

The Jet Edge Mid Rail Gantry Waterjet System produces complex parts out of virtually any material. Designed to easily accommodate overhead loading, the Mid Rail Gantry is available in several sizes and comes standard with one abrasivejet cutting head; a second cutting head can be added for increased productivity.

The Mid Rail Gantry is ball-screw driven for higher accuracy. It utilizes an industrial PC controller and can be configured so that all three axes are fully programmable (Z optional). It also features direct-couple AC brushless digital servo motors and single or double carriages.



Construction

The Mid Rail Gantry's sturdy heavy-wall tubular steel beams eliminate vibration and increase system longevity. Critical X and Y bearing components are protected with heavy metal covers with brush seals. The system's catcher tank is isolated from the motion system so energy from the cutting stream does not disrupt the mechanics of the motion system. The catcher tank features heavy gauge C channel reinforced steel side walls (stainless steel optional), replaceable steel slats (stainless steel optional), clean-out couplings on both ends, an adjustable overflow to drain, and multiple C channel floor supports. The slat surface can be leveled or is adjustable.

Standard Features

- Available work envelopes include: 5'x5', 5'x13', 8'x5', 21'x5', 8'x13' and 21'x13'.
- 1 abrasivejet cutting head
- Slat-style catcher tank – separate from motion system
- PC-based CNC controller
- Full-featured hand-held pendant
- Linear bearing ways X and Y axes
- Ball screw-drive (all axes): pre-loaded/zero backlash; direct drive on Y and Z axes, indirect drive on X axes
- Servo motors on X, Y axes: AC digital brushless, absolute encoders, SERCOS communication platform. Servo-driven Z optional.
- Motorized Z axis travel standard (lead screw)
- Machine way protection on all axes: heavy gauge steel covers, brush seals on X and Y axes, bellows covers on Z axes only.
- 5' and 8' Systems: Whip-style high pressure plumbing – Single ¼" whip line to Z carriages reduces number of high pressure components.
- 21'x13': Scissor arm high pressure plumbing to X-axis bridge; Whip line high pressure plumbing to Z axis carriage.

Options

- 2nd abrasivejet cutting head
- Idler-type secondary Z Carriage tied to primary Z carriage and manually adjusted; motorized or servo-driven 12" height control (vertical travel). Will only follow primary Z; occupies 16" of work envelope when parked.
- Z axis AC brushless digital servo with absolute encoders
- Secondary Z carriage: servo-motor driven, fully programmable with mirroring capabilities, motorized or servo-driven with 12" height control (vertical travel); occupies 16" of work envelope when parked.
- Programmable contact height sensing on motorized Z
- Water Raise/Lower for under-water cutting – automatic/manual
- Abrasive Removal System
- Stainless Steel catcher tank
- Stainless Steel catcher tank slat kits
- Splash shields
- Water level to follow Z axis travel (upward travel only)
- Twin catcher tank bladders to decrease cycle time
- SigmaNEST CAD/CAM nesting software