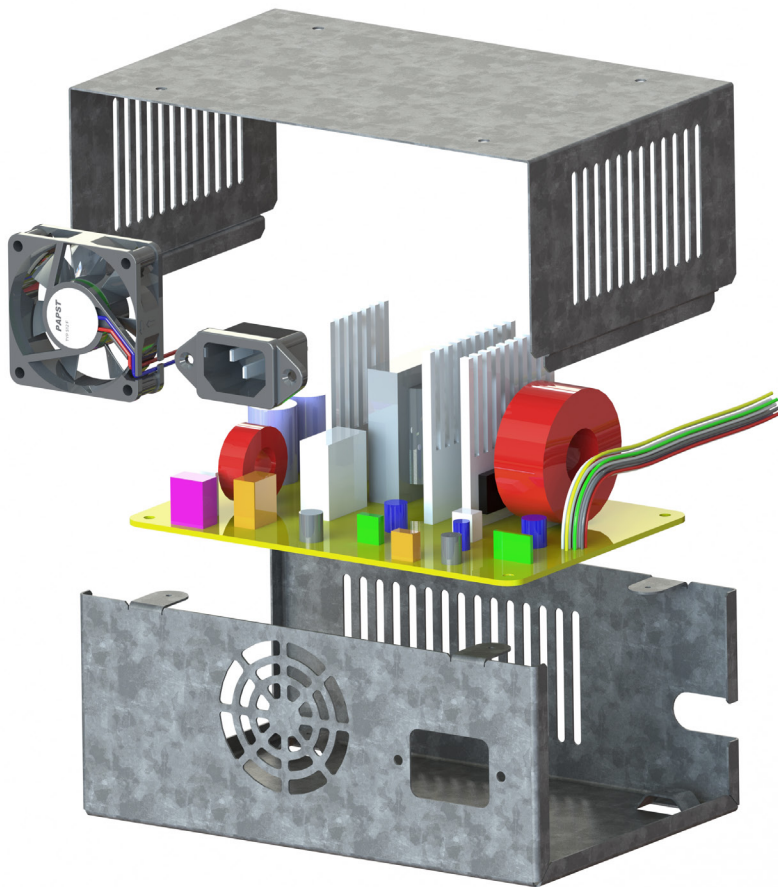


# Beginner's Guide to SOLIDWORKS® 2023 Level II

Sheet Metal, Top Down Design,  
Weldments, Surfacing and Molds



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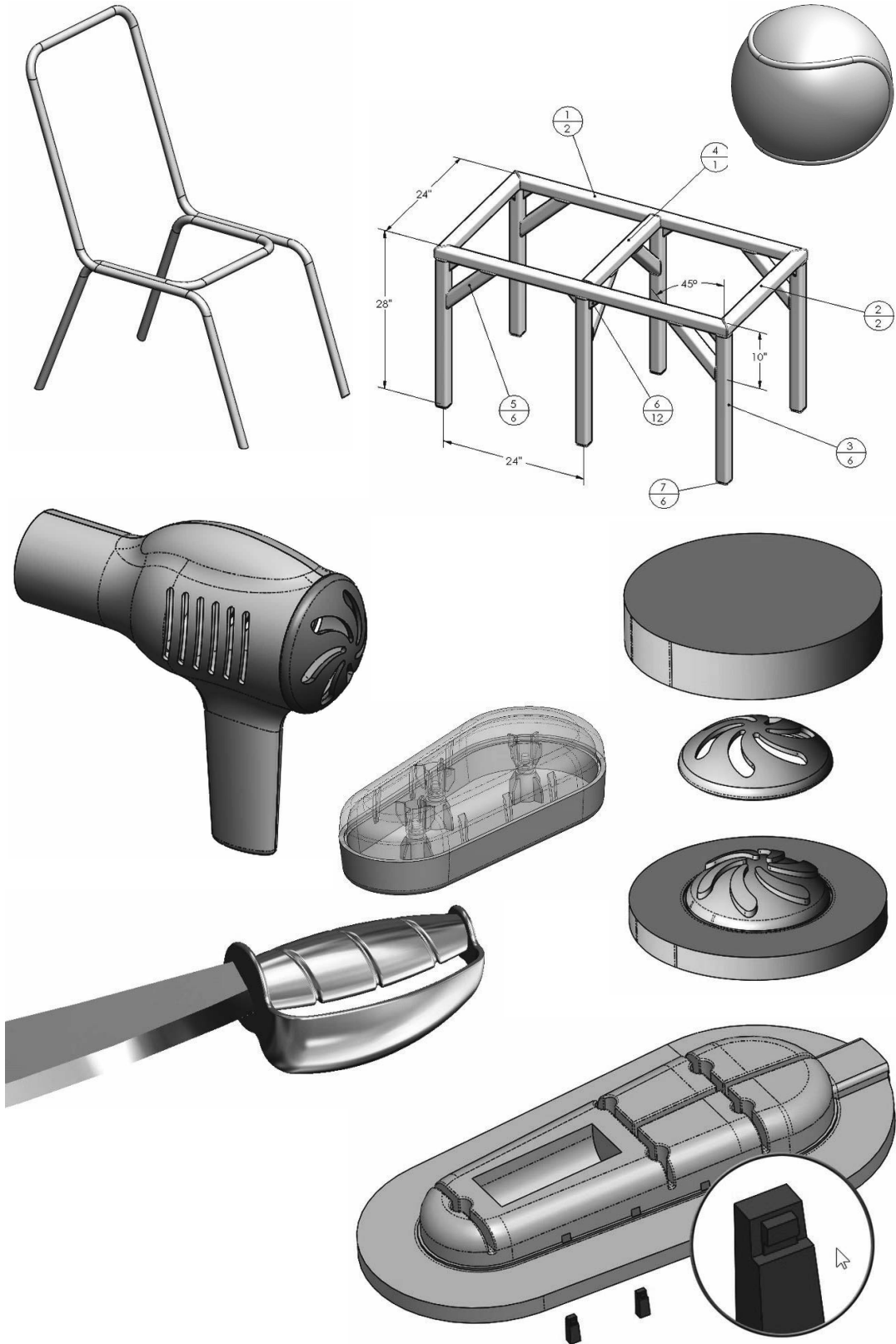
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List of commands introduced in each chapter. Note that many commands are used extensively in following chapters after they have been presented.

<p><b>Multi Body Parts</b></p> <ul style="list-style-type: none"> <li>Multi Body</li> <li>Local Operations</li> <li>Hide/Show Body</li> <li>Merge</li> <li>Feature Scope</li> <li>Delete Body</li> <li>Body Pattern</li> <li>Combine Bodies                             <ul style="list-style-type: none"> <li>Add</li> <li>Subtract</li> <li>Common</li> </ul> </li> <li>Bodies to keep</li> <li>Offset from Surface</li> <li>Sketch Picture</li> </ul> <p><b>Contour Selection</b></p> <ul style="list-style-type: none"> <li>Regions available</li> <li>Contour Selection</li> <li>Shared Sketch</li> <li>Start From: Condition</li> </ul> <p><b>Part Editing</b></p> <ul style="list-style-type: none"> <li>What's Wrong</li> <li>Parent/Child relations</li> <li>Sketch Editing</li> <li>Dangling Relations</li> <li>Delete Absorbed                             <ul style="list-style-type: none"> <li>Features</li> </ul> </li> <li>Sketch Relations</li> <li>Over Defined Sketch</li> <li>Not Solved Sketch</li> <li>SketchXpert</li> <li>View Sketch Relations</li> </ul> <p><b>Equations</b></p> <ul style="list-style-type: none"> <li>Rename Dimensions</li> <li>Pattern Seed Only</li> <li>Add Equations</li> <li>Edit Equations</li> <li>Delete Equations</li> <li>Link Values</li> </ul>	<p><b>Top Down Design</b></p> <ul style="list-style-type: none"> <li>New Part</li> <li>Edit In Context</li> <li>Assembly Transparency</li> <li>Internal Part</li> <li>Externalize Part</li> <li>Edit Assembly</li> <li>External References                             <ul style="list-style-type: none"> <li>In Context</li> <li>Out of Context</li> </ul> </li> <li>Locked</li> <li>Broken</li> <li>List External References</li> </ul> <p><b>Sheet Metal and Top Down Design</b></p> <ul style="list-style-type: none"> <li>Base Flange</li> <li>Sheet Metal Thickness</li> <li>Bend Radius</li> <li>Bend Allowance</li> <li>Bend Deduction</li> <li>K-Factor</li> <li>Auto-Relief                             <ul style="list-style-type: none"> <li>Rectangular</li> <li>Obround</li> <li>Tear</li> </ul> </li> <li>Flat Pattern</li> <li>Forming Tools</li> <li>Modify Sketch</li> <li>Link to Thickness</li> <li>Normal Cut</li> <li>3D Content Central</li> <li>Vent feature</li> <li>Miter Flange</li> <li>Unfold/Fold Bend</li> <li>Edge Flange</li> <li>Build Library Features</li> <li>Library Parts</li> <li>Mate Reference</li> <li>Break Corners</li> <li>Jog bend</li> <li>Flat Pattern Drawing</li> <li>Bend Notes</li> </ul>	<ul style="list-style-type: none"> <li>Convert to Sheet Metal</li> <li>Closed Corners</li> <li>Selection Filters</li> <li>Sketch Pattern</li> <li>Feature Driven Pattern</li> <li>Hem Feature</li> <li>Creating Forming Tools</li> <li>Component Pattern</li> <li>Collision Detection</li> <li>Flexible Sub Assemblies</li> <li>Assembly Features</li> </ul> <p><b>3D Sketch</b></p> <ul style="list-style-type: none"> <li>3D Sketch</li> <li>3D Sketch Relations</li> <li>Derived Sketch</li> <li>Projected Curve</li> </ul> <p><b>Weldments</b></p> <ul style="list-style-type: none"> <li>3D Sketch review</li> <li>Cut list</li> <li>Weldment feature</li> <li>Structural Member</li> <li>Corner Treatment                             <ul style="list-style-type: none"> <li>End Miter</li> <li>End Butt</li> </ul> </li> <li>Locate Profile</li> <li>Rotate Profile</li> <li>Trim/Extend</li> <li>Gusset</li> <li>End Cap</li> <li>Weld Beads</li> <li>Weldment Cut List</li> <li>Weldment Drawings</li> <li>Cut List Table</li> <li>Weld Table</li> <li>Weld Symbols</li> <li>Save Bodies to                             <ul style="list-style-type: none"> <li>Assembly</li> </ul> </li> <li>Structural Member</li> <li>Libraries</li> </ul>
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### **Surfacing**

Revolved Surface  
 Lofted Surface  
 Extruded Surface  
 Direction of Extrusion  
 Extrude with Draft  
 Trim Surface  
 Mutual Trim  
 Planar Surface  
 Filled Surface  
 Knit Surface  
 Constant Width Fillet  
 Thicken  
 Body Split  
 Face Fillet  
 Extend Surface  
 Extrude From  
 Mirror Bodies  
 Swept Surface  
 Twist Along Path  
 Sweep Cut  
 Master Model  
 Mounting Boss Feature  
 Lip/Groove Feature  
 Snap Hook/Groove  
 Feature

### **Mold Tools**

Draft Analysis  
 Direction of Pull  
 Positive Draft  
 Negative Draft  
 Draft  
 Neutral Plane  
 Rollback/Roll Forward  
 Scale  
 Parting Line  
 Parting Surface  
 Tooling Split  
 Composite Curve  
 Swept Surface  
 Shut Off Surfaces  
 Move/Copy body  
 Delete Face  
 Face Classification  
 Manual Parting Line  
 Selection  
 Select Open Loop  
 Rib  
 Side Core