

SK ARITMA Praha



Founded in 1908 through the merger of SK Veleslavín and Dynamo Vokovice, SK ARITMA Praha is a Czech football club based in Prague. The club currently plays in the Czech Fourth Division.

One of its most famous players was Jirí Tichý. A central defender, he entered the Czech Football Hall of Fame as part of the silver team from the World Championships in Chile. The club also offers tennis, basketball, athletics, and volleyball facilities.

The challenge

ARITMA Praha needed to replace its lighting as it was old, costly to run, unreliable, and needed a great deal of expensive maintenance. The lighting levels the old system was providing also failed to meet what was required for the league competitions played there.

The new lighting solution needed would have to be able to dim lights smoothly whilst maintaining uniformity for the training pitches too.

Other challenges we faced were:

- The project was taking place in January, so we had to work in sub-zero conditions – where the daily temperature only ever rose to -10°C . We also had to contend with strong winds and lots of snow. Not ideal if you're working on high masts.
- The wireless controls for dimming each pitch all needed to run from one mobile device.

At a glance

Sector: Sports - Football
Country: Czech Republic
Customer: SK ARITMA Praha
Project Date: Jan 2021
Rated power for 1 luminaire: 1,200W

Midstream Authorised Partner: 4 Lighting s.r.o. / LAMA lighting technologies s.r.o.
LED floodlights installed: 28
Type: Modus R 1200 S3

Lux average values:
Pitch 1 - 218 Lux
Pitch 2 - 215 Lux
Pitch 3 - 253 Lux

Uniformity:
Pitch 1 - 0.71
Pitch 2 - 0.61
Pitch 3 - 0.61



- We had to provide a retrofit solution as there was no budget for new masts.
- The project needed to be delivered at the height of the COVID-19 pandemic.

Our solution

As this needed to be a retrofit project, the first task was for our Lighting Design and Engineering teams to assess what masting was already there and how it could be used. Armed with this they then started to produce several potential layouts for the lighting using different types of our luminaires.

They decided our Modus R Series would be the perfect choice. Thanks to its low weight and the fact we could add ballast to the base of the masts, it meant the load on the mast booms was significantly reduced. Its modular design and its versatile control systems also meant it could provide the right amount of light exactly where, and when, it was needed using just one mobile control. For a list of all the Modus R Series features and benefits, see below.

You'll see from the technical 'before and after' comparison, also below, the energy savings were significant – almost 50%. This both reduced the daily running cost of the lighting and helped the club boost its environmental credentials.

As for completing the project during such bad weather conditions, as a global lighting company, we're well used to operating in all extreme types of weather – hot and cold. So we know what safety measures need to be adhered to. Likewise for delivering the

job during the COVID-19 pandemic. We'd already completed a large number of projects since the pandemic began and understood exactly what protocols were required to keep everyone safe.

Our Modus R Series benefits at a glance:

A lightweight, extremely versatile, and robust product requiring very little maintenance, the Modus R Series has been engineered for both retrofit and new build projects. It also provides low glare, broadcast-ready, flicker-free LED light designed for sports applications.

- The series is manufactured in stainless steel, which improves its structural integrity and product life – a critical need when used across sporting environments.
- Its in-house designed extruded heat sink allows for highly efficient heat dissipation compared with a die-cast product. This keeps lumen degradation to a minimum – helping to extend life and performance.
- It also comes with special light shields to control light spill, reduce glare, and increase uniformity.
- The modular design of the Modus R makes it perfect for versatile, tailored applications and solutions.
- It integrates with wired or wireless controls, including DMX, DALI, and 1-10V solutions to provide the ultimate in lighting control for event light shows and dimming.
- It also offers versatile asymmetric or symmetric distribution, and it delivers up to 150,000 lumens – more than enough to meet the needs of world-class sporting facilities.
- Plus, its integrated 10V surge protection, coupled with a panel-mounted Type 2 surge suppressor, guarantee high protection against power surges and a longer product lifetime.

Before and after technical comparison:

	BEFORE	AFTER WITH LED
Number of projectors	28	18
Nominal power for single appliance	2,000W	1,200W
Absorbed power (measured data)	2,276W	1,200W
Total power absorbed	63,7kW	33,6kW
Colour temperature	4,000K	5,000K
Colour rendering index	60	70
Average light level	100Lux	250Lux
Uniformity	0.4	0.6 to 0.7
Energy savings		47%