

Surface Drainage and
Building Elements for
Sport and Recreational
Venues



ACO SPORT

Product Overview Catalog

Athletic Tracks

Field Accessories

Team Sports Venues

Tennis Courts

Recreational Areas



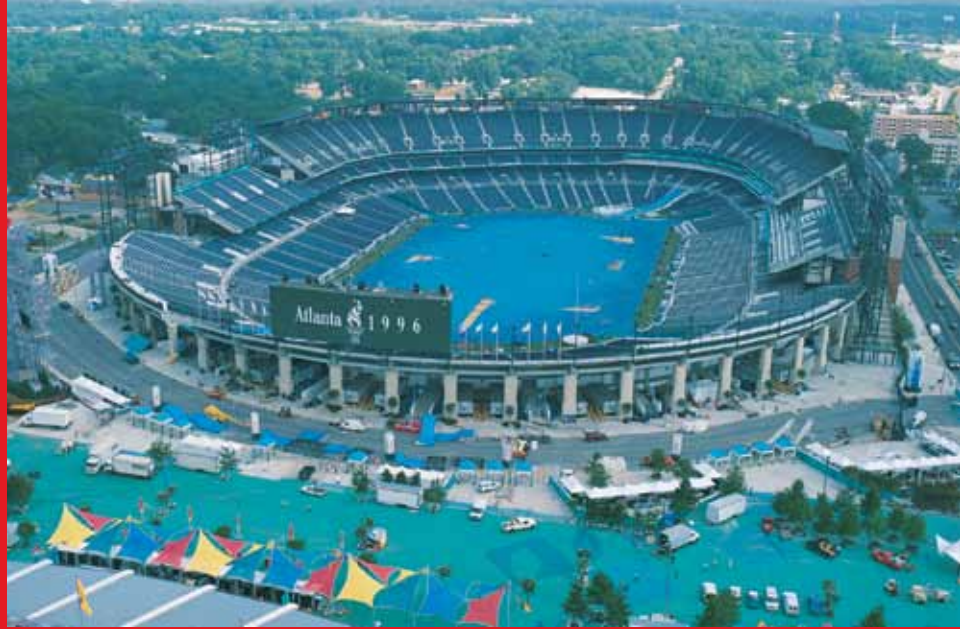
The ACO Group

Established in 1946, the ACO Group is a major manufacturer of products for the construction and building industry for more than 60 years.

The Group operates on a global basis and has companies in more than 40 countries with manufacturing on 4 continents.

ACO employs more than 3,500 people and has sales in excess of \$600 million.

ACO has been present in the USA since 1978 and has offices and manufacturing facilities nationwide.



Atlanta Olympic Stadium, 1996

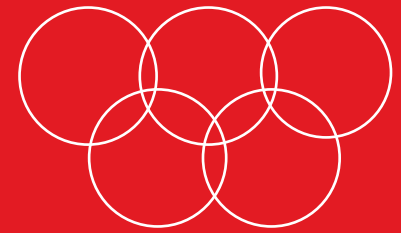


Athens Olympic Stadium, 2004

ACO Sport

Building on the expertise and reputation gained in commercial trench drainage. The ACO Sport range of products is specifically designed to meet the demands of track & field facilities.

ACO Sport products are designed to maximize the functionality of the athletic facility without disrupting the performance of athletes and players. Products are available to meet the requirements of any athletic arena from high school field to Olympic Stadium.



Sydney Olympic Stadium, 2000



- Munich, 1972
- Montreal, 1976
- Los Angeles, 1984
- Seoul, 1988
- Barcelona, 1992
- Atlanta, 1996
- Sydney, 2000
- Athens, 2004
- Beijing, 2008

Systems Overview

System 1000

Athletic track trench drain system with running lane canopy cover



System 1000 is designed for use on running tracks. The system is supplied in straight and radiused channels with matching in-line catch basin to provide a continuous run around the entire track.

Features

- Polymer concrete channel with u-shaped profile
- Canopy cover (1000mm) with side inlet slots
- Interconnecting end profiles
- Neutral depth system
- Straight and radiused channels (1000mm)
- Direction arrows ensure correct installation



System 2000

Slotted track and field drainage system - the product for high profile and professional stadiums



System 2000 is the premier slotted running track drain system, used at most high profile venues, including professional and IAAF stadiums. The system is supplied in straight and radiused channels with a matching in-line catch basin to provide a continuous run around the entire running track. Increased depth provides maximum hydraulic performance.

Features

- Polymer concrete with u-shaped profile
- Tapered drainage slot (12.7mm) offset from center, ADA compliant
- Smooth, flat top surface
- Slot bridge prevents slot closure during concrete pour
- Maximum hydraulic performance
- Interconnecting end profiles
- Neutral depth system
- Straight channels (1000mm and 500mm), radius channels (1000mm)
- Direction arrows ensure correct installation



System 3000

Slotted athletic track and field drainage system - ideal for high school and amateur stadiums



Running tracks are the most common use for System 3000. The system is supplied in straight and radiused channels with matching in-line catch basin to provide a continuous run around the entire running track.

Features

- Polymer concrete channel with u-shaped profile
- Tapered drainage slot - 13mm drainage slot centrally located for versatility of use, ADA compliant
- Smooth, flat top surface
- Slot bridge prevents slot closure during concrete pour
- Interconnecting profiles
- Neutral depth system
- Straight and radiused channels (1000mm)
- Direction arrows ensure correct installation



System 4000

Open trench drain system for tracks, sports fields and recreational areas



Team sport facilities/tennis courts are more suited to System 4000 as surfaces may be “loose” or cannot be easily fixed down. An open system allows easy access for cleaning and removal of stray surface particles. Recreation areas, effective drainage of trails, pathways and any hard paved area will prolong the life of the paving material and provide an all-weather, user-friendly environment.

Features

- Polymer concrete channel with u-shaped profile
- Sloping or neutral depths - 0.6% built-in slope
- Polymer concrete grate seat and edge detail
- Choice of grates with “quicklok” locking
- Interconnecting end profiles
- Straight channels (500mm and 1000mm)
- Direction arrows ensure correct installation



System 7000

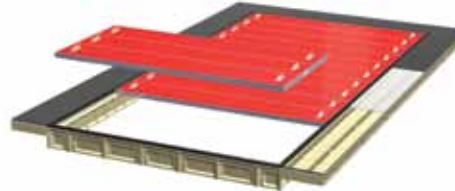
Elastic curbing and jump pit systems



ACO Sport System 7100 offers bordering products that provide a cellular EPDM rubber top to provide a soft, safe edge to reduce injury.

Curb Features

- Cellular EPDM rubber cap
- Polymer concrete curb
- Straight & corner sections



System 7200 features sand trap units that collect sand splash and reduce abrasion damage to the surrounding surfaces.

Sand Trap Features

- Steel support grid with non-slip rubber mat
- Polymer concrete
- Metal edge rail
- Bottom outlet to prevent water build-up



System 7300 modular jump pit systems provide an easy solution for the three most common jump pit sizes. Curbs offer a ledge to support aluminum covers and optional sand traps complete the system.

System 6000

Artificial turf anchoring and drainage systems



System 6000 is the premier channel drainage system with integrated clamping system for water based artificial turf. It is commonly used for football, field hockey, and soccer fields.

System 8000

Steeplechase water jump kit



Runner momentum and change in elevation means that the water jump is an area of increased fall risk to athletes. System 8000 water jump pit uses the System 7100 elastic curb cap to provide a wall around the water pit that has a soft, safe edge to minimize injury.

System 9000

Bleacher seating



System 9000 is manufactured from polymer concrete. Units are finished with a textured surface so they are safe to use, even in wet weather conditions. Built-in slopes facilitate drainage to prevent standing water. All exposed edges are rounded, reducing the risk of injury to pedestrians and spectators.

Why use Surface Drainage?

Water is a problem for synthetic surfaces. Damage is caused by standing water, particularly in colder climates where the water can freeze. Water run-off from surrounding areas brings sediments, debris and pollutants, which can increase the rate of surface deterioration. This surface damage can be minimized, or prevented by proper drainage systems.

Effective drainage is critical in the design and construction of any athletic facility.

- *Reduces rain delays*
- *Improves conditions for runners, coaches and spectators*
- *Extends the life and performance of the track surface*



Running track without effective drainage

Why use Trench Drainage?

- *Provides effective drainage without the need to construct complex slopes*
- *High quality, modular product allows easier installation, while maintaining strict site tolerances required for running tracks*
- *Provides continuous barrier to protect running track from contaminated run-off from in-field, or surround areas*



System 2000 at Ohio State University

Why use a Polymer Concrete Trench Drain?

IAAF and ASBA lay out strict guidelines for any sporting arena - particularly where prestigious events are held and new records may be set. Construction tolerances can be less than 0.125" around a 400m track. Polymer concrete is a rigid inert material that helps maintain these tight tolerances.

Polymer concrete also offers a similar rate of expansion and contraction to surrounding cement concrete. Other common trench materials such as HDPE have poor thermal qualities; around a 400m track, with an ambient temperature change of 75°F, a HDPE trench system can expand by 56" more than a concrete surround. This difference in expansion/contraction can cause channels to buckle and pull away from the concrete. The problem is compounded as the trench is generally laid continuously around the track, thus having no start or finish, and nowhere to expand.

Materials

The majority of ACO Sport products are manufactured from polymer concrete which offers the following benefits:

- *Excellent compressive strength - 14,000psi (3 times stronger than cement concrete)*
- *Good flexural strength - 4,000psi*
- *Low coefficient of friction - n=0.011 (for maximum hydraulics)*
- *Low water absorption +0.07% (C-97)*
- *Excellent corrosion resistance*
- *Low coefficient of expansion relative to cement concrete - does not expand significantly more than concrete surround during large temperature changes, unlike HDPE and other plastic materials*



Other ACO product lines

- **ACO DRAIN**
ACO Drain is the world's leading modular trench drain system for commercial, industrial and landscape applications.
- **ACO ROAD**
ACO Road is a range of surface drainage products engineered for the unique design and performance demands of highways, urban roads and bridges.
- **ACO PAVE**
ACO Pave detectable warning devices for ADA compliant ramps and sidewalks.
- **AQUADUCT**
Aquaduct custom designs and manufactures fiberglass trench drain systems to meet individual project requirements.
- **MARKANT BY ACO**
Markant by ACO is a range of building products designed for the residential builder and DIY enthusiast.
- **QUARTZ BY ACO**
QuARTz by ACO linear shower channel solutions inspire creative bathroom planning while maintaining quality and functionality.

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