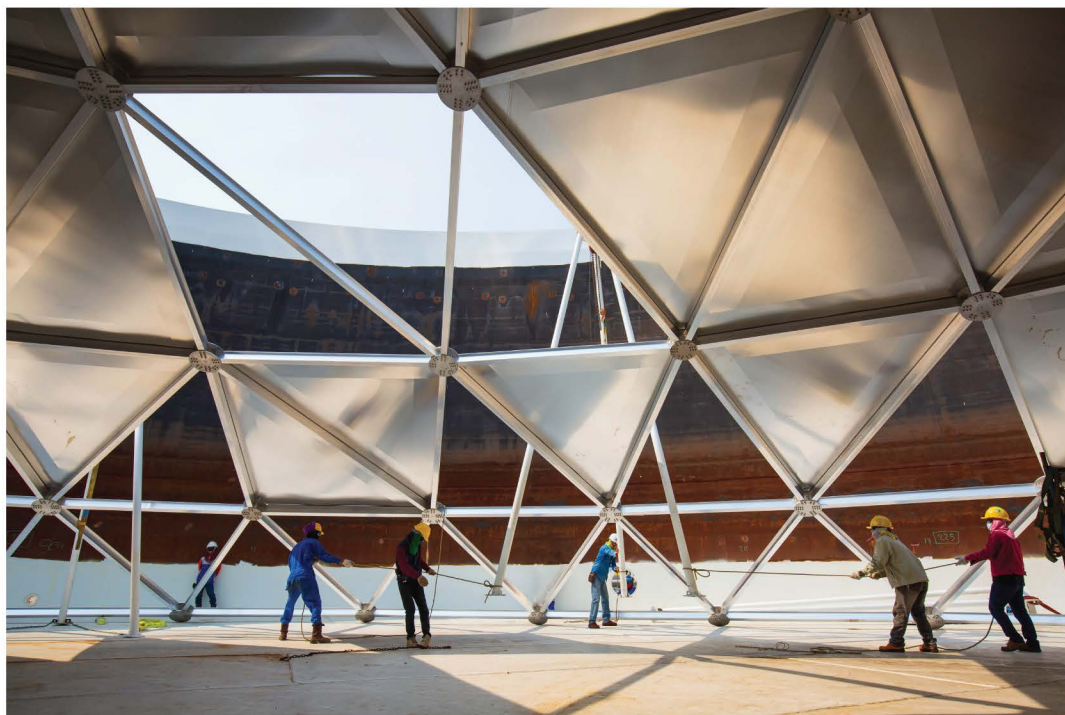




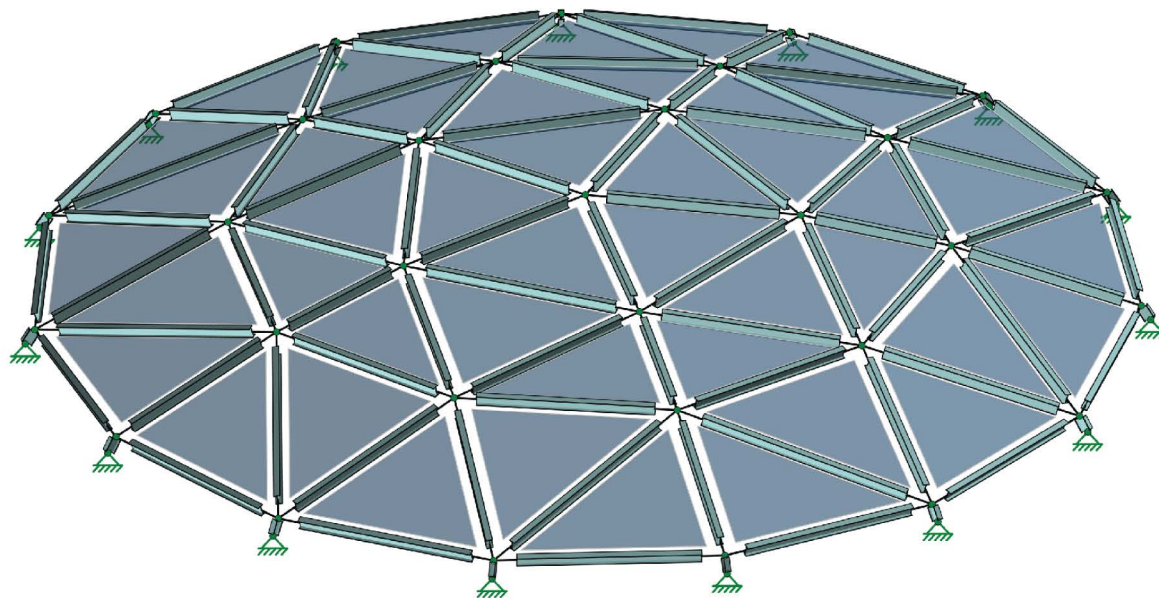
# ELEMENT 13

## ALUMINUM GEODESIC DOME ROOFS



The **Element 13 Aluminum Dome** is a durable high-performance roof for all applications ranging across petrochemical, municipal, wastewater, and architectural. Element 13's proprietary extruded beam design allows for an optimized weight-to-strength ratio, often exceeding design load requirements while remaining lightweight and easy to install.

Each dome is custom engineered to provide the most efficient solution utilizing the latest in automated engineering design software and technology.



## ELEMENT 13 DOME BENEFITS

The **Element 13 Aluminum Dome** is the superior choice for covering any basin or storage tank. Our aluminum structures provide a wide array of benefits over conventional steel cone roofs and open-top tanks. Whether your priorities are speed to install, minimizing maintenance, increasing operating capacity, severe weather protection, product loss, or unwanted vapor reductions: we've got you covered.

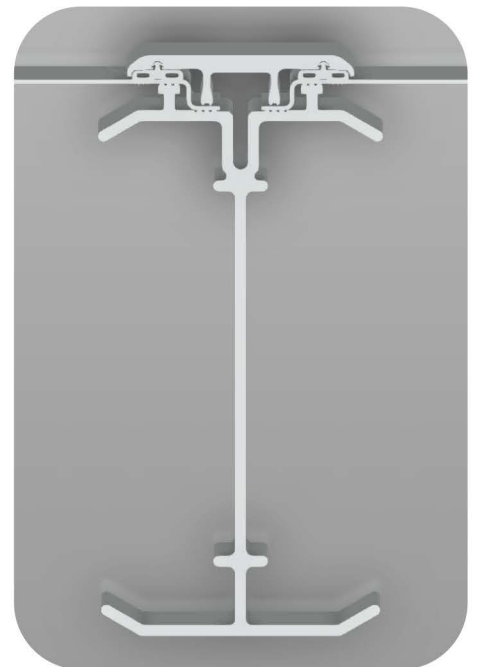
### Key Advantages of Element 13 Domes:

- Can be installed on new tanks or retrofitted onto existing structures with minimal to no modifications.
- Are 1/3rd the weight of steel for similar structures which requires less foundational support and reduces the stress on the tank itself from the roofing structure.
- When combined with a cable suspended IFR, increases the operating capacity of a storage tank.
- Are more economical than similar steel structures, are corrosion resistant, and require low maintenance over a longer lifespan.
- Reduce emissions and evaporative losses, while providing protection from water and other foreign contaminants.
- Are easy to install taking a fraction of the time to erect compared with a fully welded steel roof. Bolt-together design allows for in-service installation and uninterrupted tank operation.
- Provide all parts for efficient assembly and can provide construction administration to train any crew. Construction manuals are provided for all products to efficiently outline the erection and installation process.

## INNOVATIVE DESIGN FEATURES

### Batten Bar Design

- Element 13 Domes have a batten design with an enclosed gasket that clamps the panels in place.
- The batten protects the gasket from weathering and degradation and increases seal efficacy over time.
- The batten is substantially flush with the dome panels, which reduces concerns from pooling liquids or moisture ingress.
- A preformed screw chase incorporated into the top of the extruded aluminum beam profile is designed such that fasteners can be installed and removed in the same position, as needed.



# INNOVATIVE DESIGN FEATURES

## Panel Geometry

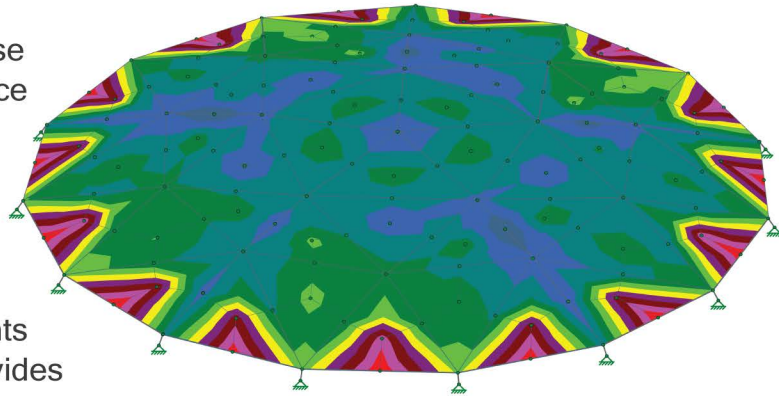
- Panel geometry is maximized to reduce gross dome weight and structural connections. This reduces the total number of potential leak points and results in a faster installation.

## Hub Covers and Gusset Plates

- The hub cover provides a uniform seal around the gusset plate further protecting against moisture ingress.


## Engineering and Design

- Each Dome is specifically designed and engineered to meet each client's unique needs.
- 3D Structural Modeling Software and Finite Element Analysis is incorporated into Element 13 designs to ensure a structurally sound, value-engineered product that meets the latest design codes, including: Aluminum Association's Aluminum Design Manual, IBC, AWWA D108 and API 650G.
- Element 13 utilizes in-house design automation to reduce standard engineering lead-times to less than a week.
- Element 13's structural system is designed to comply with all requirements specified by code and provides superior performance under all environmental conditions, including high wind speeds and heavy snow loads.



## CONTACT US

Please feel free to reach out to us using the information below. We would be happy to help answer any questions you have regarding our full line of quality aluminum tank products.

 7102 North Sam Houston Pkwy W  
Suite 320 Houston, TX 77064

 281-724-8313

 [info@elem13.com](mailto:info@elem13.com)

 [elem13.com](http://elem13.com)