Structural Air Dome for Sports, Recreation, Industrial, Commercial, Military & Medical
Broadwell is the worldwide leader in air supported structures, integrating design, development and manufacturing in-house. From sports and recreation to industrial and military applications, Broadwell designs dome specific to each client’s needs. Broadwell domes are the highest quality, most efficient, and most cost-effective in the industry. There are over 180 Broadwell Air Domes built in Russia, Turkey, Mongolia, China and other countries.
Broadwell air domes can be used for a wide variety of athletic and recreational applications, including ice sports, soccer, football, basketball, volleyball, gymnastics, playgrounds, trampoline fun centers and more... Some Broadwell domes are used for as multi-functional sports centers.
Broadwell offers a wide range of services, from dome design to its installation and operation. Our expert engineers and technicians develop the most energy efficient inflatable domes with the lowest operating costs.
## ADVANTAGES

The pressurized atmosphere inside the inflatable air dome structure allows for an energy efficient, climate controlled environment with advanced air filtration.

- Attractive architectural design
- Lower construction costs than a traditional steel structure
- Short installation time, portable and easy to dismantle
- Fire proof class B1 fire rating: in compliance with ASTM E-136
- Advanced automated and mobile control system
- Domes can be up to 180m wide and 90m tall with no beams and poles
- Unique patented bias-harness cable net system
- Capable of withstanding 150 mph winds and 250 kg/m$^2$ snow load
- Low energy consumption: patented with the “thermal layer”
Unique Patented Bias-Harness Cable Net System

Our patented bias-harness cable net system evenly distributes both internal uplift forces and external environmental forces. Without this cable net system, the dome body would bulge due to the weight of the dome itself and any accumulated snow on top. This would flatten the top of the dome, further increasing the area for snow to accumulate and requiring more pressure to inflate the dome, putting unneeded stress on the structure. However, testing shows that with our bias-harness cable net system, the dome shape remains unchanged even when the internal pressure is increased to 500 Pascals (2.01 inH20).
ENERGY SAVING TECHNOLOGY

80% energy savings compared to a conventional steel structure. A triple layer design, including insulation helps maintain the desired temperature inside the air dome.

ADVANCE AUTOMATION CONTROL SYSTEM

Our remote control mobile app allows full automation of your air dome from any smart device. The app will automatically adjust temperature, humidity, air pressure, and air quality with changes in wind, temperature, and snow fall. You can also monitor and manually change these parameters remotely from any smart device.
TECHNOLOGY AND EQUIPMENT

☑ STRUCTURAL AIR DOME
Made of high quality and high density PVC fabric. It includes a three-level safety inflation system and the most advanced bias-harness cable net system in the industry.

☑ HEAT RECOVERY SYSTEM
Proven method to lower energy costs with savings of up to 50% by recycling the energy deployed to maintain the facility at the needed temperature.

☑ AIR CONDITIONING & AIR-TREATMENT SYSTEMS
Integrated to the facility in order to provide a comfortable experience.

☑ Top Air Purification System
Our industry-leading purification systems can produce air with less than 2.5 particles per million (PM).
After-Sales Services

Broadwell provides comprehensive services with every installation to ensure the best operating efficiency of the facility, as well as reducing operating costs. Our services include:

- 1-year system warranty
- Preventive and comprehensive maintenance program
- Technical support
- On-site inspections and training programs
Office Network

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