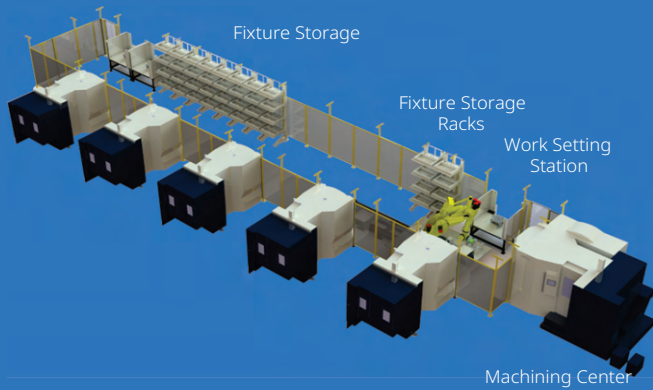


MMC-R Systems – Fixture Plate Automation



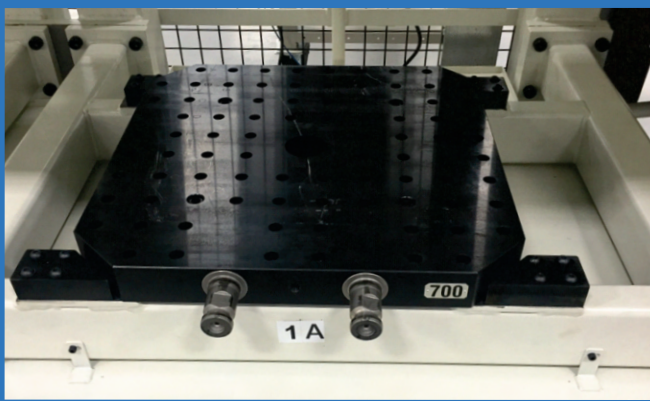
System Features

- ✓ Robot Transports Fixture Plates in place of Machine
- ✓ Makino Machining Centers configured with Zero-Point Clamping Systems
- ✓ Work Setting Stations
- ✓ Fixture Plate Storage Racks
- ✓ System Cell Controller – MAS-A5



Robot Transport

- ✓ 7th-axis Floor Track
- ✓ Fixture Plate Gripper System
- ✓ Fixture Plate Detection/Seated Switch
- ✓ Carriage Plate with Coolant Containment
- ✓ Coolant Gutter System along Floor Track



Fixture Plate Specifications

- ✓ Qualified Similar to Machine Pallets
 - ✓ Center Locating Hole & Rotational Location Holes
- ✓ (2) Spigots for Robot Transport
- ✓ (4) Spigots for Zero-Point Clamping
- ✓ Hardened Surfaces at Clamp Locations
- ✓ Fixture Plate Size Based on Machine Work Zone Size
 - ✓ For example: a61nx: 400 x 400mm



Work Setting Station

- ✓ Horizontal Fixture Plate Orientation
- ✓ 360° Fixture Plate Rotation
- ✓ Light Curtains – Operator Protection
- ✓ Operator Control Panel
- ✓ Load Cells to Measure Fixture Plate Weight



Fixture Plate Racks

- ✓ Coolant Directed to an Easily Accessible Location
- ✓ Fixture Plate Racks Expandable



MAS-A5 Cell Control

Schedules Cell Operations & Maintains the Following

- ✓ NC Programs
- ✓ Tool Data
- ✓ Parts Data
- ✓ Pallet Data
- ✓ Fixture Data
- ✓ Production Orders
- ✓ Reports