

CLEAR SPAN ARCHITECTURAL ALUMINIUM DOMES

Efficient in design, distinctive in appearance, unsurpassed in quality, and value aluminium domes are as beautiful as they are efficient and enduring. The aluminium dome is a unique triangulated space truss skinned with aluminium panels secured by a patented batten closure system. With an ability to offer clear spans from 10 to more than 300 meter aluminium domes are specified for large covers area's such as churches, sports arenas, exhibition centres. Aluminium domes are as beautiful as they are efficient and durable. Aluminium integrated structural frames are permanent and lightweight. Optional panel systems offer eye-dazzling options.

Engineering

During the engineering phase our team of engineers will review local load requirements and all combinations (Live-, wind-, snow-, seismic load etcetera). This includes the most common standards ASCE 7-05, ADM (aluminum design manual), EN 1991 and EN 1999. Important safety aspects for construction and use of the structure are also taken into consideration. Completely in line with our sustainability vision all emission requirements will play a major role in the decisions we make in the design phase.

Self-supporting structure

Geodesic domes are entirely self-supporting. Depending on the design and the supporting structure reaction forces at the base supports of the dome are minimal. For this reason many of our domes are installed on PTFE-covered sliding supports. The dome itself is strong enough to deal with its own internal forces. In other cases however support walls are used to distribute loads from bearing points of the dome. Any dome will be designed to deal with local circumstances and to comply with local engineering codes and building regulations.

Solutions

- Aestetical solution with virtually unlimited possibilities in design
- light weight and clear-span structure manufactured from aluminium and stainless steel
- Optimal total cost of ownership when compared to traditional structures
- Can be optimised for any possible climate
- Turn key solution. engineering, supply and installation

Highlights

- The panel design is specifically engineered to support loads of up to 23.9 kN/m² (500 psf)
- Able to withstand high loads by providing unsurpassed stiffness and strength to weight ratio (snow loads of up to 7.9 kN/m² or 165 psf and wind loads of up to 240km/hr or 150mph)
- Truly maintenance free, guaranteed water tightness
- Short installation time (shortest in the market) with experienced crews
- Maximised service life (more than 50 years)

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Aluminium dome design

These structures are the optimal solution wherever an esthetical structure is required, for covering larger areas. The design of the dome structure will be engineered to fit any specific project and its requirements. Our extensive experience and track record in this particular field, backed up by an experienced engineering and design department is the best available in the market. A wide variety of structures, panel materials, different finishing and detailing are available. These are sure to exceed your expectations on creating an eye-catching and functional structure.

Support and assistance

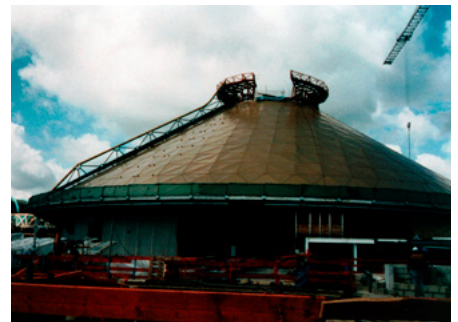
If this datasheet triggers more questions our team of experts will be always available to support and assist you in selecting the optimal solution for your specific application.

Dome Features

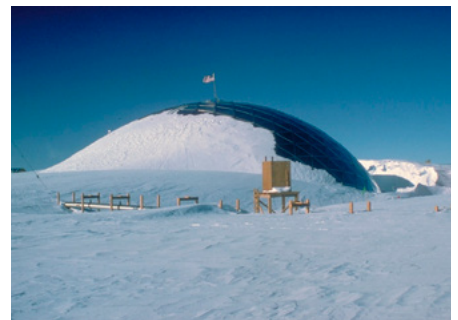
- Truly maintenance free
- because aluminium domes use less material and labour when compared to conventional constructions, overall costs are lower and construction time is shorter
- service life expectation well in excess of 50 years



Botanical gardens, Des Moines, Iowa, USA, 46m dome structure.



Space Mountain, Disneyland Paris, France.



US Navy South Pole dome, 50m, suitable for 1,465 kg per m² snow load.

All our product information and specifications are drafted with care but can be subject to change. We reserve the right to change product specifications.

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CTS GROUP

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