Pressure vessels and tanks built with INTEGRITY





A DIVISION OF VESTEK INDUSTRIES



### **Complete tank fabricating and finishing services**

We engineer and produce a wide range of tank and pressure vessels, often with accelerated timetables. Project costs are minimized through our on-site blasting, painting and finishing services. A dedicated project manager will keep you informed of the status of your project every step of the way.

### Integrity runs full circle at Universal

From the first weld to finished assembly, what matters is the integrity of your product throughout. The same can be said about the company that builds it. Universal was founded on our belief in the Golden Rule. We value the integrity of the people and the processes we have carefully integrated on your behalf, and we are inspired to support the success of your business in the most efficient, proactive and resourceful ways.



A dedicated project manager keeps you informed of the status of your project throughout. Our disciplined approach to process efficiency and operational excellence ranges from design engineering and fabrication to comprehensive inspections and certifications.

### Designed and built to be your tank and pressure vessel partner

One visit to our production facilities will convince you of our quality, efficiency and capacity to meet your fabrication needs. Our ASME code compliant operations assure the integrity of your project from engineering through production, with total project assembly, testing and certifications conducted on-site. Complete projects can be built and delivered with all externals and internals in place. This includes the integration of ladders and platforms, as well as piping and electrical for reduced time and cost.





# FABRICATION SERVICES

### Experienced tank welding professionals

Reliable ASME pressure vessel and tank fabrication is assured with welds produced by our Accu-Pulse<sup>®</sup> process and certified welders. Our welding professionals average 15 years of welding experience.

- ASME Section VIII, Div. 1 Boiler and Pressure Vessels
- 100 gallons to 50,000 gallons
- R-Stamp certification for boiler repairs and alterations
- U-Stamp certification for miniature pressure vessels, safety valves, rupture discs
- Accu-Pulse<sup>®</sup> welding process
- ASME Certified welders and inspectors
- 100,000 pounds fabricating capacity

In-house parts and material preparations set the stage for efficient fabrication. Careful planning and inventory management prevent most production delays that can otherwise extend project delivery dates.

- Comprehensive in-house parts production and inventory
- Detailed shop instructions for efficient project flow
- .25-inch to 1.5-inch steel
- High-definition plasma cutting, 10ft x 20ft capacity, +/- 1/32-inch precision typical
- 14-foot x 1-inch steel plate rolling capacity, 24-inches to 15-foot 6-inches diameter
- Carbon steel SA516-70, A-36, SA-36, SA-106B
- Stainless steel SA-304, SA-316, SA-240
- EX-Ten

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Our expertise in the design and fabrication of tanks and pressure vessels serves a wide range of markets and applications. The majority of our projects are highly customized to the requirements of these diverse sectors and applications. We are highly specialized in the production of ASME pressure vessels and tanks for applications in water, storage, truck transportation, and heavy industry.







### Efficient tank and pressure vessel fabrication begins with planning

Our highly efficient and scalable fabrication operations serve a wide range of tank and pressure vessel applications, often with accelerated timetables. Universal is an approved and certified as an ASME Code manufacturer of pressure vessels. We are confident we can deliver your project, on-spec, on-time, and priced to meet your needs.

In addition, Universal offers fabrication services that include add-on elements such as piping, ladders, and platforms. We can collaborate with you during the planning phase so as to minimize your project's production timeline.

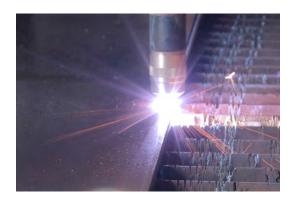




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Capital investments in high-definition plasma cutting, plate rolling and state-of-the-art pulse welders enable the efficient preparation of tank and pressure vessel. In-house operations help minimize outsourced component cost markups and the related risk of sourcing delays.



Project plan detailing extends to shop-level assembly instructions, such as part positioning. Careful planning at this phase prevents delays during any step of fabrication.





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# Tank and Pressure Vessel DESIGN ENGINEERING

### **Skilled and proactive collaboration**

Our engineering team knows how to get a tank project moving by proactively and swiftly evaluating and complying with project specifications. We can also help you develop a product concept from scratch. Or, we can help you find ways to improve an existing plan, either by improving product performance or by engineering costs out of a design. This includes the early resolution of dimensions, materials, and other critical design considerations.

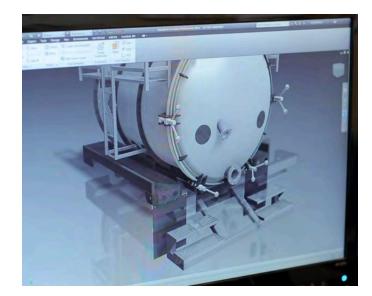
To further assure the efficient flow of your project from estimate preparation to successful completion and delivery, a dedicated project manager oversees your project at every step. The project manager is your direct contact, keeping you informed of project status and coordinating with you on any decisions as needed from start to finish.

- Complete tank engineering capabilities
- Rapid resolution of drawings and related decisions
- Early conceptual design assistance
- Recommendations for performance and cost improvement
- Seismic and wind load calculations
- Shop detailing and directions for efficient project flow
- Dedicated project management on design through completion
- 24-inches up to 15-feet 6-inches diameter
- .25-inch to 1.5-inch steel
- 100 gallons to 50,000 gallons

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Universal's experienced engineers use the latest design tools and methods, including Autodesk<sup>®</sup> Inventor<sup>®</sup> 3D CAD software. Tank requirements can be programmed from sketches or CAD drawings. Parts can also be imported from CAD drawings in a .dwg or .dxf file format.







### Experience and technology come together at Universal

Comprehensive undertsanding of the spec is only part of the task. Our rapid resolution of drawings and related design decisions is enhanced by our experience and ability to make recommendations for performance and cost improvements. Universal is backed by complete tank engineering capabilities and can provide early conceptual design assistance to help you get your project underway.

From the moment you submit a spec, through design, fabrication and inspection, you will have a dedicated project manager on your side.





As-built digital models support rapid and accurate design collaboration. Proactive communication at this phase assures an efficient start to your project.





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# Tank and Pressure Vessel FINISHING SERVICES

### **Comprehensive in-house capabilities**

To maintain quality and ensure your project is completed on-time and on-budget, Universal provides turnkey in-house services that include thorough testing processes, inspections and finishing services, and shipping coordination.

### **ASME testing and certifications**

Thorough testing and certifications assure the performance and reliability of every ASME tank and pressure vessel manufactured by Universal. In addition, every production employee is empowered to "stop the line" based on the slightest quality concern. Individually and collectively, our insistence on operational excellence enables us to make tough promises and keep them.

- Digital mill gauge, profile gauge, and surface temperature gauge testing
- Hydrostatic, dye penetrate, hardness, magnetic particle, and lining continuity testing
- Full blast and lining profiles, heat treating, and stress relieving
- Phycrometer relative humidity and dew point testing
- Dry film thickness, radiography, and Charpy V-notch testing
- American Society of Mechanical Engineers (ASME), R-Stamp and U-Stamp certification, Department of Transportation (DOT)



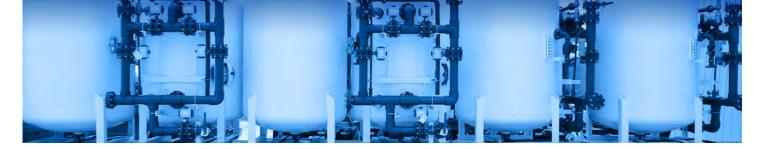
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Hydrostatic pressure vessel testing and radiography (x-ray) weld testing are among the comprehensive measures undertaken to assure product performance and reliability.







# In-house blasting and painting reduce project timelines and costs

Our in-house finishing operations include the installation of protective linings, surface preparations, coating, and painting. We make your tank look good so you look good.

- Protective linings
- Steel grit abrasive and cleaning
- Blasting facilities on-site
- Coatings and finish painting on-site
- Cold set epoxies, polyurethane, enamel, vinyl ester
- Painting and lining inspection report on every job





# DOT certified to help ensure your project arrives safely and securely

Many pressure vessel and steel tank fabrication projects are sizable and uniquely configured, which impacts many shipping considerations relative to shape, weight distribution and length. We truly believe that no project is truly finished until it arrives safely and securely at our customer's location. For this reason, we often coordinate closely with customers regarding shipment preparations.

- Transportation load specifications
- Drawings for loading guidance
- Palletizing and temporary fabricated bracing
- 75,000 pound capacity crane loading
- Special freight arrangements



Uniquely customized tanks and pressure vessels often require close coordination on loading and shipping.

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# Tank and Pressure Vessel VALUE-ADDED SERVICES

### **Functional integration of components**

We develop many projects turnkey, providing additional elements to enhance tank or pressure vessel functionality. These added elements range from platforms, ladders and manways to more complex internal and external systems that prepare the project for operations.

### Internals, Piping and Electrical

Universal has vast experience providing final assembly services which include piping, the integration of pumps and motors, electrical panels and related connections. All finished pressure vessels follow strict ASME Section VIII Codes and standards with ASME U Stamp and R Stamp ratings.

- Fitting, bolting, and welding
- Internal and external piping
- Pumps and panels installation
- Electrical fixtures and connections





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Internal and external piping is typically assembled during the final stage of production along with any required system testing prior to finishing.







### Custom design and fabrication services to enhance tank functionality

Many of the tank and pressure vessel projects we undertake require highly custom designed and fabricated elements that we produce in-house. These range from skid, pallet, and frame foundation configurations to such accessibility elements as manways, ladders and platforms. We also fabricate components integral to tank and vessel functionality, such as nozzles, filters and piping, as well as pipe headers and other custom designs.

- Portals and manways
- External and internal piping
- Ladders and platforms
- Skids and frames
- Filters and strainers
- Other custom fabrication





*Our capacity to engineer and fabricate accessory structures completely in-house can significantly reduce time and cost from a project.* 



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# Tank and Pressure Vessel MARKETS SERVED

### **Designed to meet your application**

Our expertise in the design and fabrication of tanks and pressure vessels is enhanced by our experience across a broad range of markets. Most of our projects are highly customized to the requirements of these diverse sectors and applications. We are highly specialized in the production of ASME pressure vessels and tanks for applications in water, storage, truck transportation, and heavy industrial markets.

Engineering firms and facility managers prefer us because of our one-stop design and production capabilities, which enables projects to start moving earlier and deliver sooner, for greater production efficiency and the lowest cost possible.



*Our highly efficient pressure vessel and tank fabrication operations support a wide range of applications and designs, often with accelerated timetables. Universal Tank is an approved and certified manufacturer of ASME / Code pressure vessels.* 





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### Expertise across a broad range of markets and applications

This list below represents a snapshot of the broad range of the markets and applications we have experience in fabricating for our customers. Whether your project is an ASME or non-code tank, we would be honored to provide you with an estimate. If you do not see your specific market or application, just ask... our experience runs deep.

### Markets:

- Agriculture
- Chemical
- Co-Generation
- Food & Beverage
- Heavy Equipment
- Marine
- Mining
- Petrochemical
- Pharmaceutical
- Refineries
- Irrigation
- Truck & Transportation
- Water Treatment

### **Applications:**

- Air Receivers
- Autoclaves
- Custom Filters
- Deaerators
- Degasifiers
- Distillation Tanks
- Flocculation Tanks
- Hydropneumatics
- Refrigeration
- Saturation Tanks
- Storage Tanks
- Vacuum Vessels
- Water Treatment



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#### **Turnkey Capabilities**

- Design engineering and design-assist
- Dedicated project manager
- Tanks, pressure vessels, skids, piping, ladders, platforms, add-ons
- Final assembly, blasting, painting, piping and electrical
- Testing and certifications
- Shipping preparation and coordination

#### **Production Capacities**

- Wide range of tanks and pressure vessels
- 100 gallons to 50,000 gallons
- 24-inches in diameter up to 15-feet 6-inches in diameter
- 100,000 pounds fabricating capacity
- Carbon steel SA516-70, A-36, SA-36, SA-106B
- Stainless steel SA-304, SA-316, SA-240
- Ex-Ten® 50

#### **Testing and Certifications**

- ASME Section VIII, Div. 1 Boiler and Pressure Vessels
- R-stamp certification for repairs and alterations
- U-stamp certification for miniature pressure vessels, safety valves, rupture discs
- ASME certified welders and inspectors
- Department of Transportation (DOT)
- Hydrostatic testing
- Non-destructive examination (NDE)
  - Radiography, dye penetrant, hardness testing
  - Magnetic particle, lining continuity, dry film thickness testiing
- Heat treating and stress relieving



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