

Dirt-resistant igus linear system displays wins in long jump

Maintenance-free drylin linear guide enables a laser to slide and ensures fast, visible top marks in the stadium

In order to make the longest distance visible to the audience at the stadium during the long jump event, organisers rely on the laser projection of lines in the sand. One of them is Golden Fly Sports GmbH with its "PrimeLine System". The developers set the highest standards: All components must be robust and above all sand-resistant, but at the same time lightweight. Therefore, lubrication-free and maintenance-free drylin linear guides from igus were chosen.

Results in athletics can be confusing for the viewer. Whilst in football it is clear when the ball is in the goal, it is not immediately apparent in the long jump whether the jumper has set a new record. Virtual lines help the audience on TV, but are not visible in the stadium. Armin Margreiter therefore devised a new solution for his certified mobile athletics system. The former national coach of the Austrian long jumpers, together with the laser projection expert MediaLas, developed a system that projects the furthest jump distance in the sand. It consists of three laser diodes, which are aimed at the pit and produce a visible line even in direct sunlight. To move the laser diodes, the developers needed a drive unit that can move to positions over a range of 3 to 12 metres. The system should also be easy to transport. Therefore, the decision was made to use a sliding, lubrication-free and maintenance-free drylin linear system from igus on which the laser moves. It consists of lightweight high-performance plastic and aluminium components that are very easy to transport and set up.

iglidur J200 defies sand and heat

Upon landing, long jumpers kick up a lot of sand, which settles in the surrounding area, even on the linear guidance system. Oils and greases, which are often used as lubricants, bind this dirt and lose their lubricity. This is why liners made of lubrication-free, high-performance polymer iglidur J200 from igus are used in the carriage of the linear guide. The bearing remains dry

so that no sand can adhere to the bearing and it remains un-affected. The low coefficient of friction enables precise positioning, as demanded by the international IAAF athletics association. Both the rails made of aluminium and the liners are maintenance free and corrosion resistant with a very long service life, which can be calculated online. As a result, they can be used continuously even during long competitions. Armin Margreiter is convinced by igus: "The linear guides from igus have been in use on my systems for four years and still work without any problems."

Caption:



Picture PM4119-1

Tough and maintenance-free even under sporting conditions: Lubrication-free and dirt-resistant linear guides from igus convince with their freedom from lubrication and maintenance in the long-jump visualisation system. (Source: igus GmbH)

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ABOUT IGUS:

igus GmbH is a globally leading manufacturer of energy chain systems and polymer plain bearings. The Cologne-based family business has offices in 35 countries and employs 4,150 people around the world. In 2018, igus generated a turnover of 748 million euros with motion plastics, plastic components for moving applications. igus operates the largest test laboratories and factories in its sector to offer customers quick turnaround times on innovative products and solutions tailored to their needs.

The terms "igus", "Apiro", "chainflex", "CFRIP", "conprotect", "CTD", "drylin", "dry-tech", "dryspin", "easy chain", "e-chain", "e-chain systems", "e-ketten", "e-kettensysteme", "e-skin", "flizz", "ibow", "igear", "iglidur", "igubal", "kineKIT", "manus", "motion plastics", "pikchain", "plastics for longer life", "readychain", "readycable", "ReBeL", "speedigus", "triflex", "robolink", and "xiros" are protected by trademark laws in the Federal Republic of Germany and internationally, where applicable.