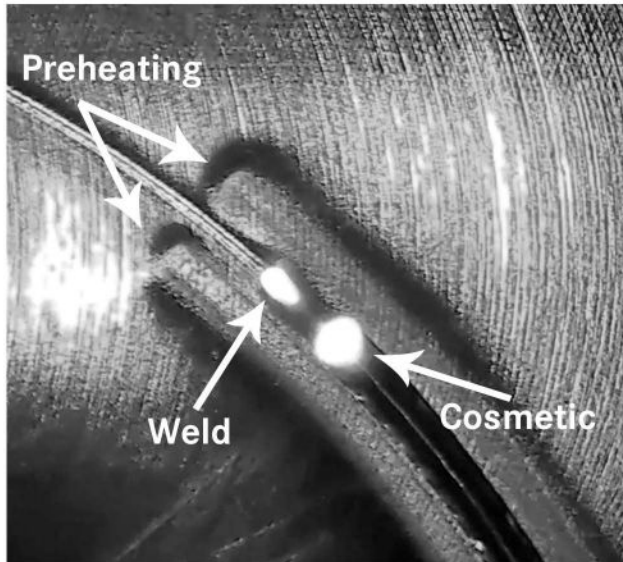


# ELECTRON BEAM WELDING JOB SHOP SERVICES



Since 2011, PTR has added five new 5-axis CNC welding systems to our Enfield, CT Job Shop. Once our skilled Welding Technicians & Engineers refine a robust welding process on this state of the art equipment, it is encoded into a repeatable CNC program. Since all PTR systems have precise CNC control of machine motion and all welding parameters, the process can be repeated by any of our operators at any time, ensuring part to part consistency.

*Put PTR's experience, know-how, and capabilities to work for you.*



*Advanced welding process using EBO Jump multi-beam technology.*

## CAPABILITIES

- Modern Job Shop with 8 full CNC EB Welders
- EB Welder Chambers up to 14 feet long
- High Vacuum ( $< 1 \times 10^{-6}$ mbar) Capability
- Automatic Data Collection of all Welding Parameters
- Preheating & Post Weld Heat Treating
- Welding, Metallurgical & Quality Engineers on Staff
- EBO Jump High Speed Beam Deflection
- Metallographic & NDT Services



EB WELDER	CHAMBER SIZE ( X" x Y" x Z")	VOLTAGE (kV)	MAX POWER (kW)	SYSTEM CAPABILITIES
1	43 x 29 x 35	60	7.5	CNC PV 100 RT
2	43 x 29 x 35	60	15	CNC PV
3	53 x 36 x 50	90 - 150	25	CNC PV 5 AXIS HF MSF 100 RTZ
4	53 x 36 x 50	90 - 150	25	CNC PV 5 AXIS HF WF MSF 300 RTZ 1000 RT
5	144 x 60 x 75	90 - 150	30	CNC PV 5 AXIS HF WF MC MSF 1000 RTZ
6	70 x 36 x 50	90 - 150	30	CNC EBO 5 AXIS AST 100 RTZ
7	168 x 94 x 112	90 - 150	30	CNC PV 5 AXIS HF WF 1000 RTZ 3000 RT
8	36 x 28 x 43	60	15	CNC PV EBO 5 AXIS AST MC MSF 100 RT

**CNC** All Motion & Beam Parameters Integrated

**5 AXIS** 5-Axis Contouring Motion

**PV** Partial Vacuum Capable

**MSF** Multi-Spindle Fixturing for Higher Throughput

**HF** Supports Hairpin Filament

**EBO** High Speed Beam Deflection (EBO Jump)

**WF** Multi-Axis Wire Feeder Capability

**MC** Meissner Coils

**AST** Automatic Seam Tracking

100 RTZ 300 RTZ 1000 RTZ 100 RT 1000 RT 3000 RT Up to 3000 lbs Capacity Rotary/Tilt & Z-Lift Fixtures

## In-House Support Equipment & Services

- Metallographic Equipment (Microscopy & Sectioning)
- Metrology
- Helium Leak Testing
- In-House Machining
- Vapor Degreaser
- Stress Relieving Oven
- Overhead Cranes with up to 3-Ton Capacity
- Access to other, OEM Qualified Post Weld Processing Vendors



Met Lab for on-site metallographic analysis.



Job Shop EB Welding system with full CNC control & multi-spindle fixture.



(860) 741-9354  
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# FAA REPAIR STATION RATINGS & WELDING APPROVALS



Our quality system is based on the AS9100 with formal NADCAP AC7004 accreditation. Through decades of experience, we have prided ourselves on understanding our customer's diverse requirements, providing services that continually exceed their needs, and committing to the entire products lifecycle (development, processing, and post-delivery assurances).

## Weld Qualifications

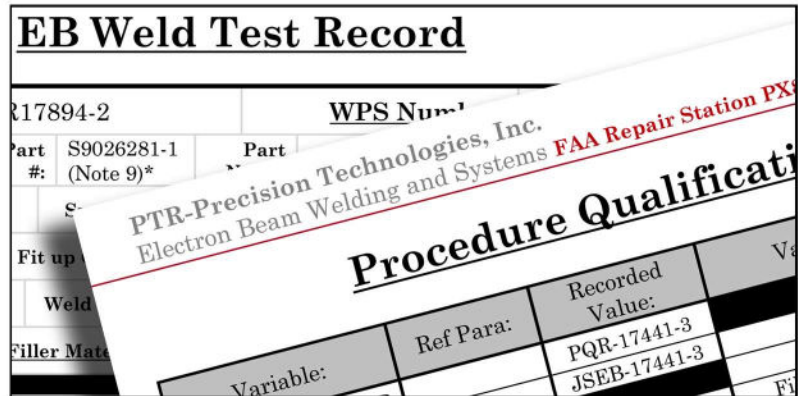
AMS2680	AWS C7-3
AMS 2681	ASME Boiler & Pressure Vessel Code Sec. IX
AWS D17.1	Customer Specific
Mil-W-46132	OEM Approvals



*Nadcap Accredited Welding & Aerospace Quality Systems*



*ITAR Compliant: DDTC  
Registration # M15306*



*Inquire about getting your repair added to our Capabilities List!*

## FAA Repair Station **PX8R599Y** Electron Beam Welding

<u>Rating</u>	<u>Manufacturer</u>
<b>Powerplant</b>	Pratt & Whitney Aircraft
	Pratt & Whitney Canada
	General Electric
	CFM International, S.A.
	International Aero Engines AG (IAE)
	Honeywell International Inc.
	Rolls-Royce
<b>Accessories - Mechanical</b>	Hamilton Sundstrand



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