

Group /Tool**Explanation****Alignment**

Align Bottom to Point	<i>Aligns lowest point of an object to the Z-level of a picked point</i>
Match Object Z Level	<i>Moves object in Z to a picked point</i>
Object Point to New Z	<i>Move point on object to new Z Level (keyboard or pick)</i>
EquiCenter Objs X-Y	<i>Redistributes objects center to center evenly in world X and/or Y (uses bounding box)</i>
EquiSpace Objs X-Y	<i>Redistributes objects to have equal space between them in world X and/or Y</i>
Closest Dist btw Objs	<i>Iteratively finds the closest distance between 2 surface or polysurface objects</i>
Stack objects	<i>Stack objects in Z or along an axis</i>
Project Volumes	<i>Projects volumes to surfaces or meshes (objects will be embedded in surface)</i>
Align bottom to 0	<i>Aligns bottom of object to world Z0 plane</i>

BoundingBox

Planar Minimum BB	<i>Tries to find the closest fit rectangle for a 2D (planar) object</i>
BoundingBox w/Size	<i>Creates a bounding box with on-screen dimensions as text dots</i>
Adjust BoundingBox	<i>Creates a bounding box with user adjustable dimensions in 3 axes</i>

Point Functions

Ordered 3D Point Grid	<i>Generate ordered grid of points in XY or XYZ</i>
Random 3D Point Dist	<i>Generate a collection of randomly spaced points in 3D</i>

Offset Curves

OffsetCrvs2SidesEnds	<i>Offset multiple curves both sides with end choices</i>
OffsetClosedCrvsInOut	<i>Offset multiple closed curves inside, outside or both</i>
MultiBooleanOffset	<i>Creates multiple combined offset outlines from a set of closed planar curves</i>
OffsetObject(s)Outline	<i>Creates an offset outline of a 3D object</i>

Curve Functions

BoundaryTrim Crvs	<i>Trims curves inside or outside a closed boundary</i>
ScaleCircles	<i>Scales selected circles by a factor</i>
Force Crv Direction	<i>Makes all selected closed planar curves CW or CCW</i>
Insert PL in Curve	<i>Insert a polyline into a curve</i>
PL by Angle+Length	<i>Create a polyline by inputting successive lengths and relative polar coordinates</i>

Curve Repair

Rem Short Crv Segs	<i>Removes segments of curves smaller than file tolerance</i>
DPRefit Polyline to Tol	<i>Douglas-Peucker refit polyline to tolerance algorithm</i>
Remove Xtra PL Pts	<i>Remove unnecessary polyline points (angle tolerance)</i>
Reduce Crv Pt Count	<i>Rebuild curves with less points (reduction factor)</i>
RebuildReduce PLines	<i>Fit smooth curves to polylines with reduced point count (reduction factor)</i>
Rebuild Crvs ByLength	<i>Rebuild multiple curves with a point count proportional to length</i>

Surf Functions

Make Quad Srf	<i>Make untrimmed quad surfaces from closed 4 sided polylines</i>
Conv Srf to Quads	<i>Make untrimmed quad surfaces from trimmed surfaces if possible</i>
Multiple Planar Srf	<i>Make one planar surface from each selected closed planar curve</i>
Multiple UnrollSrf	<i>Unroll multiple surfaces or polysurfaces</i>

Curve Piping

MultiRoundPipe	<i>Make round pipes from a selection of curves</i>
MultiSquarePipe	<i>Make square pipes from a selection of curves</i>
MultiRectPipe	<i>Make rectangular pipes from a selection of curves</i>
Profile MultiPipe	<i>Make profile pipes from a selection of curves (choose profile on Z0 plane)</i>

Copy/Array

Circles at Points	<i>Creates a circle of user specified diameter at all selected points</i>
Spheres at Points	<i>Creates a sphere of user specified diameter at all selected points</i>
Copy Object to Points	<i>Copies one object from one picked point to a group of selected points</i>
Array Diagonal	<i>Arrays a set of objects along an XY or XYZ diagonal</i>
Array Helical	<i>Arrays a set of objects along a helix (stair-like)</i>

Transforms

MultiObj FlowCrv	<i>Flow one object from one base curve to multiple destination curves</i>
RemapObjs to World	<i>Remap objects from 3 points to world Z0</i>
Comp/Exp Obj Spacing	<i>Compress or expand the space between objects by scaling their distance from a given point</i> <i>* the above does not check for interferences produced by the scaling, objects may overlap</i>
Uniform Scale Objs Ctr	<i>Scales objects uniformly in 3D about their bounding box center or centroid (LMB/RMB)</i>
NU Scale Objs Ctr	<i>Scales objects non-uniformly in 3D about their bounding box center or centroid (LMB/RMB)</i>
Random Scale Objs Ctr	<i>Scales objects about their centers randomly in X, Y, and Z (with max and min in each axis)</i>
Random Rotate Objs Ctr	<i>Rotates objects about their centers randomly (with angle limitation)</i>

Sel by Object Type

Selfence	<i>All self-explanatory except: Use a pre-existing curve fence to select objects</i>
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Sel by Obj Property

Sel by Linetype	<i>Select curves by linetype</i>
Sel Crvs by Length	<i>Select curves by length criteria (greater than, less than, equal to, etc.)</i>
Sel Crvs by Area	<i>Select closed planar curves by area (greater than, less than, equal to, etc.)</i>
Sel Arcs by Radius	<i>Select arcs or circles by radius (greater than, less than, equal to, etc.)</i>
Sel Srf by Area	<i>Select surfs or polysurfs by area (greater than, less than, equal to, etc.)</i>
Sel Small Srf+PSrf	<i>Select surfaces or polysurfaces less than a certain size (area)</i>
Sel by Z Level	<i>Selects planar curves and surfaces by Z level (or a range of Z levels)</i> <i>*RMB of above isolates the objects found, hiding the rest</i>

SliceNFlat

Slices objects, numbers slices, and prepares flat layouts for cutting