

Legendary Reliability—Ongoing Innovation





- Founded in 1967
- Small Business Concern
- US Made
- Industry Leader
- Aluminum Towers
- > AWS Certified Welders
- **Commercial & Military** Customers
- Highly Customizable **Product Lines**
- Low & High Volume **Production Capability**

- Innovation of signal boost towers for Ham Radio enthusiasts
- Mobility tower concept is born. Company attaches first antenna to a TV repairman's
- First in industry to deliver aluminum tower
- Company incorporated in Florida as Aluma Tower Company, Inc.
- Leading supplier in the Americas for aluminum telescoping tower systems

1970's & 1980's

- Designed & deployed new turnkey products:
- · Cell On Wheels for interim cellular communications
- Public Safety units for disaster relief
- Lab On Wheels for air sampling and data transfer
- Energy discovery & field equipment repair

- Patented innovations: unguved towers increasing capabilities and opening up new markets
- Introduction of first unguyed aluminum telescopic tower system
- New units geared for desert/mountain range sent to classified zones under DOD contract
- Design & certified Trailer Tower to be C130 transportable

- Patented innovations; smart tower system, adjustable coupler & aluminum pallet increasing capabilities and opening up new markets
- Adjustable trailer "Coupler" provides advantage for tight packing and multiple towable setups
- Introduction of Magnemount System to the Market
- First official channel partner

2010's

1990's

2000's

With a 40+ year history, Aluma Tower has integrated the right material with innovations to serve wireless technology's rapid evolution.

Thousands of Active **Units Deployed**











Company History

- 1. **Industry Experience** Designed and delivered safe, ground-breaking, quality products for 40+ years.
- 2. **Geographic Deployments** Actively deployed in over 45 countries.
- Quality Products Patented, lightweight, noncorrosive, portable, telescopic towers, fully deployable in 15 minutes or less.
- 4. **Customization** In-house design team allows for integration of your custom specifications.
- American Made All products are designed and manufactured in the USA.
- 6. **Safety** A priority on our manufacturing facility floor, all products are designed following SHARP safety standards.







Active Units Deployed in 45+ Countries



Geographical Footprint



- DOD & FMS Military
- Electronic Test & Analysis System
- Emergency Management, First Responder, & Disaster Relief
- Entertainment, Broadcasting/Multi-media, & Event Coordination
- Ham Radio
- Homeland Security
- Law Enforcement, Public Safety, & Security
- Meteorological & Environmental
- Mobile/Cellular Communications & Wireless Carriers
- Oil & Gas, Smart Meter, & Industrial Data Transfer
- Site Survey
- Surveillance & Border Enforcement
- Transportation & Logistics
- Utility, Water Management, Mining, & Alternative Energy

Industries Served



Major Product Lines

- Telescoping Towers
- Shelters
- Trailers
- SMART Tower
- SMART Generator
- Magnemount
- Aluminum Pallets

Tower/Trailer Unit Series

- Open Trailer
- Shelter Trailer
- Command Centers
- Enclosed Cargo Trailer
- Skid-Mounted Tower Systems

Full Professional Services

- Training & Support
- Engineering & Design
- Mechanical Analysis
- Maintenance







Our Products & Services

	GUYED	UNGUYED
Height	24 - 92ft (7 - 28m)	32 - 106ft (10 - 32m)
Payload	Up to 300lbs (136Kg)	Up to 750lbs (340Kg)
Sail Area	Up to 25ft ² (2.32m ²)	Up to 55ft ² (5.10m ²)
Wind Speed	Up to 125mph (201km/h)	Up to 125mph (201km/h)
Total Tower Weight	64 - 300lbs (29 - 136Kg)	340 - 1300lbs (154 - 590Kg)
Trailers - Open, Shelter, Enclosed, Vehicle Mounted, Military Spec.		

Payload capability customizable to customer requirements and specifications as needed.

Tower Specifications





Aluma Tower Active Deployments

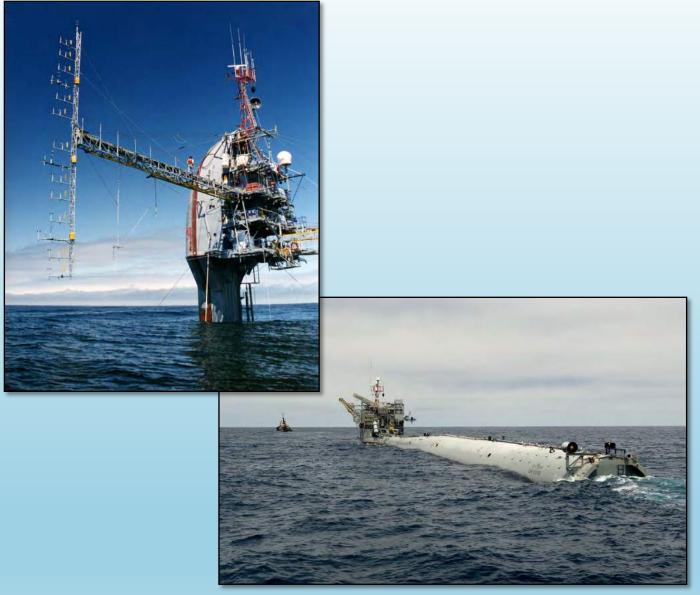


Unit Model	S812-Mil (deployed in 2011)
Qty. Delivered	20
Industry	DOD & FMS Military
Geo. Location	Afghanistan & Iraq
Special Features	Tower design to reach 114ft (35m), while supporting 550lbs (250Kg) of payload and 36ft ² (3.35m ²)of sail area
Background	Customer required a rugged, quick-to-deploy (less than 15 minutes) trailer tower with shelter system that could house military communications equipment. System had a dual generator system to mitigate the power fluctuation of the deployed region. All units were delivered on-time, and are currently on-field in theater.





Unit Model	FLIP Ship (deployed in 2002)
Qty. Delivered	1
Industry	Meteorological & Environmental
Geo. Location	Current – Gulf of Mexico
Special Features	Designed to support ocean conditions, deployment forces, and an array of meteorological monitoring stations.
Background	FLIP (Floating Instrument Platform) is used for a multitude of meteorological and environmental research and analysis in open water. Aluma Tower was responsible for providing a lightweight stackable tower capable of supporting multiple conditions including the deployment force of the ship, rough seas, and all the instrumentation mounted to the tip of the extendable catwalk of the ship.





Unit Model	TM51-20/T-30XXHD (deployed in 2012)
Qty. Delivered	15
Industry	Surveillance & Border Enforcement
Geo. Location	West Canada & USA Border
Special Features	48 hours of Self-Government & Self- Sufficient Solar Array
Background	Single-axle trailer tower weighing less than 3000lbs (1360Kg), with a 30ft (9.15m) tower capable of handling 70mph (112Km/h) wind with minimal deflection, providing the surveillance system much needed stability in order to utilize its optimal capability and range (3 miles (4.82Km)). The trailer is equipped with a 1KW self-government solar array that is capable of operating for 48 hours continuously without recharging.



Unit Model	Skid System (deployed in 2013)
Qty. Delivered	5
Industry	Oil & Gas, Smart Meter, & Industrial Data Transfer
Geo. Location	California, USA
Special Features	Helicopter lift system (weighing below 2000lbs (910Kg)) with a 40ft tower and 1KW independent solar system
Background	Customer required deployment of towers in a mountainous terrain, not accessible via vehicle. The systems are currently used for uninterrupted data collection. Aluma designed a complete system under 2000lbs (910Kg), packing all accessories and solar power system components, and capable of being moved via helicopter lift by a commercial aircraft to its final deployment location.





Unit Model	S812-Mil (deployed in 2011)
Qty. Delivered	20
Industry	DOD & FMS Military
Geo. Location	Afghanistan & Iraq
Special Features	USAF C-17 & C-5 Certified
Background	To support US troops and meet an aggressive delivery schedule, Aluma Tower and DOD prime contractor hired the ANTONOV 225, the biggest cargo plane in existence. The plane was capable of transporting up to 10 of Aluma's largest trailer towers in a single trip, and without needing any major modifications. This logistics solution allowed Aluma's customer to reduce integration and fielding time, which saved lives and money along the way.





Unit Model	S812/T2-100UG (deployed in 2015/2016)
Qty. Delivered	30
Industry	DOD & FMS Military
Geo. Location	Iraq
Special Features	AK-47 Bulletproof shelter, Dual HVAC and Generator system.
Background	Trailer is primarily used to set up communication for the forces fighting against ISIS. It possesses a special bulletproof non-ballistic design shelter, and the system can be protected from imminent attacks. Units are equipped with dual HVAC to support the harsh weather conditions of the region and dual 25KW generators to provide clean power for essential communication. Aluma was able to deliver all trailers ahead of schedule and without any major disruptions.







Unit Model	TM51-35/T-100HD (deployed in 2015)
Qty. Delivered	4
Industry	Utility, Water Management, Mining, & Alternative Energy
Geo. Location	Florida, USA
Special Features	Standard Design, Rapid Deployment
Background	A dual-axle Open Trailer Tower with a GVWR of 7000lbs (3175Kg) capable of providing support and mounting space for a variety of accessories. Deployable in 15 minutes, the TM51-35 can host guyed and unguyed towers that can reach close to 100ft (30m) and a great range of payloads. Currently, the customer uses their trailer to provide communication during the aftermath of a natural disaster.





Unit Model	TM54-80/TU-90HD (deployed in 2016)
Qty. Delivered	8
Industry	Mobile/Cellular Communications & Wireless Carriers
Geo. Location	Philippines
Special Features	Unguyed 90ft (27m) Tower, designed to fit in a Cargo Container
Background	Tier 1 Carrier used Aluma Tower trailers to support disaster relief efforts and reestablish cell coverage after the Philippines were hit several times by different typhoons. The system is capable of being deployed in under 15 minutes. The aluminum tower and treated steel frame can also resist the harsh conditions of the region and its unique design facilitates the customer in moving the trailer from island to island. It allows the end user to deploy the trailer in any of the 1000s of islands that make up the great Philippines.



	
Unit Model	TM-12/T-DD-50HD (deployed in 2013)
Qty. Delivered	7
Industry	Law Enforcement, Public Safety, & Security
Geo. Location	Minnesota, USA
Special Features	50ft (15m) Towable by Car or SUV
Background	Designed to be a very lightweight trailer with the capability of being towed by car or SUV, and reaching 50ft (15m), the TM-12 is a smaller communication trailer Aluma currently produces. Available in 2 configurations, a light and heavy duty, this trailer is perfect for communications-on-the-go; can be deployed in under 5 minutes, and performs essential tasks like site surveys. Aluma's customer has used this trailer in the most populated areas of Minnesota when providing support for local law enforcement. Aluma manufactures 30+ trailers like this per year to appeal to a variety of markets.





Unit Model	S8Hybrid/T2-100UG (deployed in 2014)
Qty. Delivered	10
Industry	Electronic Test & Analysis System
Geo. Location	Massachusetts, Nevada, & Hawaii, USA
Special Features	64ft² (6m²) of Shelter Area, 106ft. (32m) Unguyed Tower
Background	A dual-axle shelter tower trailer, the S8 hybrid is one of the most desired trailers in our product line because of its rugged and compact design, which allows the end user to have a communication shelter and a 106ft (32m) unguyed tower trailer that weighs less than 10,000lbs (4535Kg). This trailer is terrain flexible and easy to transport, and uses the S812 model chassis. Because of the long deck received hybrid designation, customers can mount multiple accessories to the trailer deck.





Unit Model	TM53-70/T2-100UG (deployed in 2013/2014)
Qty. Delivered	5
Industry	Law Enforcement, Public Safety, & Security
Geo. Location	Brazil
Special Features	106ft (32m) Unguyed Tower, DC Electrical System
Background	This Open Trailer Tower system was designed to support the FIFA World Cup in 2014 and the Rio de Janeiro Summer Olympic Games in 2016. It is used for public safety and the final product had to survive harsh environmental, social (tampering), and infrastructure conditions of Brazil. Because of the difference in the power grid configuration, Aluma designed the trailer to be completely operational on DC power. Currently, the trailers are spread around the Brazilian territory, including in the Amazon Forest, the desert areas of the Northeast, and mountains of the South.





Unit Model	TM53-70/T2-60UG (deployed in 2015)
Qty. Delivered	3
Industry	Emergency Management, First Responder, & Disaster Relief
Geo. Location	New Mexico, USA
Special Features	Compact design, patent pending slide- out pivot, capable of supporting 450lbs (205Kg) of payload.
Background	Designed to support the First Net program, this system has been successfully fielded and used by the customer. It features a compact trailer tower design capable of expanding from 20ft (6m) to 60ft (18m) of reach when deployed. Capable of supporting 450lbs (205kg) of payload, this unique configuration uses the patent-pending design "slide-out pivot" that removes the need for an overhang tower, facilitating the deployment and packaging of the unit.







Unit Model	TM53-70/T2-100UG (deployed in 2016)	
Qty. Delivered	5	
Industry	Utility, Water Management, Mining, & Alternative Energy	
Geo. Location	California, USA	
Special Features	Meet all fleet requirements of multiple US utility companies	
Background	System was designed to meet special requirements from a fleet of utility companies around the USA. Those requirements were concentrated on safety, operability, and maintainability. Currently, all the trailers are being deployed and operated in California, and they were used to provide communications support to Super Bowl 50 in 2016 (Santa Clara, CA).	





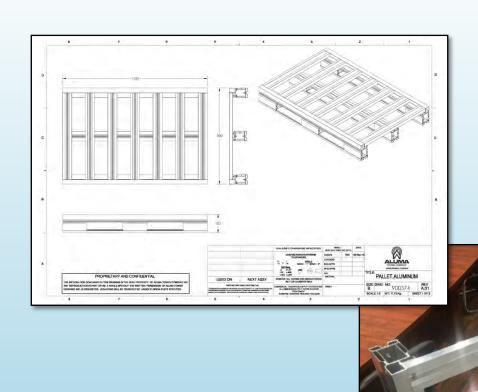


Unit Model	S510/T2-100UG (deployed in 2014)	
Qty. Delivered	6	
Industry	DOD & FMS Military	
Geo. Location	Maryland, USA	
Special Features	C-130 Certified, 106 Ft (32m) Unguyed, 250 RU of capacity	
Background	The purpose of the system was to house communication equipment over 250RU of space. Rugged with HMMWV run flat tires, the trailer was designed with safety, operability, and survivability in mind. It is very practical, can be deployed in less than 15 minutes, and operated under extreme conditions. The trailer chassis and suspension were designed to support the conditions experienced on most unimproved roads. This is the only trailer model comprised of shelter and a 100ft (32m) tower with a C-130 Certification available on the market.	





Unit Model	Aluminum Pallets (deployed in 2015)	
Qty. Delivered	Multiples	
Industry	Multiples	
Geo. Location	Worldwide	
Special Features	100% Aluminum Pallets	
Background	Aluma's aluminum pallet can be configured to meet worldwide standards, specially designed to be quickly assembled, lightweight, and capable of handling a large payload. Aluma's aluminum pallets are currently being used in handling the logistics of electronical components, cold storage, and outdoors in places that experience a high humidity level.	





Unit Model	Magnemount (deployed in 2015)	
Qty. Delivered	Multiples	
Industry	Utility, Water Management, Mining, & Alternative Energy	
Geo. Location	USA	
Special Features	Magnetic Antenna and Sensor Mount	
Background	Aluma Tower is a distributor of Magnemount, a system that allows the antenna mount to be installed to any steel surface without the need of welding. It offers a quick way to rapidly mount and deploy communications antennas and sensors. A great example of Magnemount application is when it is used to support antennas on preexisting structures like water towers. In this market alone Magnemount reduces the overall cost of installation by 80%.	





Unit Model	Stage Trusses (deployed in 2014)	
Qty. Delivered	Multiples	
Industry	Entertainment, Broadcasting/Multi- media, & Event Coordination	
Geo. Location	Worldwide	
Special Features	Custom Stage and Truss Design	
Background	Aluma Tower aluminum welding capabilities have moved us into many verticals. In our 40+ years of company history, we have deployed and designed multiple custom stage solutions. Our list of customers includes Walt Disney World, Universal Studios, Wet 'n Wild, The Rolling Stones, Elton John, Celine Dion, and others.	





Linit Model	TM 12 / T DD 50HD (2016)	
Unit Model	TM-12 / T-DD-50HD (2016)	
Qty. Delivered	2	
Industry	Transportation & Logistics	
Geo. Location	Texas – USA	
Special Features	Tower designed to reach 50ft (15.25m), and a 600 watts solar panel array capable of running for an uninterrupted 72 hours (3 days).	
Background	Customer required a quick-to-deploy (under 10 minutes) self-sufficient trailer that could help them with the communication and surveillance of a large cargo port. This TM-12 is equipped with a slide-out solar panel system to facilitate transport and accommodate a large amount of payload. The system has the capability of running for 72 hours without needing recharging. The total weight of the trailer is less than 3000lbs (1360Kg).	







Our Strengths





Aluma Tower - TM51-35 / T-1100		
Year of Manufacturing 1991		
Industry	Utility, Water Management, Mining, & Alternative Industry	
Current Status	Operational in State of Florida	
Current Location	Florida - USA	



Olikilowii – NOI A ALOWA TOWER		
Year of Manufacturing	Unknown	
Industry	Ham Radio / Ham Amateur Club	
Current Status	Non-Operational	
Current Location	Kansas – USA	

Aluminum vs. Steel



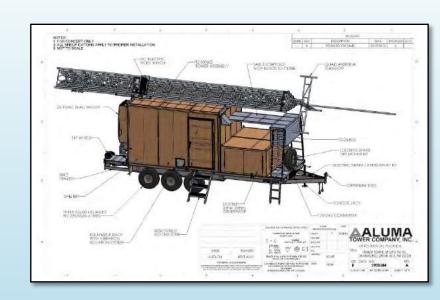
COMPARISON OF COMMON STRUCTURAL SHAPES AND GRADES OF TWO METALS		
Property	Aluminum 6061-T6	Carbon Steel A36
Extrudability	Very Good	Not Practical
Cost by Weight	\$1.50 / lb.	\$0.30 / lb.
Cost by Volume	\$0.14 / in ³	\$0.084 / in ³
Corrosion Resistance	Good	Fair
Stiffness	10,000 KSI	29,000 KSI
Elongation	8 to 10%	20%
Density	0.098 lb. / in ³	0.283 lb. / in ³
Strength-to-Weight Ratio	2.8	1.0 to 1.41

Aluminum vs. Steel



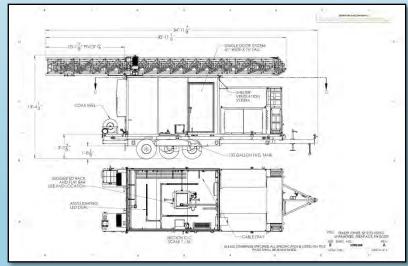
■ Engineering - Aluma Tower has an in-house, full-time engineering team dedicated to each program. Upon request, a full Professional Engineering stamped analysis with the customer-specified payload can be provided.

Aluma Tower is a build-to-print facility and can provide a complete Technical Data Package upon delivery of the final configuration.



Current Tools:

- Solidworks Software
- Solidworks EPDM
- DraftSight
- Electroworks
- Tower Numerics NX
- Global Shop ERP

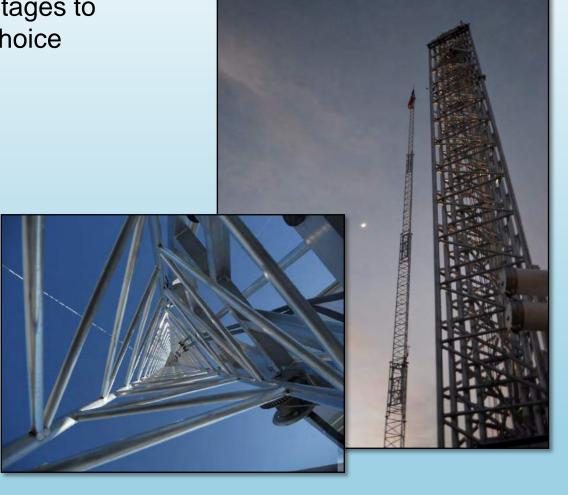




□ Aluminum Telescopic Towers - Aluma Tower is the leading manufacturer of Aluminum Telescopic Towers. The use of aluminum provides many advantages to the end user and has been proven as the choice material time and time again.

Advantages:

- Capable of handling large payloads
- Guyed or Unguyed
- Lightweight
- Non-Corrosive
- Easy-to-Transport
- Extended Lifecycle
- Towers from 20' 120'





□ Trailer Platforms and Shelters - Aluma Tower works closely with local partners to manufacture galvanized steel trailer frames to our in-house design. This ensures towers are supported by a sturdy, structurally-sound platform.

These designs provide significant safety margins and greatly reduce the risk of failure in the field. A number of different shelter configurations can be used as command centers, sleeping quarters, communication racks, etc.

Advantages:

- Galvanized Steel Chassis Construction
- Aluminum or Armored Shelter Construction
- Off-Road Capabilities
- Customizable to Specifications





□ <u>System Integration</u> - Aluma Tower offers full-system integration at the Vero Beach Facility, sourcing all equipment or receiving in the form of CFE or GFE.

Aluma Tower has integrated and tested turn-key solutions for numerous customers and employs full-time licensed electricians, electrical, and RF engineers to support these efforts. In addition, electrical interconnected diagrams with the Technical Data Packages can be made available upon delivery of the final configuration.

Capabilities:

- Rack Equipment Integration, Installation, and Test
- Tower Payload Mount and Test
- Complex Electrical Systems (AC, DC)
- Computers, PLC's, Smart Switches
- Communications System and SCADA Interface





■ Mobile Command Post - Aluma Tower can fully implement the necessary components into our shelters to make them an ideal solution for mobile command.

Shelters can be outfitted with user workstations to accommodate up to 12 users and fully integrate monitors and other components to meet operational requirements.





□ <u>Training</u>, <u>Support</u>, <u>and Program Management</u> -

Aluma Tower has a full staff of seasoned professionals that possess a deep knowledge of transportable tower systems. Time and time again this team transforms customer requirements into a deliverable product.

Aluma Tower pre- and post-delivery support is second-to-none.

- In-House and In-Field Training Programs
- Design Gates and Requirements Matrix
- 24/7 Technical Support
- Risk Management





□ Past Performance

Aluma Tower has performed on many government contracts, and in all cases, has satisfactorily met customer requirements and delivery schedules. Aluma's Scorpion System is a rapidly-deployable, C-130 certified transportable telescopic tower trailer system that enables the user to raise their mission equipment to 106ft without the use of guy wires. This system is easily deployable by two persons in less than 15 minutes.

Aluma Tower is pleased to submit references for any of our systems.

Aluma Tower has successfully delivered units in great quantities for recent FMS programs. At full-rate production, Aluma had a throughput of one S812 trailer shelter system per day.







- 1. <u>Industry Experience -</u> Aluma Tower has been designing and delivering ground-breaking, quality products for the past 40 years. Aluma Tower's team of professionals has a deep knowledge of both fixed and mobile telescopic tower platforms, which gives us an edge over competitors.
- 2. <u>ISO 9001-2008 Registered -</u> Aluma Tower is an ISO 9001:2008 registered company; our processes are strictly adhered to by all staff members, which makes the end product of the highest quality. Currently, the goal is to become the first ISO 9001:2015 registered company in Florida. The 2015 standard includes a strong emphasis on risk management, which Aluma Tower has written into processes and takes very seriously.
- 3. <u>Customization</u> Unlike many of our competitors, Aluma Tower works with our customers to incorporate their thoughts and ideas into the end product. Starting with a baseline, Aluma Tower will work directly with the customer project team to fully ensure that the system meets the operational capabilities required.



Capabilities - Differentiators



- 4. American Made All of Aluma Tower products are designed and manufactured in the USA.
- 5. Aluminum Construction Unlike many of our competitors, Aluma manufactures the lattice telescoping towers with T6-6061 aircraft grade aluminum. All tower sections are welded by AWS-certified welders in accordance with AWS D1.2. The aluminum tower improves the effectiveness of performance, ease of mobility, sustainability of the unit over time, maintenance, and both initial and long-term lifecycle costs.
- 6. <u>Safety -</u> Along with quality, safety for Aluma's employees and customers is of the utmost importance. We have incorporated many redundant safety features into our products. In support of our safety culture, Aluma has held the SHARP (Safety & Health Achievement Recognition Program) Certificate since 2008.



Capabilities – Differentiators



- 1. Built with Non-Corrosive Material
- 2. Low Cost of Ownership
- 3. Highly Customizable Solutions
- 4. In-House Engineering
- 5. Smart Tower/Generator Features
- 6. ISO 9001-2008 Certified
- 7. Safely and Fully Deployable in under 15 Minutes
- 8. Adjustable Tower Locking Mechanism Safety Stop
- 9. Built with Aircraft Aluminum 6063-T8 & 6061-T6
- 10. Low and High Volume Production Capability

Competitive Strengths





Aluma Tower Company believes that a good design will lead to a safe design. While meeting our legal obligations is the minimum expectation, Aluma Tower goes further and engages in best practices throughout the design, production, supply, and disposal stages of our manufacturing process.

Aluma became ISO 9001:2008 Certified in November of 2014. We live by our Quality Management System, which provides a blueprint for building a safe, reliable, and quality product. As such, a Certificate of Conformance (CoC) is provided with every purchase of your Aluma Tower unit.



Safety and Health Achievement Recognition Program (SHARP) (Jan 2003 to Present)

Other Standards Followed:

- ☐ AWS Certified Welders (1978 to Present)
- □ OSHA (Dec 1993 to Present)
- ☐ ISO 9001 (Nov 2014 to Present)
- □ DOT (May 1974 to Present)
- ☐ FAA (May 1974 to Present)
- □ NATM (Jan 2007 to Present)
- ☐ TIA-222G (Jan 1985 to Present)
- ☐ MIL-HBK-454 (Feb 2014 to Present)
- ☐ IPC-620 (Feb 2014 to Present)

Safety Culture



Our Vision:

To be the supplier of choice in every industry we serve.

Our Mission:

To provide our customers with superior products that are built with legendary reliability, ongoing innovation, and exceptional quality and value. We are focused on achieving this while maintaining the highest ethical and safety standards.

Core Values:

Aluma Tower helps customers deploy a safe and cutting-edge product that provides an immediate bridge for communications, utility, monitoring, and other challenging applications that can also meet custom specifications without impacting quality.

Our in-house team of experts have been designing and deploying towers for over 40 years.

Value Proposition



Aluma Tower Company, Inc.

1639 Old Dixie Hwy, Vero Beach, FL 32960

DUNS - 15-4478432

CAGE Code - 7W000

ISO Registration No. - 15593

Small Business Concern

NAICS Codes

237130, 332312, 334220, 334290, 334310, 334511, 335999, 336212, 517919, 541330, 541519, 541712, 811213

Registered at SAM.GOV















Legendary Reliability—Ongoing Innovation

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