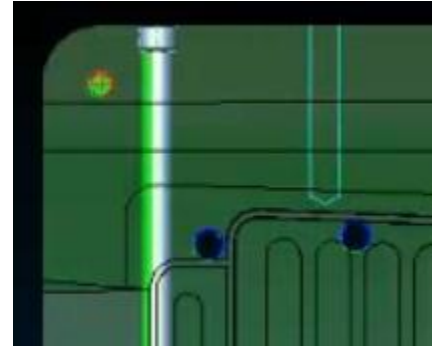
Demo video: <http://www.youtube.com/watch?v=2mZGwuAoG9M>

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 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.



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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.

What's New in XMD-S 9.0

- 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).