

SPORT LIGHTING



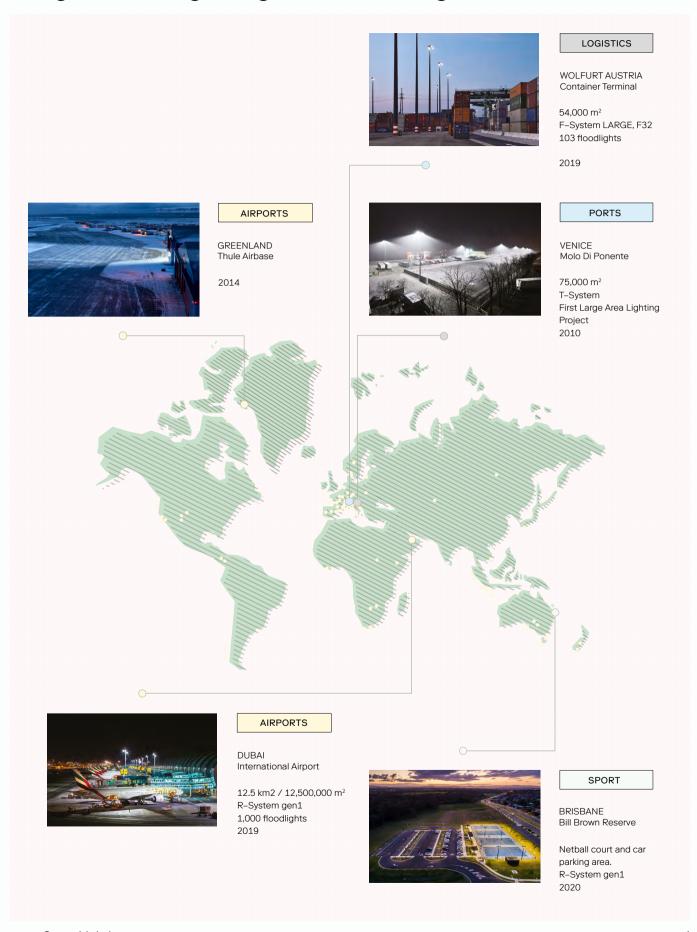
Top performance in sport shown in its best light

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ewo Sport Lighting ewo Sport Lighting

Large Area Lighting around the globe



From airport lighting to sports facilities

ewo already exploited the potential offered by LED technology for large areas as far back as 2010 at Venice cargo terminal and since its project at Innsbruck Airport, has conquered airport installations of various sizes one by one throughout the world.

A development that never stops.

Since 2020, the third generation of high performance floodlights <u>R-System gen3</u> is on the starting line with different power variants.

When it comes lighting sports facilities, maximum performance and power are paramount.

Due to its scope of configuration options, our high power floodlights are optimised for <u>sports</u> fields, sports halls and stadiums – irrespective of size.

ewo Sport Lighting 1 ewo Sport Lighting

High-power floodlights for sport lighting

R-System gen3



R-System gen3 MAX

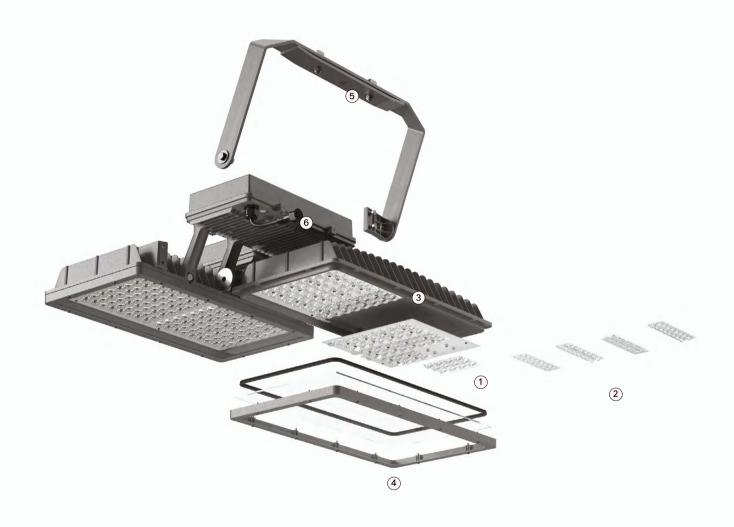


R-System R1



Superior flexibility thanks to modular design

Each project has its own specific requirements. That's why we have developed a modular product system, which we can modify and fine-tune down to the smallest details, allowing us to produce sophisticated and technologically advanced solutions in different settings as well as a sustainable spare parts supply system.



1	PRINTED CIRCUIT BOARDS	individually interchangeable	wide-ranging configuration options
2	LENS OPTICS	UV stabilised PMMA and PC	different light distributions
3	COOLING SYSTEM	reliable temperature management	optimal thermal performance
4	GLASS COVER	high light transmittance	protection of optical components
5	MOUNTING BRACKET	infinitely variable 360° swivelling	floor, wall and ceiling mounting
6	DRIVER BOX	separate mounting	for optimal thermal separation

AIRPORTS PORTS TRAFFIC LOGISTICS SPORTS

R-System gen3 Recipe for success: simplexity

Cost efficiency with maximum performance and a focus on what matters. At ewo we have a word for this: simplexity. Because simplexity in design and application optimises performance by R–System gen3 in any large area, with up to 480 LEDs.

AREAS OF APPLICATION	airports, ports, logistics centres, sports facilities and roads		
MAX LUMEN PACKAGE	up to 193,000 lm		
CURRENT FEED	up to 1,850 mA depending on ambient temperature		
AMBIENT TEMPERATURE RANGE	-40 to +45 °C		
OUTSTANDING LIFETIME	L80B10 > 100,000 h		
DARK SKY	full-cut-off optic at 0°, optional visor up to 7° (E–Series)		
ELECTRONIC OPERATING DEVICE	on request with DALI2 or Line Switch		
SMART LIGHTING	control modules for different communication standards available upon request		
LENSES	made with UV-stabilised polycarbonate (E–Series) or PMMA (A–Series)		
COVER	single-pane safety glass (ESG)		
LUMINAIRE HOUSING	in die-cast aluminium		
BRACKET	made of hot-dip galvanised steel, on request with swivelling bracket for floor, wall and ceiling mounting		
FINISH	polyester powder coating, white aluminium (RAL 9006 / DB 701)		



Left R2 (144 LEDs) / right R4 (288 LEDs)

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PORTS

TRAFFIC

LOGISTICS

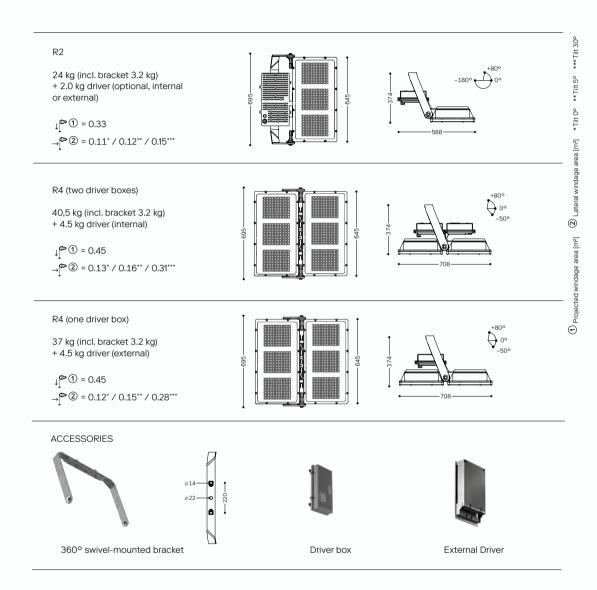
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R-System gen3 A-Series model variants



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R–System gen3 A–Series model variants



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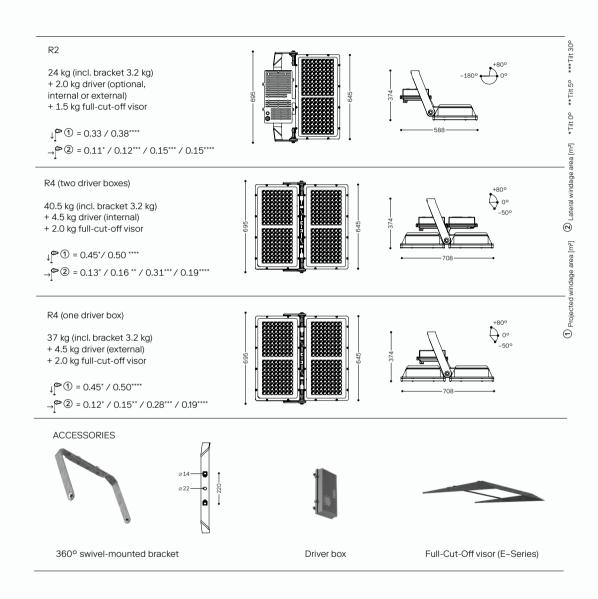
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R-System gen3 E-Series model variants



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R-System gen3 E-Series model variants



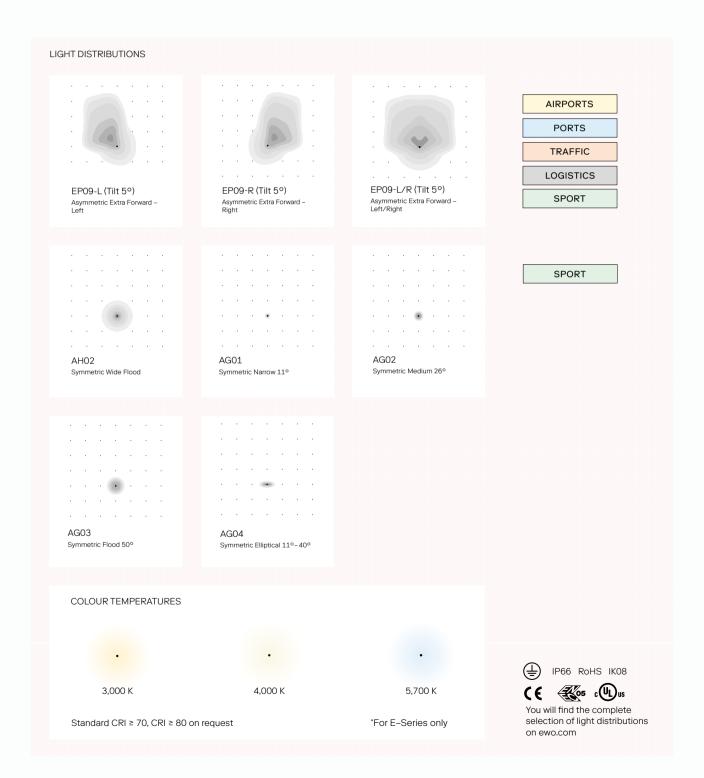
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R-System gen3 E-Series

R-System gen3

MODEL	LIGHT DISTRIBUTION	LUMINOUS FLUX [Im]	MAX POWER [W]	CURRENT FEED [mA]	LEDs
R2	A-Series	117,000	905	1,200	240
R4	A-Series	205,000	1,496	1,000	480
R2	E-Series	89,500	807	1,850	144
R4	E-Series	179,000	1,614	1,850	288

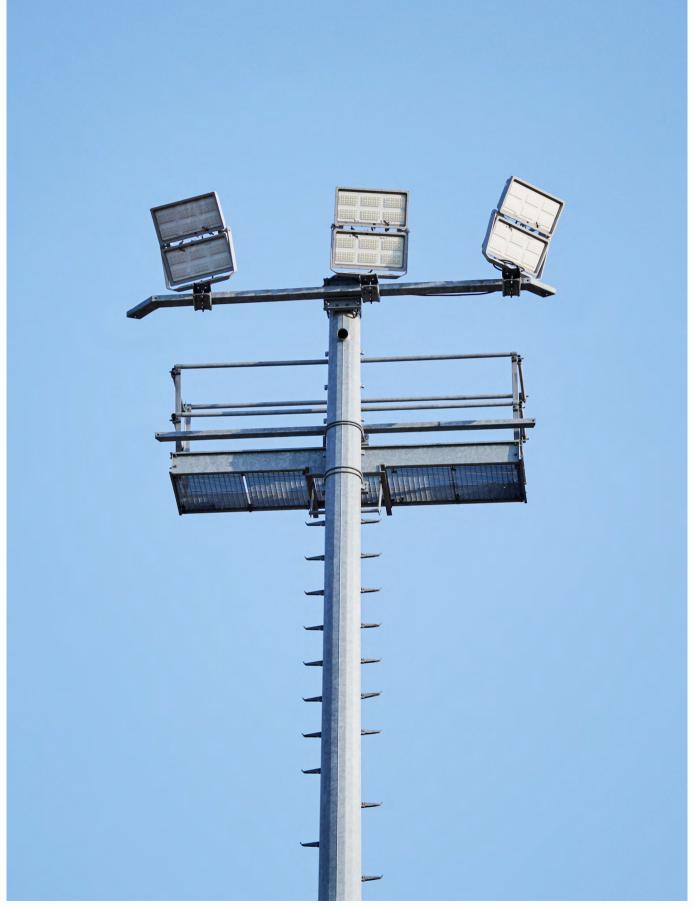


R-System gen3 MAX

Optimised for sports facilities and stadiums, our new R–System gen3 MAX is available in two versions with different LED quantities and outputs to meet any requirements. R–System gen3 MAX can deliver 265,000 lm for maximum performance and output, for entire stadiums, compatible with DMX-DALI converters for light shows.

CHARACTERISTICS	ADVANTAGES
HIGH LUMEN PACKAGE UP TO 265,000 Im	Fewer light points required
LIFETIME OF UP TO 30,000 h L80B10	Maintenance greatly reduced
8 DIFFERENT LIGHT DISTRIBUTIONS	Precise and accurate solutions without wasting light
NEWLY DEVELOPED OPTICS	Prevents upward lighting
AMBIENT TEMPERATURE RANGE -40° TO +45°C	Applicable in any region
SINGLE-PANE SAFETY GLASS COVER	Light transparency is maintained and glass does not discolour
SMART LIGHTING AND DMX CONVERTER	Enhancement of the sports experience with light shows

ADVANTAGES OF LED TECHNOLOGY COMPARED TO HALOGEN Energy savings of up to 85 % Maintenance costs up to 30 × lower Service life increased by approx. 3,000 %



R-System gen3 MAX R4/ A-Series / Alfortville Sports venues / 2020

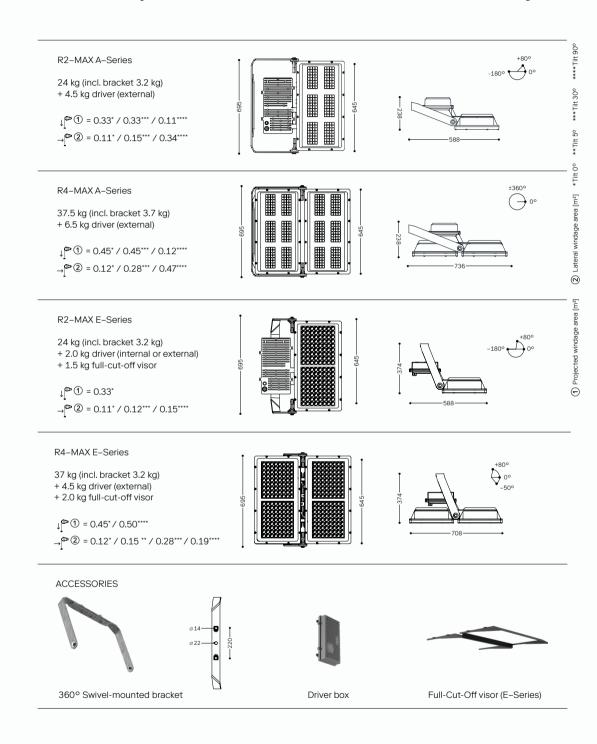
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R-System gen3 MAX Four product variants, endless possibilities





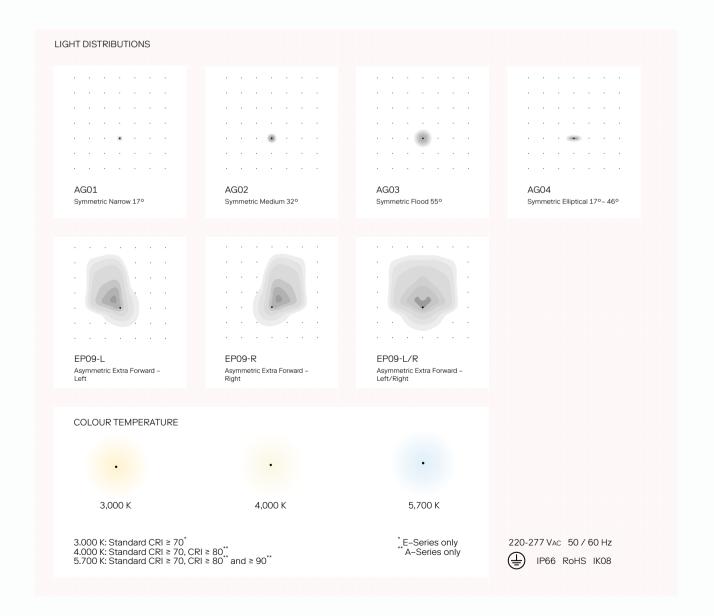
R-System gen3 MAX One to two panels for maximum flexibility



R–System gen3 MAX Mastering the shape of light

With our optics, designers have all the tools at their fingertips, to create any desired light scenario.

MODEL	LIGHT DISTRIBUTION	MAX.LUMINOUS FLUX [lm]	MAX. POWER [W]	MAX.CURRENT FEED [mA]	LEDs	DRIVER
R2	A-Series	132,500	1,179	2,000	192	2 external
R4	A-Series	265,000	2,357	2,000	384	3 external
R2	E-Series	96,500	965	2,200	144	1 external or internal
R4	E-Series	193,500	1,930	2,200	288	2 external



R–System gen3 MAX Performance at the highest level

Mechanical Details

Luminaire housing of die-cast aluminium	
Polyester powder-coated surface, metallic grey (RAL 9006 / DB 701)	
Mounting bracket made of hot-dip galvanised steel - on request with infinitely variable 360° swivel-mounted bracket for floor, wall and ceiling mounting	
Cover made from single-pane safety glass (ESG)	
GORE® valve to prevent condensation	
Protection class IP66 / IK08 impact resistance	
Hermetically sealed cable entry - no exposed cable	

Electrical Details

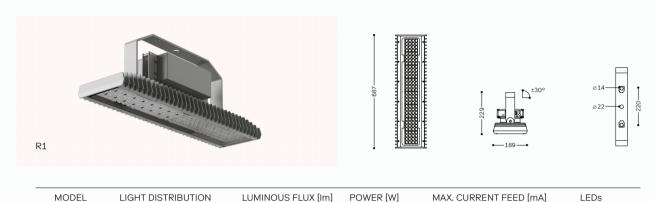
Input voltage 220-277 Vac or 198-250 Vdc (50-60 Hz)
Power Factor > 98% / Pout > 240 W Power Factor > 95%
Electronic control gear with DALI2 or Line Switch available
Insulation class I
Flicker free at full power
Overvoltage protection integrated 10 kV
Features for constant luminous output control (CLO) available

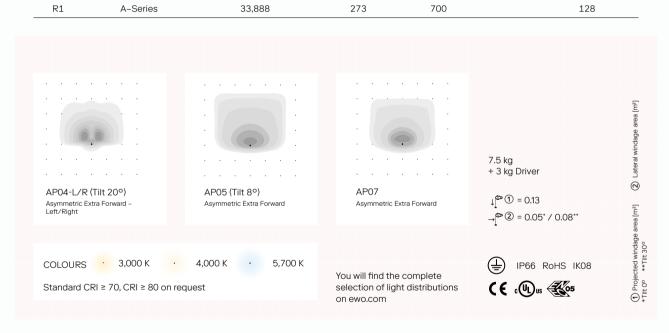
Certificates



R-System R1

The tried-and-tested R-System R1 is still available and optimised for applications such as traffic areas as well as small sports areas (tennis courts etc.).





OPTIMISED PERFORMANCE	33,888 lm, 110-145 lm/W
LIFETIME	L90B10 > 100,000 h
ELECTRONIC OPERATING DEVICE	DALI interface and CLO on request
MATERIALS	lens optics made from PMMA luminaire body from die-cast aluminium luminaire cover of reinforced safety glass (ESG)



Brisbane, Australia / Bill Brown Reserve / Netball courts / R-System gen1, R3 / 2020

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Lens Accessoires The best tools for precise guiding of light

To guide light in an even more targeted manner, we have three main tools:

- Full-cut-off visor
- Backlight shield (RBL)
- Louvre

The goal: light exactly where it is needed. Nowhere else.



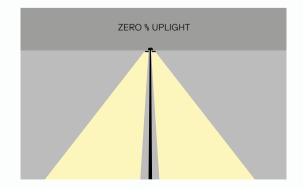
Bill Brown Reserve / Netball Courts / 2020

Full-cut-off visor No light above the horizontal

When necessary to tilt spotlights up to 7°, Full cut-off visors can be used to prevent direct uplighting. Ideal for projects where the avoidance of light pollution is paramount.







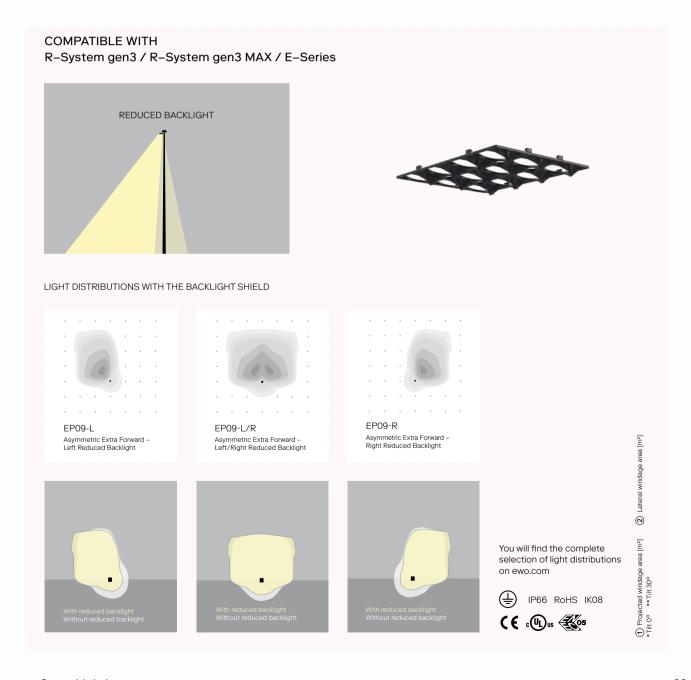
Bill Brown Reserve / Netball Courts / 2020

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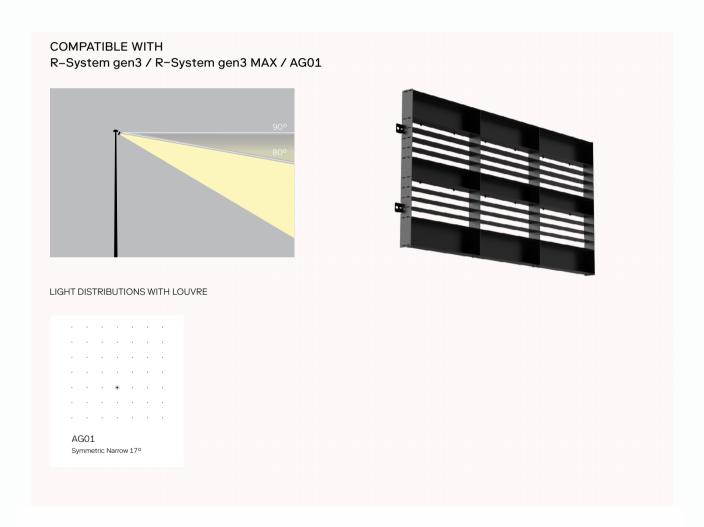
Backlight Shield (RBL) Substantially reduced rear illuminance

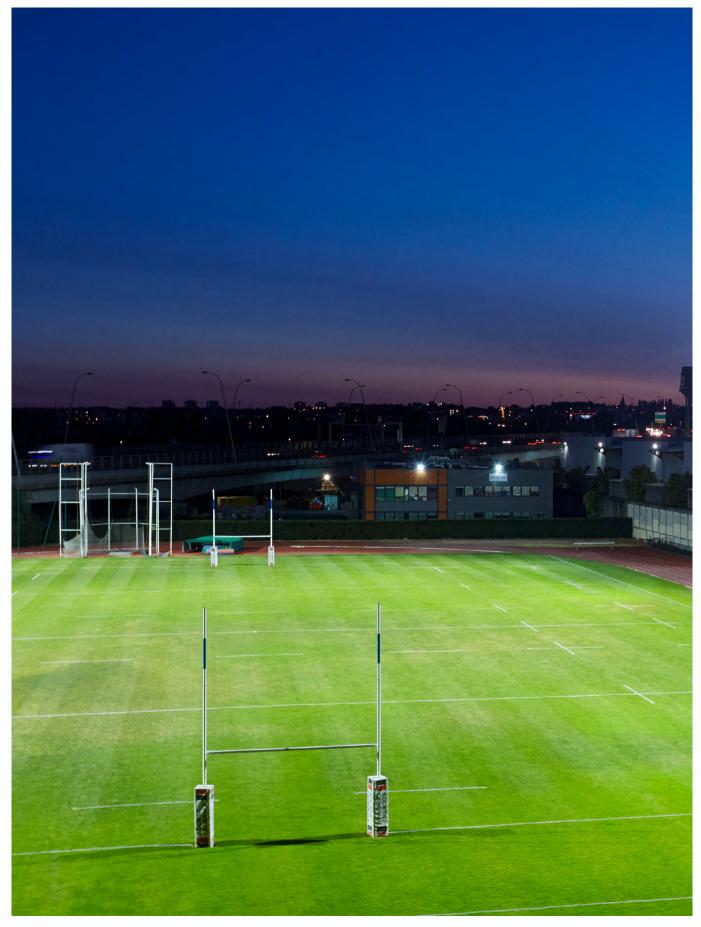
This accessory reduces the rear illuminance of individual lenses by a factor of two to three and directs the light exactly where it is needed - without affecting the front lighting in any way.



Louvre High angle of inclination – outstanding cd value

This external accessory allows a tilt angle of up to 60°, maintaining a cd value of 25,000 or less above 80°: ideal for unobtrusive illumination of large sports venues.





Alfortville, France / Rugby field / R-System gen3 / 2020



Smart Lighting

When lighting is intelligent, it can respond to a variety of elements in the environment. To enhance end-user enjoyment, maximum flexibility is required. Intelligent lighting management is always a step towards any goal, be it safety, sustainability or a unique lighting experience.

Intelligent lighting options with wireless and touchscreen control or with touchscreen control that responds to a DALI signal

DMX converter for light shows

Nema socket

Zhaga Book 18 socket

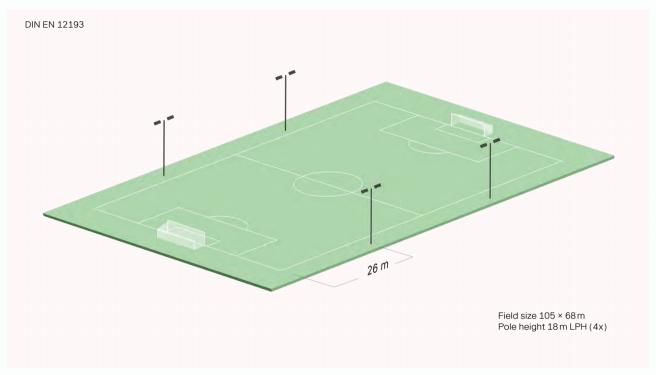
Line Switch



Alfortville, France / R-System gen 3 MAX / Standardised according to the French National Football Association / 150 lux, Uo > 0.7, Emin/Emax > 0.4

Lighting Examples

Soccer - 4 poles



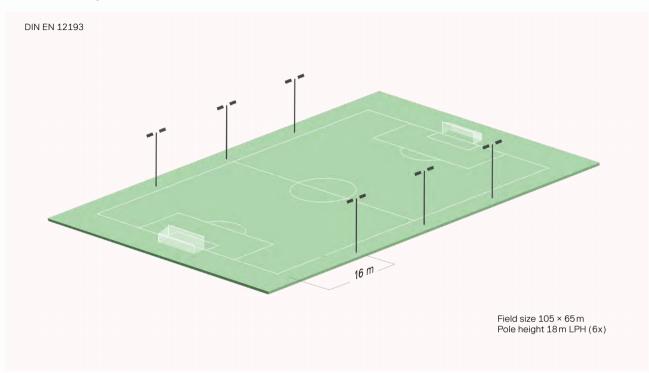


	CALCULATED LUX LEVEL	75.3 lx	214 lx	501 lx
	NUMBER OF PRODUCTS	4	12	28
	PERFORMANCE	7.14 kW	21.42 kW	49.98 kW
_	GLARE (STANDARD VALUE)	< 50 GR (55 GR)	< 50 GR (50 GR)	< 50 GR (50 GR)
	UNIFORMITY (STANDARD VALUE)	0.5 U ₀ (0.5 U ₀)	0.62 U _o (0.6 U _o)	0.75 U _o (0.7 U _o)

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Lighting Examples

Soccer 6 poles

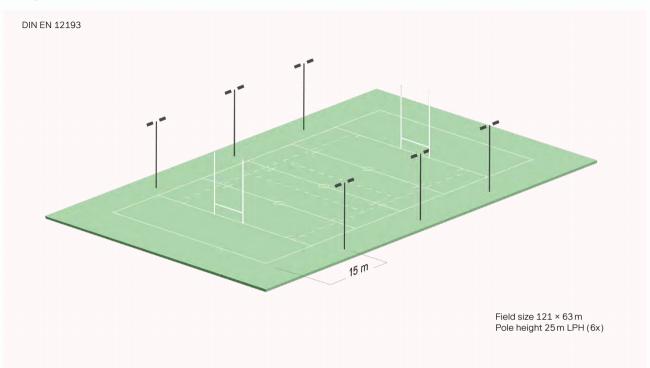




CALCULATED LUX LEVEL	79,6 lx	233 lx	501 lx
NUMBER OF PRODUCTS	6	14	30
PERFORMANCE	7.79 kW	24.99 kW	53.55 kW
GLARE (STANDARD VALUE)	< 50 GR (55 GR)	< 50 GR (50 GR)	< 50 GR (50 GR)
UNIFORMITY (STANDARD VALUE)	0.61 U ₀ (0.5 U ₀)	0.7 U _o (0.6 U _o)	0.78 U _o (0.7 U _o)

Lighting Examples

Rugby

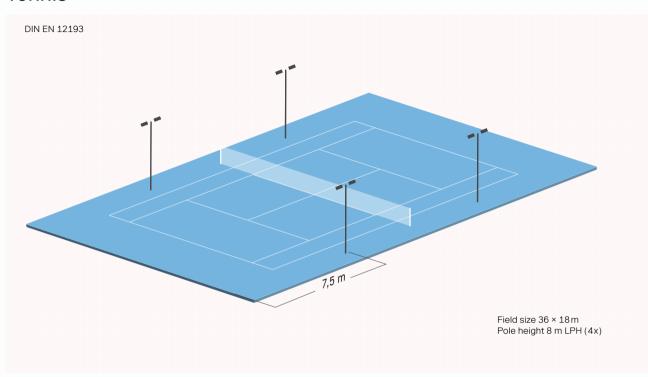


R-System gen3 MAX	75 LUX	200 LUX	500 LUX
	Class III R4-MAX EP09	Class II R4-MAX EP09	Class I R2-MAX EP09
Tilt 0° Maintenance Factor 0,9			R4-MAX EP09
CRI ≥ 70 Colour temperature:			
4,000 K / 5,700 K			

CALCULATED LUX LEVEL	76 lx	211 lx	501 lx
NUMBER OF PRODUCTS	6	16	40×R4+4×R2
PERFORMANCE	11.57 kW	30.87 kW	81.05 kW
GLARE (STANDARD VALUE)	< 50 (55 GR)	< 50 GR (50 GR)	< 50 GR (50 GR)
UNIFORMITY (STANDARD VALUE)	0.6 U ₀ (0.6 U ₀)	0.7 U _o (0.6 U _o)	0.75 U _o (0.7 U _o)

Lighting Examples

Tennis

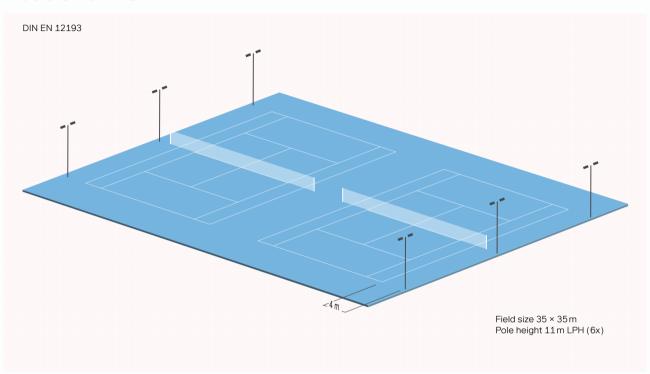




CALCULATED LUX LEVEL	202 lx	309 lx	517 lx
NUMBER OF PRODUCTS	4	4	4x R4 + 4 x R2 total
PERFORMANCE	3.13 kW	4.13 kW	7.26 kW
GLARE (STANDARD VALUE)	< 35 GR (50 GR)	< 35 GR (50 GR)	< 35 GR (50 GR)
UNIFORMITY (STANDARD VALUE)	0.7 U _o (0.6 U _o)	0.71 U _o (0.7 U _o)	0.71 U _o (0.7 U _o)

Lighting Examples

Double Tennis



50 LUX	40011111	
	100 LUX	200 LUX
Class III R2 EP09 R4 EP09	Class II R2 EP09 R4 EP09	Class I R4 EP09
	R2 EP09	R2 EP09 R2 EP09

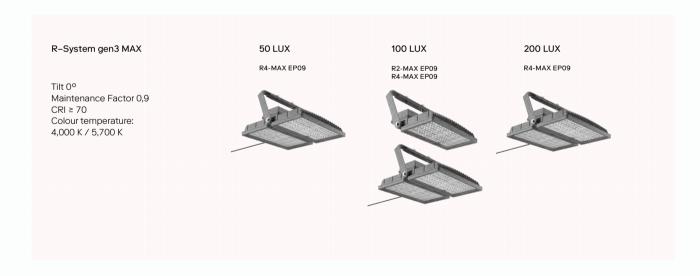
	CALCULATED LUX LEVEL	203 lx	304 lx	502 lx
	NUMBER OF PRODUCTS	4×R2 / 2×R4	6×R2/2×R4	8×R4
	PERFORMANCE	4.14 kW	6.49 kW	11.5 kW
	GLARE (STANDARD VALUE)	< 50 GR (55 GR)	< 50 GR (50 GR)	< 50 GR (50 GR)
	UNIFORMITY (STANDARD VALUE)	0.85 U ₀ (0.6 U ₀)	0.84 U _o (0.7 U _o)	0.86 U _o (0.7 U _o)
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Lighting Examples

Australian Football





CALCULATED LUX LEVEL	55 lx	100 lx	200 lx
NUMBER OF PRODUCTS	8	4 x R2 + 12 x R4	28
PERFORMANCE	15.4 kW	27.03 kW	54.03 kW
GLARE (STANDARD VALUE)	< 50 GR	< 50 GR	< 50 GR
UNIFORMITY (STANDARD VALUE)	0.33 U ₀ (0.3 U ₀)	0.7 U _o (0.6 U _o)	0.7 U _o (0.7 U _o)

Lighting Examples

Indoor swimming pool



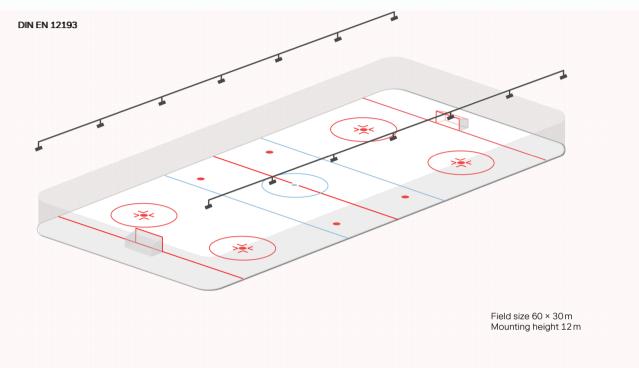
R-System gen3 MAX	200 LUX	300 LUX	500 LUX
	Class III	Class II	Class I
Tilt 0°	R2	R2 EP09	R2 EP09
Maintenance Factor 0,9 CRI ≥ 70			
Colour temperature:			
4,000 K / 5,700 K			

	CALCULATED LUX LEVEL	237 lx	331 lx	521 lx
	NUMBER OF PRODUCTS	10	14	22
	PERFORMANCE	6.5 W	9.1 kW	14.29 kW
	GLARE (STANDARD VALUE)	< 50 GR (55 GR)	< 50 GR (50 GR)	< 50 GR (50 GR)
	UNIFORMITY (STANDARD VALUE)	0.91 U _o (0.5 U _o)	0.91 U ₀ (0.7 U ₀)	0.93 U ₀ (0.7 U ₀)
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Lighting Examples

Indoor Ice Hockey





CALCULATED LUX LEVEL	305 lx	500 lx	759 lx
NUMBER OF PRODUCTS	10	16	12×R4 + 4×R2
PERFORMANCE	9.65 kW	15.4 kW	20.96 kW
GLARE (STANDARD VALUE)	< 50 GR (55 GR)	< 50 GR (50 GR)	< 50 GR (50 GR)
UNIFORMITY (STANDARD VALUE)	0.7 U ₀ (0.7 U ₀)	0.7 U _o (0.7 U _o)	0.74 U _o (0.7 U _o)

Lighting Examples

Multipurpose pitch



R-System gen3 MAX R-System R1	75 LUX	200 LUX	500 LUX
Tilt 0°	Class III R1	Class II R2-MAX EP09	Class I R2-MAX EP09
Maintenance Factor 0,9 CRI ≥ 70			
Colour temperature: 4,000 K / 5,700 K		~	_

_	CALCULATED LUX LEVEL	76 lx	200 lx	501 lx
_	NUMBER OF PRODUCTS	4	4	8
_	PERFORMANCE	932 W	3.13 kW	7.7 kW
_	GLARE (STANDARD VALUE)	< 50 GR (55 GR)	< 50 GR (50 GR)	< 50 GR (50 GR)
_	UNIFORMITY (STANDARD VALUE)	0.7 U _o (0.5 U _o)	0.7 U _o (0.6 U _o)	0.7 U ₀ (0.7 U ₀)

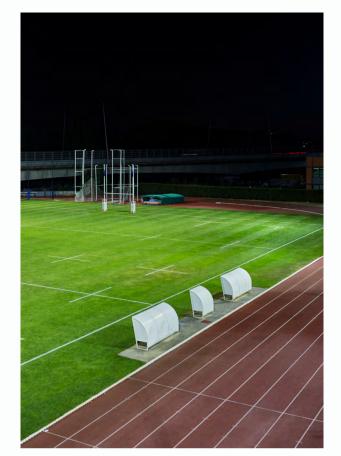
Sports facilities around the globe

"The biggest challenge here was to illuminate several netball netball fields with limited space, in accordance with standards. With ewo's solution, we achieved excellent results through uniform light distribution in combination with an FCO-compliant effect - it's a comfortable, natural environment deep into the night."

Principle Lighting Engineer, Bill Brown Reserve



Brisbane, Australia / Bill Brown Reserve / Netball courts / 2020



Alfortville, France / Rugby and football pitches / R-System gen3 MAX / 2020

"Whether for millions of spectators at high-class sporting events or for a friendly training session at the sports facility next door, our floodlights can be used for all sizes and any sport."

Stefan Ursch, Technical Sales Support

"The aim of the development of the R-System gen3 MAX was to offer a spotlight with an exceptionally high lumen output – at maximum performance."

Hannes Wohlgemuth, CEO



Vintl, Italy / Engineering 3M Srl / 2015

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Sports fields and golf courses big and small

"As specialist lighting designers, lighting outcomes and the quality of the products we use are of upmost importance. Too often, LED sources have traded efficiency for lesser quality lighting outcomes. Finally we have a sports lighting product that can deliver glare and obtrusive light control while still providing the benefits of an LED source."

Rubidium Light, Lighting Designer







Solander Oval, Sutherlandshire, Australia / Multipurpose sports field / 2021



Golf Center / Seve, Rotterdam, Netherlands / 2021

"Quality of lighting calculation and a high level of service really help us deliver the best possible illumination with a fantastic range of products, and this can be seen in our projects every day."

Stefan Ursch, Technical Sales Support



Cortaccia, Italy / Football Pitch / 2021

Wembley: Quality lighting outside of the stadium

The Wembley Stadium project had to meet two scenarios: On the one hand - dramatic, safety-compliant lighting at night, suitable for when 90,000 people leave the stadium; on the other, the pavement needed to be safely lit for a resident walking his/her dog, for example.

ewo offered a combination of optics normally exclusive to street lighting, built into architectural projectors. This underlies the company's great pride: its flexibility - the result of the modularity inherent in all of ewo's products.



London, England / Wembley Way / Walkway to Wembley Stadium / 2021



"Our tried-and-tested A-Series lenses have had a huge impact on our ability to deliver required street and effect lighting within architectural projectors, which we hope have done justice to the designers' ambitious concept."

Hannes Wohlgemuth, CEO





For more than 20 years ewo has been making places shine: picturesque footpaths and urban meeting places, streets, cultural buildings and squares, airports and other transport and industrial environments. For us, the cutting edge requires use of the latest technology to create tailor-made solutions.

At our location in South Tyrol we develop and manufacture high-quality products for the distribution, control and limitation of light in public spaces.

A modular LED unit is the basis of ewo's peerless customer-centric, sustainable and energy-saving lighting projects, which operate on any and every scale.

We bring passionate curiosity for individual requirements, such as individualised lighting effects, special demands on form, colour and material of the luminaires, sensitive or extreme environments, special technical specifications. The examination of cultural and artistic questions, the experimental exchange with architecture, art and design have for us a special significance.

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