Mastercam 2023
QUICK REFERENCE CARD

ICON	FUNCTION	SHORTCUT	ICON	FUNCTION	SHORTCUT
	About Mastercam	Alt+V		Pan	Arrow keys
	Analyze Entity	F4		Paste	Ctrl+V
	AutoSave	Alt+A		Planes Manager	Alt+L
	Configure Mastercam	Alt+F8		Redo	Ctrl+Y
	Copy to clipboard	Ctrl+C		Rotate	Alt+Arrow keys
	Cut to clipboard	Ctrl+X		Rotate Position	Alt+F12
	Delete Entities	F5		Run Add-In	Alt+C
	Divide	Shift+D		Save	Ctrl+S
	Drafting Options	Alt+D		Save As	Ctrl+Shift+S
	Exit Mastercam	Alt+F4		Select All	Ctrl+A
	Fit	Alt+F1		Set From Entity	Alt+X
	Grid Settings	Alt+G		Shading toggle	Alt+S
	Gview–Back	Alt+3		Shading Translucency toggle	Ctrl+T
	Gview–Bottom	Alt+4		Show Axes	F9
	Gview–Front	Alt+2		Show Gnomons	Alt+F9
	Gview–Isometric	Alt+7		Show/hide displayed toolpaths	Alt+T
	Gview–Left	Alt+6		Solids Manager	Alt+I
	Gview–Previous View	Alt+P		Toolpaths Manager	Alt+O
	Gview–Right	Alt+5		Trim to Entities	Shift+T
	Gview–Top	Alt+1		Trim to Point	Shift+P
	Help	Alt+H		Unzoom 80%	Alt+F2
	Hide/Unhide	Alt+E		Unzoom Previous/50%	F2
	Levels Manager	Alt+Z		Undo	Ctrl+Z
	Modify Length	Shift+E		Window	F1
	Multi-Threading Manager	Alt+M			

Map the above Mastercam functions to a custom keyboard shortcut:

Choose **File, Options, Customize Ribbon**. Then click the **Customize** button to open the **Customize Keyboard** dialog box.

Disable gnomon selection	G		Snap to view toggle	S	

Navigate to these websites to get more out of your Mastercam experience:

Mastercam Reseller Locator
mastercam.com/resellers

Mastercam Blog
mastercam.com/news/blog

myMastercam
my.mastercam.com

What's New in Mastercam
whatsnew.mastercam.com

Online Mastercam Training
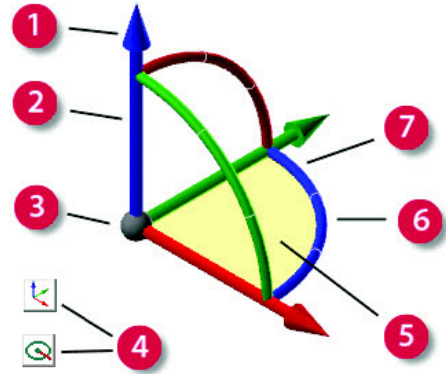**university.mastercam.com**

ON-SCREEN EDITING TOOLS

Dynamic Gnomon

The Dynamic Gnomon helps you manipulate geometry and planes interactively. The gnomon comprises three axes connected at an origin sphere. Choose from the selection points listed here to apply different types of transformations to either the gnomon or your selected geometry.
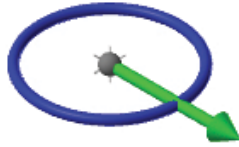
1	Align	**5**	XY Orient
2	Translate Along	**6**	2D Rotate
3	3D Translate/Polar	**7**	3D Rotate
4	Gnomon/ Geometry Switch		

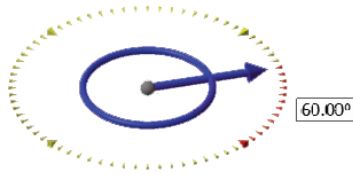See Mastercam Help for more information.

Polar control

The Polar control consists of the origin sphere, a rotation compass, and a green single-axis arrow. It can rotate as well as edit the position of entities in the graphics window.
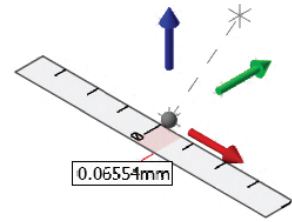
Rotate control

The Rotate control can only rotate on-screen entities within the current Cplane. It consists of the origin sphere and a rotation compass.

Delta control

The Delta control consists of the origin sphere and three single-axis arrows that can be manipulated independently.
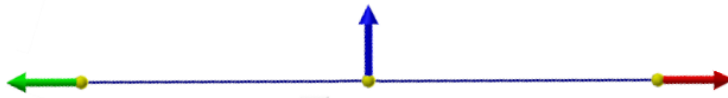
Hover over any single-axis arrow until it highlights. Click and drag the arrow to a new position using the ruler to guide your placement.

To rotate entities on screen, hover over the blue circle until the rotation compass appears. Rotate the control or enter a value in the on-screen field. Rotating from inside the compass allows you to snap to angular increments. Manipulating either control outside the compass ignores the snap control.

Top-level Editing

Directly edit wireframe geometry without interacting with a dialog box. Double-click an entity to enter the function. If no other function is active, a combination of spheres, arrows, and buttons display.

- Click and drag a sphere to move a point, line endpoint, or the center point of an arc.
- Click and drag the blue midpoint sphere to reposition a line or spline.

- Hover over a sphere to display the arrows.
- Click and drag the green or red arrows to shorten or lengthen a line or change the sweep angles of an arc. Splines can only be lengthened.
- Click and drag the blue arrow to create an offset parallel line/spline or change the radius of an arc.

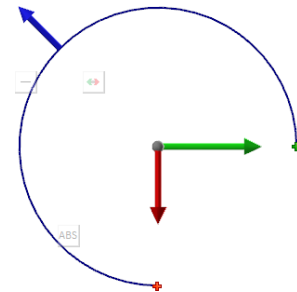- Toggle the **Move** button to move or copy a point, line, spline, or arc.
- The **Flip** button inverts an arc to display its complement.
- The **ABS/REL** button toggles the display of the sweep angle value of an arc between its absolute and relative values.

You cannot edit multiple entities with top-level editing. To do that, use the Analyze function. To display the **Analyze** dialog box from the top-level, press the [**End**] key. You can continue to use the new graphic controls as well as change entity attributes such as level, color, and line style. Press the [**End**] key again when you are finished.