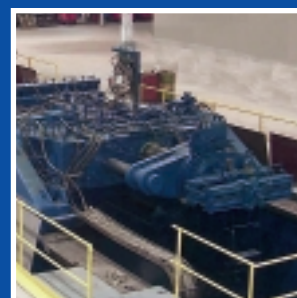




Commercial - Industrial - Manufacturing - Advanced Technologies



**Meeting all of your  
bonding & composite  
structural needs.**



ISO9001:2000 & 9100 Registered



Commercial - Industrial - Manufacturing - Advanced Technologies



Brenner Aerostructures' commitment to excellence in the manufacture of high quality component and assemblies for marine, power generation, rail, automotive, aerospace, and specialty industries. Our process capabilities and scale of operations allow us to supply every industry needing metal bonding, composite lay-up, metal forming, assembly, sheet metal fabrication, polishing, and nondestructive inspection services.

Over the years, this facility has supported the bonding and metal forming needs for major companies from around the world.

Brenner Aerostructures is a member of the Brenner Business Network. This network of family owned businesses are organized to augment each organization's manufacturing capabilities. The Brenner Business Network includes: 40,000 square foot sheet metal fabrication facility; 100,000 square foot bonding and metal forming facility; 185,000 square foot machining and tooling facility; laser cutter; and numerous CAD systems (CATIA, Pro-E, Unigraphics) supporting a board spectrum of customer needs. This alliance allows customers the convenience of a "one stop source".

Located north of Philadelphia, PA, Brenner Aerostructures has immediate access to metropolitan and local airports, Interstate I-95, the Pennsylvania and New Jersey Turnpikes to ensure part, component, and assembly shipments are fulfilled with ease.



### Facility Capabilities

- Autoclave Capable of Bonding Parts up to 600" Long by 120" Wide
- 6,400 Square Foot Controlled Contamination Area
- 1500 Ton Stretch Press forming 480" of Sheet and Plate Materials (Extensions Can Be Added)
- Nondestructive Testing
  - Ultrasonic Inspection with C-Scan Capabilities
  - Resonance Testing
  - Pulse Echo
  - Thru Transmission (TTU)
  - Magnetic Particle Inspection
- Sheet Metal Fabrication
- Assembly
- Oven Bonding
- Roll Former

### Primary Processes

Utilizing cellular manufacturing concepts to meet customers' need for rapid response,

Brenner Aerostructures houses five work cells:

- Sheet Metal – Equipped with Roll Former, Stretch Former, Sheet Metal Detail Fabrication
- Bonding – Autoclave (50' x 10'), 6,400 Square Foot Controlled Contamination Room
  - Bonding Metal to Metal, Metal to Honeycomb, Rivet Bonding, Cold Bonding
  - Composite Lay-Up of Fiberglass, Carbon Fibers, to include Prepreg and Wet Lay-Up
- Nondestructive Inspection
  - Ultrasonic with C-Scan Imagery
  - Magnetic Particle
- Assembly with Fastening and Sealing Capabilities
- Mechanical Polishing

### Materials

- Brenner possess a large inventory of sheet metal stock in various thicknesses and tempers from commercial to skin quality aerospace grade available for your immediate needs.

**For Extended Brenner Business Network Facilities Information, View Inserts**

## Quality Management Systems

Brenner Aerostructures top management's commitment to instilling a process-based Quality Management System, focuses around our customers' needs.

The quality initiative at Brenner Aerostructures is "Right Today, Better Tomorrow". Quality is our top priority.

Brenner Aerostructures' system handles the most critical and stringent industrial quality requirements in today's manufacturing environment. Our key focus on continual improvement and value-added activities is achieved through:

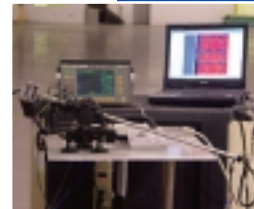
- Lean Manufacturing & Six Sigma Principles
- Continuous Training for All Employees
- Acquisitioning State-of-the-Art Inspection Equipment
- Customer Satisfaction

Proudly, Brenner Aerostructures' Quality Management System is a registered ISO9001:2000 and AS9100 company in the manufacture of commercial and aerospace components in bonding, metal forming, sheet metal fabrication and machining, assembly, polishing, and nondestructive inspection services. A copy of our certificate is available online at [www.brenneraero.com](http://www.brenneraero.com).



CMM

Length = 400"  
Height = 100"  
W-Axis = 160"



ISO9001:2000 & 9100 Registered



[sales@brenneraero.com](mailto:sales@brenneraero.com)

T- 215-638-3884

F- 215-638-3899

[www.brenneraero.com](http://www.brenneraero.com)

*Meeting all of your bonding & composite structural needs.*

BRENNER BUSINESS NETWORK

BONDING & STRETCHFORMING  
PRECISION MACHINING  
SHEET METAL FABRICATION Brenner Aerostructures, 450-3 Winks Lane, Bensalem, PA 19020



[www.brenneraero.com](http://www.brenneraero.com)



## Precision Machining



**B-TEC SOLUTIONS** combines the traditional values of service, quality, and performance with versatility, flexibility, and advancing technology allowing manufacturing engineers to conceive new uses and applications in metals.

The ability to develop distinctive new designs at **B-TEC SOLUTIONS** is brought about by using the strengths of the past to produce components and assemblies that offer an exciting view of the future.

Further supported by new equipment, **B-TEC SOLUTIONS** offers customers one of the most comprehensive, advanced and performance-proven machining companies in the country. At **B-TEC SOLUTIONS**, we take pride in being your single source for all of your machining and turning needs.

### CNC Machining - General/Commercial

**B-TEC SOLUTIONS'** ability to meet customers' requirements is accomplished in-house with facilities housing over 100+ CNC Machining and Turning Centers, and large capacity wire EDM's for your precision quality parts. We utilize Pro/ENGINEER and IBM CATIA (CAD/CAM/CAE) to allow seamless interface between engineering and manufacturing, providing greater flexibility and faster delivery. **B-TEC SOLUTIONS** meets the precision machining requirements of the Aerospace, Power Generation, Construction Machinery, Chemical Industry, Textile Machinery and other industries, as well as Die Manufacturing.

### Capabilities Include

- CNC Turning and Machining - 100+ Machines; 30 5-Axis up to 130" x 400" Capacity
- High Performance, 3 Spindle, 5- Axis, Cincinnati Profiler with Bed Size of 10' x 87'
- CATIA CAD/CAM and Pro/ENGINEER/SDRC Solid Modeling
- Super Productive 5-Axis Integrated Turning Centers (Turn and Mill in One Step)
- Wire and Ram EDM, 22 Machines
- Tooling: Dies, Molds, Composite Tooling 50+ Toolmakers
- Custom Machine Building
- Welding
- Sheet Metal Fabrication
- Punch Press Capacity to 1000 Tons, 60 Presses
- CNC Cutter Grinding
- Centerless Grinding



BONDING & STRETCHFORMING  
PRECISION MACHINING  
SHEET METAL FABRICATION

Brenner Aerostructures, 450-3 Winks Lane, Bensalem, PA 19020 T-215-638-3884 F-215-638-3899



## Precision Sheet Metal Fabrication



Since 1979, [Woodbine Industries](#) provided complete sheet metal fabrication services to industrial, commercial and government-related companies. Over the years, our customer list has grown to include many Fortune 500 companies across the country. One of our overriding goals is to develop and maintain long-term customer relationships. In today's competitive world, [Woodbine](#) is capable of manufacturing parts to print just in time. Talk to us, tell us your requirements. We are happy to design and implement solutions that fit your needs.

### Current Technology

[Woodbine's](#) design engineering team, equipped with state-of-the art CAD and NC programming software, can aid you in designing sheet metal parts and assemblies. We will work closely with your technical personnel to familiarize ourselves with your requirements for added value engineering.



### Versatility

Daily we fabricate complex assemblies to exacting dimensions. Our certified welders, with over 50 years combined sheet metal experience, are knowledgeable at welding any material using the latest TIG, MIG, Fluxcore or Arc welding methods.

Powder Coating highlights our in-house painting capabilities. Temperature-controlled bake ovens and the latest in part pretreatment technology ensure lasting color-matched products every time.



### Laser Cutting Service

CO2 laser is one of the fastest, most accurate and versatile methods available today. Lasers can cut a wide variety of materials including plastics, ceramics and metals. The unique properties of lasers provide cut widths as narrow as .005" enabling a closer nesting of parts. [Woodbine's](#) powerful 3000-watt laser can cut steel and stainless steel as thick as 1/2" or as thin as .001".

CNC-machine controllers allow our engineers to quickly program any shape or contour and produce parts to your specifications in lots from one to thousands.

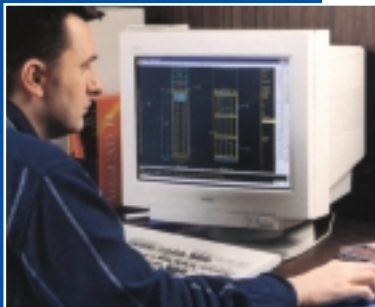
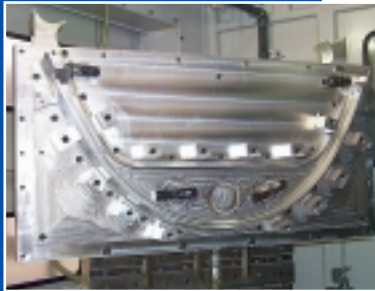
BONDING & STRETCHFORMING  
PRECISION MACHINING  
SHEET METAL FABRICATION

**WB** WOODBINE INDUSTRIES INC.

Brenner Aerostructures, 450-3 Winks Lane, Bensalem, PA 19020 T-215-638-3884 F-215-638-3899

# BBN Brenner Business Network

## CAD/CAM Design



The Benner Business Network is commitment to excellence with fully integrated state-of-the-art CAD/CAM design facilities utilizing IBM CATIA CAD/CAM/CAE, Pro/ENGINEER and Unigraphics allowing seamless interface between engineering and manufacturing, providing greater flexibility and fast delivery.

Using our CAD/CAM/CAE networks, we download customer engineering files, which are used to program our CNC Machining Centers and CMM's. The customer electronic engineering files allow design, and build of vacuum fixtures and tooling. Our design department is unsurpassed through the use of our IBM CAD/CAM/CAE systems, interfacing with many of our customers CAD/CAM systems.

The BBN's CAD/CAM design team works hand in hand from concept to product realization with customer development teams.

### Other Features

- Develop NC Processes by Utilizing Manufacturing Parameters.
- Optimize for Production Machining.
- Create Libraries of Tools, Fixtures, and Manufacturing Processes.
- Manufacture Families of Parts.
- Verify Toolpaths On-Screen, Using VERICUT.
- Generate Process Documentation Automatically.
- Define Relationships in the Manufacturing Model.
- Utilize Run-Time Post-Processing Capabilities.

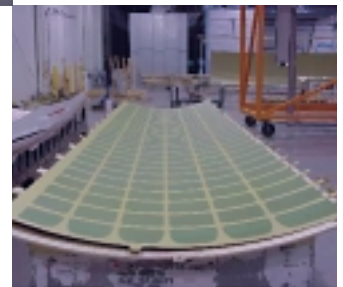
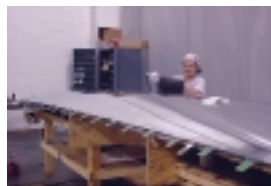
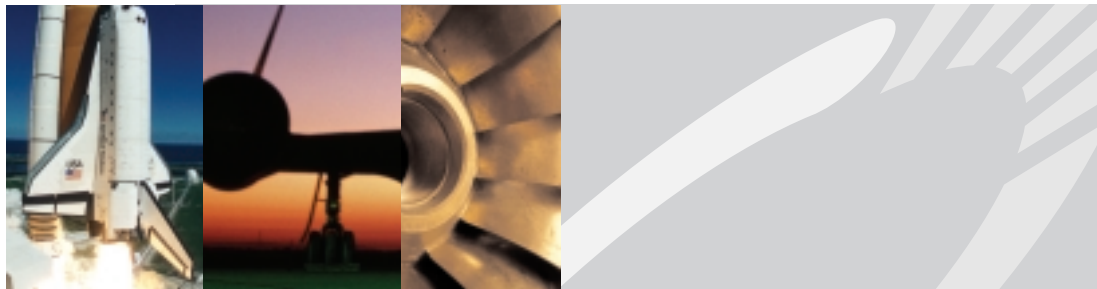
BONDING & STRETCHFORMING  
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BBN  
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