



A Fusion Enterprises Company

Master Machine's new facility is purpose-built to support the growing nuclear market by bringing our fabrication, machining, and engineering services under one roof. From individual components, to high-volume production, to commercial grade dedication (CGD), the facility enables fully integrated in-house manufacturing, inspection, and testing while maintaining efficiency, control, and full regulatory compliance.

Backed by a robust quality program, world-class facilities, and industry-leading certifications, Master Machine is the provider of choice to deliver fully compliant, fully documented solutions for nuclear power generation, naval and defense, and Department of Energy.



MASTER MACHINE AT A GLANCE

80,000 SQUARE FOOT FACILITY
Prime Location near the Heart of Downtown Chattanooga

20 FEET UNDER CRANE HOOKS

LOCAL RAIL & RIVER ACCESS *for shipment*

3 BAYS, up to 35 ton capacity

NUCLEAR-GRADE QUALITY SYSTEMS

- 10CFR50 Appendix B
- 10CFR21
- NQA-1
- ASME Section III, N, NPT, (with material), NS
- ISO 9001:2015
- AS9100:D
- ANSI N45.2
- 10CFR71 Subpart H
- ASME VIII,
- Division 1
(U-Stamp)
- NIAC Audited

NUCLEAR EXCELLENCE

- Documented CGD program aligned with NRC-endorsed guidance (*EPRI NP-5652, 10 CFR 21, Appendix B*)
- Qualified dedicated engineers with nuclear experience
- Proven test and inspection capabilities: *material verification, functional testing, environmental testing, dimensional inspection*
- Traceability systems that maintain full documentation from receipt to shipment
- Robust supplier qualification and audit history with major utilities and EPCs
- Corrective action program that meets nuclear expectations
- Go-to resource for obsolescence equipment in the nuclear fleet
- Mechanical, electrical, and controls prefabrication integration

PREFAB / FABRICATION CAPABILITIES

- Precision welding capabilities (*ASME Section IX, American Welding Society (AWS)*)
- Pipe spool fabrication (*carbon, stainless, specialty alloys*)
- Modular fabrication and skid assembly
- Sheet metal / structural fabrication
- Custom enclosure or shielding fabrication using materials like lead, steel, or concrete
- Fit-up and test facilities Ability for modular fabrication and assembly as well as drop testing, hydrostatic testing, NDE, and function testing

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WAREHOUSE & LOGISTICS STRENGTH

- Large inventory capacity for long-lead nuclear parts
- Environmental controls for sensitive components
- Dedicated receiving inspection area
- Chain-of-custody handling with detailed documentation
- Crating, packaging, and nuclear-grade shipping proficiency
- Proximity to major transport routes and ability to move oversized components

ENGINEERING SERVICES

- Design including pressure vessel, equipment, and systems
- Special expertise in nuclear obsolescence equivalency, seismic, and reverse engineering
- 3D scanning and reverse engineering of obsolete parts
- CAD/CAM integration for precision manufacturing
- Engineering change management processes that fit nuclear expectations
- Robust CGD program supporting both operating nuclear generation as well as Department of Energy/National Laboratory from raw material to complex systems

SAFETY & COMPLIANCE CULTURE

- Strong human performance tools
- 10 CFR 21 reporting awareness
- Strong safety culture compliant to federal, state, and local requirements

SCALABILITY & SURGE CAPACITY

- Ability to ramp production during outage seasons
- Extended hours or additional shifts when needed
- Project management support for large multi-month engagements

SECURITY & DATA PROTECTION

- Controlled access to sensitive work areas
- Cyber Security meeting the latest industry requirements

MACHINING CAPABILITIES

- Mazak Integrex I-630V/6 Vertical Multi-Function Machine
- CNC Bridge Milling
 - x=160", y=70", z=32", 4th axis, 90degree head
 - X=120", Y=120", Z=14", Open End
 - X=128", Y=62", Z=40"
- CNC Planer Milling
 - 63" Open Sided x 252" Long
- CNC Gantry Milling
 - x=120", y=120", z=24"
- CNC 5-Axis Milling
 - x=30", y=20", z=20"
- CNC Turning
 - Up to 27" Diameter x 120" Long
- CNC Turning with Live Milling
 - 14.75" Diameter x 21" Long
- Turning, Manual
 - Up to 32" Diameter x 288" (24ft) Long
- Milling - Up to 168" long
- Boring, Horizontal
 - Up to 168" horizontal x 60" vertical
- Pressing
 - 200 Ton, Horizontal and Vertical
 - Shaft Straightening, up to 20ft Long
- Saw Cutting up to 18"

Call (423) 867-2900 Today!

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