



ALUMINIUM DOMES FOR BULK STORAGE

Our unique space truss design and highly engineered components combine to make aluminium domes the ideal solution for challenging environmental enclosure problems. Whether it is keeping the elements out or getting the largest amount of bulk in the smallest amount of space, an aluminium dome has proven itself time and again. Domes offer the ideal span-to-rise ratio in standard and custom designed configurations for any clearance requirement. In applications requiring vertical headroom near the dome's edge, aluminium domes can be erected on vertical steel wall frames, providing maximum unhampered space for material handling.

Aluminium domes, standards and safety

CTS' Aluminium domes are constructed according all relevant international standards such as ASCE 7-05, ADM (Aluminium Design Manual), EN 1991 and EN 1999. Local load requirements are of course reviewed, and load combinations reviewed include all common load cases and combinations between dead load, live load, unbalanced live load, wind load and if required a seismic load or snow load.

Also other applicable standards such as safety standards are fully covered from CTS as your supply partner.

Features

- Able to withstand high loads by providing greater stiffness and strength to weight ratio than any other dome geometry system, like snow loads up to 7.9 kN/m² (165 psf) and wind speeds of up to 240 km/hr (150mph)
- Maintenance free, as the permanent aluminium exterior never rusts, rots, degenerates or degrades
- Economic construction as domes use less material and labour than conventional structures. Therefore overall costs are lower and construction time is shorter
- The built-in advantages and beauty of an aluminium dome will be appreciated for years to come
- Light weight and free-span structure manufactured from aluminium and stainless steel
- Full installation and project support available

ALUMINIUM DOMES

Light and strong

Yet another advantage of an aluminium dome is its light weight. This means reduced foundation costs. But its weight belies in its strength. When applications require, aluminium domes can even be designed to support heavy processing equipment. From the blazing Mojave Desert to the humidity of Singapore and the gale force winds and snow of the Antarctic, aluminium domes have repeatedly proven their strength, durability and flexibility.

Large clear spans

The possibility to cover large diameters of up to 270m (900ft) in diameter offers unique solutions for material handling and environmental problems. There are no columns, no trusses, no internal supports or other obstacles hampering equipment configurations or transfer of stored materials. Apart from that the dome structures are strong enough to support the suspension of concentrated equipment loads and to withstand the harshest climates.

Light weight

The light weight of an aluminium dome reduces foundation costs. The dome itself will keep the elements out, prevent the stored materials from spreading under strong winds and shield them from direct sun light exposure. Spraying of stored materials is significantly reduced or will not be required at all anymore after covering the material storage area.

Supporting sidewalls

The dome can be installed on vertical steel, stainless steel, aluminium frames or concrete sidewalls in situations requiring vertical headroom near the dome's edge. This will provide maximum unhampered space for material handling.

Unique batten bar design

The unique and patented batten bar design of an aluminium dome is a tremendous asset. The used materials will not deteriorate under ultra-violet light or elevated temperatures. This is not only the basis for a leak-free dome structure, but it also adds structural strength to the dome roof.

Installation

Domes can be installed in many different ways, depending on the site conditions, their diameter or size and the available time for installation. There are very few structures however that come close to the minimum men hours for installation, and the minimum engineering and production time required for supplying a dome. Besides this a dome is a very economical and esthetical cover for large areas.



Interior view bulk storage dome for FPC Taiwan, coal storage, 120m in diameter.



Bulk storage dome (120m) under construction at FPC in Tainwan.



Completed 120m bulk storage domes at FPC Taiwan.

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

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