

Mill / Turn

Multi task machining

The use of tail stocks, steady rests, sub spindles, twin turrets along with C axis, CY axis and B axis are regular features on today's Multi-Task machine tools. In this collision rich environment, the programming of these machines is made simple and safe utilizing EDGE CAM's turning and milling combinations in a single environment. With the addition of 4 and 5 axis simultaneous milling, the simulation of these machine tools is made even easier.

Features at a glance

- One single machining environment
- Full machine tool and toolpath simulation
- Reduce machine tool prove out by graphically simulating the tool path
- Reduce component cycle time
- Full collision checking on component parts
- Support for Twin Spindle, Twin Turret, Pickoff spindle, C, Y & B axis machining

Mill / Turn simulation

EDGE CAM offers a full kinematic simulation package. All the cycles and movements are supported along with the full graphics of the machine, tails stocks and steadies allowing the programmer to visually simulate the machine motion and avoid collisions as they program. Looking for a complete digital twin? EDGE CAM offers complete integration with NCSIMUL for true 1:1 G-Code verification.

4 / 5 axis simultaneous

Mill/Turn machines have many uses and allow much more flexibility and capabilities not offered from other machine configurations.

EDGE CAM uses the latest cutting technologies and machine cycles and with this offers 4/5 axis simultaneous milling options.

Features include

- Axial Milling
This mode allows the user to perform milling operations using the C axis with Rotary options allowing programming along the Z axis
- Radial Milling
Allows the user to machine features around the diameter giving flexibility to the user to turn the component, then create the mill features using driven tooling
- Y Axis Milling
The Y axis milling capabilities allows the engineer more control over the toolpath creation and CNC code output. EDGE CAM supports plane switching where available on the machine tool and keeps the CNC code to a minimum by outputting arcs as required.

B axis head support

In a Mill Turn environment EDGECAM fully supports the use of B axis head work whether working on single spindle or sub-spindle machines. Features include:

- B axis positioning on upper turret allowing more precise and varied approaches to Mill/Turn parts giving the engineer a more flexible approach to programming complex components
- The B axis can be programmed to tilt to any number of angles to allow the many milling options available to tackle any number of features such as Faces, Pockets and Holes
- B axis machining on both the main and sub spindles maximizes productivity allowing optimum machine performance. These features are also supported by our Full Kinematic Simulator with collision detection when using for 4/5 axis Simultaneous work. This provides accurate feedback of the part being cut before release to the actual machine

Upper / lower turret 4 axis turning

The 4 axis turning option in EDGECAM allows major advantages and functionality which is not always easily achieved at the machine control. EDGECAM programming techniques allow you to use more than one turret at the same time in the mill turn programming environment. This means you can use two fixed cutting tools in the same cycle by using a number of 4 axis commands from the Cycles menu.

EDGECAM supports the use of Upper and Lower Turret configurations and will support simulation of these including features such as:

- Mirrored Turning
- Balanced Turning
- Synchronized Turrets

