



Multi-Sports Buildings



In 1968, the first large, clear-span, air-supported structure for a multi-sports application was installed at Harvard University. This facility was a first in many ways. Due to its size (over one acre), a basic stress relief system was incorporated into the structure to increase fabric and membrane strength. The polyester straps used on the Harvard University structure were, in later designs, replaced with steel aircraft cables. The simple radial (hoops over a barrel) configuration of the straps were reconfigured into various degree bias grid patterns providing for total encapsulation of the fabric membrane, eliminating the potential for tear propagation, and increasing load-bearing capacity. With this and many other design modifications, the groundwork was set for the technological advances of the **Arizon™ Grid** design that withstands winds of 150 MPH and snow loads exceeding 50 pounds per square foot.

The result of this history and research provides for many benefits of **Arizon™ Multi-Sports Buildings**, such as:

- Unlimited large, clear-span structures, designed for any climatic conditions.
- Combine track, soccer, football, baseball, softball, tennis, swimming and many other sports as entertainment venues.
- Total stability; no visible structure movement in high winds, ice or snow storms.
- Long structure life due to elimination of fabric fatigue and tear propagation.
- Design acceptance by architects, designers and project developers.
- Acceptance by financial institutions.
- Safety acceptance by conventional insurance companies.
- Discounted insurance rates due to the **Arizon™ Grid** exceeding minimum design standards and equaling or exceeding conventional construction standards for wind and snow load.
- Businesses, universities and municipalities are able to provide premier, indoor facilities for students and/or communities at a fraction of the cost of conventional construction with favorable bonding or leasing packages.
- Private entrepreneurs are able to develop large, indoor sports centers for any application with guaranteed success due to the extremely low initial

Outstanding Features and Benefits of an **Arizon™ Air Structure**:

- ✓ Exceeds standard building codes such as AISC, BOCA, ICBO, IBC, CSA and NFPA 701.
- ✓ With the unique **Arizon™ Grid System**, the structure can withstand winds up to 150 miles per hour as well as snow loads up to 50 pounds per square foot.
- ✓ Proven performance of over 25 years.
- ✓ Fire retardant, translucent or opaque, mildew and fungus proof, and UV resistant.
- ✓ Translucent fabrics reduce lighting costs.
- ✓ Provides immediate, short term and long term coverings.
- ✓ Require only light construction.
- ✓ Flexible---can easily be taken down and moved to another site.
- ✓ Ability to change inside air up to 6 times per hour.
- ✓ Provides players with ideal playing conditions.
- ✓ Protects players and fans from weather.
- ✓ Costs one-third less than tradition buildings such as "brick and mortar", "steel and glass" and metal.
- ✓ Can provide a wide range of R-values.