Thermal Equipment Corporation
Manufacturer of the Highest Quality Autoclave Systems
TEC Over the Past 50 Years

- Pioneered all modern Autoclave Innovations & Safety Concepts
- Supplied more than 1,000 Autoclave Systems Worldwide
The Beginningé

Founded in the 1950s as Fuel Engineering
Innovations of the 1950s

Laboratory Autoclave

Extremely valuable in the development of new composite bonding materials and techniques due to its accurate control of both heating and cooling cycles.
Innovations of the 1960s

Control Consoles for Multiple Autoclaves
Control systems developed using new technology and instrumentation to offer accurate control of Cooling, Heating, Pressure & Vacuum systems
Innovations of the 1970s

**Large Autoclave Systems**
Largest autoclave systems in the industry built since the early years.
(20 ft. Diameter Autoclave shown on photo)
TEC in the 1980s

TEC Expands & Acquires Baron Autoclaves in 1987
Innovations of the 1980s

**Autoclave Computerized Control Systems (ACCS)**

- Introduction of computers. Hardware included IBM systems and 7-color dot matrix printers.
- Computerized control system that is both “user-friendly” and technically advanced.
- Development of easy-to-follow software allowing customer to operate the system with ease and still satisfy all quality control requirements.
Innovations of the 1980s

TEC 715-2000 Vacuum Valves

• Vacuum valves system offering unparalleled Vacuum Control and Performance that guarantees the compliance to the most stringent industry standards and requirements.
TEC in the 1990s

- Advanced Microprocessor Controls
- Dual Fuel Gas or Propane Fired Combustion Systems
Innovations of the 2000s

Innovative Circumferential Airflow Autoclave System

- Development of new circumferential airflow system to meet extremely stringent Heating, Cooling, and Uniformity requirements on Large 7M Diameter Autoclave system.
Innovations of the 2000s

First ever 30 foot Diameter Autoclave System in Production Worldwide
TEC in 2008

TEC expands and moves to its new “State of the Art” facility in Rancho Dominguez, California in 2008
TEC Todayé

Employing “State of the Art” Technology for the Design and Engineering of Autoclave Systems

Finite Element Analysis (FEA) Software

Computational Fluid Dynamics (CFD) Software

Door Deformation Analysis for Reliability, Safety, and long-term cyclic life

CFD Analysis to ensure Autoclave is designed to meet Heating, Cooling, and Uniformity requirements to customer satisfaction
TEC Todayé

- TEC has built more Autoclave Systems than all other Autoclave suppliers combined.

- TEC is number one for Autoclaves larger than 13 feet Diameter.
TEC Completed Systems:
30 feet Diameter x 70 feet Long Autoclave
TEC Completed Systems:
23 feet Diameter x 120 feet Long Autoclave
TEC Completed Systems: 23 feet Diameter x 120 feet Long Autoclave
TEC Completed Systems: 20 feet Diameter x 50 feet Long Autoclave
TEC Completed Systems:
20 feet Diameter x 70 feet Long Autoclave
TEC Completed Systems:
(3) Identical Systems
15 feet Diameter x 60 feet Long Autoclaves
TEC Completed Systems:
12 feet Diameter x 33 feet Long Autoclave
TEC Completed Systems:
22 feet Diameter x 80 feet Long Autoclave
TEC SHOP BUILT SUB-COMPONENTS

THERMAL EQUIPMENT CORPORATION
CUSTOM AUTOCLAVE SYSTEMS – "IT'S WHAT WE DO"
Shop Fabrication of Combustion Chamber
For 30 foot Diameter Autoclave

COMBUSTION CHAMBER FINISHING WORK

COMBUSTION CHAMBER READY FOR SHIPPING TO JOBSITE

THERMAL EQUIPMENT CORPORATION
CUSTOM AUTOCLAVE SYSTEMS – “IT’S WHAT WE DO”
Shop Fabrication of Cooling Coil for 30 foot Diameter Autoclave

COOLING COIL READY FOR SHIPPING TO JOBSITE

COOLING COIL HYDROSTATIC PRESSURE TESTING

THERMAL EQUIPMENT CORPORATION
CUSTOM AUTOCLAVE SYSTEMS – “IT'S WHAT WE DO”
Shop Fabrication of Heating Coil for 30 foot Diameter Autoclave

HEATING COIL FABRICATION

HEATING COIL READY FOR SHIPMENT TO JOBSITE

HEATING COIL & OTHER COMPONENTS SHIPMENT TO JOB SITE

THERMAL EQUIPMENT CORPORATION
CUSTOM AUTOCLAVE SYSTEMS – "IT’S WHAT WE DO"
Shop Fabrication of Miscellaneous Autoclave Components

MOTOR HOUSING WITH INTERNAL COOLING COIL (1)

MOTOR HOUSING WITH INTERNAL COOLING COIL (2)

COMBUSTION AND VENT EXHAUST DUCTS PROTECTION

THERMAL EQUIPMENT CORPORATION
CUSTOM AUTOCLAVE SYSTEMS – “IT’S WHAT WE DO”
Shop Fabrication of Miscellaneous Autoclave Components

- Autoclave Transition Piece (Top Section)
- Vacuum System (Ready to Connect)
- Cooling Filtration System
TEC FIELD SUPERVISION
TEC FIELD SUPERVISION

Unparalleled Field Supervision:

• Efficient and optimized installation procedures developed over the last 50 years

• Procedures & Guidance ensure
  • Safety is number one priority
  • Regulatory measures & Codes are always met
  • Final Installed Autoclave system has No Flaws & is built as intended per design
TEC FIELD SUPERVISION

TEC Field Supervision Services Include:

- Schedule and deadlines are number key priority
- Optimize installation supervision efficiency through broad knowledge & experience
- Minimize your labor costs
- Reduce your installation space and materials costs
- TEC does not use third-party supervisor
- TEC support and direct communication with home office from start to finish
Partial List of Our Major Customers

Aerojet
Alliant TechSystems
American Airlines
Beech Aircraft
Bell Helicopters
Boeing Company
Bombardier
Brunswick Corp.
Ciba-Geigy
Dow Chemical
DuPont
General Electric
Goodrich Aerospace
Goodrich Industries
Government of Australia
Government of Korea
Government of Spain
Government of Taiwan
Hercules, Inc.
Hexcel Corporation
Hitco Carbon Composites
Israeli Aircraft Industries
Israeli Military Industries
Korean Aerospace Industries
Korean Airlines
Lockheed Martin Corp.
Mitsubishi Heavy Industries
NASA
Northrop Grumman
Pratt & Whitney
Raytheon Company
Sikorsky Aircraft
Singapore Aerospace
Spirit AeroSystems
Texas Instruments
Thiokol
Turkish Aerospace
United Technologies
US Air Force
US Army
US Marines
US Navy
Vought
Westinghouse
Experience

- Engineering - 15 Years
- Management – 25 Years
- Shop Fabrication Crew – 20+ Years
- Field Crew – 18+ Years
- Field/Service Technicians – 30 years
- Administrative Support – 14 years
TEC Works in Concert with the Customer to Ensure On Time Delivery as Follows:

- Dedicated project manager available 24/7
- Onsite supervision throughout the field installation until project completion and customer acceptance
- Routine MPP Schedule updates including: Detailed Critical Path Designation, Fabrication, & Installation Schedules
- Design/Fabrication Progress Meetings
- Project Acceptance, Buyoff, Training & As-Built Drawings Plan
Why Buy a TEC Autoclave?

- TEC is the worldwide leader
  - Pioneered the modern Aerospace Autoclave System
  - Competition may *imitate*, but cannot *duplicate* a TEC Autoclave
- TEC is here to stay
  - New Corporate Management committed to long term Customer satisfaction
  - Field Crews, Engineers and Service Technicians with vast experience and on payroll
  - Ongoing investment in R&D (energy efficient Controls)
- Proven long-term production quality systems with many in service over 30 years
- Unparalleled & Superior Customer Support
- TEC builds relationships with its customers for continued success
- Specializes in Custom Autoclave Systems
- All site work supervised directly by TEC personnel
- TEC prides itself for developing its autoclave systems on Budget and on Schedule
Sample Autoclave Layout
Sample Autoclave Front View
Sample Motor Housing

Designed to Reduce Maintenance Costs, such as with Motor Housing:
Thank you for your time and interest in Thermal Equipment Corporation (TEC).

TEC looks forward to working closely with you for all of your important Autoclave projects with a desire to meet your requirements, needs and expectations. We believe our vast experience will ensure you will receive the best Autoclave money can buy. We can provide a not only all of your new Autoclave equipment, but complete Autoclave service, upgrades and spare parts.

Being your Autoclave supplier is not just about selling you an Autoclave, but being your supplier Partner to help you keep your production equipment at its optimum performance for many, many years to come. Your success is our success and TEC wants to be there every step of the way. We take this role very seriously.

No one else has more satisfied customers than TEC.