

















Sketch Relations

Description: Sketch relations help to define a sketch entity by relating them or constraining them to other sketch entities. Sketch relations can either be added or assumed by SolidWorks through built in features (the polygon tool).

Note: All relations can be seen and edited by using the display/delete relation icon. Selecting multiple entities will make the property manager window pop up and will display the relations between the selected entities (**ctrl + left click** selects multiple entities).

| | |
|--|---|
|  Horizontal | Sketch entities such as a line or point will remain horizontal with respect to current coordinate axis. |
|  Vertical | Sketch entities such as a line or point will remain vertical with respect to current coordinate axis. |
|  Parallel | Two or more sketch entities will remain parallel to each other. |
|  Perpendicular | Sketch entities will remain 90 degrees from each other. |
|  Collinear | Two or more line segments will align along the same line. |
|  Coincident | A point or vertex will lie on a line, arc, or ellipse. |
|  Midpoint | A point or vertex will remain at the midpoint or center of a line. |
|  Merge | Combines two sketch points. |
|  Intersection | A point will remain at the intersection of two lines. |
|  Concentric | Two circles or arcs will share a common centerpoint. |
|  Coradial | Two circles or arcs share a common centerpoint and radius. |
|  Tangent | Two sketch entities will remain tangent to each other. For example a line that intersects an arc or circle at a single point. |
|  Equal | Set two entities to have the same length or radius. <i>Note: Equal entities will update when the major dimension is changed.</i> |
|  Equal Curve Length | Set two arc segments (or arc length and line length) equal. |
|  Symmetric | Two sketch entities such as lines, arcs, or ellipses remain equidistant to a centerline. |
|  Fix | The entities size and location are fixed in space. <i>Note: For debugging purposes only. Your models should <u>never</u> be turned in with fixed constraints!</i> |