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## Types of synthetic surfaces for athletics tracks. Certified systems

CONICA: Everything you need to know when choosing an athletics track.

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Following several articles that examined the aspects of regulation, certification and approval, today we are finally going to have a look at the different types of synthetic athletics tracks and their variants.

Once we have defined the project, the type of planned oval, its dimensioning, the various disciplines the facility will accommodate, its location and all the specifications for each sport outlined in Chapter 2 of the World Athletics Manual (WA), it is time to look at the different systems we can consider using for our synthetic competition surface.



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Chapter 3 of the **World Athletics Track and Field Facilities Manual** describes everything involved in building the athletics track.

The section dedicated to the competition surface describes prefabricated systems and systems implemented “in situ”, i.e., manufactured and installed entirely on site.

**Prefabricated systems** usually consist of two combined layers of an alveolar (not solid) base bonded by vulcanisation and overlaid by a top layer of rubber. It is available in **rolls** of different qualities and thicknesses ranging from 10 to 13.5 mm. An adhesive glues the rolls onto the (usually asphalt) base. As the system comes in rolls, **there are joints** where the rolls have been attached. Weights are placed on the joints until they are dry and have bonded. The systems are waterproof. As prefabricated roll-based systems cannot be partially refurbished, another **major investment** will be necessary when they reach the end of their useful life cycle or need repair.

Although **on-site flooring for athletics tracks** comes in many different variants, it can basically be categorised into three families: spray-coated systems, sandwich systems, and full PUR systems. They are all mixed and installed **right on site** over the asphalt base, **without joints** and, depending on their category, they can be systems with virgin components, or mixtures of rubber and EPDM together with different polyurethanes. Both permeable and waterproof systems are available. On-site systems can be completely or partially refurbished at **reduced costs** compared to prefabricated systems.

Let's have a closer look at these on-site systems.

1.– **The spray-coated systems** are usually intended for sports at the grassroots, schools and universities levels. They consist of a first layer of recycled rubber granulate (SBR) that is mixed with a binder and installed on the asphalt surface using a precision paver. The final use layer is then applied by spraying fine EPDM granulate and spray-coating two coats in opposite directions to completely cover the base. It is a **permeable system**.

CONICA's *CONIPUR SP* system is an example of this type of flooring for athletics tracks and, despite being economical, is certified by World Athletics (WA) – IAAF and can be found in many facilities certified with Class 2 and even Class 1 by World Athletics (WA).



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2.– **The two-layer or sandwich (SW) systems** have an elastic base similar to the one used in the spray-coated systems, on top of which a layer of filler and finally the topcoat is applied, which consists of a polyurethane coating over which the EPDM is spread in the desired colour. It is a **waterproof system** with an excellent quality/price **ratio**.

CONICA's **CONIPUR SW** system is an example of this type of flooring for athletics tracks and is one of the best sellers for public facilities and training centres thanks to its excellent durability, good price and economic refurbishment option at the end of its useful life cycle. There are numerous CONIPUR SW systems in facilities approved by World Athletics (WA), in both Class 1 and Class 2.

3.– **Full PUR or full PU systems** are floorings that contain a mixture of liquid layers with granules that are perfectly integrated into the existing base as a single body. Polyurethane is renowned for offering athletes **excellent sporting properties**, since in addition to its load capacity, the mixtures used can customise the track's degree of hardness and the catapult effect it has on athletes. The materials are **resistant** to impacts, the passage of time and abrasion, and yet maintain their sporting qualities. This makes them ideally suited for the **most demanding and professional sports**, and also for heavily used facilities, thanks to their great **durability**. Depending on the granulated materials used and the particular polyurethane properties, there are several types of systems with a greater or lesser degree of virgin materials. These are **waterproof systems**.

This CONICA family includes three different systems – **CONIPUR MX+**, **CONIPUR M** and **CONIPUR Vmax** – that are found in the world's most prestigious stadiums and that can boast dozens of world and continental records for this type of surface in either Class 1 or Class 2 facilities across all five continents.

The Vmax system constitutes a great technical innovation, as it consists of only two layers and was designed by renowned athletes in a study supported by the University of Sport in Cologne (Germany) where its great capacity to improve the sporting performance of athletes was tested and demonstrated.

The above is merely a basic presentation of the systems that make up CONICA's range of on-site flooring options. If you would like us to inform you in detail about any of these systems, please do not hesitate to contact us.



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**Three basic concepts from this chapter:**

- The types of systems that can be used and certified for an athletics track are regulated in Chapter 3 of the **World Athletics Track and Field Facilities Manual** and include both prefabricated and on-site systems
- Prefabricated systems come in rolls that must be glued to the floor, making joints on the track inevitable. “In-situ” systems are mixed and installed right on site, providing a uniform and seamless track surface without any joints
- The on-site systems include three types and multiple variants, available in different qualities for every budget and type of use

In the next chapter, we will examine the certification processes, the certification’s term of validity, and renewals.

If in the meantime you are interested in learning more about CONICA’s systems for athletics tracks, please feel free to contact us or have a look at our Website: [www.conica.com](http://www.conica.com)  
(<https://www.conica.com/>)

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