

| | |
|---------------------------|---------------|
| Uniclass L2123 + L7315 | EPIC J3413 |
| CI/SfB S2 (52.5) | X |

ACO Sport



*Channel drainage systems and sports accessories
for stadiums and arenas*

ACO Sport - Product Overview

ACO Sport Systems

Product Overview

Introduction to ACO Sport

Throughout the world, the ACO brand is recognised as a leading supplier in the design, development and manufacture of surface water drainage. An extensive portfolio offers the market quality solutions for every application, including Internal and Building Drainage, Landscaping, Sport facilities, Retail, Distribution centres, Highways and Airports.

The ACO group has over 40 years experience of drainage installation, with more than 5 million metres of ACO products installed in the UK - and more than 100 million metres worldwide.

ACO Sport is a division of the ACO Group, which provides specific drainage solutions and stadia products for sporting facilities, stadiums and arenas. These systems are designed to maximise the functionality of the athletic facility without disrupting the performance of athletes and players.

ACO Sport has a full range of systems available to meet the requirements of any athletic arena from school field to Olympic Stadium.

Since the Munich Olympic Games in 1972, ACO Sport systems have been installed in Olympic stadia all over the world.

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



ENVIRONMENTAL CONSIDERATIONS

All materials used in the manufacture and packaging of the ACO Sport systems are 100% recyclable. In using the latest finite element analysis design packages, ACO have ensured minimum materials have been used for maximum performance.

By minimising the amount of material used in the manufacture of these systems, the environmental impact is kept to a minimum. Not only has the product been developed with the environment in mind, the whole packaging and distribution of the product has been optimised to help meet your sustainable construction targets.

The lightweight design not only aids installation but reduces carbon emission linked with the transportation of this product.

ACO Sport Systems

Product Overview

ACO Sport Drainage

Why use surface water drainage systems?

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 minimised, 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.

The ACO Sport systems, designed for track and field events, are setting new safety standards in sport and recreation areas.

They are designed to protect against injury and provide a boundary system whilst serving their primary function of efficiently draining rain water away from the event surfacing.

In addition to the drainage channels, the ACO Sport Systems include many accessories, such as rubber-capped kerbs, sand traps and services boxes.



Why use Channel Drainage?

- ▶ It 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
- ▶ It provides continuous barrier to protect running track from contaminated run-off from in-field, or surround areas

Why use a Polymer Concrete Channel Drainage?

IAAF set strict guidelines for any sporting arena - particularly where prestigious events are held and new records may be set. Construction tolerances can be less than 5mm 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 elements.

ACO Sport Systems comply with IAAF (International Amateur Athletics Federation) and ASBA (American Sports Builders Association) requirements and are compatible with Mondo and other synthetic track materials.

ACO Drainage Channels

In addition to drainage products related to track and pitch drainage, there will be a requirement for drainage to pitch surrounds, pedestrian concourses, car parks and access roads, delivery yards, roofs, etc.

ACO manufacture a wide range of drainage systems in polymer concrete, stainless steel or plastic, suitable for every location in the project.

ACO channels can also provide the cable ducting needed for modern communications and television services. The secure, yet easily removable covers provide for rapid access for re-routing of cables as required.

ACO Sport Systems

Product Overview

ACO Sport Systems Overview

ACO Sport product ranges are split down into a number of different systems.

System 1000 and System 1500 are compatible systems for draining around the inside perimeter of an athletics track, with straight units and 37.5m radius units available. System 1000 is a U-shaped channel designed to be topped with a plastic channel cover/kerb. System 1500 is a slot drain to provide a level transition between the track and the infield area.

System 6000 is for draining the perimeter of an artificial turf pitch and includes a turf anchoring system.

System 7000 includes the rubber-topped kerbs and the sand trap units needed for long jump pits. The kerbs can also be used for other edging situations in stadiums, children's' play areas, school playing fields etc.

System 8000 includes service boxes for water and electrical services in a stadium or arena.

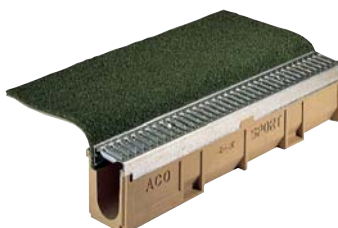
- 1 System 1500**
Trackside slot drainage system, with straight and 36.5m radius units. Complete system with sumps. Channels may be coated with synthetic track surface.



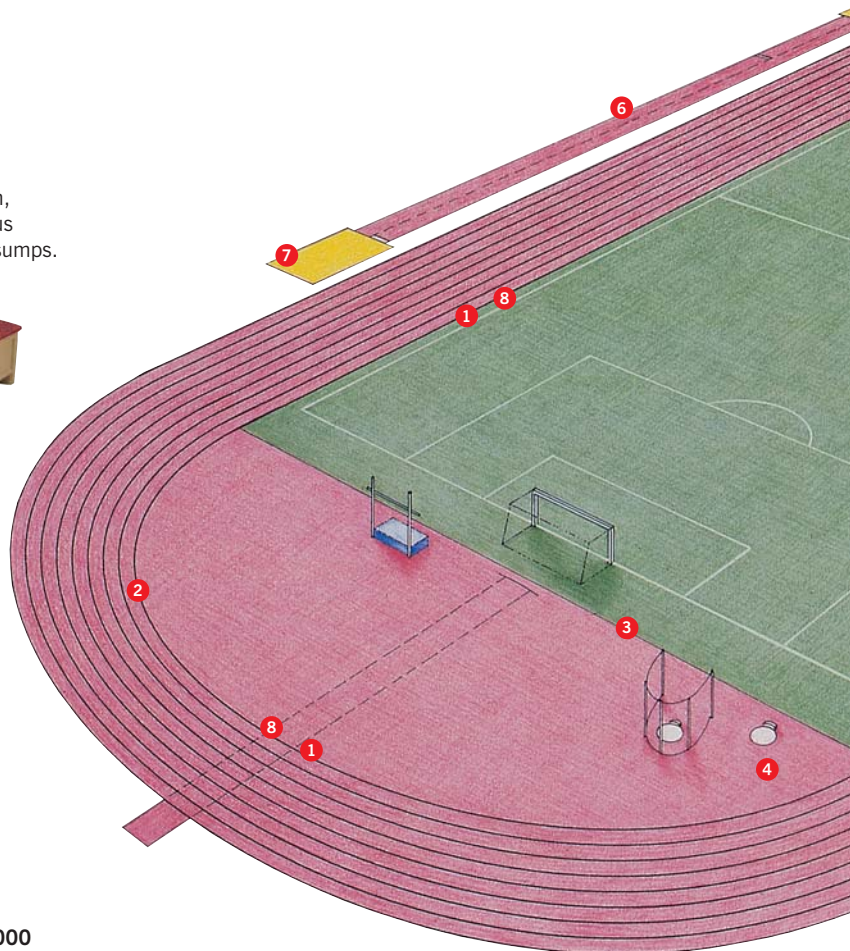
- 2 Channel Kerbs**
ACO Sport Systems 1000 and 1500 may be capped with plastic kerbs. With System 1500, these may be removed after athletics events to provide a level surface across the slot drain for other activities.



- 3 System 6000**
A grated drainage system of channels and sumps with an integral anchoring system for artificial grass carpets.



- 4 System 8400 Service Distribution Boxes**
Polymer concrete service boxes for water and cable distribution.

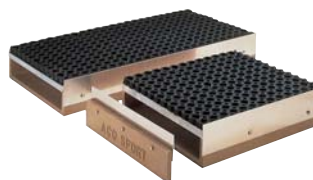




- 8 System 1000**
Trackside channel drainage system, with straight and 36.5m radius units with level sides or with one 40mm raised side. Complete system with sumps.



- 7 System 7000 Sand Traps**
Polymer concrete trays with perforated rubber cushion mat to surround jump sand pits. Prevents sand being lost and keeps sand off adjacent track surfaces.



- 6 System 7000 Kerbs**
Synthetic rubber capped, polymer concrete kerbs to mark out running tracks and areas for field events. Suitable for children's play areas, recreation grounds and school playing fields. Also used to edge sand pits.



- 5 Sumps**
Outlet and access units available for systems 1000, 1500 and 6000.



Further ACO Drainage solutions

The ACO Group manufactures a wide range of systems suitable for many different applications. A number of these drainage systems are appropriate for the wider requirements of stadiums and sporting facilities:

ACO Drain manufactures medium to heavy duty systems for pedestrian, parking and highway applications.

ACO Building Drainage manufactures internal drainage systems for changing room facilities, clean room, and food preparation areas.

ACO Technic manufactures specialist drainage and refurbishment solutions manufactured from polymer concrete.

Further overview information on these product ranges can be found on pages 9 – 11.

ACO Sport Systems

Product Overview

ACO SPORT DRAINAGE: SYSTEM 1000

LW125

High quality track area drainage system with plastic kerb top.

System 1000 includes straight units and 37.5m radius units, to fit all around the inside of a running track.

Units also available with 40mm raised inside wall, ideal for use where there is to be a 40mm step in level between the athletics track and the infield area.

- ▶ Polymer concrete U-channels
- ▶ Polymer concrete slot channels (see System 1500)
- ▶ Straight units and 37.5m radius units
- ▶ Sump units
- ▶ 125mm wide channels
- ▶ Level tops and 40mm stepped tops
- ▶ Plastic channel covers



ACO SPORT DRAINAGE: SYSTEM 1500

LW125

High quality track area slot drainage system, for use where there is to be a level transition between the athletics track and the infield area. Removable kerbs can be fitted for athletics use, and removed for other events.

- ▶ Polymer concrete slot channels
- ▶ Straight units and 37.5m radius units
- ▶ Suitable for wheelchair use
- ▶ Sump units
- ▶ 125mm wide channels
- ▶ Level tops, can be covered on site with track surface on one or both sides
- ▶ Removable plastic kerb channel covers



Available as straight and radius units with an anchorage groove for track surfacing on one side, both sides, or with no groove.

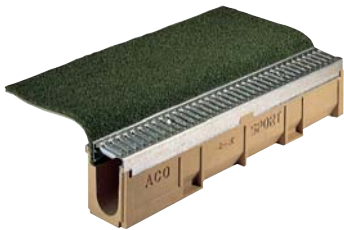
ACO Sport Systems

Product Overview

ACO SPORT DRAINAGE: SYSTEM 6000

LW100K

Combined drainage and anchoring system. Provides an efficient mechanical fixing of artificial grass carpets combined with positive surface drainage.



The units feature an integral metal edge cast into the channel. This edge is used to fix the carpet, and is independent of the grating. This means that when the grating is lifted for cleaning or maintenance of the channel, the carpet will remain fixed in place.

Ideal for use with water based artificial turf as used on hockey pitches.



ACO SPORT ACCESSORIES: SYSTEM 7000

Rubber capped kerbs 7100

Many areas in stadiums and playing fields need to be marked out and safely edged. The ACO SPORT System 7000® rubber capped kerbs can be used to mark out running tracks and areas for field events. It can also be used in children's play areas, sand pits, recreation grounds and school playing fields.

The rubber capped kerbs can be used to edge in situ concrete water jumps and jump sand pits.



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

System 7100 elastic kerbs are available in choice of 2 sizes and with white, or black, EPDM rubber cap.



Long jump pits

Long jump events increase risk of impact injury to athletes from hard edges and corners; System 7100 EPDM rubber capped elastic kerbs can be used as a border around the jump pit to provide a safe, soft edge, to reduce and prevent injury.

Event borders

System 7100 EPDM rubber capped elastic kerbs provides a safe visual border in long jump runways and between different sport surfaces such as between in-field turf and 'D' areas.

ACO Sport Systems

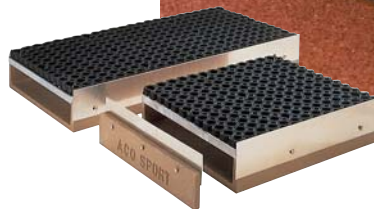
Product Overview

ACO SPORT ACCESSORIES: SYSTEM 7000

Sand Traps 7400

Sand traps are recommended around long jump sand pits, to prevent sand being lost and to protect sand from spilling onto adjacent areas which might cause the track to become slippery or be damaged by abrasion.

- ▶ Polymer concrete sand traps
- ▶ Metal edges for ease of jointing to synthetic track surfaces
- ▶ Covered with perforated cushion rubber mat
- ▶ Pre-formed drain outlet



ACO SPORT ACCESSORIES: SYSTEM 8000

Service boxes 8400

ACO Sport offers communications boxes for easy access to power, internet or water at convenient locations around the stadium. By using buried cables, event set up is quicker and trip hazards caused by trailing cables at the surface are minimised.

The recessed lid allows for track material or artificial turf to be set into the lid providing a discreet look when the box is not in use.



Cable distribution

- ▶ Polymer concrete cable distribution box 600mm x 600mm x 600mm deep
- ▶ Hinged galvanised steel recessed cover to Load Class B125
- ▶ Socket and cable fixings

Water distribution

Polymer concrete water distribution box 1000mm x 1000mm x 420mm deep (plus optional raising pieces).

ACO Sport Systems

Product Overview

ACO Drain

Surface water drainage systems for the stadium and surrounding areas.

ACO Drain manufactures medium to heavy duty surface water drainage systems for a wide variety of pedestrian, parking and highway applications. Many of the systems within this range would provide suitable drainage solutions for many areas within a sports facility and the vicinity surrounding these venues.

The product portfolio consists of traditional channel and grate assemblies, monocast and high capacity drainage systems as well as solutions for environmentally sensitive projects.

A brief overview of these products is given below. For further detailed information on these product ranges please visit www.aco.co.uk



ACO MultiDrain™

General purpose polymer concrete grated channels in 100, 150 and 200mm width and a choice of invert depths, including pre-sloped inverts for the 100mm channels. Wide range of gratings including steel, iron and composite plastic, plus a brickslot grating for block or slab paved areas. Load Class up to D400.

Suitable for draining car parks, concourse areas and pitch surrounds.



ACO RoadDrain®

One piece polymer concrete drainage system available in 100mm and 200mm widths. The integral grating eliminates lost or vandalised gratings. Easy maintenance with access units and sumps. Black colour as standard for installation in asphalt, and other colours available to order. Load Class up to F900.

Suitable for drainage of roads and delivery yards.



ACO S-Range

Heavy duty polymer concrete channel with cast iron gratings available in 100, 150, 200 and 300mm widths. Load Class up to F900.

Suitable for drainage of delivery yards and HGV access routes.



ACO ParkDrain®

One piece polymer concrete drainage system. The integral grating eliminates lost or vandalised gratings. Easy maintenance with access units and sumps. Black colour as standard for installation in asphalt, and other colours available to order. Mini ParkDrain available for small areas or shallow installation depths. Load Class up to C250.

Suitable for drainage of schools, car parks and pitch surrounds.



ACO KerbDrain®

Combined kerb and drainage system available in three sizes. Kerb face profile matches standard kerbs. Load Class D400.

Suitable for drainage of roads, delivery yards and car parks.



ACO Qmax®

Four sizes of slot drainage channel for drainage of large areas. Load Class up to F900.

Suitable for large areas such as car parks or concourse areas.



ACO Sport Systems

Product Overview

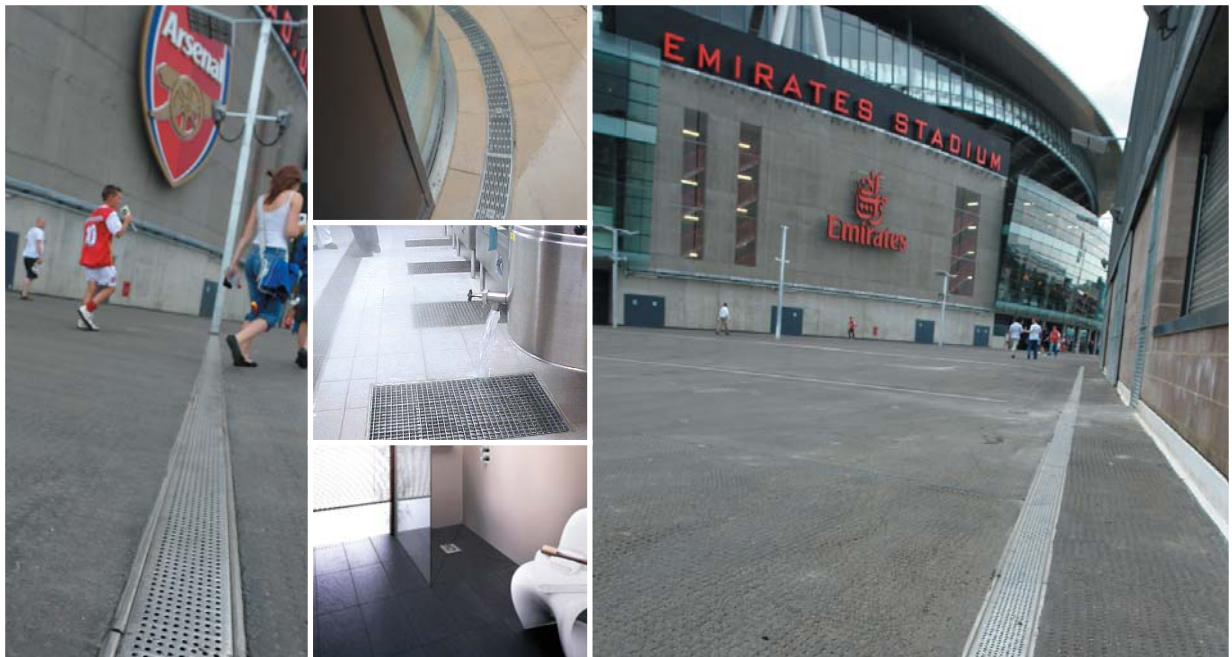
ACO Building Drainage

Drainage systems and building products for Internal and Building Drainage.

ACO Building Drainage specialises in drainage systems and building products manufactured from corrosion resistant materials.

These systems are designed to provide a variety of high specification solutions for internal and building drainage applications.

The product portfolio consists of stainless steel channel and gully assemblies, grease management solutions and bespoke engineering services offering high specification product for landscaped areas.



Radius channel

Bespoke fabricated system of true radius units in stainless steel complete with locked gratings to individual design. Widely used in external areas of high quality landscaping. Capacity can vary with user requirements.

Suitable for drainage of pedestrian precincts and high quality landscaped areas.



Stainless steel channel and gully systems

A wide range of off-the-shelf and bespoke drainage solutions where corrosion resilience and hygienic performance are prerequisites, ideal for changing room, shower areas and kitchens. Gratings are available with slip resistant technology.

Suitable for drainage of wet rooms, shower areas and food production and preparation areas.



Grease management solutions

Gravity separators to BS EN 1825, above or below ground design with optional maintenance features, or biological grease traps with a choice of polypropylene or stainless steel, convenient design methodology caters for small to large applications.

Suitable for food production and preparation areas.



ACO Sport Systems

Product Overview

ACO Technic – Bespoke solutions

ACO Technic the solution provider for the Construction Industry

ACO Technic offers precision cast products manufactured from ACO Polymer Concrete as well as fabricated metal components custom-made to suit any requirements.

Initial concepts can be quickly modelled and analysed using the latest 3D technology and drawing software. Completed designs can then be quickly turned into finished products with many applications throughout the construction markets.

This can be anything from a brand new concept to a special drainage product adapted from our UK and European Drain product ranges.



The ACO Group is one of the world's leading manufacturers of resin castings and fabricated metal parts for the construction industry.

ACO Polymer Concrete is produced by mixing a carefully selected variety of fillers with the resin binder to give a strong yet lightweight concrete mix that can be cast into very complex shapes. Polymer concrete differs from ordinary concrete in that it uses polyester resins rather than water and cement to bind the fillers together. This material gives a much improved strength to weight ratio.

ATM Enclosure Slabs

These units are designed to sit under ATM room enclosures and prefabricated room structures. Units are supplied in different sizes and supplied complete with cast in threaded inserts for bolting wall sections and equipment to.

The units provide a pre cast slab foundation which allows the rooms to be assembled without the need for wet pour concrete and all the equipment and attendances that are required.

Modular slab units can be added to extend a room or moved as required. As Syntolit resin concrete does not absorb water these units do away with the requirement for elaborate damp proof membrane systems.

Equipment Bases

ACO Polymer concrete can be cast into very precise shapes allowing for nylon blocks to be inserted and fixings to be accurately placed. Retractable pyramid barriers, used at airports for passenger queue control also called for the use of increased ballast weights to add additional mass for certain applications.

Beer Fonts

ACO Polymer Resin concrete can be pigmented to produce different colours. The material was used here to form hollow structures which allow for internal pipework and electrical equipment to be fitted to the finished items. Resin concrete can be used to form precise detail which cannot be achieved with traditional concrete.



Drain Specials

ACO Technic can provide solutions for non standard drainage applications, either by modifying a standard product or designing a special product to suite specific site applications.

Recent projects have included non-standard ACO slot drain covers and wide, shallow ACO KerbDrain® units.

ACO Technologies plc

- ACO Drain
- ACO Build
- ACO Building Drainage
- ACO Technic
- ACO Sport
- ACO Wildlife

ACO Sport

A division of ACO Technologies plc
ACO Business Park,
Hitchin Road,
Shefford,
Bedfordshire
SG17 5TE

Tel: 01462 816666

Fax: 01462 815895

e-mail Sales: customersupport@aco.co.uk

e-mail Technical: draintech@aco.co.uk

website: www.aco.co.uk

The ACO Group: A strong family you can depend on.

© March 2008 ACO Technologies plc. All reasonable care has been taken in compiling the information in this document. All recommendations and suggestions on the use of ACO products are made without guarantee since the conditions of use are beyond the control of the Company. It is the customer's responsibility to ensure that each product is fit for its intended purpose, and that the actual conditions of use are suitable. This brochure and any advice is provided by ACO Technologies plc (the Company) free of charge and accordingly on terms that no liability including liability for negligence will attach to the Company or its servants or agents arising out of or in connection with or in relation to this brochure or any such advice. Any goods supplied by the Company will be supplied solely upon its standard conditions of sale, copies of which are available on request. The Company's policy of continuous product development and improvement renders specifications liable to modification. Information provided in this brochure is therefore subject to change without prior notification.

ACO CARES ABOUT THE ENVIRONMENT

Printed on material approved by the Pan European Forest Certification (PEFC) who provide a means of assuring that products come from sustainably managed forests.

