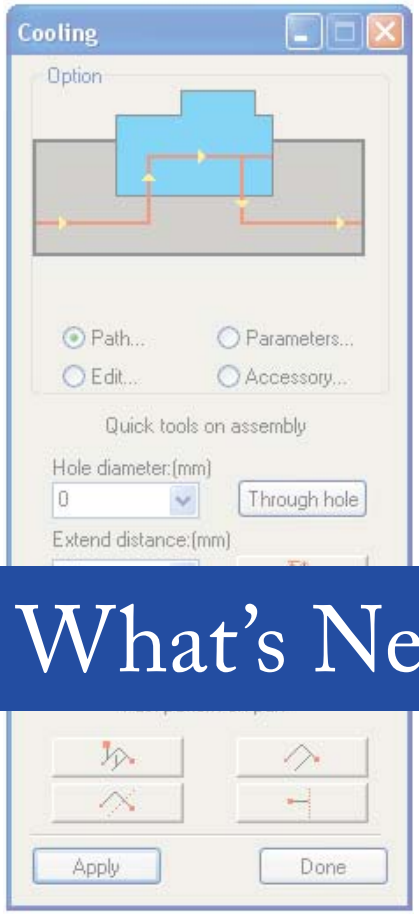
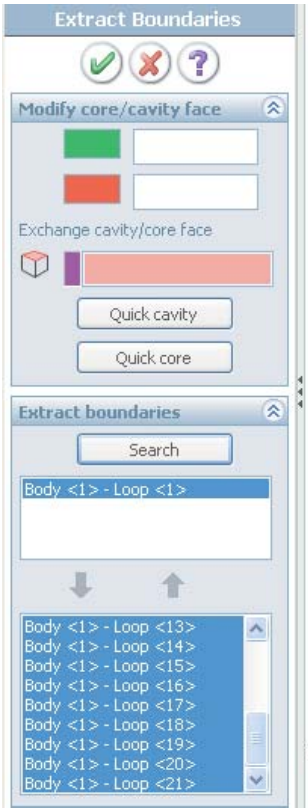
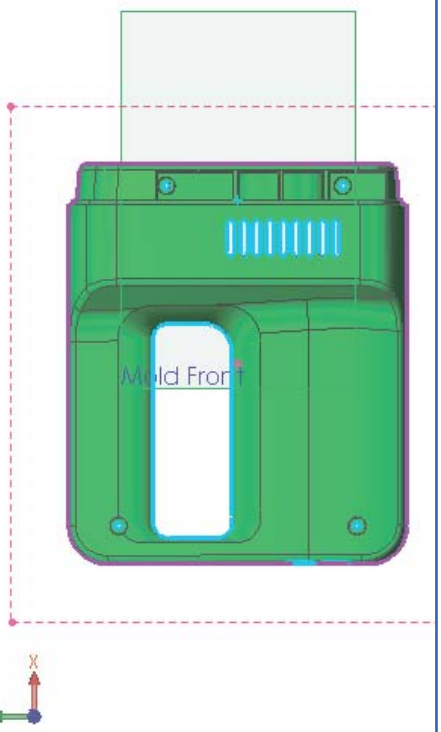
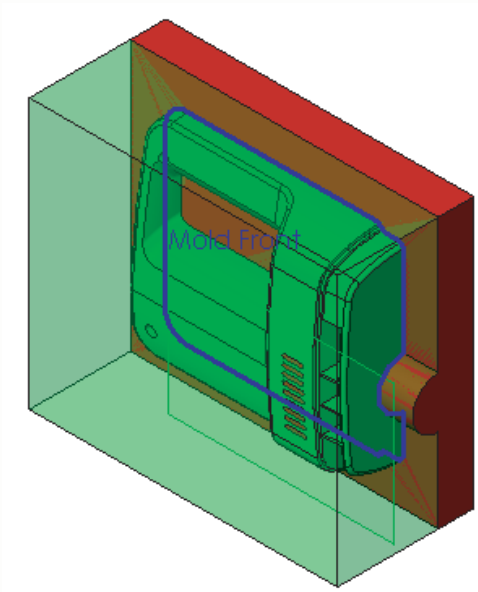


3DQuickMold 2011

What's New in Version 2011







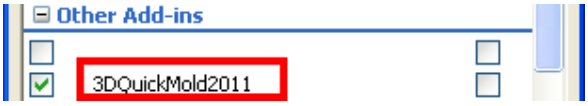
3D QuickTools Limited

What is new in 3DQuickMold2011

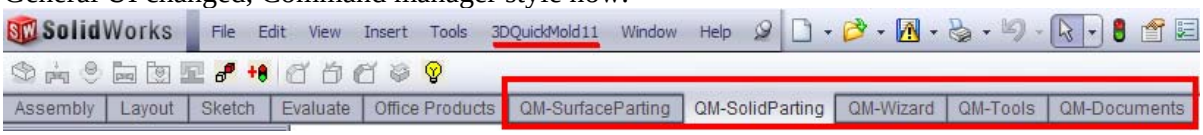
Important note: The latest release file is 3DQuickMold2011.exe

- New release applies to SolidWorks 2008 to SolidWorks 2011.
- New release supports both XP and Win 7 platform.
- New release supports both 32-bit and 64-bit system.
- New release automatically adapts Chinese version.

1. New add-in application name is 3DQuickMold2011, please refer to the installation guide regarding how to start 3DQuickMold2011 in SolidWorks.

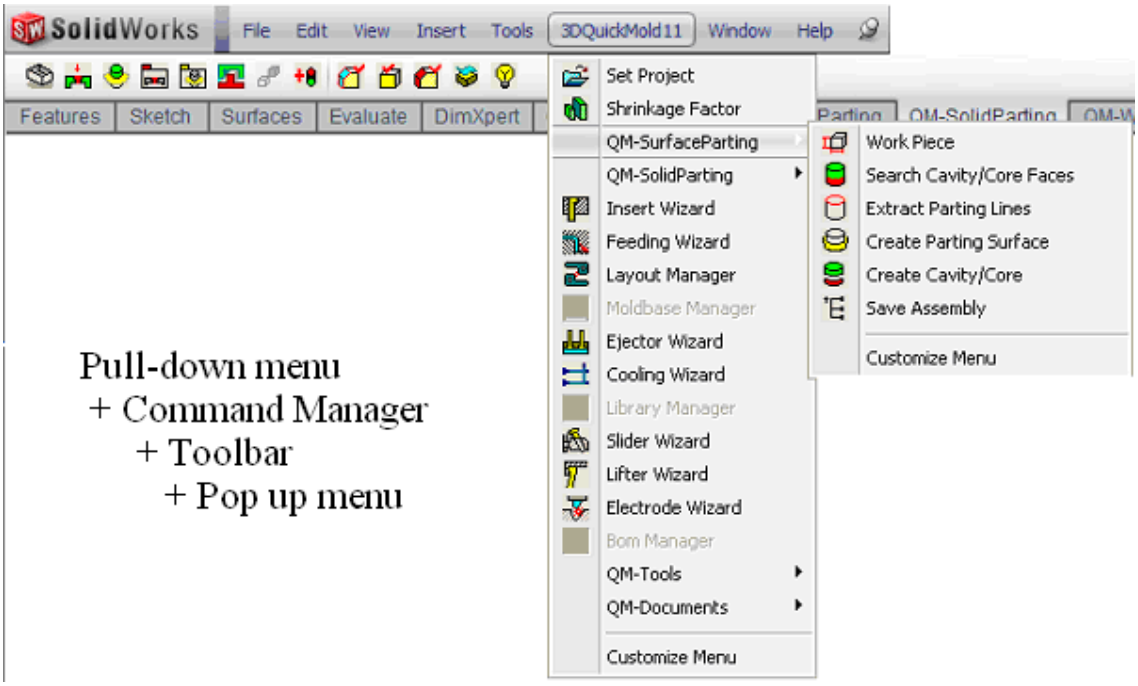


2. General UI changed, Command manager style now.

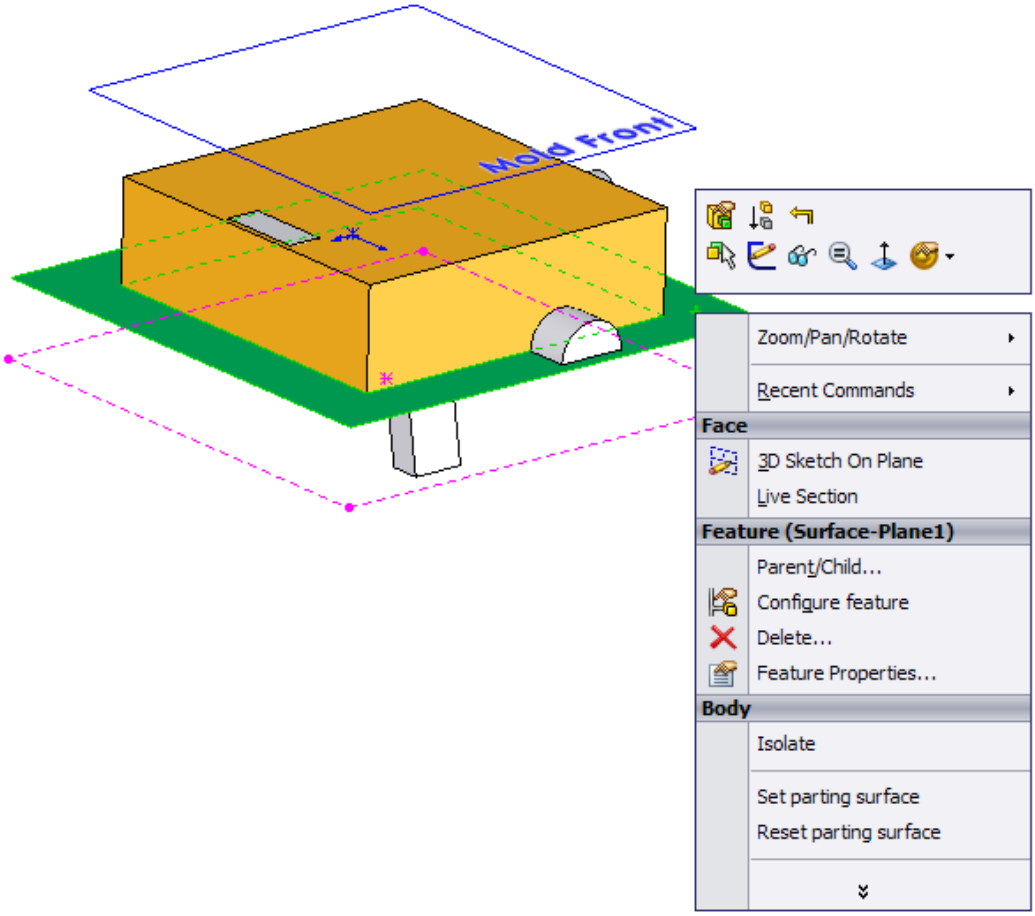


QM-SurfaceParting	:Command group for surface parting
QM-SolidParting	:Command group for solid parting
QM-Wizard	:Main module for plastic mold design
QM-Tools	:Common tools for mold design
QM-Documents	:Frequently used document

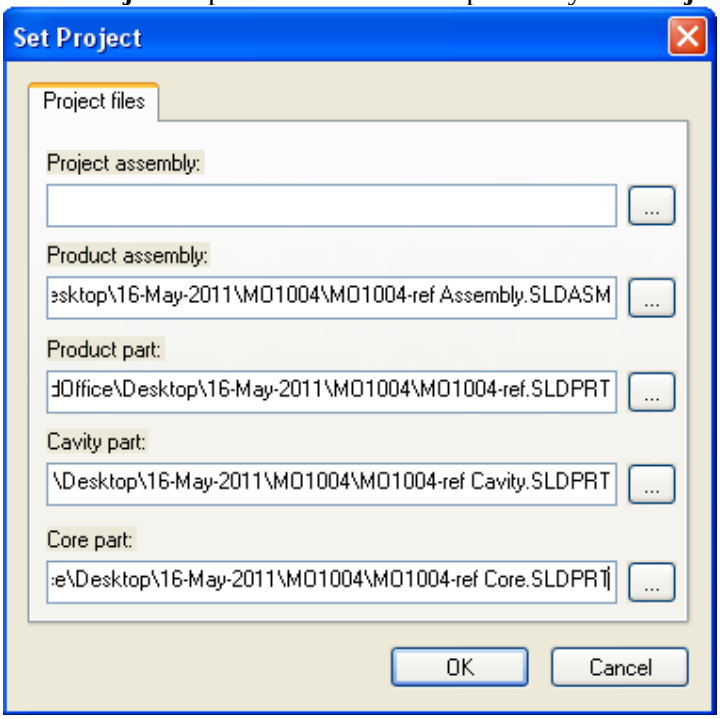
3. Pull-down menu as follows



4. Pop-up menu working on part model, for face type and surface body type selection.



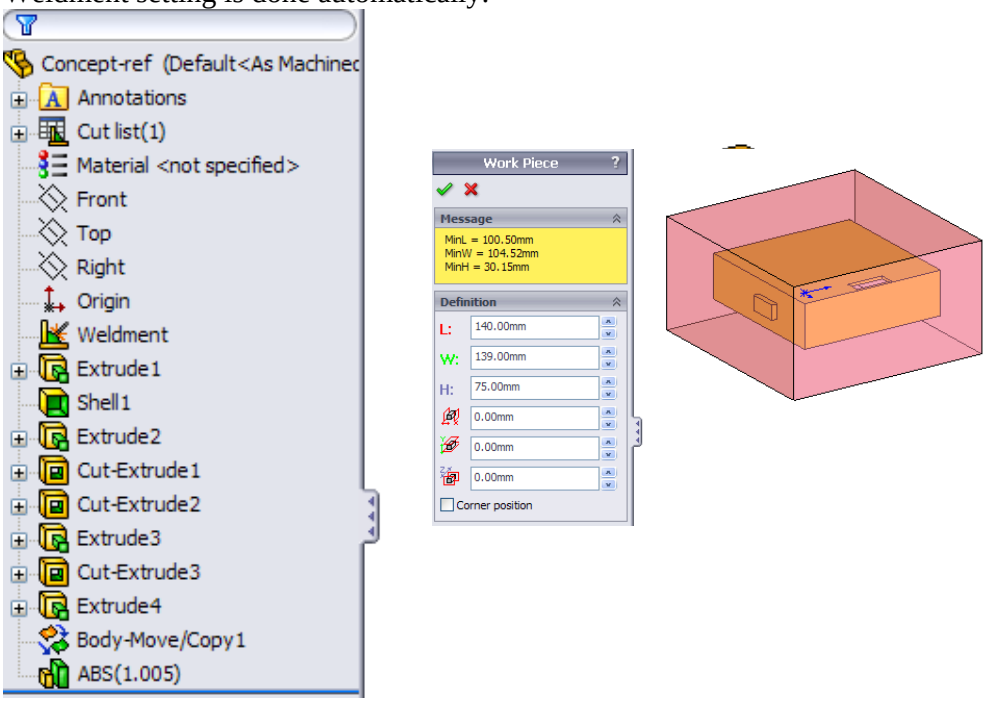
5. **Start Project** in previous version is replaced by **Set Project** function in this new release.



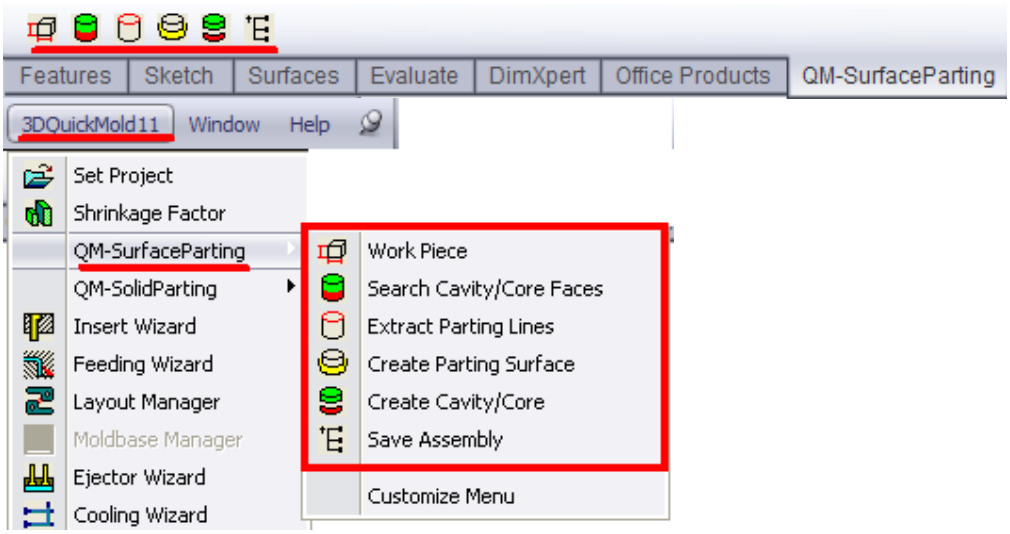
It is no longer a compulsory step to start a mold design, instead, it is mainly used to set a working project or recognize an existing mold design that was not initially completed by 3DQuickMold. For example, an import core/cavity from other platform.

Multiple projects are supported now, this means at a single Solidworks session, you can design more than one mold at the same time.

6. Shrinkage factor
Weldment setting is done automatically.

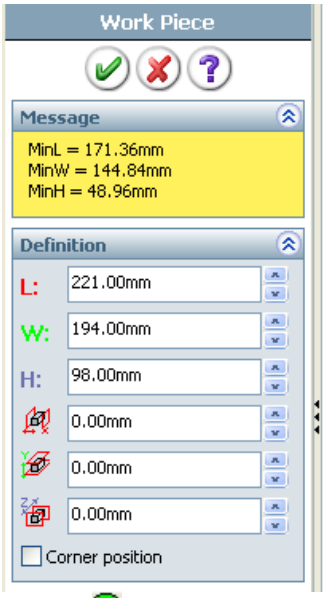


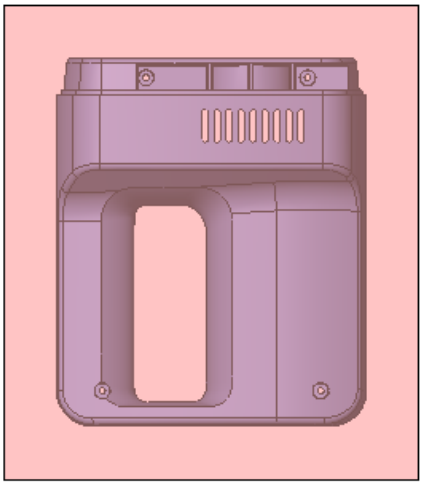
7. A new module is named as Surface Parting
It is used to simplify a lot of Solidworks process in core/cavity separation.

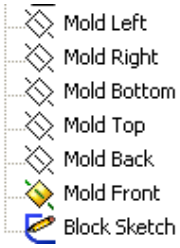


Key points in this new module as follows

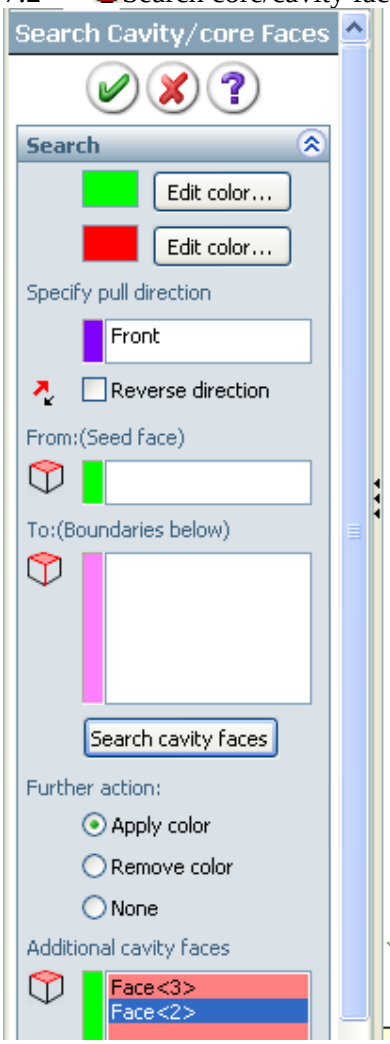
7.1 Work Piece. Now, transparent solid body, better preview than the previous framework one. Further more, it is editable by the same dialog.

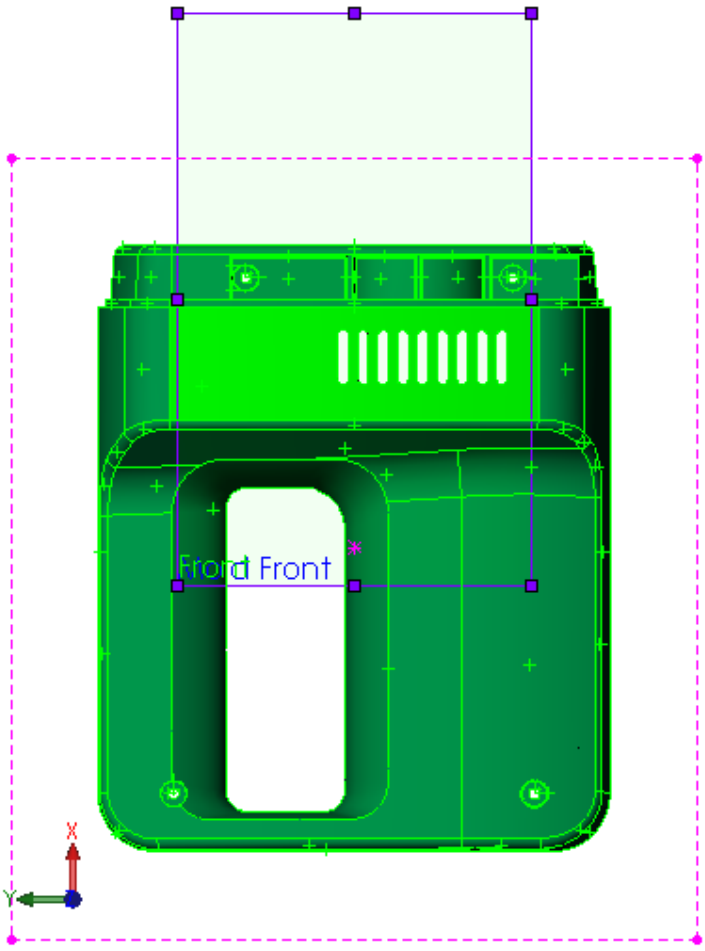


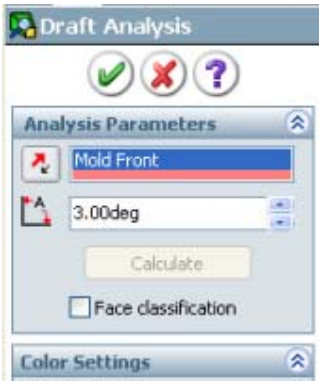




7.2 Search core/cavity faces.

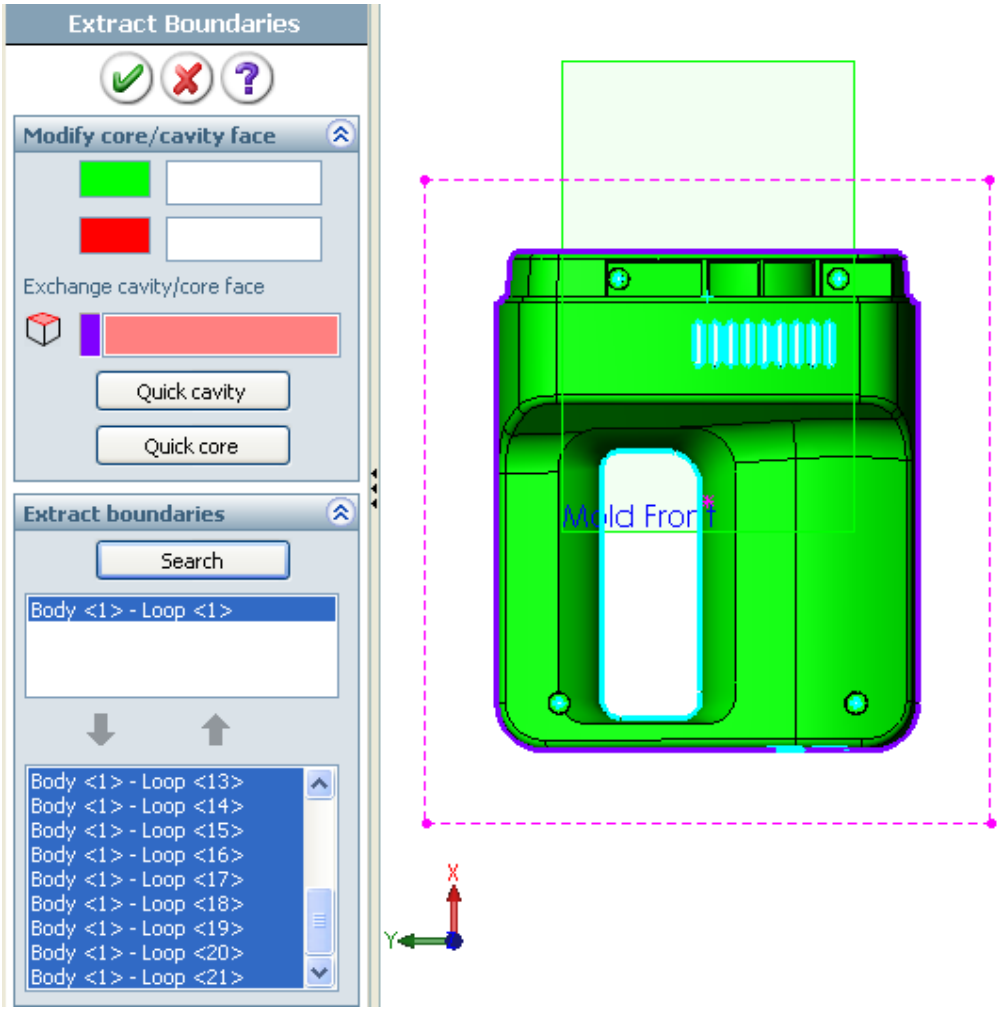


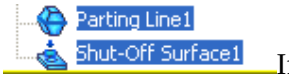




Similar to the **Draft Analysis** in SolidWorks, but much better boundaries control. The searching result will be a serial of adjacent body faces.

7.3 Followed by the core/cavity searching result, can automatically extract the parting lines and do the shut-off as well if it works in SolidWorks.

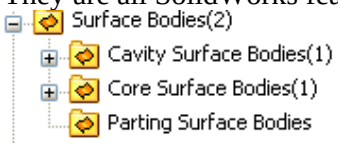




If successful, the Parting Line and Shut-Off feature should be appeared on the SolidWorks feature tree.

Whether **Shut-Off** feature ok or not depends on the complexity of the plastic part.

They are all SolidWorks feature, please check the result inside the **Surface Bodies** folder

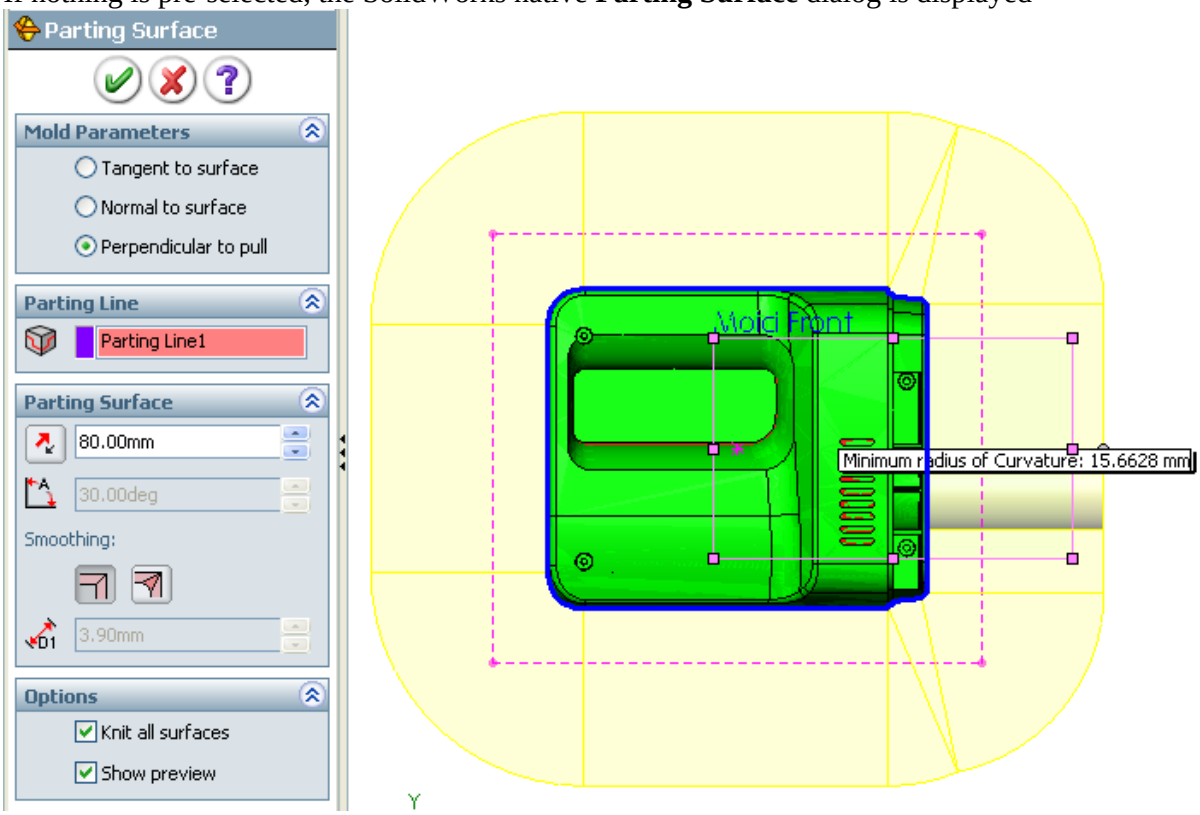


Shut-Off in SolidWorks can only be performed once, this is a SolidWorks limitation, but manual operation to handle the hole-patching is still allowed by putting the patching surface bodies into the folder named as **Parting Surface Bodies**.

7.4 Parting Surface.

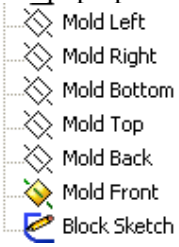
There are two possible dialogs brought by this button.

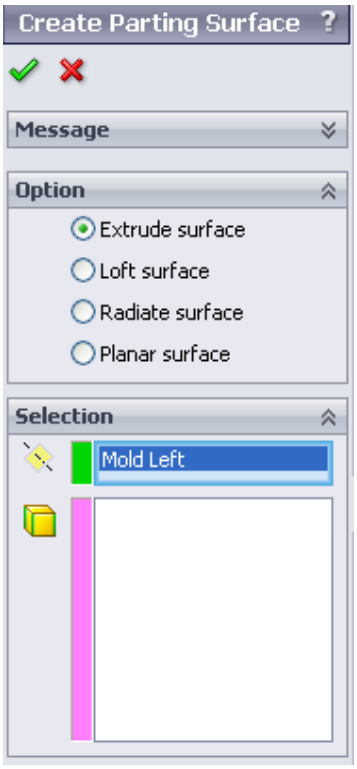
If nothing is pre-selected, the SolidWorks native **Parting Surface** dialog is displayed



If Parting Line was created in the part already, it will be selected automatically in the dialog.

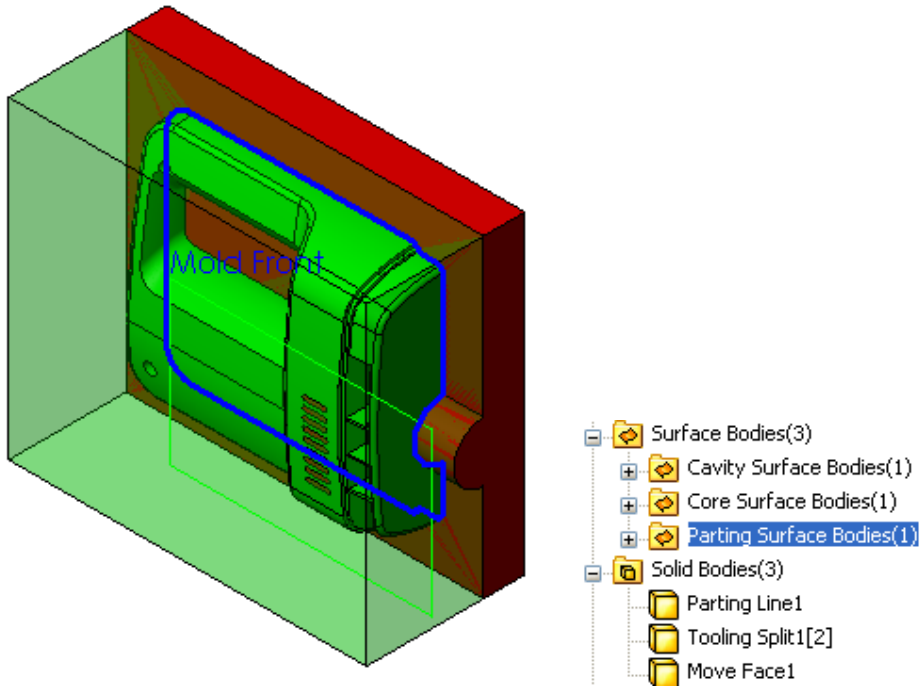
If one of the following reference planes created by **Work Piece** is selected, a different dialog will pop up.





This dialog was available in past 3DQuickMold version.

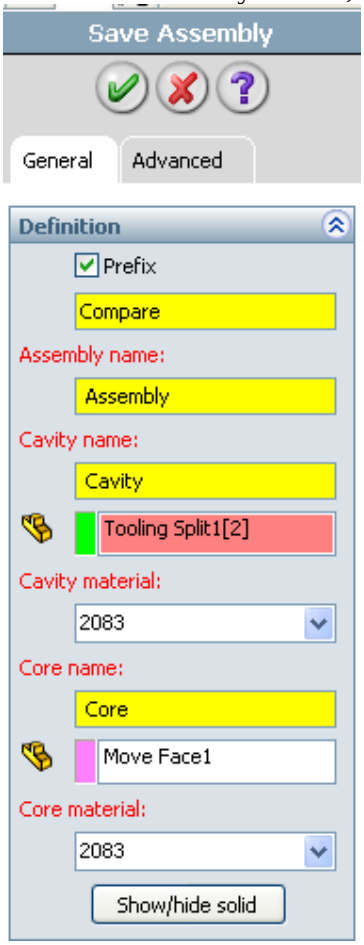
7.6 Split the core/cavity automatically based on the existing features such as Parting Line, Shut-Off and Parting Surface defined in previous steps.

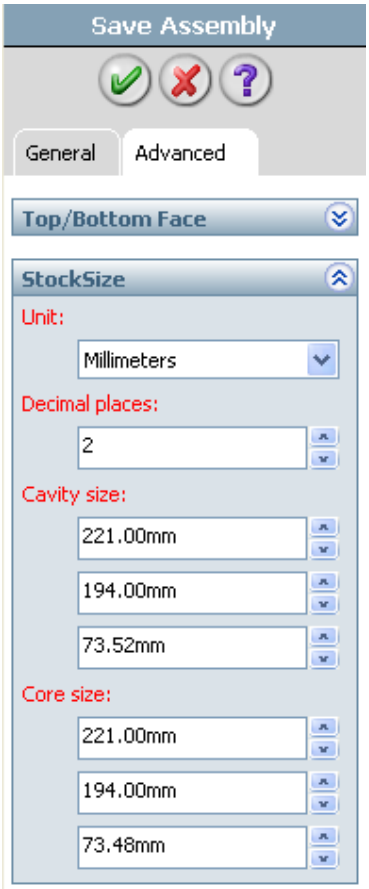


It is a native SolidWorks function but group it here to facilitate user to use it.

7.7 Save the core/cavity bodies into an assembly file.

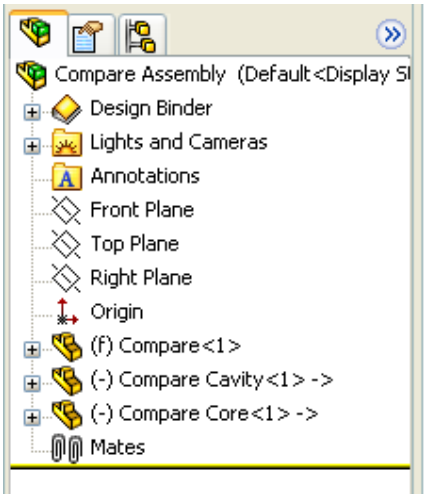
Once the core/cavity is done, can use this function to save it as an assembly document.

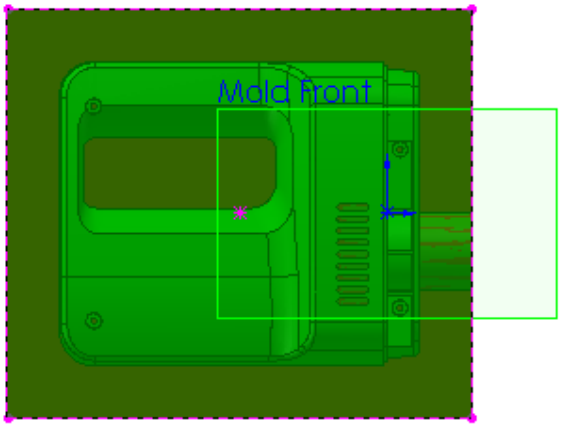




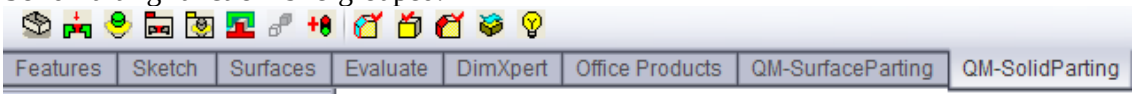
Besides the core/cavity name, user can specify the material for them. That information will be shown in BOM if needed.

The final assembly and its components are created as the following feature tree shown.





8. Solid Parting function is re-grouped.

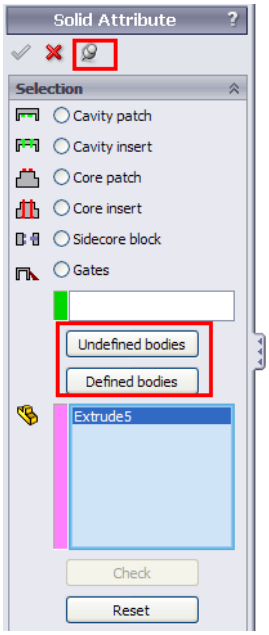


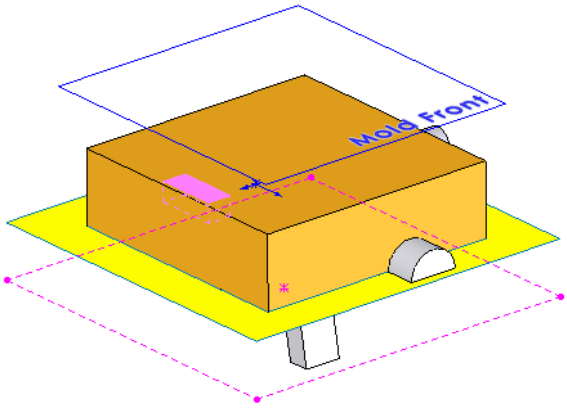
Many of them exist in past version already but some enhancements in this new release.

Solid Patch and **Solid Attribute** are placed in this group, the **Solid Utility** button and its submenu item are removed

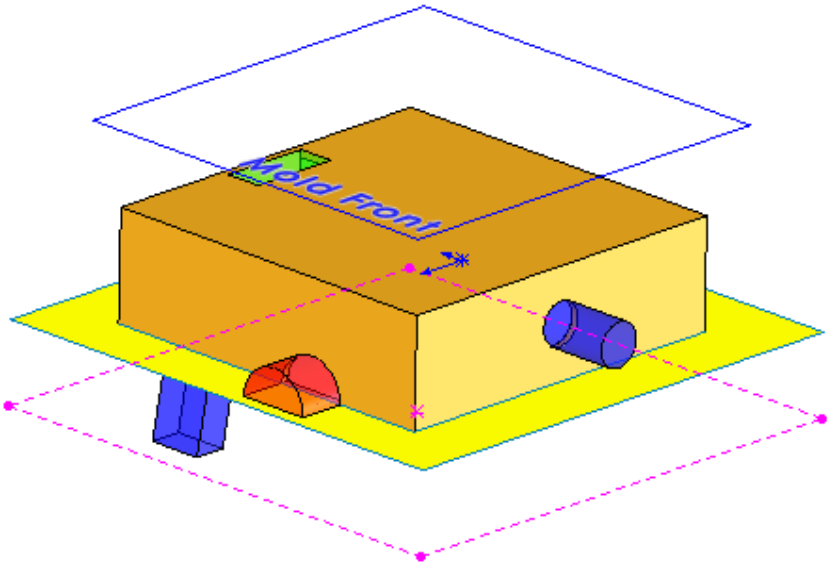
8.1 Pushpin is implemented in **Solid Attribute.**

Undefined bodies and **Defined bodies** button can easily do the mass selections.

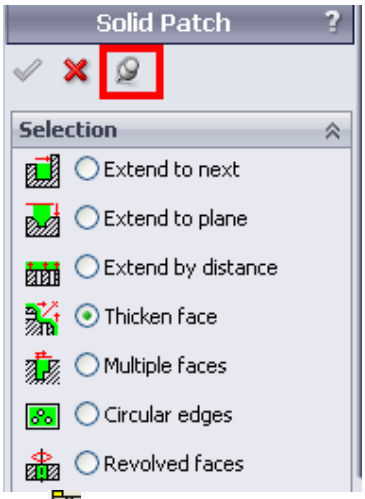




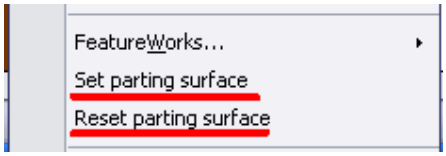
After the attribute is set, the body color is changed accordingly.



8.2 Pushpin is implemented in **Solid Patch**

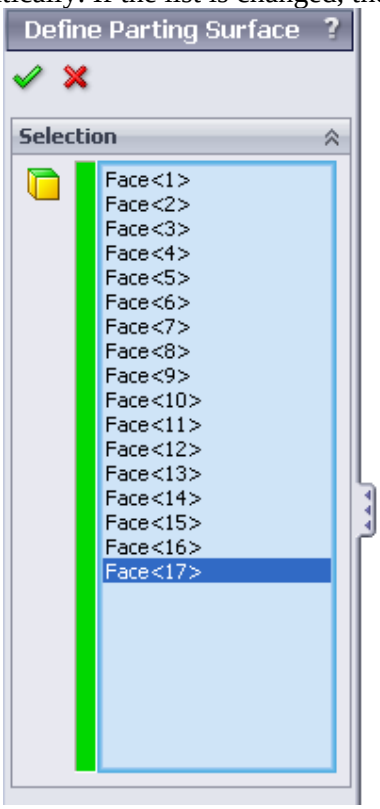


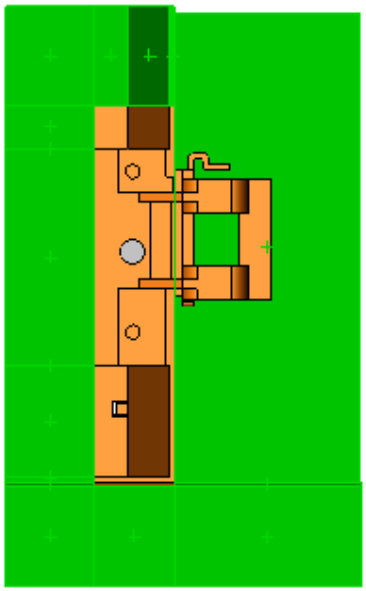
8.3 Define parting surface.



Parting surface can be set by pop up menu and set or reset by this dialog as well

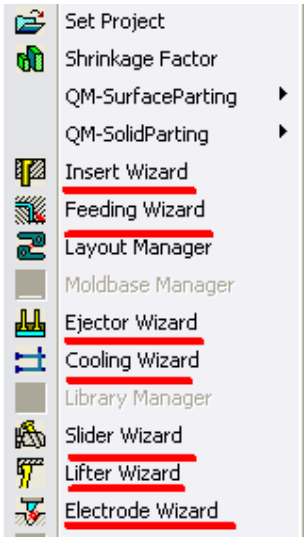
When this dialog is shown, the existing parting surface will be selected in the list automatically. If the list is changed, the parting surface will be updated based on this list.





The face on solid body can be set as parting surface. This is quite different from the SolidWorks behavior. In SolidWorks, only surface body can be defined as parting surface.

9. Wizard style dialog is implemented in many modules.

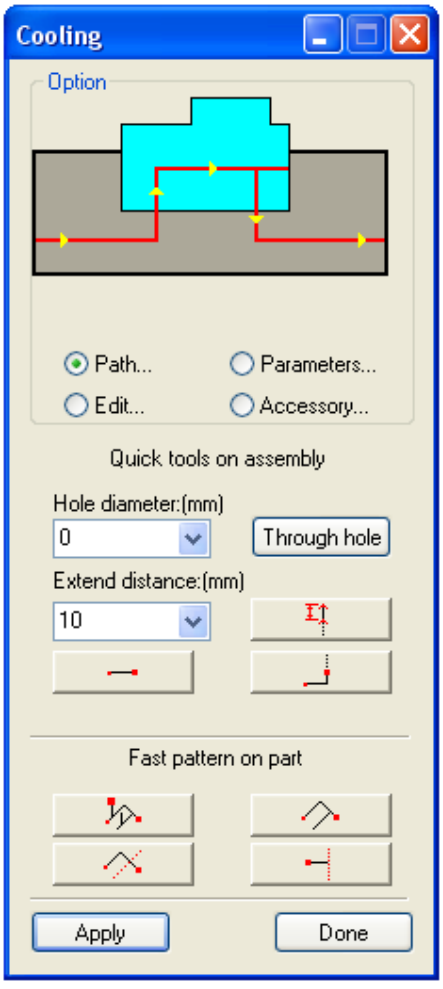


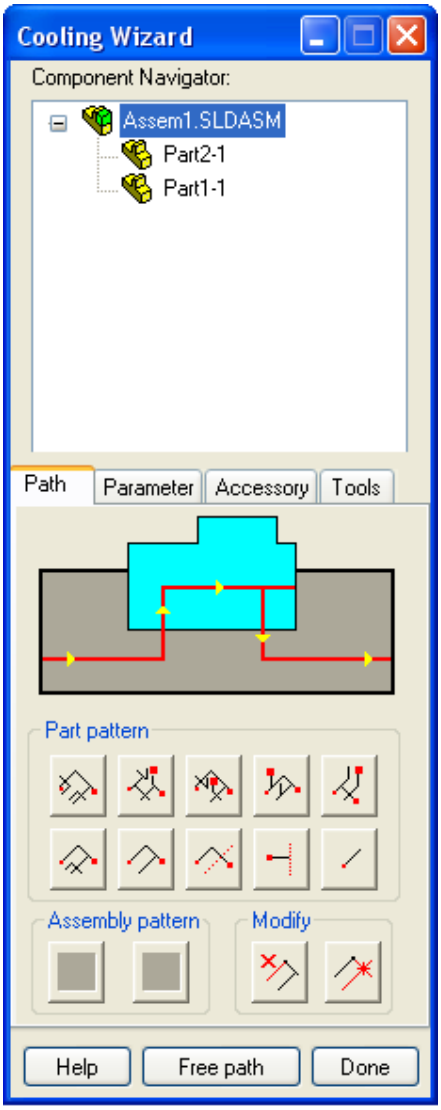
As the module name says in 3DQuickMold, we have Insert Wizard, Feeding Wizard, Ejector Wizard, Cooling Wizard, Slider Wizard , Lifter Wizard and Electrode Wizard totally 7 modules now changed from the normal dialog style to wizard style already.

The benefits of wizard-style UI are obvious.

The below left one is the old style
The right one is the new wizard-style dialog.

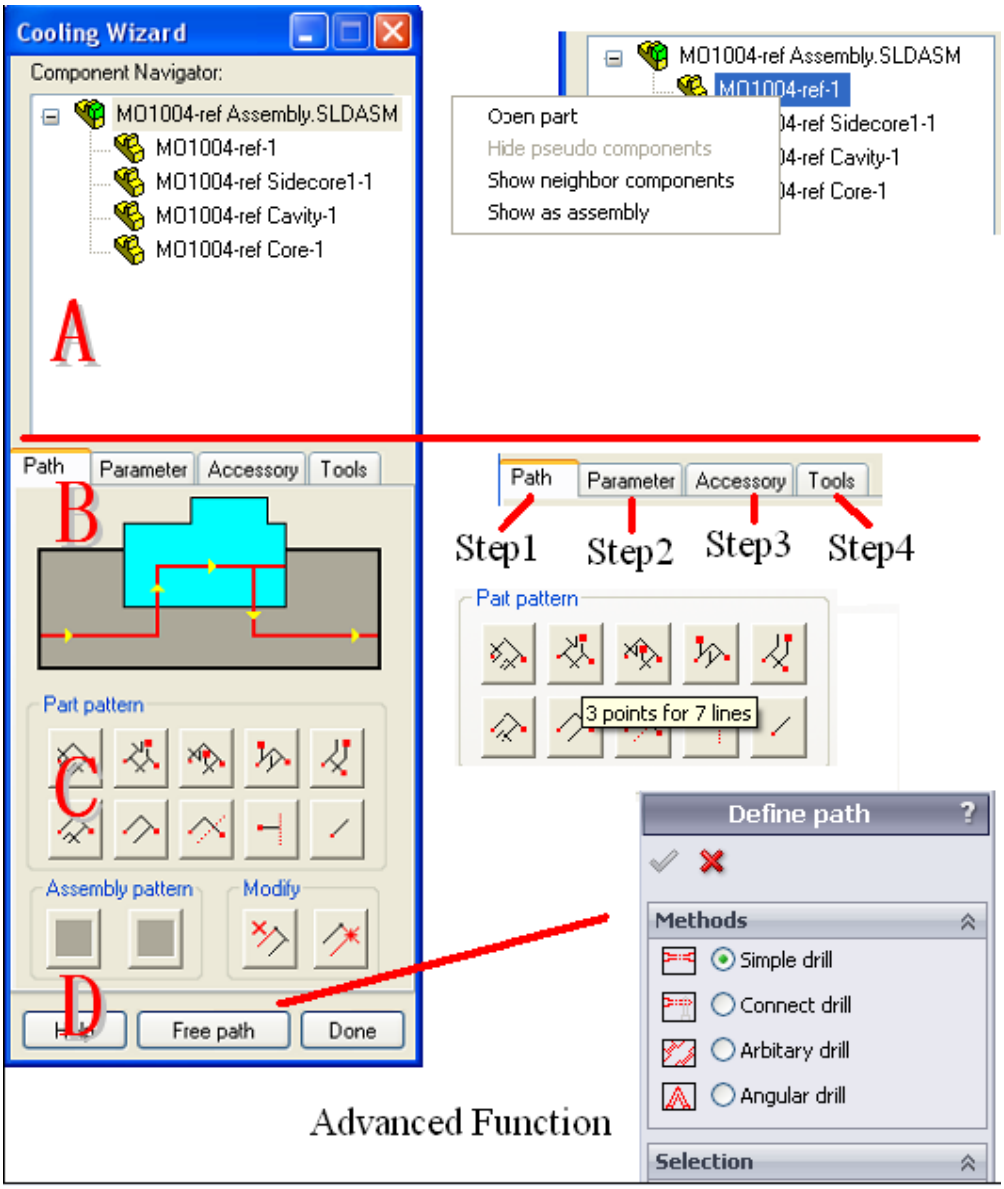
Functions are better grouped now.
Users can normally follow the wizard page to complete the design for this particular module.





All wizard-style modules are working at a similar way.

Let's take the Cooling Wizard as an example to explain how to use the functions on it.



The wizard page is basically classified into A, B, C, D four portions.

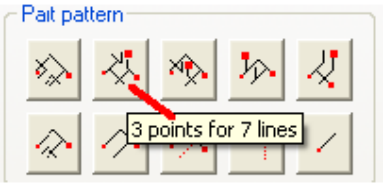
Portion A is used to help designer to navigate the working document quickly in different mode. This area can show some design information such as bitmap sometime.

Portion B is the wizard title to guide the user to complete these modules at normal order, in this sample, the step1 is to define the cooling path, and last step is some tools to use.

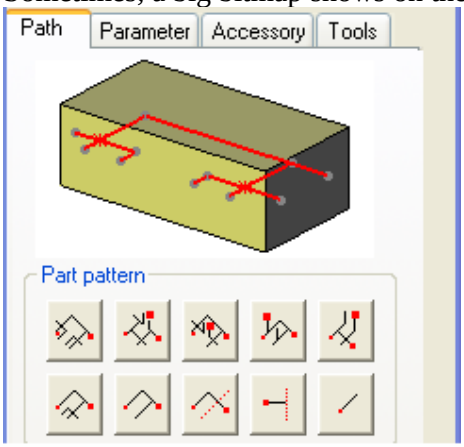
Portion C is the actual function buttons, when **portion B** is activated to different page, the responding set of controls will be displayed at this area. They are normally the most frequently used operations that don't need too much inputs and selections.

Portion D is advanced action that will bring out a SolidWorks PMP dialog for advanced design that normally need more input and selection to complete.

Tips: If you move the mouse cursor over the button, there are a tool tips to give you a basic design hint.

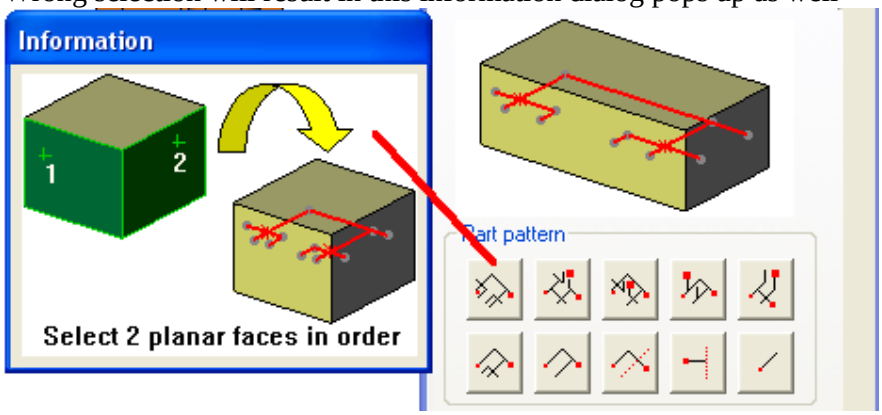


Sometimes, a big bitmap shows on the dialog to give you a better view.



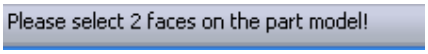
At any time during your design, in case you don't know how to use this function, just click on the button without any selection, the information dialog will show you how to use this function including your selection order required.

Wrong selection will result in this information dialog pops up as well



The above information bitmaps says that you should pick up totally two faces in order, then click this button, a design result should look like the right one pointed by the arrow.

Some information shown on status area too

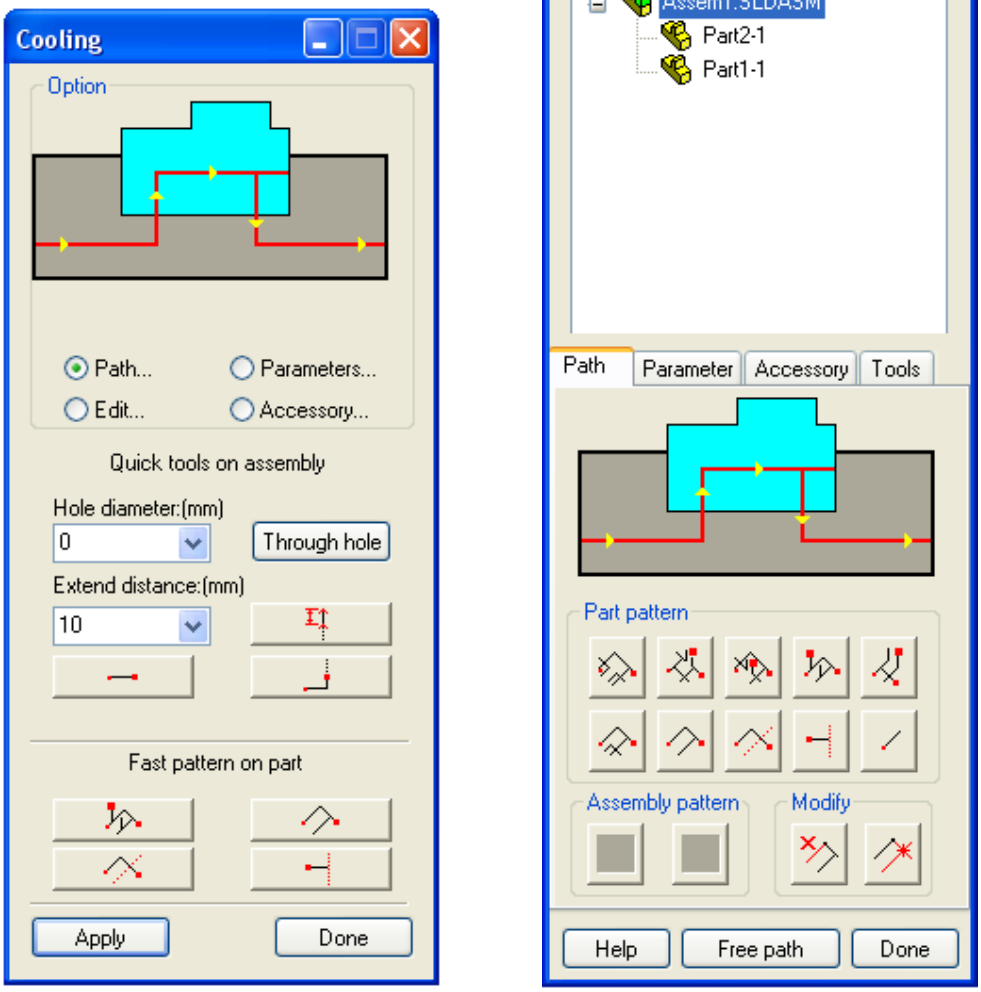


For more design details, you can refer to the manual.

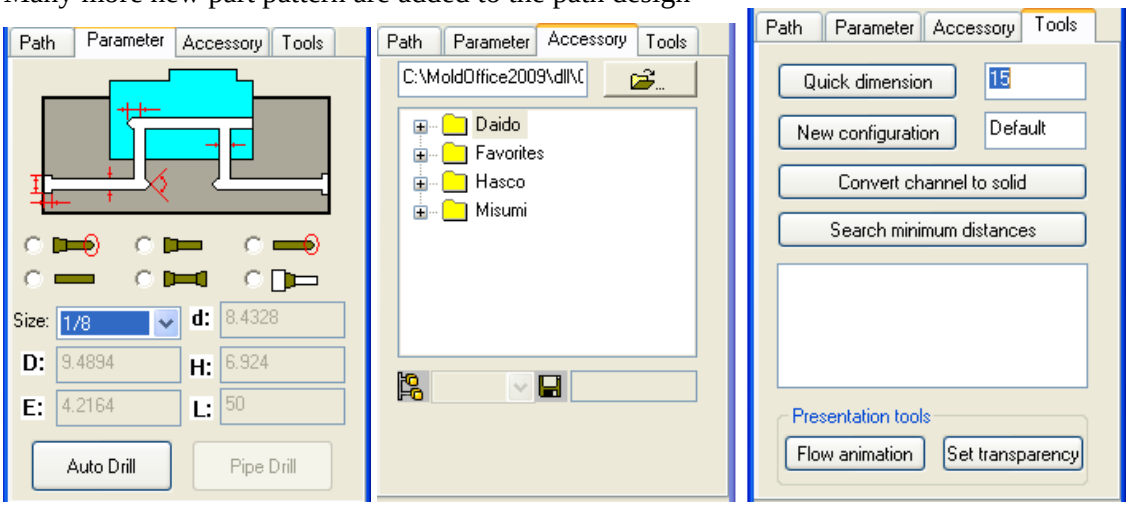
Additional information, all wizard-style modules can be run independently if needed.

10. Cooling Wizard

Let’s put the old version and the new one together.

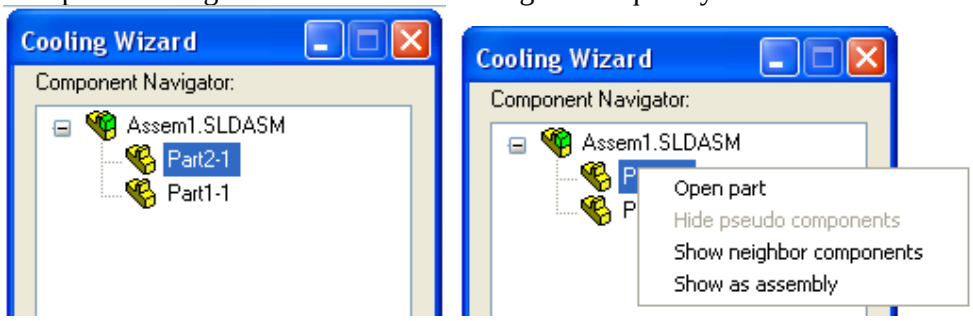


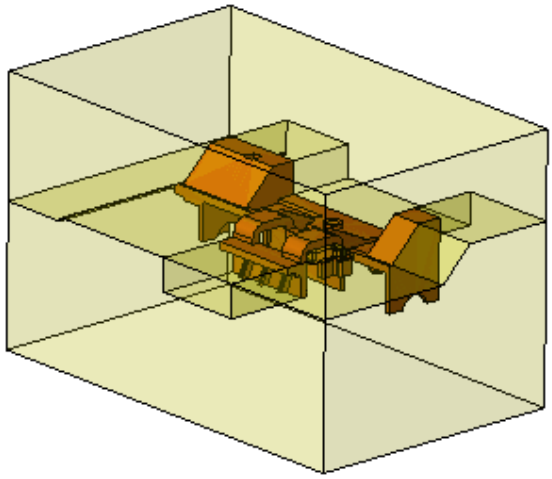
Many more new part pattern are added to the path design



Four pages, you can see many new functions comparing with the previous one.

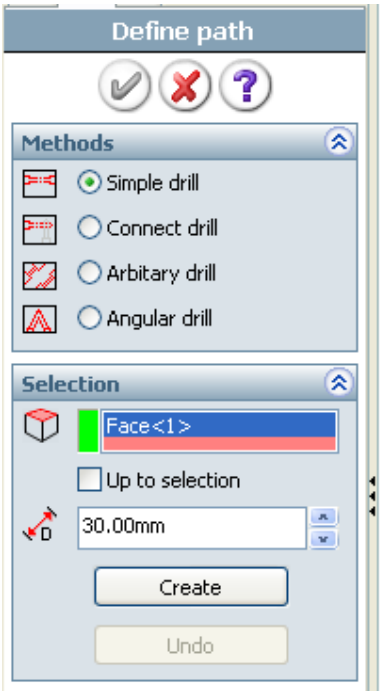
Component navigator to switch the working model quickly at different mode.

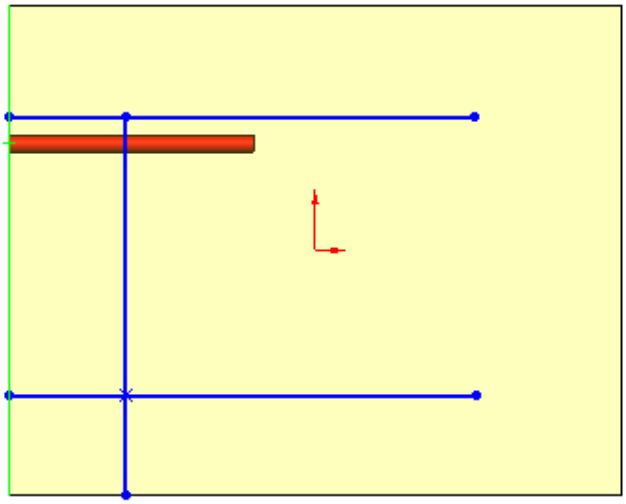




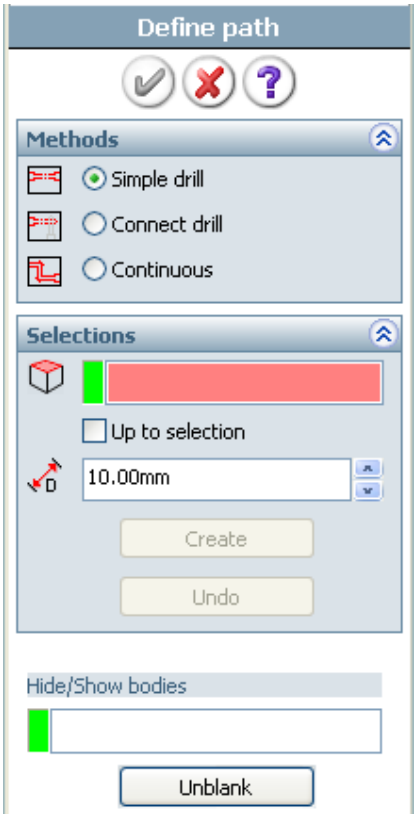
Show as assembly opens an assembly component as part but the other components shown as temporary body for your design view reference(not geometric reference, those temp bodies can be selected)

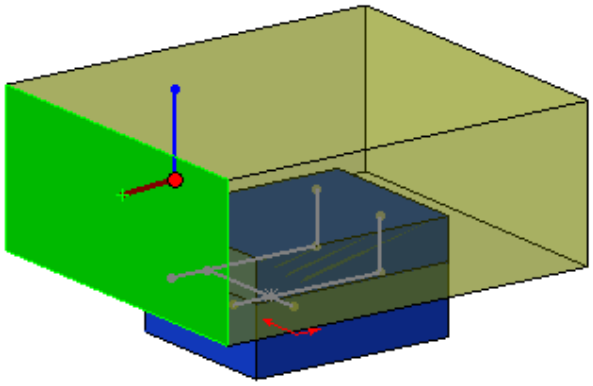
The existing functions are improved as well in term of the graphic preview in **Define path** if you click the **Free path** button when the **Path** page is activated.





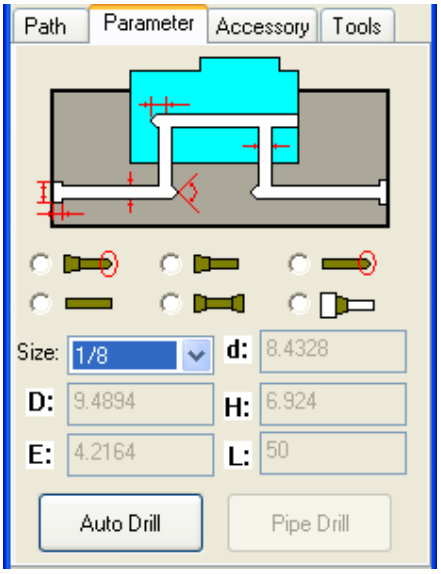
Please be noted, **Define path** has different behavior for part model and assembly model.

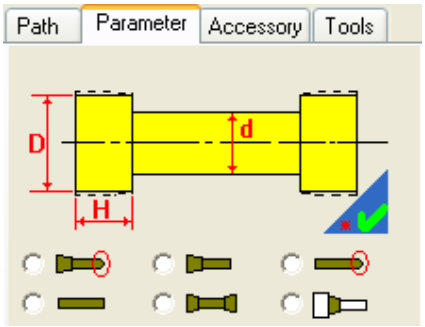


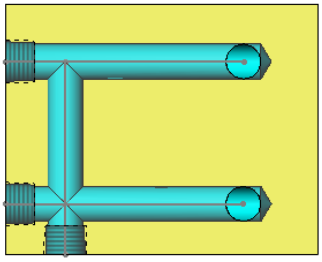


All cooling path is actually SolidWorks 3D Sketch.

The **Parameter** page is basically a new page. The new function uses the hole-wizard to create the cool channels. **Auto Drill** can create the cooling channel if the cooling path is done by standard cooling pattern on Page page.

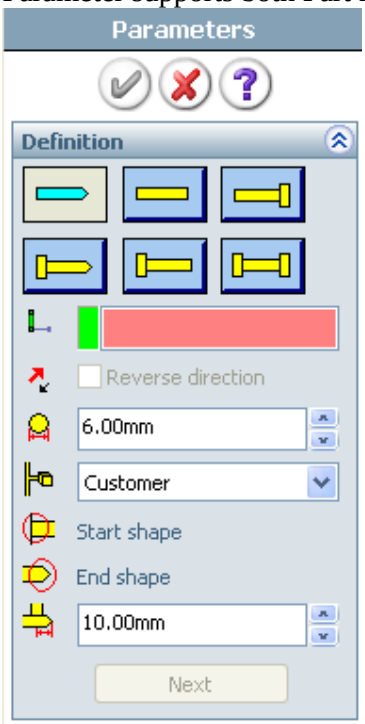






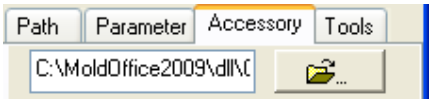
Previously, our cooling path is created by Revolve Cut and this is still kept for user-defined design.

Parameter supports both Part model and Assembly model.

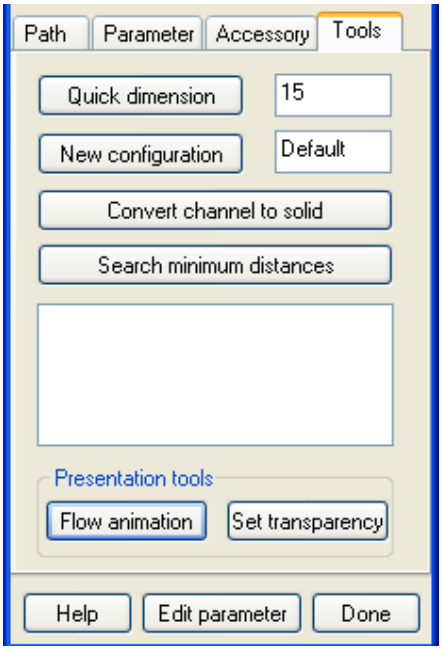


The new UI is much improved than before, can now select the Bitmap Button directly.

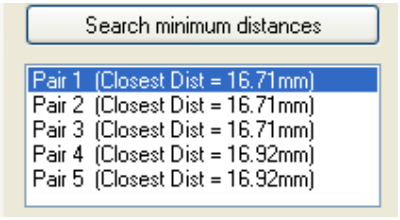
Accessory can now customized the library folder, thus, users among the intranet can easily share some libraries on the server.



The last **Tools** Page are some advanced design tools, don't have those before.



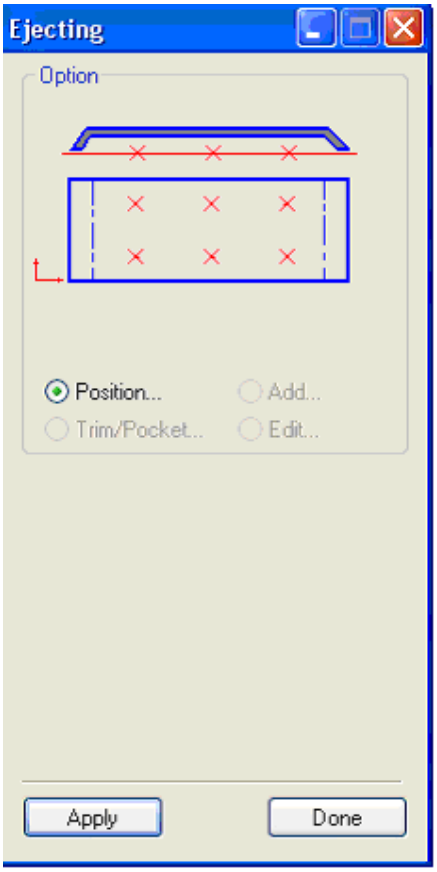
Quick dimension and **New configuration** can quickly add a dimension and set a new configuration.

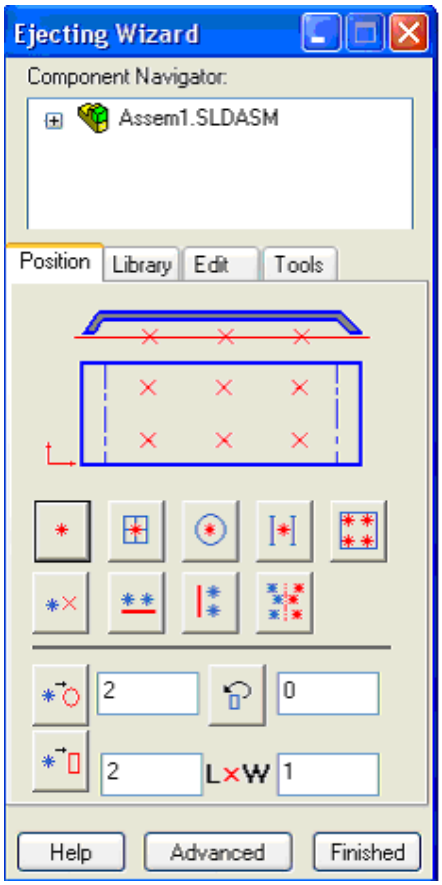


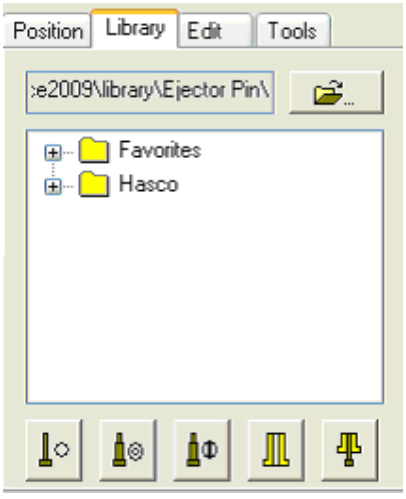
Can list 5 pair of faces that has minimum distance. This function is used to detect the design error.

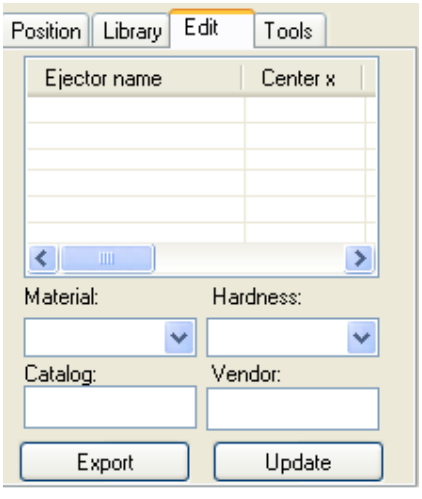
11. Ejector Wizard

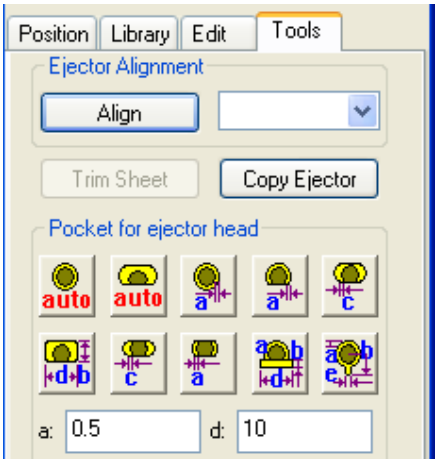
Quick comparison by the following two pictures for old version and new one.





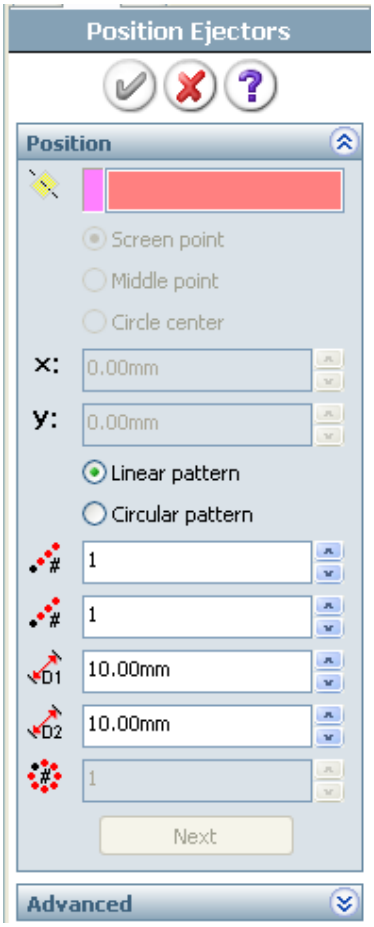




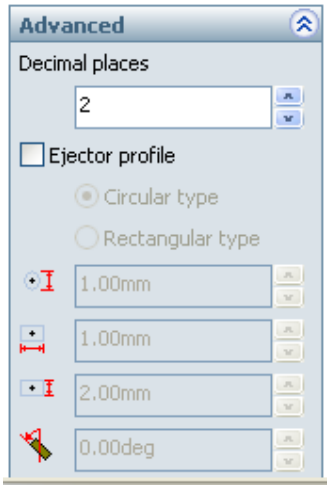


Also, some new-added functions mainly on the wizard pages and improved old functions for existing PMP dialogs.

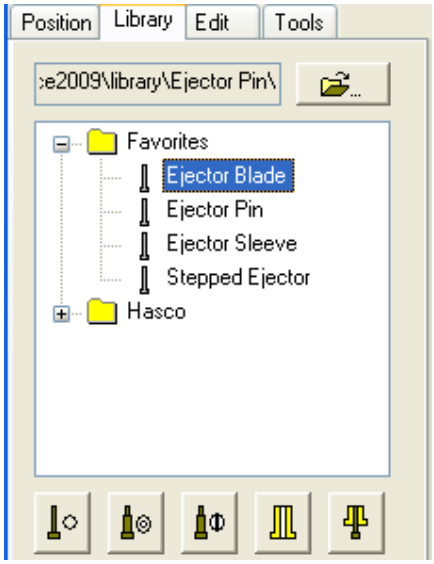
Position has a few enhancements on this page:

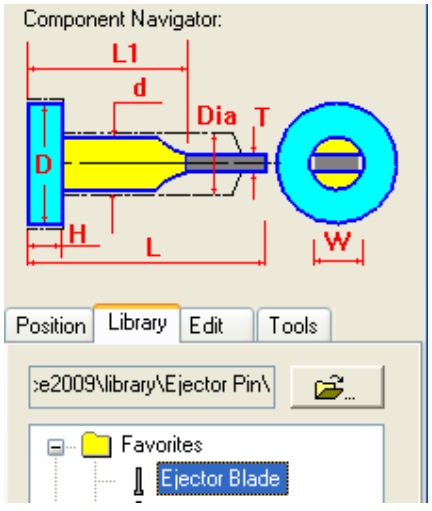


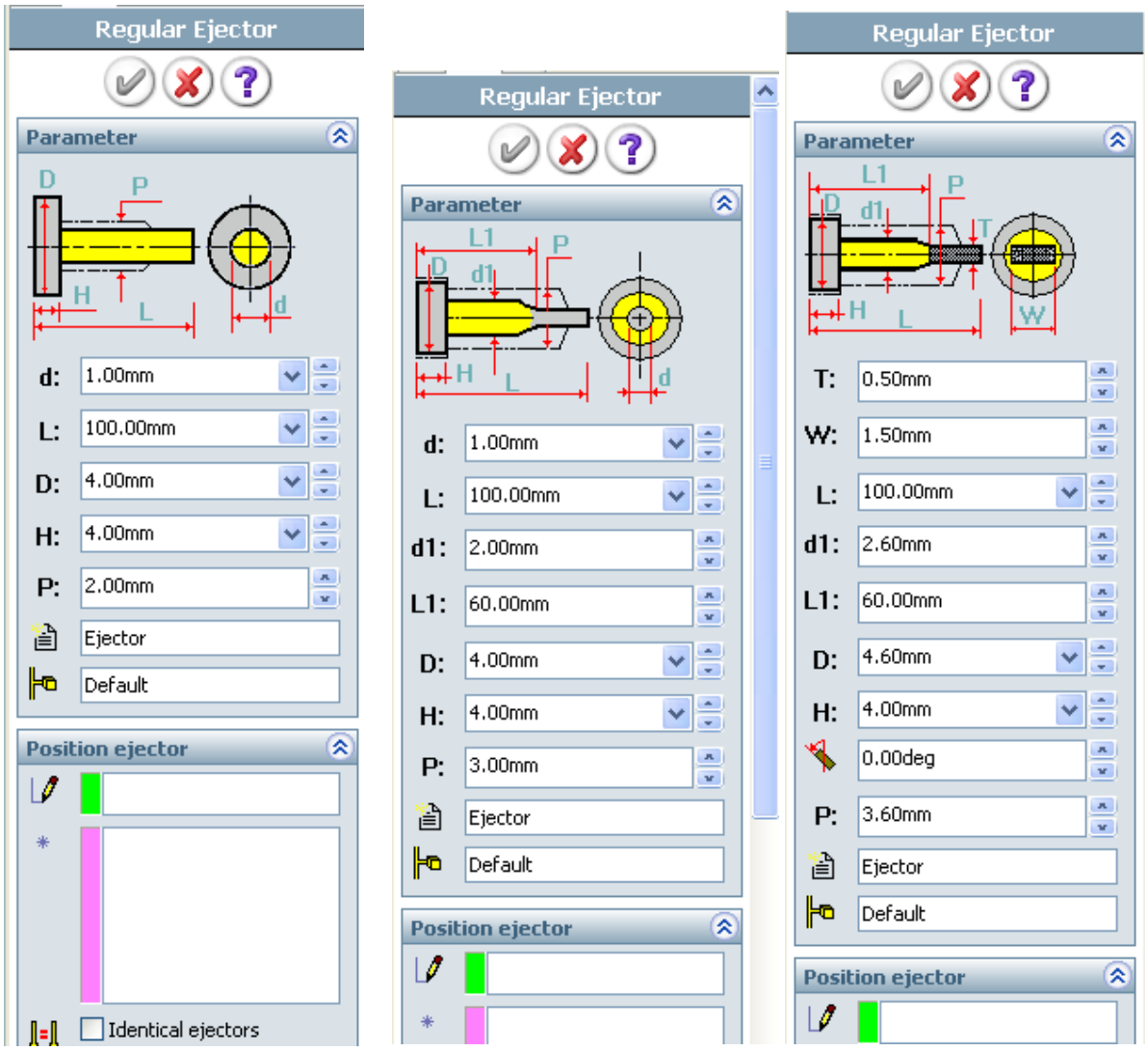
- Better preview
- Ejector profile

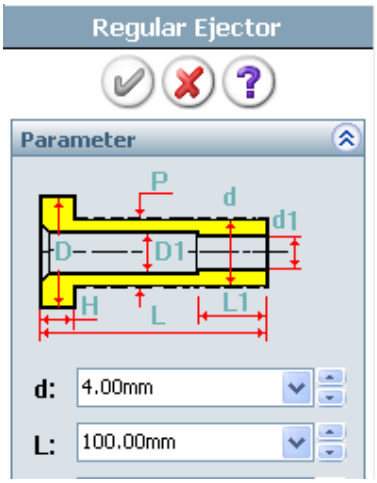


Library can add non-standard ejectors now, those are totally new functions.

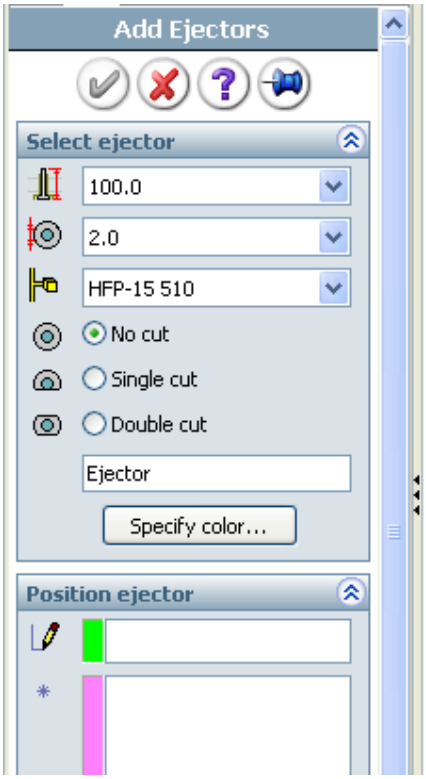


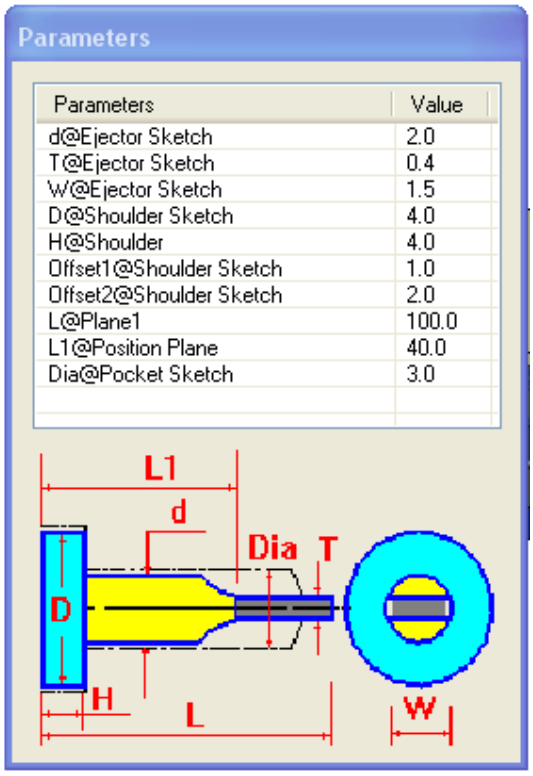






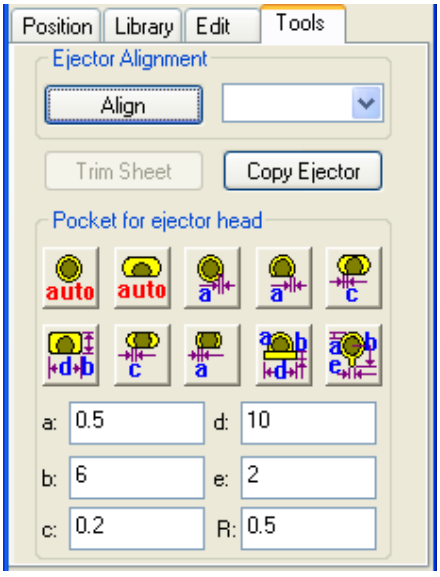
Pushpin is implemented.





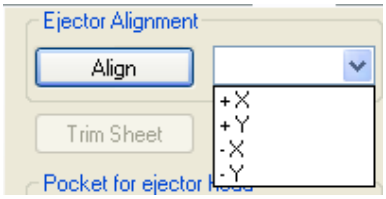
Preview is much improved in this version.

Tools provides the strong pocketing now.

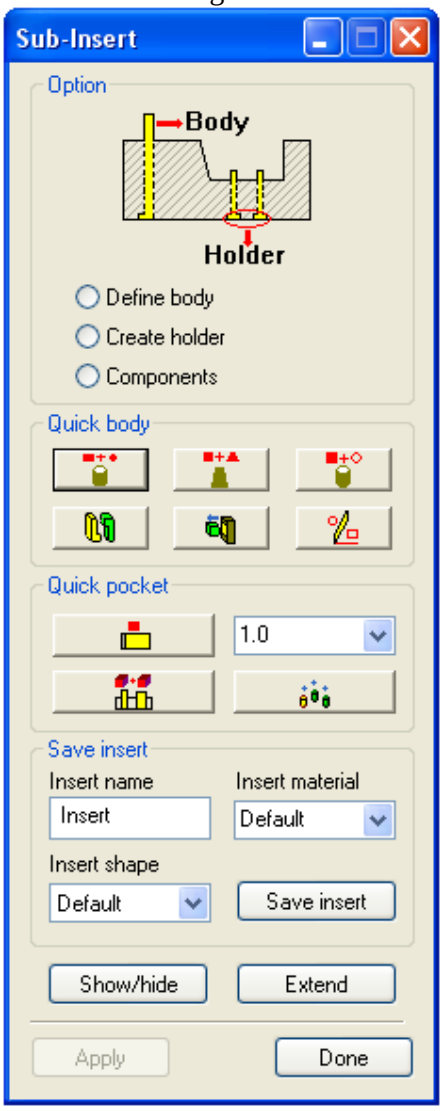


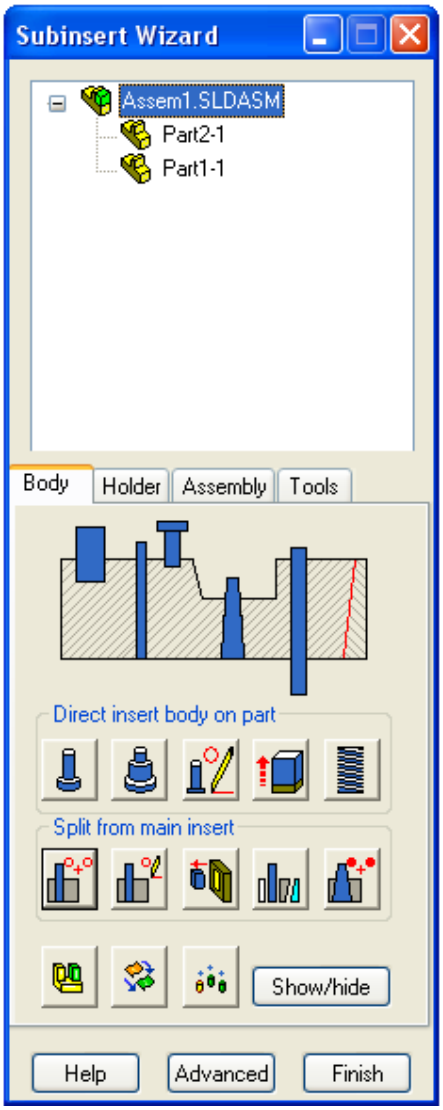
10 pocketing functions.

Very strong functions to handle the pocketing for ejectors on mold ejector plate.

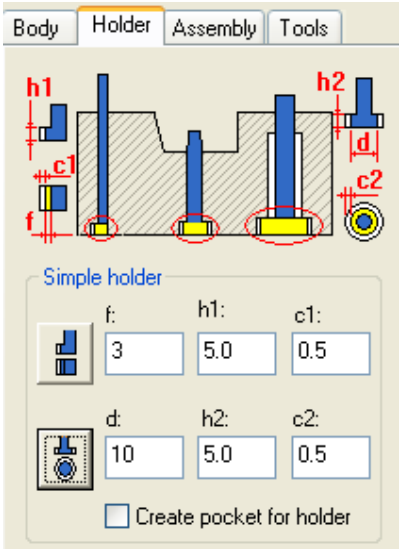


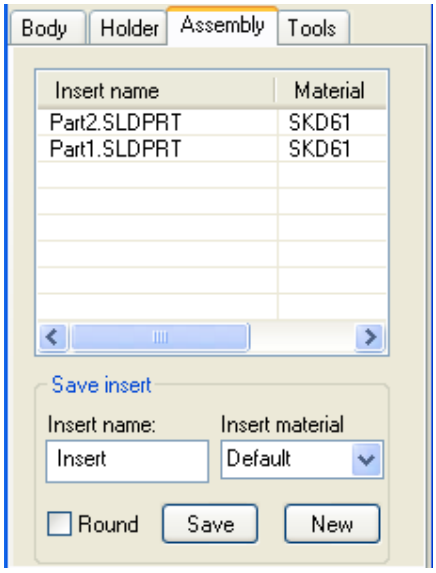
12. Insert Wizard. A glance on old version and new version

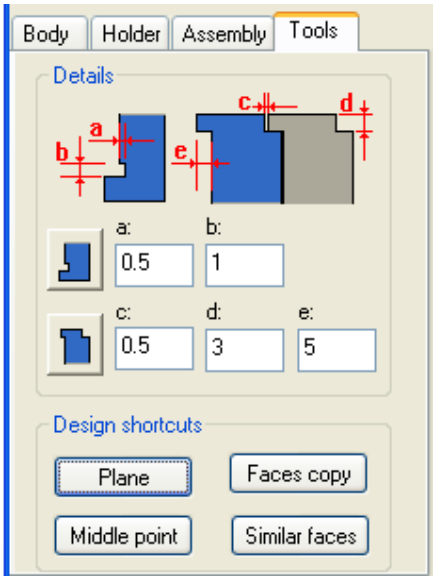




Other three wizard pages as follows.







Well-organized grouping now for insert body creation, holder creation.

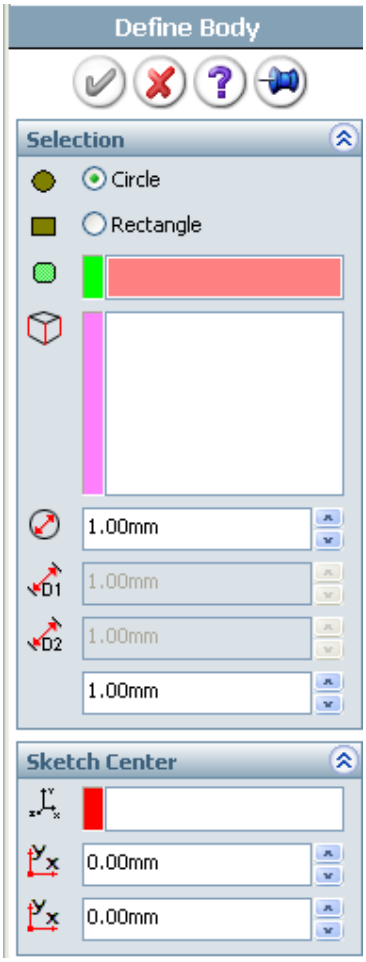
 Direct create insert body on part.

 Different way to split or cut the insert body from core or cavity.

 : SolidWorks functions to handle duplicated inserts

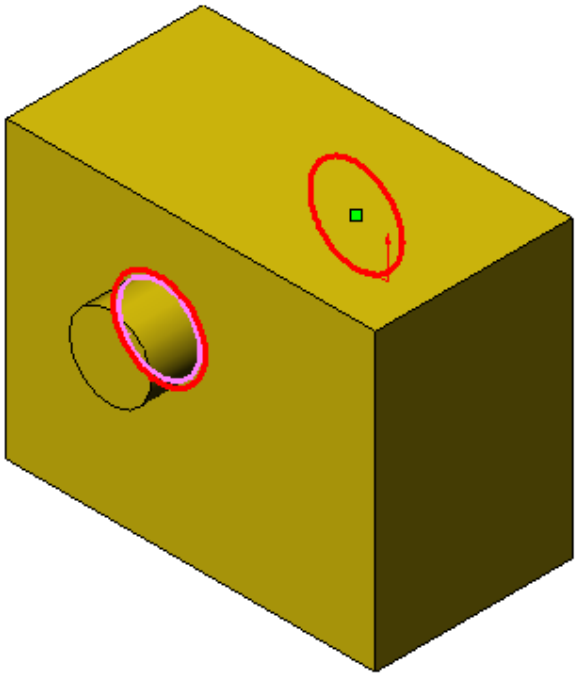
Much improved function to show or hide insert body
With pre-selection of planar face on insert body, the insert body can be shown in an explode view way using temporary body.

For the insert body that doesn't follow existing edge profile, for example, you need offset certain distance along some body edges, this function is used. Otherwise, the above buttons on the **Body** page can do it easier by one click and some pre-selections.

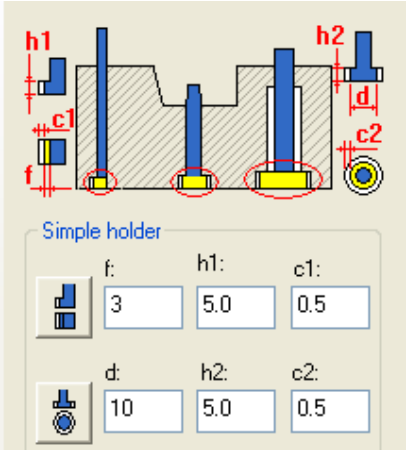


Define Body Page is simplified with better preview.

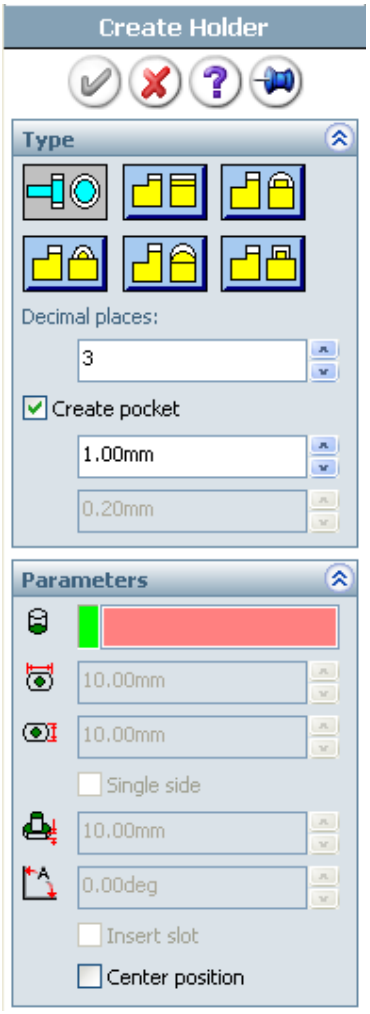
Pushpin  is implemented.



For holder design in insert, the simplest and most popular two types of holders (a circular and rectangular one) can be done on the **Holder** page quickly.



For advanced holder design, new types are provided here.

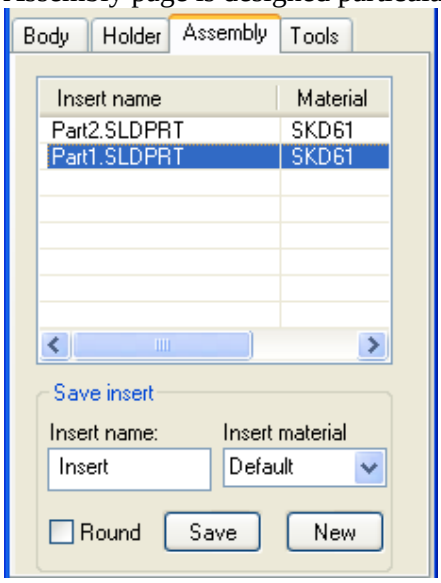


Much improved function than before.

- You have better preview now.
- You can control the dimension accuracy.
- Pushpin  is implemented.

Almost totally new insert’s type.

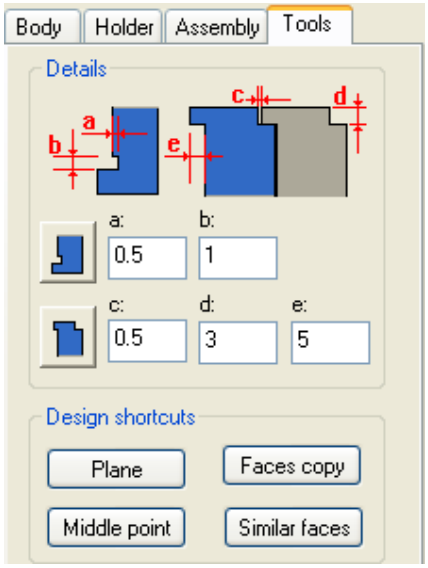
Assembly page is designed particularly for insert's management at the assembly file.



Create a blank new insert part.

The material setting here will appear on the BOM.

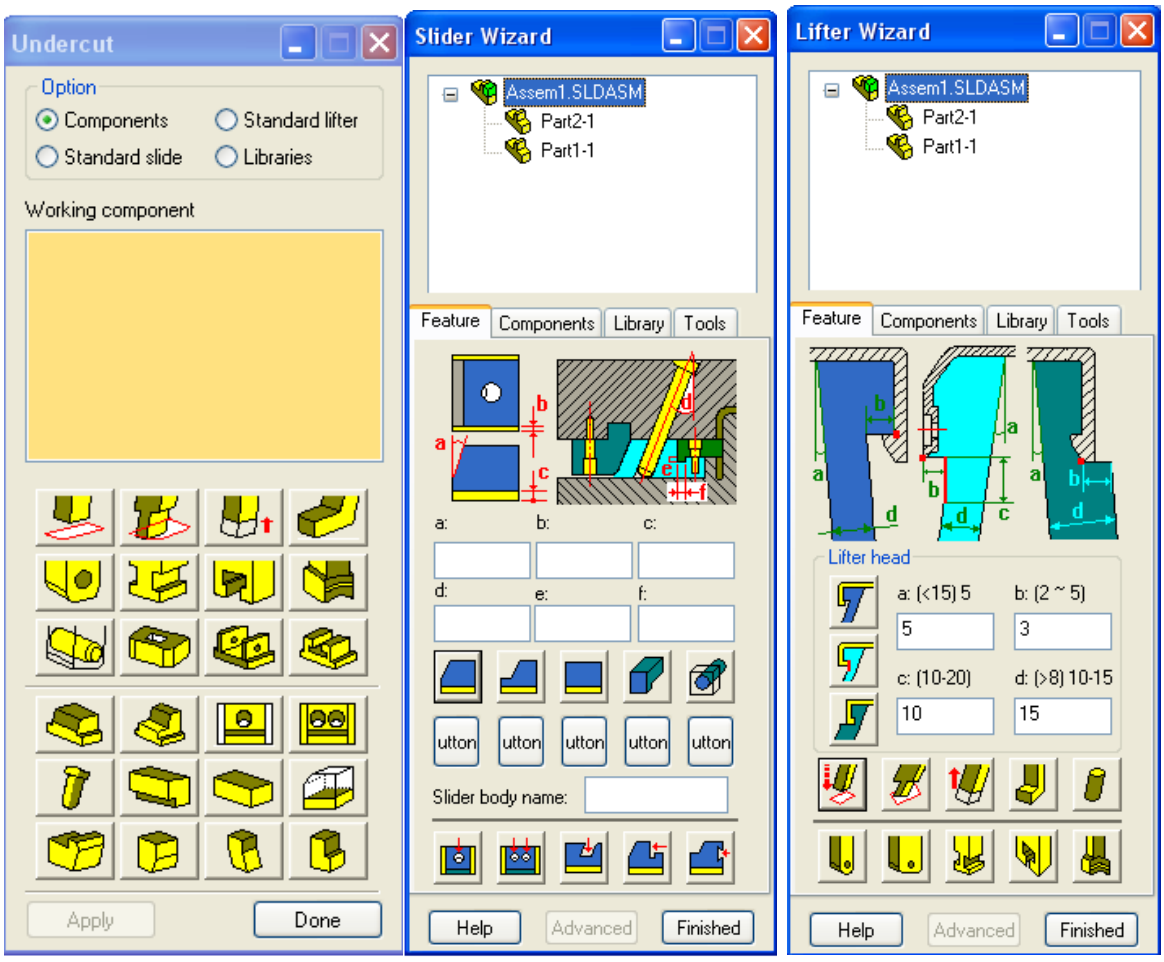
Tools for some design details. Used in some special situation such as connector mold design that with many sub-inserts in core/cavity.



13. Slider and Lifter.

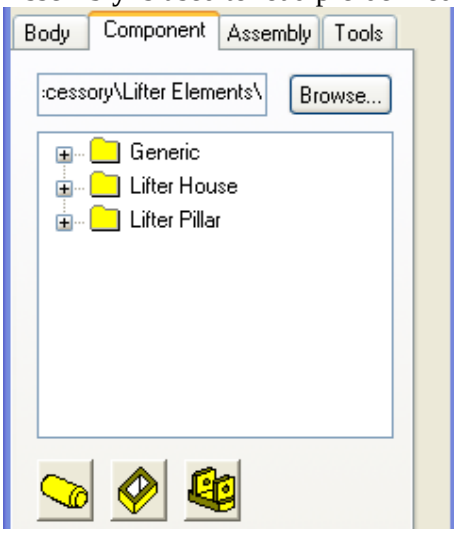
Starting from this version, Undercut module is separated into Slider wizard and Lifter wizard now.

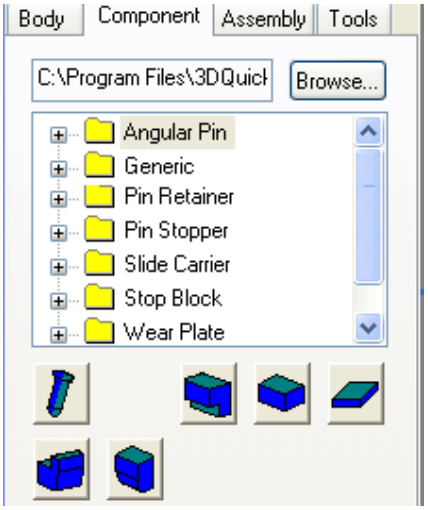
The left picture is the old version.

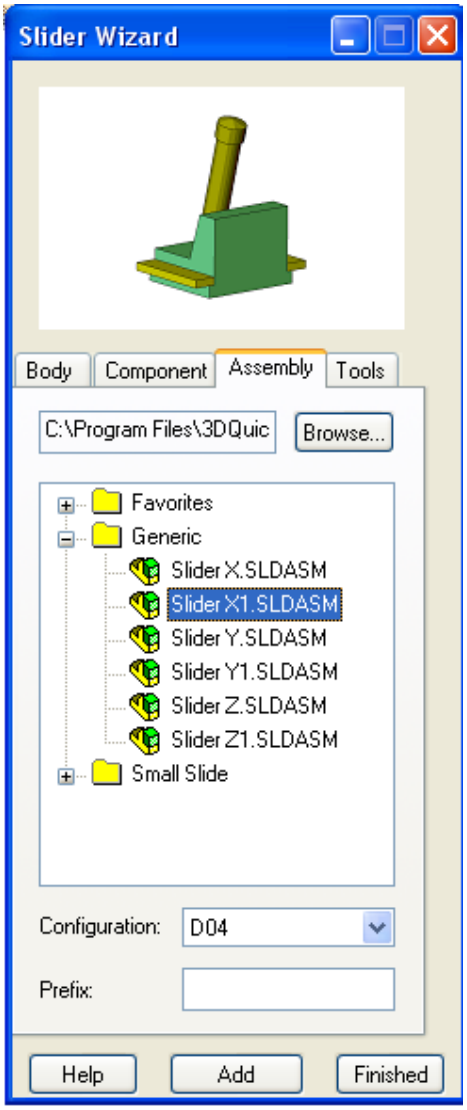


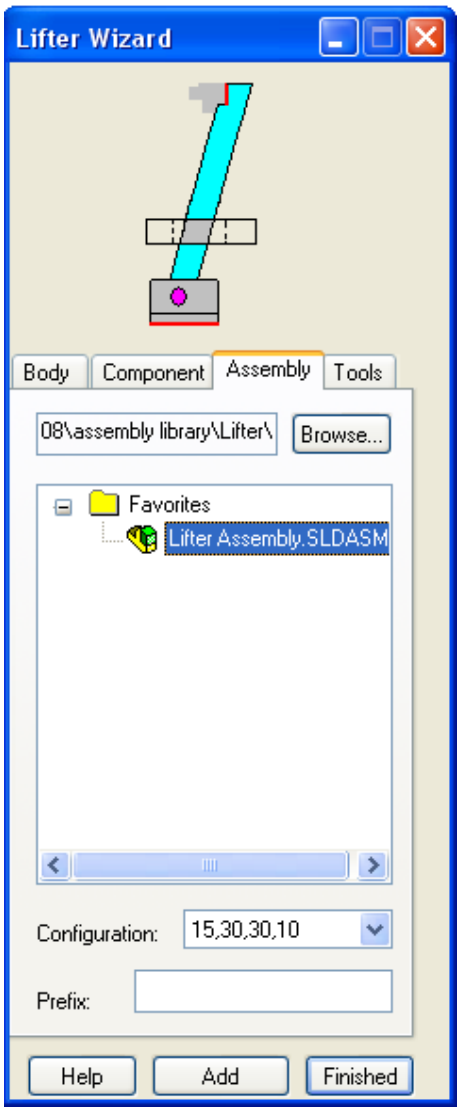
Each wizard dialog has four pages.

Feature takes care of the detailed design on slider body or lifter body
Components is used to add or create individual slider or lifter components.
Assembly is used to load pre-defined slider or lifter sub-assembly.

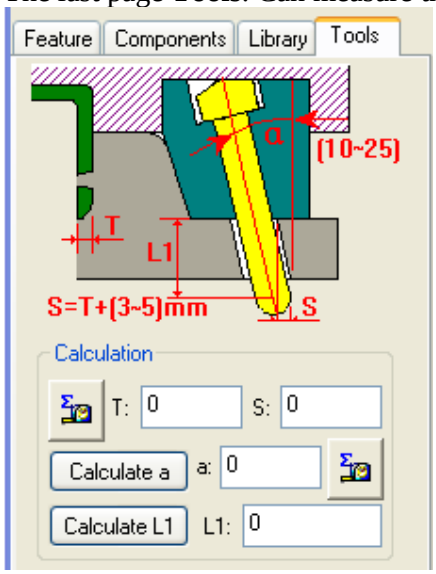


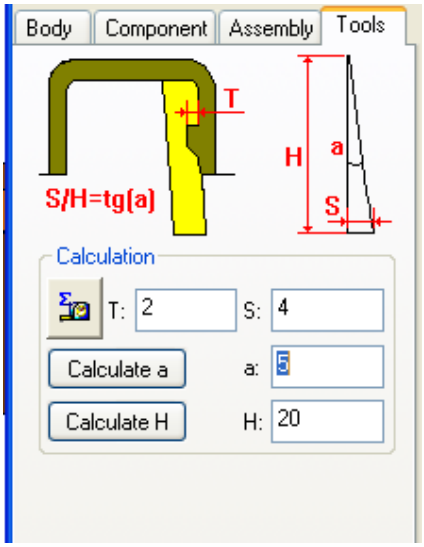




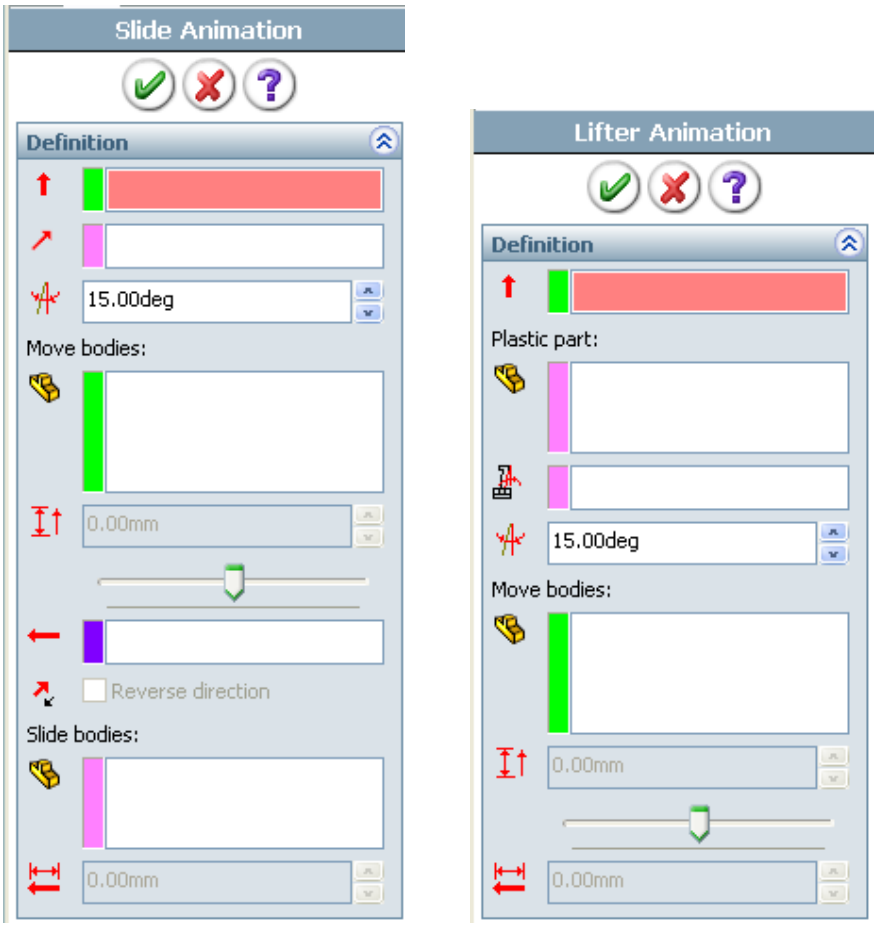


The last page **Tools**. Can measure the stroke distance and do some basic calculations.





Newly added function can animate the slider and lifter's movements to verify if the current design is reasonable or not.



14. Feeding Wizard

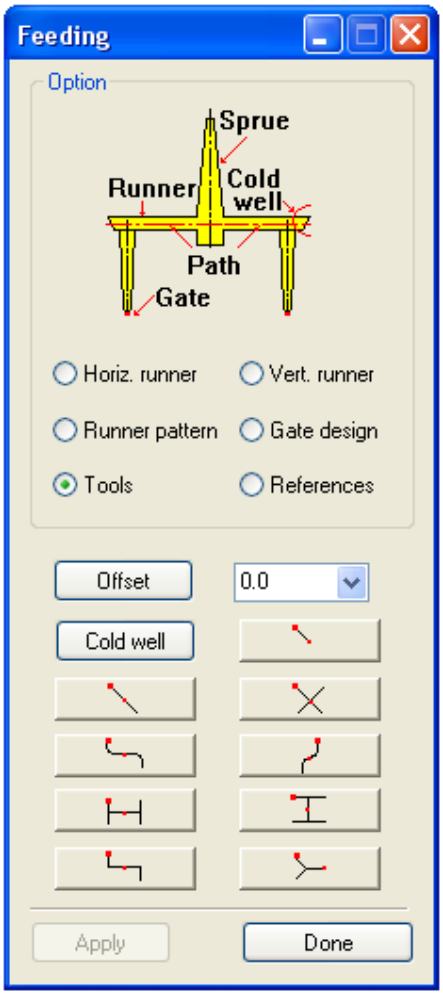
The old and new UI are shown together on the following picture.

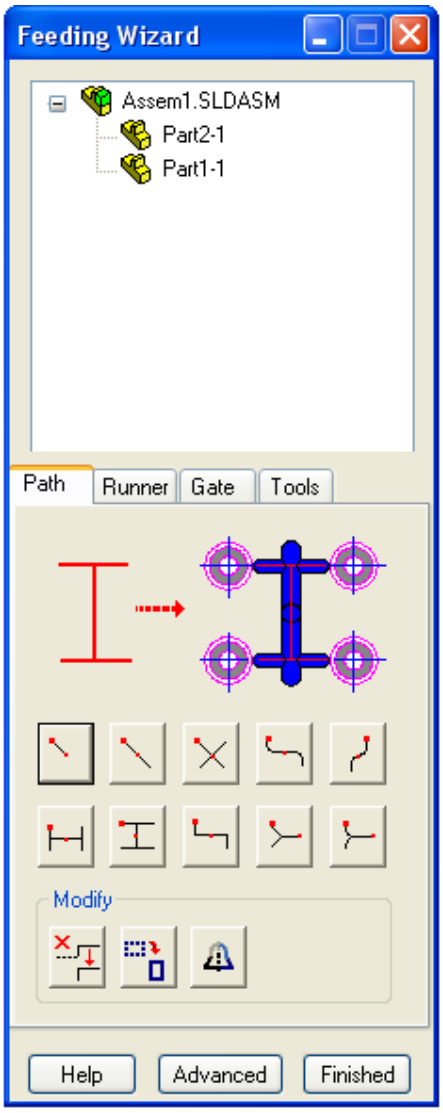
This Feeding wizard has four pages too.

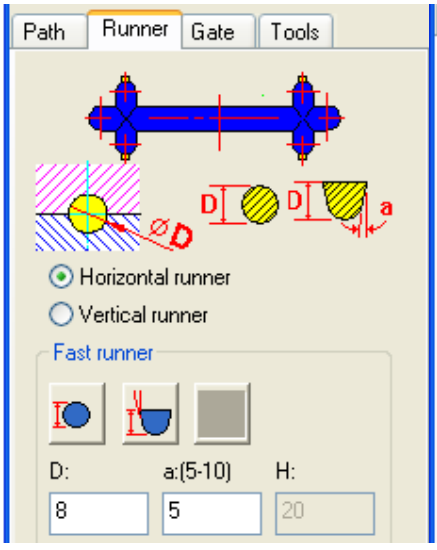
Existing functions are re-grouped into **Path**, **Runner**, **Gate** and **Tools** respectively.

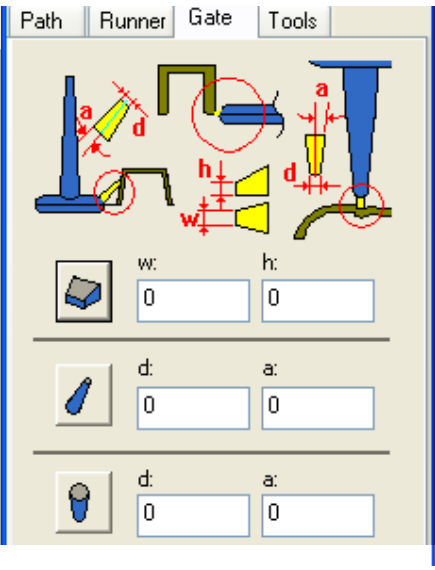
Path to define the runner path in sketch format

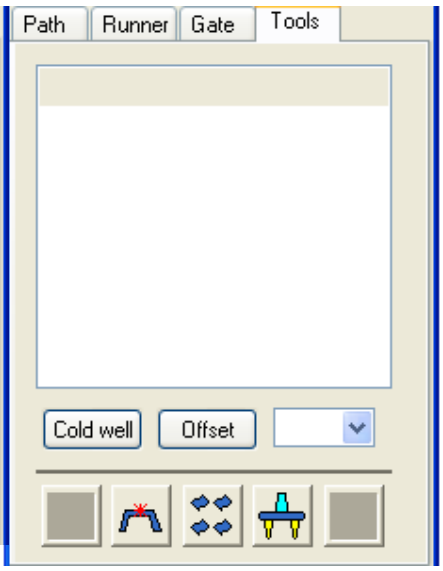
Runner includes the horizontal runner and vertical runner


Feeding
Option
Sprue
Runner
Cold well
Path
Gate
Horiz. runner
Vert. runner
Runner pattern
Gate design
Tools
References
Offset
0.0
Cold well
Apply
Done

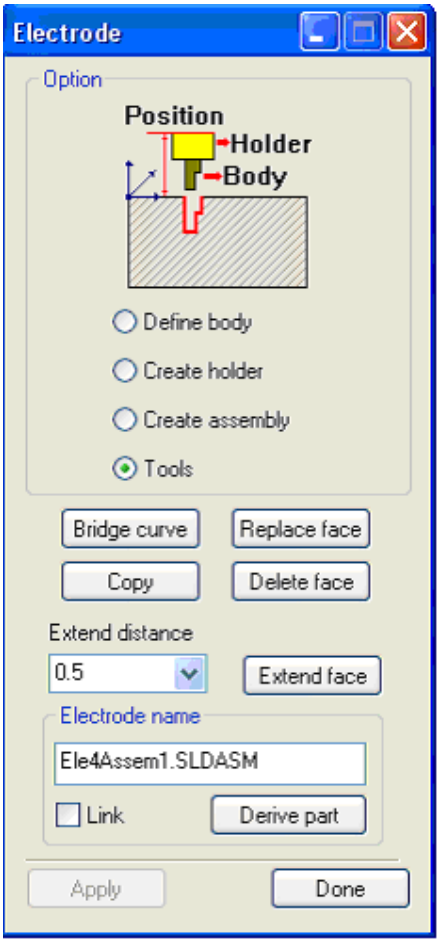

Feeding Wizard
Assem1.SLDASM
Part2-1
Part1-1
Path
Runner
Gate
Tools
Modify
Help
Advanced
Finished

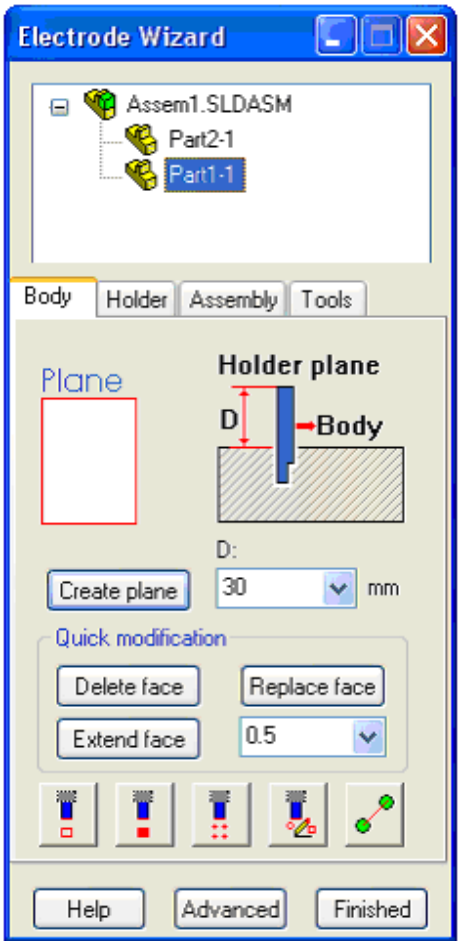

Path
Runner
Gate
Tools
D
a
Horizontal runner
Vertical runner
Fast runner
D:
a:(5-10)
H:
8
5
20

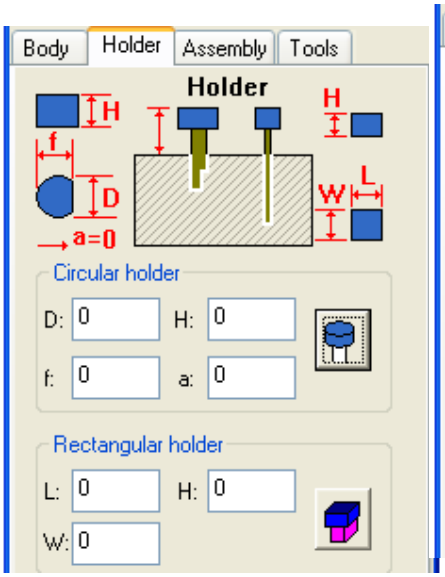

Path
Runner
Gate
Tools
a
d
h
w
w:
h:
0
d:
a:

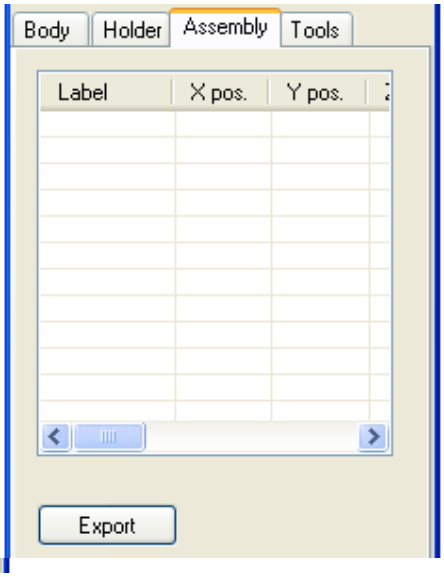

Path
Runner
Gate
Tools
Cold well
Offset

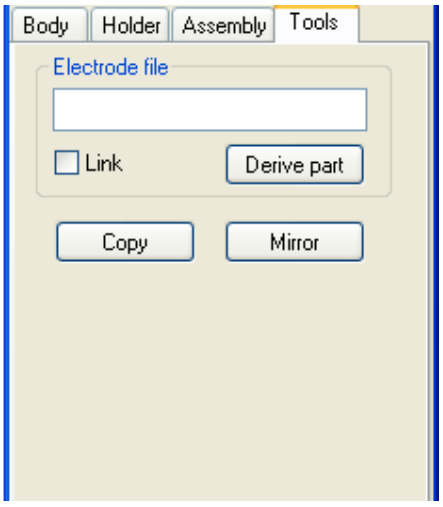
15. Electrode Wizard. New UI has re-grouped the existing functions.





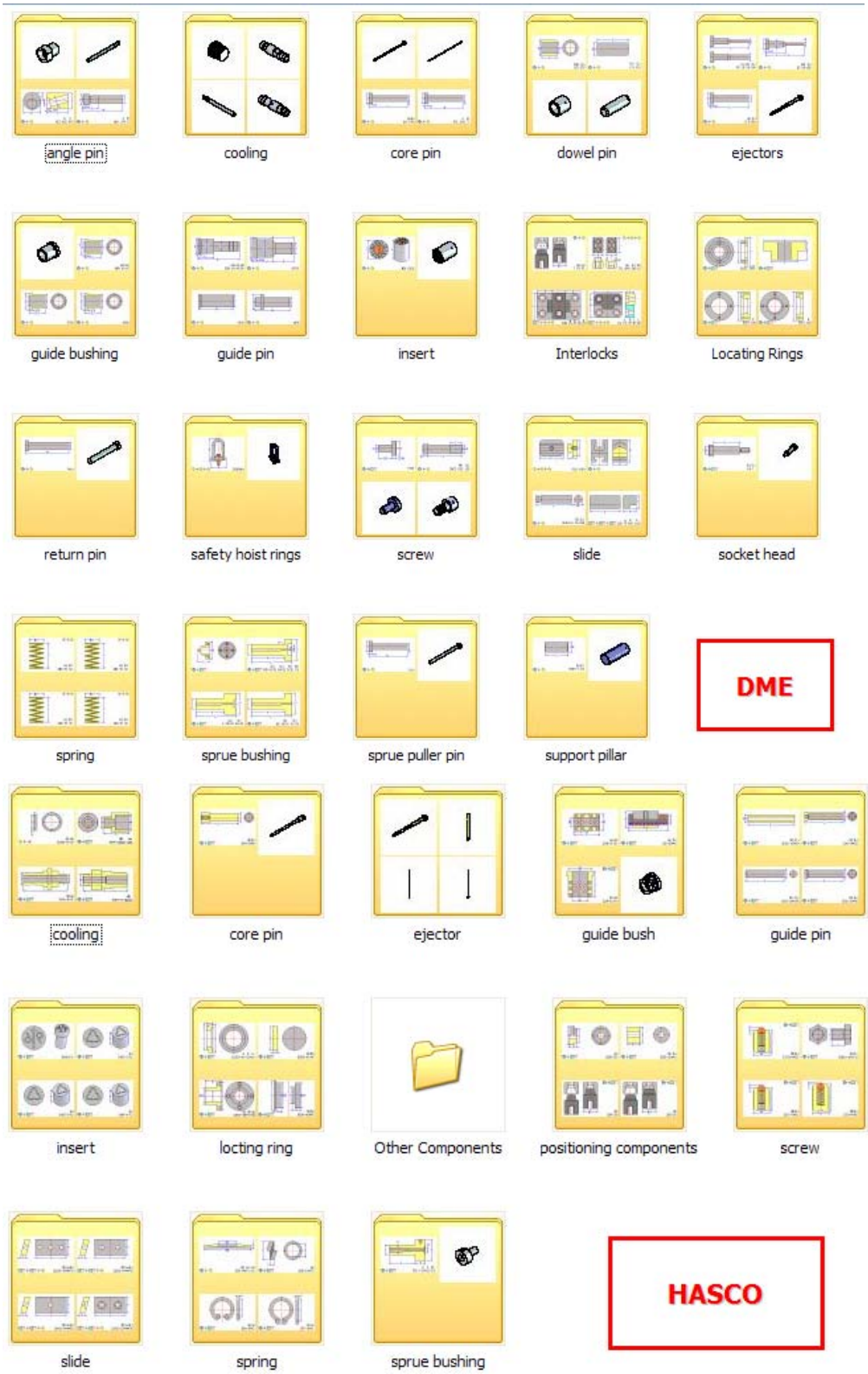






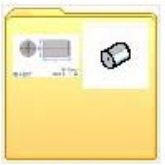
16. Layout has slight modification. Preview is better.

17. New library models are added in this release.

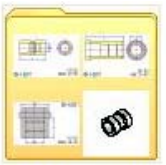


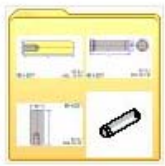

cooling


core pin

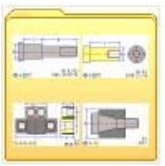

DateMarkedPin

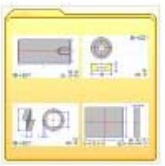

ejector pin

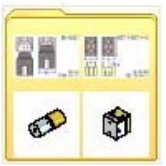

leader bushing


leader pin

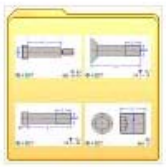

locating rings

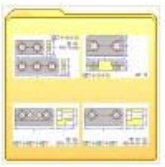

mold opening controllers

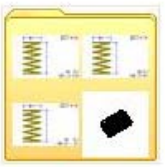

other components

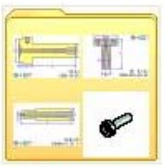

positioning components

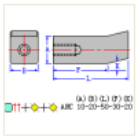

runner lock pin

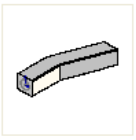

screw

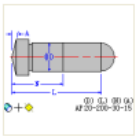

slide


spring

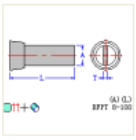

sprue bushing

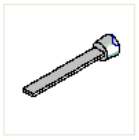

AngularCam ANC.bmp

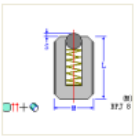

AngularCam ANC.SLDPRT


AngularPin AP.bmp

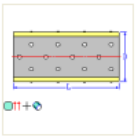

AngularPin AP.SLDPRT


BaffleBoard BFPT.bmp

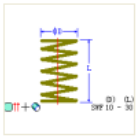

BaffleBoard BFPT.SLDPRT


BallPlunger BPJ.bmp

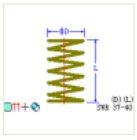

BallPlunger BPJ.SLDPRT


BallRetainer EMBS.bmp

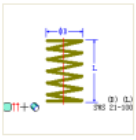

BallRetainer EMBS.SLDPRT


CoilSpring SSWF.bmp

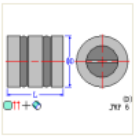

CoilSpring SSWF.SLDPRT

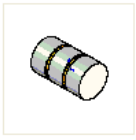

CoilSpring SSWR.bmp

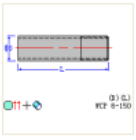

CoilSpring SSWR.SLDPRT

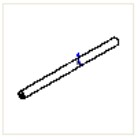

CoilSpring SSWS.bmp

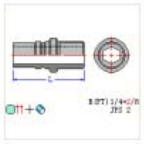

CoilSpring SSWS.SLDPRT


CoolingCircuitPlug JWP.bmp

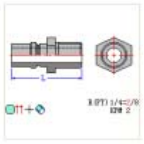

CoolingCircuitPlug JWP.SLDPRT


CoolingPipe WCP.bmp

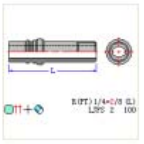

CoolingPipe WCP.SLDPRT


CouplerPlug JPS.bmp

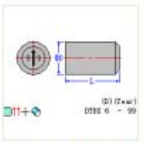

CouplerPlug JPS.SLDPRT


CouplerPlug KPM.bmp

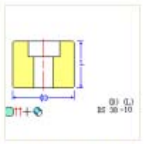

CouplerPlug KPM.SLDPRT


CouplerPlug LJPS.bmp

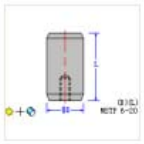

CouplerPlug LJPS.SLDPRT


DateMarkedPin DTBX.bmp

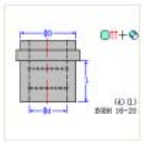

DateMarkedPin DTBX.SLDPRT


DistanceSpacer DS.bmp

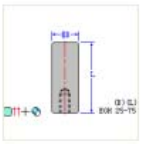

DistanceSpacer DS.SLDPRT


DowelPin MSTP.bmp

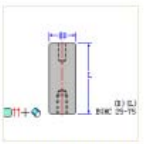

DowelPin MSTP.SLDPRT


EjectorLeaderBushing EGBH.bmp

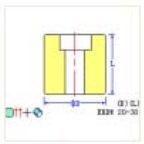

EjectorLeaderBushing EGBH.SLDPRT


EjectorLeaderPin EGH.bmp


EjectorLeaderPin EGH.SLDPRT


EjectorLeaderPin EGHC.bmp

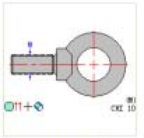

EjectorLeaderPin EGHC.SLDPRT


EjectorRod ERDW.bmp

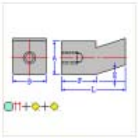

EjectorRod ERDW.SLDPRT

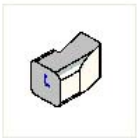

ExtendedSprueBushin...

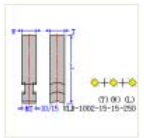

ExtendedSprueBushin...


EyeBolts CHI.bmp

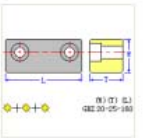

EyeBolts CHI.SLDPRT

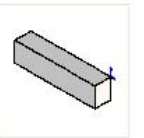

FingerCam.bmp

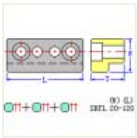

FingerCam.SLDPRT

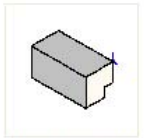

FlatCoreBlade ULB.bmp

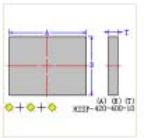

FlatCoreBlade ULB.SLDPRT

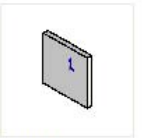

GuideRail GRZ.bmp

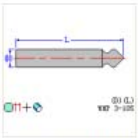

GuideRail GRZ.SLDPRT


GuideRail SRTL.bmp


GuideRail SRTL.SLDPRT


HeatInsulationSheet HIPS.bmp


HeatInsulationSheet HIPS.SLDPRT


HeatTransPipe WHP.bmp

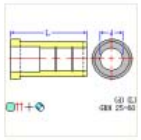

HeatTransPipe WHP.SLDPRT


HoseNipple NPWL.bmp

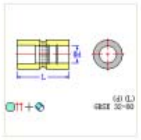

HoseNipple NPWL.SLDPRT


HoseNipple NPWN.bmp

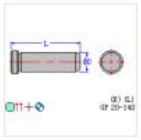

HoseNipple NPWN.SLDPRT


LeaderBushing GBH.bmp


LeaderBushing GBH.SLDPRT


LeaderBushing GBSE.bmp

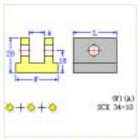

LeaderBushing GBSE.SLDPRT

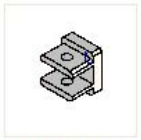

LeaderPin GP.bmp

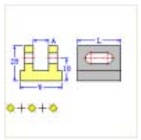

LeaderPin GP.SLDPRT

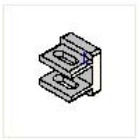

LeaderPin GPH.bmp


LeaderPin GPH.SLDPRT


LifterBase1.bmp


LifterBase1.SLDPRT


LifterBase2.bmp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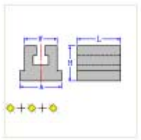
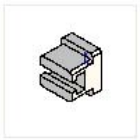
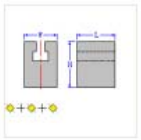
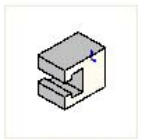

LifterBaseT1.bmp


LifterBaseT1.SLDPRT


LifterBaseT2.bmp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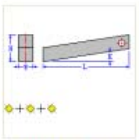
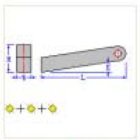
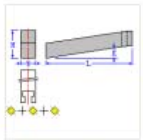

LifterPillar1.bmp

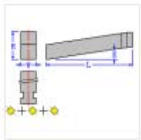

LifterPillar1.SLDPRT


LifterPillar2.bmp

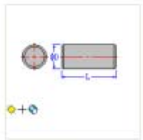

LifterPillar2.SLDPRT

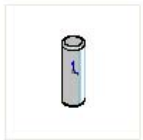

LifterPillarT1.bmp

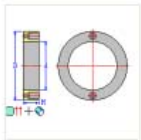

LifterPillarT1.SLDPRT


LifterPillarT2.bmp

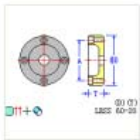

LifterPillarT2.SLDPRT


LifterPin.bmp

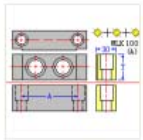

LifterPin.SLDPRT


LocatingRing LRBS.bmp

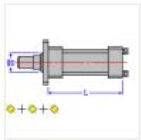

LocatingRing LRBS.SLDPRT


LocatingRing LRSS.bmp

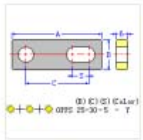

LocatingRing LRSS.SLDPRT

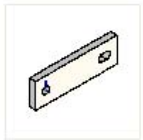

MagnetLockingSet MLK.bmp

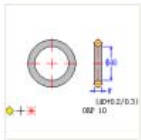

MagnetLockingSet MLK.SLDPRT


OilCylinder.bmp

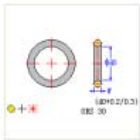

OilCylinder.SLDPRT


OpeningProtection OOPS.bmp

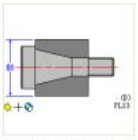

OpeningProtection OOPS.SLDPRT


ORing ORP.bmp

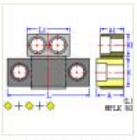

ORing ORP.SLDPRT

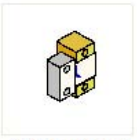

ORing ORS.bmp

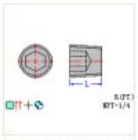

ORing ORS.SLDPRT


PartingLock PL.bmp

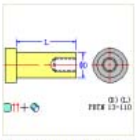

PartingLock PL.SLDPRT


PartingLockingSet MPLK.bmp

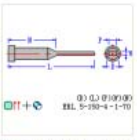

PartingLockingSet MPLK.SLDPRT


PressurePlug NPT.bmp

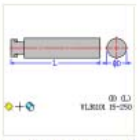

PressurePlug NPT.SLDPRT


PullerBolts PBTN.bmp


PullerBolts PBTN.SLDPRT


RectangularEjectorPin ERL.bmp

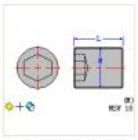

RectangularEjectorPin ERL.SLDPRT


RoundCoreBlade ULB.bmp

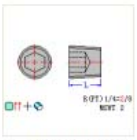

RoundCoreBlade ULB.SLDPRT

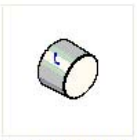

RunnerLockPin RLRL.bmp

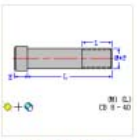

RunnerLockPin RLRL.SLDPRT


ScrewPlug MSW.bmp

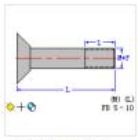

ScrewPlug MSW.SLDPRT


ScrewPlug MSWT.bmp

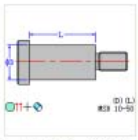

ScrewPlug MSWT.SLDPRT


SHCS CB.bmp

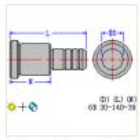

SHCS CB.SLDPRT


SHCSFlat FB.bmp

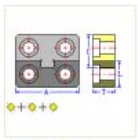

SHCSFlat FB.SLDPRT


ShoulderBolts MSB.bmp

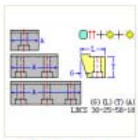

ShoulderBolts MSB.SLDPRT

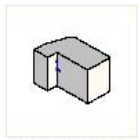

ShoulderLeaderPin GB.bmp

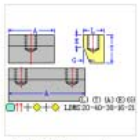

ShoulderLinderPin GB.SLDPRT

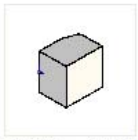

SideInterlock.bmp

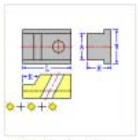

SideInterlock.SLDPRT

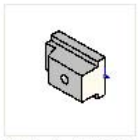

Slide Lock.bmp

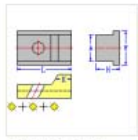

Slide Lock.SLDPRT

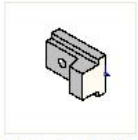

Slide Wedge.bmp

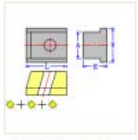

Slide Wedge.SLDPRT

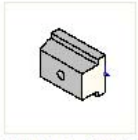

SlideCarrier1.bmp

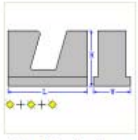

SlideCarrier1.SLDPRT

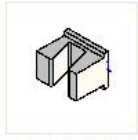

SlideCarrier2.bmp


SlideCarrier2.SLDPRT


SlideCarrier.bmp

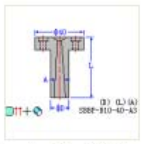

SlideCarrier.SLDPRT


SmallCarrier.bmp

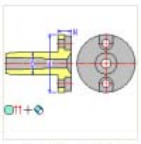

SmallCarrier.SLDPRT


SpringWasher CBW.bmp

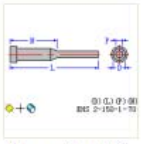

SpringWasher CBW.SLDPRT


SprueBushing SBBP.bmp

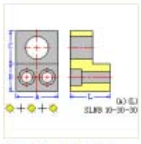

SprueBushing SBBP.SLDPRT

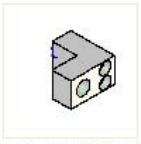

SprueBushing SBGP.bmp

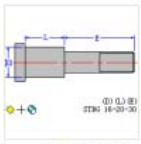

SprueBushing SBGP.SLDPRT


SteppedEjectorPin EHS.bmp

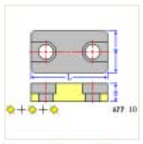

SteppedEjectorPin EHS.SLDPRT

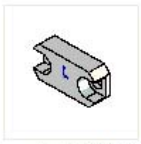

StopBlock SLNB.bmp

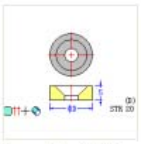

StopBlock SLNB.SLDPRT


StopperBolts STBG.bmp

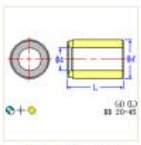

StopperBolts STBG.SLDPRT


StopperPlate APP.bmp

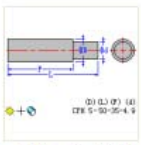

StopperPlate APP.SLDPRT


StopperRing STR.bmp

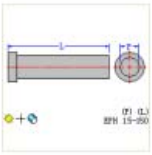

StopperRing STR.SLDPRT


StraightBushing BB.bmp


StraightBushing BB.SLDPRT


StraightCorePin CPH.bmp

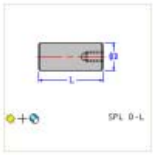

StraightCorePin CPH.SLDPRT

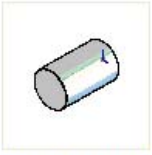

StraightEjectorPin EPH.bmp

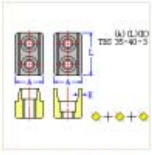

StraightEjectorPin EPH.SLDPRT

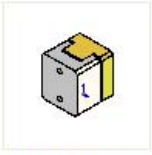

StraightEjectorSleeve ESVB.bmp

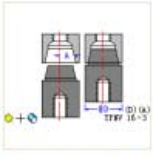

StraightEjectorSleeve ESVB.SLDPRT


SupportPillar FP.bmp

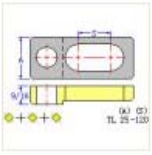

SupportPillar FP.SLDPRT

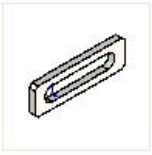

TaperedBlockSet TBS.bmp

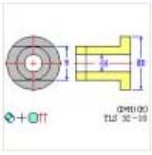

TaperedBlockSet TBS.SLDPRT


TaperPinSet TPNV.bmp

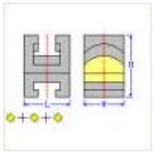

TaperPinSet TPNV.SLDPRT

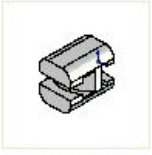

TensionLink TL.bmp

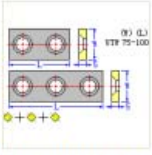

TensionLink TL.SLDPRT

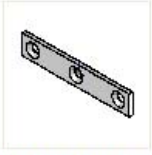

TensionLink TLS.bmp


TensionLink TLS.SLDPRT


UCoupling.bmp


UCoupling.SLDPRT


WearPlate UTW.bmp


WearPlate UTW.SLDPRT

Complete Library Samples