

The **MAC MegaGrind** is a professional grade finishing cell designed for finishing larger parts or where a heavier duty payload robot is required. The cell is typically furnished with a servo two jaw gripper for handling large parts that can weigh in excess of 250lbs. The parts are typically loaded on a fixture and the cell is configured with the right “Bolt-On” process modules to handle the tasks.

MESH features the use of advanced material removal media from 3M and Norton. Our partnership with these two suppliers provides us with the best and most cost-effective solution for material removal. This coupled with the latest inertia and load feedback compensation devices, servo or pneumatic end-of-arm tool options, spindles, floor mounted grinders, hand off stands, intelligently designed fixtures and renowned robot programming techniques elevate MESH’s solutions to handle even the toughest applications in grinding, buffing, degating, post weld finishing and deburring.

Models	MAC MegaGrind
Footprint w x l x h	20’ x 20’ x 10’ typical and configurable
Robot Quantity	Up to Two
Robot brand	ABB, Fanuc and Yaskawa
Robot payload	180 – 300kg
Robot gripper	Two Jaw Servo or Pneumatic gripper
Sheet Metal Guarding	Yes
Windows	One standard (mounted in door) extra windows available as an option
Operator loading safety	Light curtain package, or fast overhead door
Industry 4.0 Compliant	Yes, with optional data package
Guard Door Type	One standard, 36" wide, swing or sliding door
Guard Door Switch	Power to unlock, (1) E-stop, (3) PB's, escape handle
High Voltage Controls	High-voltage power distribution panel
Low Voltage Controls (Rockwell)	Rockwell CompactLogix L30, dual Ethernet, safety PLC
Low Voltage Controls (Siemens)	Siemens S7 1200F dual Profinet, safety PLC
HMI (Rockwell)	PanelView Plus 7, touch screen, 10.4"
HMI (Siemens)	SIMATIC TP900, 9"
Spindle Cooling Package	Miller Coolmate system with temperature and flow sensor verification
Safety	Fully compliant with ISO 12100 and ANSI/RIA R15.06-2012 safety standards; ABB Safemove II, Fanuc DCS or Yaskawa Motoman FSU
Fixture	Custom designed and professionally built with features such as remote I/O blocks mounted on each fixture, cleanly run, and shielded cables available as a separately price option
Cell Lighting package	LED light package Available as an option
Fume collection/roof	available as an option. MAC cell has built in strength needed for a hood without modifications.
Grind dust and particle collection package	available as an option.

MESH Automation Cell

MAC Technical Data Sheet



- **Optional “bolt on” Process Modules**

- Sanding belt stand – 134” belt in variable widths
- Pencil Grinding with axial compensation
- Grinding wheel stand with or without compensation
- Buffing stand with compensation, diameter sensing and automatic compound application.
- Media change-out drawer: Safety interlocked automatic media change-out with automatic dust cover
- Part Regrip and 180 turn
- Robot mounted spindle
 - Machining spindle
 - Pushcorp with BCT or CAT tool changer and dynamic compensation unit
 - PDS high-speed spindle with BCT or CAT tool changer
 - Force control load cell sensor between robot and spindle
- Positioners:
 - Single axis turntable
 - “H” Frame welding positioner (turntable with headstock/tailstock on either side)
 - Single or Multi-axis vertical turntable or Ferris wheel with headstock/tailstock
 - Conveyorized product feed with no mar rollers or belt

- **Optional “bolt on” Tool Storage and Retrieval Process Modules**

- Drawer type for protection of the tool and replenishment of wear media on a tool
- Tree style for convenience to the robot

- **Optional “bolt on” Quality Control Process Modules**

- Laser measurement
- 2d vision inspection
- 3d inspection stations using 3d lasers

