BEKA Schréder

Experts in lightability™

OMNIBLAST-E

Modular LED floodlighting solution

iTERRA | LENSO FLEX® 4 | BLAST FLEX™ 4 | RE FLEXO™ | Ex | EXEDRA

LOCALLY manufactured

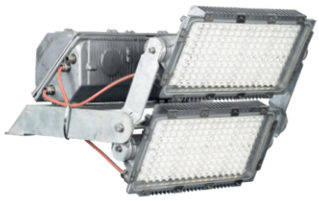
OMNIBLAST-E

IP 66

Up to IK 10

Up to 20kV

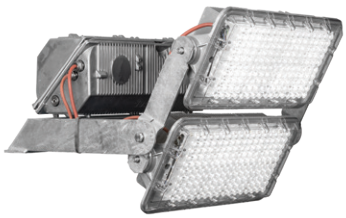
MIDI



OMNIBLAST-1-E

OMNIBLAST-2-E

MAXI



OMNIBLAST-1-E

OMNIBLAST-2-E

OMNIBLAST-3-E

Unrivalled combination of performance and flexibility

The OMNIBLAST-E is the ideal tool for sports venues and other very large area applications that require a lighting solution with the highest efficiency and flexibility to adapt to the different lighting needs.

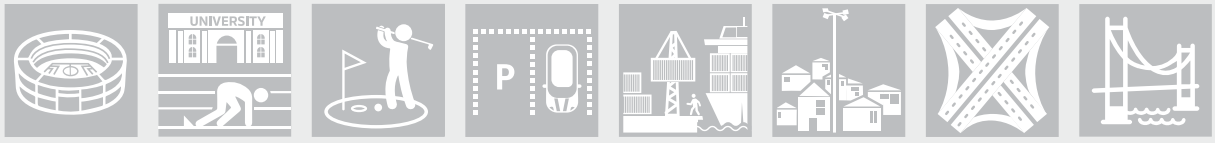
Available in a MIDI and MAXI variant, this LED solution offers an alternative with proven benefits for traditional fixtures fitted with 400W to 2000W HID lamps. The OMNIBLAST-E meets various lighting applications, ranging from general area lighting to recreational sports lighting up to professional broadcasting requirements, matching the horizontal and vertical lighting levels respectively. A modular concept of optical units means that 1, 2 or 3 modules can be mounted on a similar bracket arrangement to offer the utmost versatility, providing light distributions and lumen packages perfectly adapted to the specifications of the area to be lit.

The OMNIBLAST-E guarantees a perfect glare control, a high colour rendering index (CRI) and meets the required television lighting consistency index (TLCI), as well as providing flicker-free lighting. The OMNIBLAST-E is available with cool white (5700K) or neutral white (4000K) LEDs to meet various sports specifications offering either static or dynamic effects.

The OMNIBLAST-E MAXI incorporates a patented cooling technology that maximises its lifespan and lumen output.

Key advantages

- Manufactured in South Africa
- Cost-effective and efficient solution to maximise energy and maintenance savings
- Marine grade, high-pressure die-cast aluminium housing
- Designed to easily upgrade or replace the surge protection device, LEDs or drivers
- Designed to meet international sport federation lighting regulations
- Flexibility: modular approach for high-power applications (one-to-one replacement for up to 2000W HID lamps)
- Compliant with UHD/HD/4K broadcast and super slow motion replays (flicker-free)
- Instant switch on/off (static) - dynamic optional setting to create dramatic or theatrical effects
- Inclination angle adjustable on-site
- Surge protection 10kV/10kA
- Meeting Dark Sky requirements by using accessories such as vertical louvres and hoods
- Available in Zone 2 and 21/22 versions (MIDI only)
- 5-year warranty (Terms and conditions apply)



STADIUM | UNIVERSITY TRACK & FIELD | GOLF COURSE | AREA | INDUSTRIAL HARBOUR | HIGHMAST LIGHTING | INTERCHANGE | BRIDGE

Characteristics

GENERAL INFORMATION	
Recommended installation height	Up to 55m
Driver included	Yes
ROHS compliant	Yes
Testing standard	SANS 60598, SANS 62262, SANS 475
Weight (kg) Including gearbox	OMNIBLAST-1-E MIDI: 14.8
	OMNIBLAST-2-E MIDI: 24.2
	OMNIBLAST-3-E MIDI: 41.2
	OMNIBLAST-1-E MAXI: 16
	OMNIBLAST-2-E MAXI: 34
	OMNIBLAST-3-E MAXI: 44.6
Weight (kg) Excluding gearbox	OMNIBLAST-2-E MAXI: 22
	OMNIBLAST-3-E MAXI: 28
Aerodynamic resistance (CxS) (m^2)	OMNIBLAST-1-E MIDI: 0.168
	OMNIBLAST-2-E MIDI: 0.301
	OMNIBLAST-3-E MIDI: 0.441
	OMNIBLAST-1-E MAXI: 0.264
	OMNIBLAST-2-E MAXI: 0.304
	OMNIBLAST-3-E MAXI: 0.445

HOUSING AND FINISH	
Body	Marine grade high-pressure die-cast aluminium (EN 1706 AC-44300)
Optic	Acrylic PMMA
Protector	High-impact clear glass
	MAXI only: High-impact UV-resistant polycarbonate (optional)
Housing finish	Unpainted aluminium
Optical compartment tightness level	IP 66
Control gear tightness level	IP 66
Impact resistance	Glass: IK 08
	Polycarbonate: IK 10

ELECTRICAL INFORMATION	
Electrical class	EU class I
Nominal voltage	198-264V – 50Hz
Power factor	> 95% at full load
Surge protection	10kV / 10kA
	20kV / 20kA (optional)
Electromagnetic compatibility (EMC)	SANS 55015:2013/A1:2015, SANS 61000-3-2:2014, SANS 61000-3-3:2013, SANS 61547:2009, SANS 62493:2015
Control options	1-10V
	DALI
	Schréder ITERRA
	Schréder EXEDRA remote management
	Incorporated NEMA socket assembly 3-pin
	Incorporated NEMA socket assembly 7-pin, Schréder EXEDRA ready

OPTICAL INFORMATION	
LED colour temperature	5700K (Cool white 757)
	4000K (Neutral white 740) (optional)
Colour rendering index (CRI)	> 70 (Cool white 757)
	> 70 (Neutral white 740) (optional)

OPERATING CONDITIONS	
Operating temperature range (Ta)	-20°C to +40°C (*)

(*) Depending on the luminaire inclination and driving current. For more details, please contact us.

LIFETIME OF THE LEDS @ TQ 25°C
100,000h - Up to L95B10

LIFETIME OF THE DRIVER @ TQ 25°C
Up to 100,000h ≤10% failure rate

For options and accessories, please turn to page 15.

Switching/dimming control

5 good reasons to **smartify your lighting**

1 Optimising energy efficiency

Reduce your electricity bills and minimise your carbon footprint. Use control features and sensors to define when your lights are turned on, off or dimmed.

- **Scheduled lighting** based on working shifts and human activity.
- **Light sensors** to harvest natural light and only compensate with artificial lighting if necessary.
- **Motion sensors** to trigger lighting through detection of people entering an area.

2 Getting the right light

Take advantage of a lighting control system to precisely adjust the light intensity, colour temperature and scenario according to the actual needs.

3 Maximising safety and productivity

Help your employees perform at their best with human-centred lighting. Lighting plays an essential role in the daily life of your business. Not only does it create the atmosphere of a place, it also contributes to the mental well-being, sleep, safety and work efficiency of your staff.

4 Making technology convenient

Remotely control all parameters of your lighting. Check the status at a glance, monitor energy consumption and adjust your scenarios anytime, anywhere.

5 Increasing the life span of luminaires

Dimming and light-on-demand features limit energy usage for each luminaire and allow them to last longer.

This reduces the number of replacements required and also provides environmental benefits.

Schréder ITERRA

Schréder ITERRA provides a complete user- and installer-friendly wireless control solution for sports lighting applications.

Schréder ITERRA offers site managers a robust, cost-effective and FutureProof platform to run their infrastructure with the utmost flexibility for adapting the lighting to any scenario or event while maximising energy savings and providing the best experience for players, fans and the neighbourhood.

A mobile App based system, Schréder ITERRA is very easy to operate. It comes with a visual interface that users can quickly personalise to the layout and settings of their lighting installation.

Download on the App Store GET IT ON Google Play

Schréder EXEDRA

Schréder EXEDRA is the most advanced lighting management system on the market for controlling, monitoring and analysing streetlights in a user-friendly way.

Standardisation for interoperable ecosystems

Schréder plays a key role in driving standardisation with alliances and partners such as uCIFI, TALQ or Zhaga. Our joint commitment is to provide solutions designed for vertical and horizontal IoT integration. From the body (hardware) to the language (data model) and the intelligence (algorithms), the complete Schréder EXEDRA system relies on shared and open technologies.

Schréder EXEDRA also relies on Microsoft™ Azure for cloud services, provided with the highest levels of trust, transparency, standards conformance and regulatory compliance.

Breaking the barriers

With EXEDRA, Schréder has taken a technology-agnostic approach: we rely on open standards and protocols to design an architecture able to interact seamlessly with third-party software and hardware solutions. Schréder EXEDRA is designed to unlock complete interoperability, as it offers the ability to:

- control devices (luminaires) from other brands
- manage controllers and to integrate sensors from other brands
- connect with third-party devices and platforms

A plug-and-play solution

As a gateway-less system using the cellular network, an intelligent automated commissioning process recognises, verifies and retrieves luminaire data into the user interface. The self-healing mesh between luminaire controllers enables real-time adaptive lighting to be configured directly via the user interface.

Tailored experience

Schréder EXEDRA includes all advanced features needed for smart device management, real-time and scheduled control, dynamic and automated lighting scenarios, maintenance and field operation planning, energy consumption management and third-party connected hardware integration. It is fully configurable and includes tools for user management and multi-tenant policy that enables contractors, utilities or big cities to segregate projects.

A powerful tool for efficiency, rationalisation and decision making

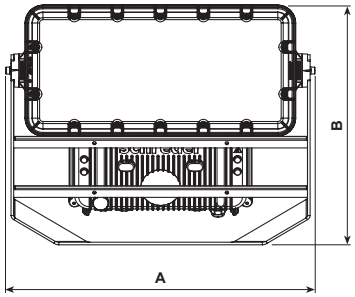
Data is gold. Schréder EXEDRA brings it with all the clarity managers need to drive decisions. The platform collects massive amounts of data from end devices and, aggregates, analyses and intuitively displays them to help end-users take the right actions.

Protected on every side

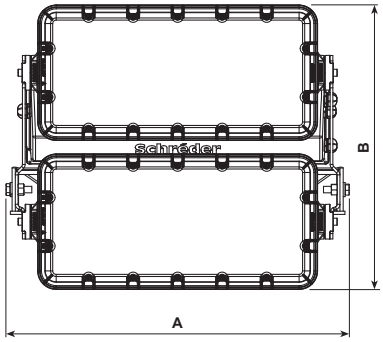
Schréder EXEDRA provides state-of-the-art data security with encryption, hashing, tokenisation, and key management practices that protect data across the whole system and its associated services.

Dimensions in mm

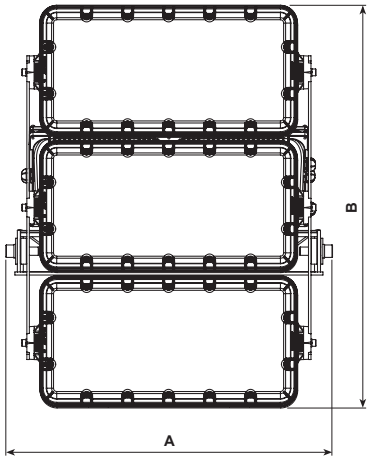
OMNIBLAST-1-E

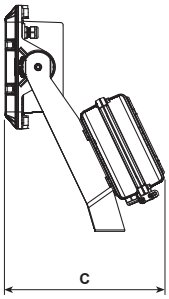


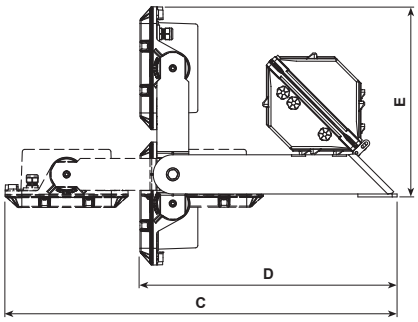
OMNIBLAST-2-E

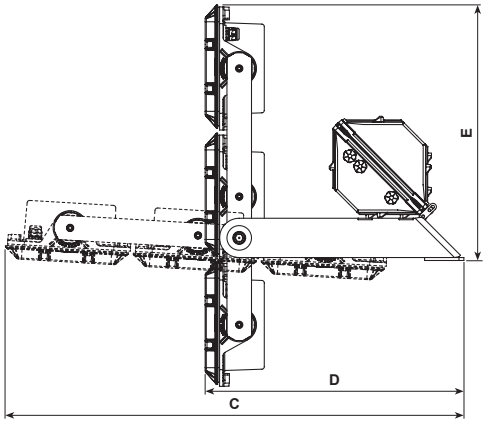


OMNIBLAST-3-E





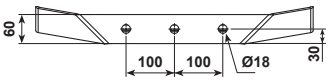




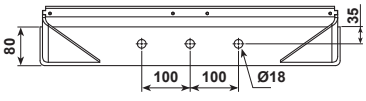
	OMNIBLAST-1-E A x B x C (mm)	OMNIBLAST-2-E A x B x C x D x E (mm)	OMNIBLAST-3-E A x B x C x D x E (mm)
MIDI	593 x 292 x 196	638 x 526 x 633 x 411 x 309	635 x 772 x 928 x 498 x 516
MAXI	593 x 460 x 323	636 x 527 x 800 x 525 x 388	658 x 777 x 934 x 527 x 521

Stirrup Mounting Holes

OMNIBLAST 1-E MIDI & MAXI



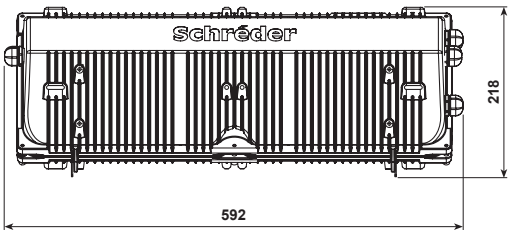
OMNIBLAST-2-E & 3-E MIDI & MAXI



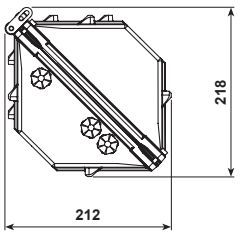
Remote Gearbox

Optional to OMNIBLAST-2-E & 3-E

Top view

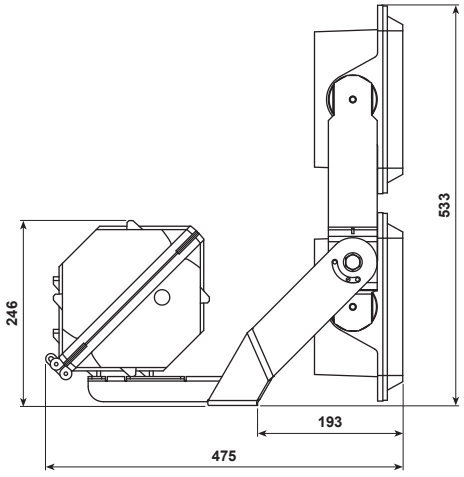


Side view



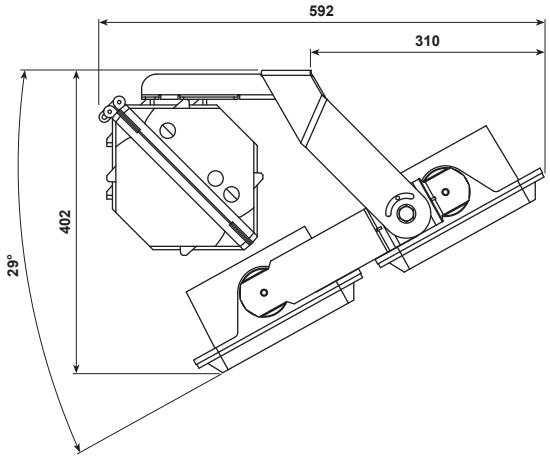
Overslung Stirrup

Optional to OMNIBLAST-2-E MIDI & MAXI



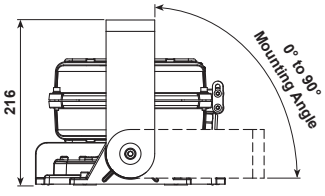
Underslung Stirrup

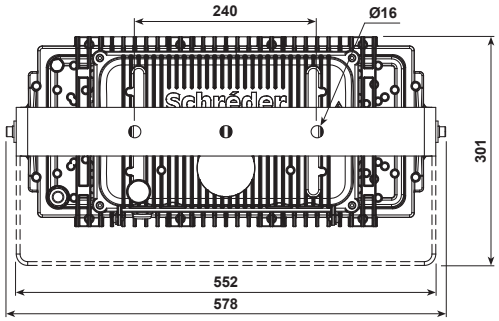
Optional to OMNIBLAST-2-E MIDI & MAXI



U-Bracket

Optional to OMNIBLAST-1-E MIDI





Performance

				Nominal flux (lm) [1]	Power consumption (W)	Nominal efficacy (lm/W)	Luminaire output flux (lm)	Luminaire efficacy (lm/W)	Photometry [2]
Luminaire	Number of LEDs	Driver Current (mA)	Line Current (A)	Typical	Typical	Typical	Typical	Typical	
MIDI 1-E	72	1000	0.98	30975	226	137	25337	112	RE FLEXO™
	96	850	1.15	36012	265	136	30250	114	Optic 5188
	96	1050	1.45	44204	305	145	37131	125	
	80	800	0.9	30240	206	147	25704	125	LENSO FLEX®4 BLAST FLEX™4
	160	800	1.79	60480	412	147	51408	125	
MIDI 2-E	144	1000	1.96	61950	451	137	50675	112	RE FLEXO™
	192	850	2.3	72036	530	135	60510	116	Optic 5188
	240	800	2.69	90720	618	147	77112	125	LENSO FLEX®4 BLAST FLEX™4
	320	800	3.58	120960	824	147	102816	125	
MIDI 3-E	288	850	3.44	108156	795	135	91933	116	Optic 5188
	480	800	5.37	181441	1235	147	154225	125	LENSO FLEX®4 BLAST FLEX™4
MAXI 1-E	96	1400	2	59065	455	130	49615	109	Optic 5188
	160	1300	3.06	89188	704	127	75810	108	LENSO FLEX®4 BLAST FLEX™4
MAXI 2-E	192	1400	3.99	118032	910	130	99147	109	Optic 5188
	320	1300	6.12	178376	1408	127	151619	108	LENSO FLEX®4 BLAST FLEX™4
MAXI 3-E	288	1400	5.99	177081	1365	130	148748	109	Optic 5188
	480	1300	9.18	267563	2112	127	227429	108	LENSO FLEX®4 BLAST FLEX™4

Tolerance on LED flux is ± 7% and on total luminaire power ± 5%

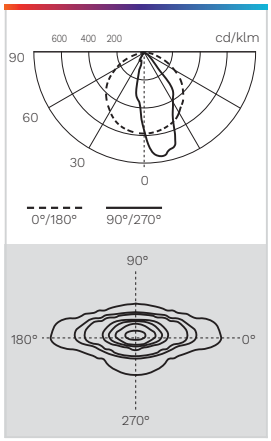
[1] The nominal flux is an indicative LED flux @ Ts 85°C based on LED manufacturer's data. The real flux output of the luminaire depends on environmental conditions (e.g. temperature and pollution) and the optical efficiency of luminaire. The type of LED used is subject to change due to the ongoing rapid progress taking place in LED technology.

[2] Custom combinations of lenses/optics to suit the project are available on request.

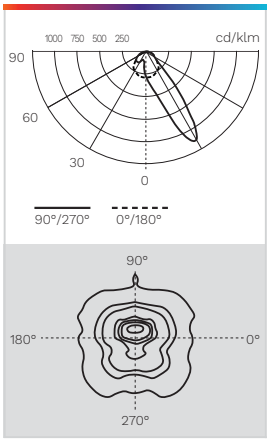
Light Distributions

Custom combinations of lenses/optics to suit the project are available on request.

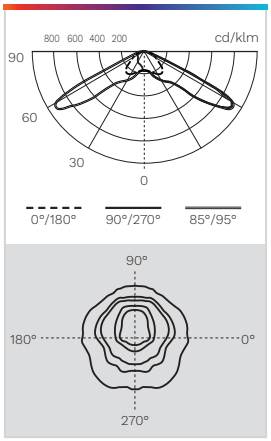
RE FLEXO™ 2259 optic



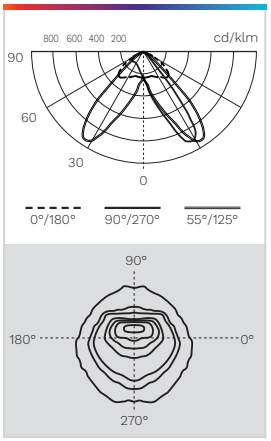
5188 optic



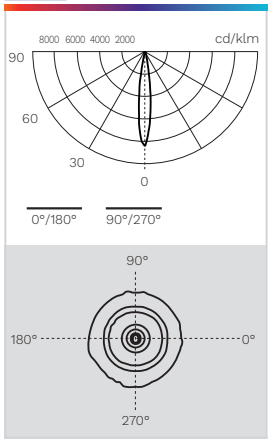
LENSO FLEX® 4 5355 optic



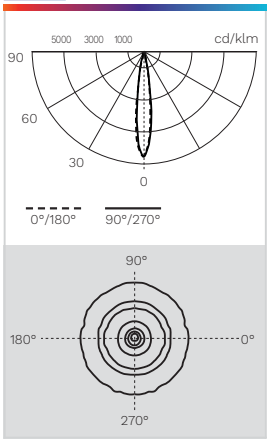
LENSO FLEX® 4 5356 optic



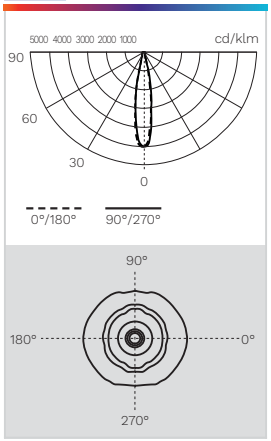
BLAST FLEX™ 4 5357 optic



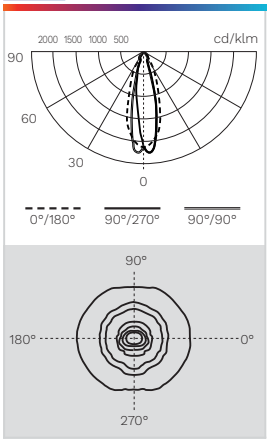
BLAST FLEX™ 4 5357-W optic



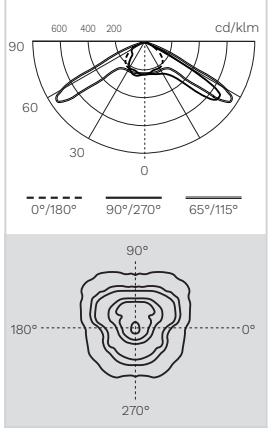
BLAST FLEX™ 4 5358 optic



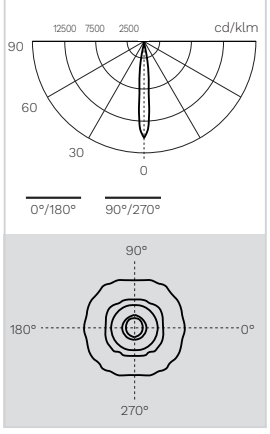
BLAST FLEX™ 4 5359 optic



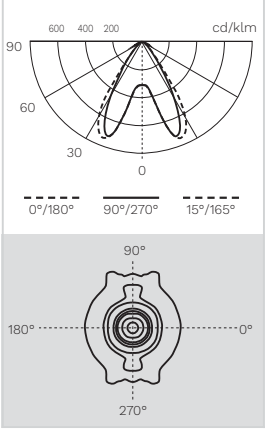
LENSO FLEX® 4 5366 optic



LENSO FLEX® 4 5405 optic



LENSO FLEX® 4 5407 optic



ReFlexo™

Using metal reflectors with a superior reflective co-efficient, the ReFlexo™ photometric engine delivers high performance for specific applications, such as very extensive light distributions for sports or apron lighting.

Another key advantage of the ReFlexo™ is its ability to direct all the light to the front of the luminaire, ensuring that no back light is emitted. This photometric engine guarantees glare free lighting for excellent visual comfort.

LensoFlex®4

LensoFlex®4 maximises the heritage of the LensoFlex® concept with a very compact yet powerful photometric engine based upon the addition principle of photometric distribution. The number of LEDs in combination with the driving current determines the intensity level of the light distribution. With optimised light distributions and very high efficiency, this fourth generation enables the products to be downsized to meet application requirements with an optimised solution in terms of investment.

LensoFlex®4 optics can feature backlight control to prevent intrusive lighting, or a glare limiter for high visual comfort.

BlastFlex™4

Using collimators made of high-transmission PMMA, the BlastFlex™4 photometric engine offers the highest efficiency for directional beams dedicated to specific applications in architectural and sports lighting. The ability to control the light with the highest accuracy reduces light spill in the surroundings, improves uniformity on the area to be lit and contributes to optimal use of the energy consumed.

Construction Details

The OMNIBLAST-E is a modular high-power floodlight consisting of a marine grade high-pressure die-cast aluminium (EN 1706 AC-44300) LED engine (optical unit) with inserted pre-extruded heatsink[1] to keep the benefits of lightweight design and excellent thermal behaviour.

The housing is robustly constructed, weatherproof, hail proof, corrosion proof and vandal resistant. It can be configured to use one, two or three optical units depending on the lumen output required. Each optical unit is enclosed by a highly UV stabilized polycarbonate protector[1] or high-impact glass to withstand high impact (IK 10[1]/ IK 08[2]) and to maintain the lowest weight and meet an ingress protection of IP 66. Each optical unit is fitted with high-efficient LEDs and optics to meet any photometrical requirement while providing a long lumen maintenance of 100 000hrs (L70B10). A pressure equalization device is fitted on each optical unit to maintain the IP 66 rating over time.

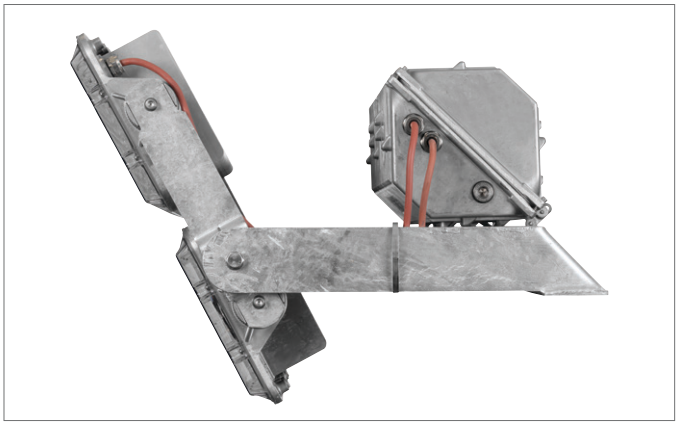
The optical unit can be adjusted easily on site.

The stirrup is manufactured from hot dipped galvanized steel. Holes are provided for mounting purposes. The gearbox is mounted on the stirrup, making it easily accessible, thereby simplifying maintenance.

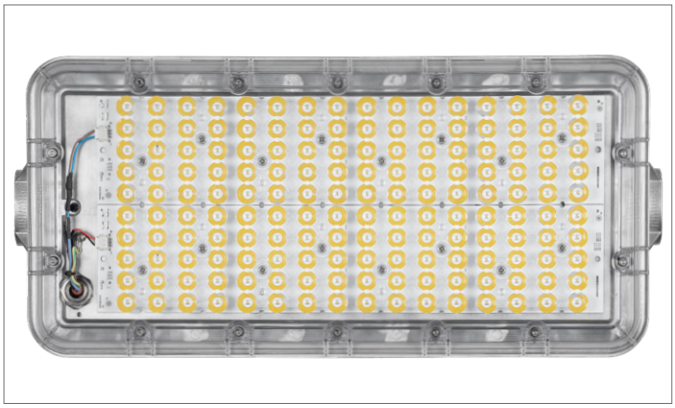
[1] Only applicable to OMNIBLAST-E MAXI

[2] Only applicable to OMNIBLAST-E MIDI

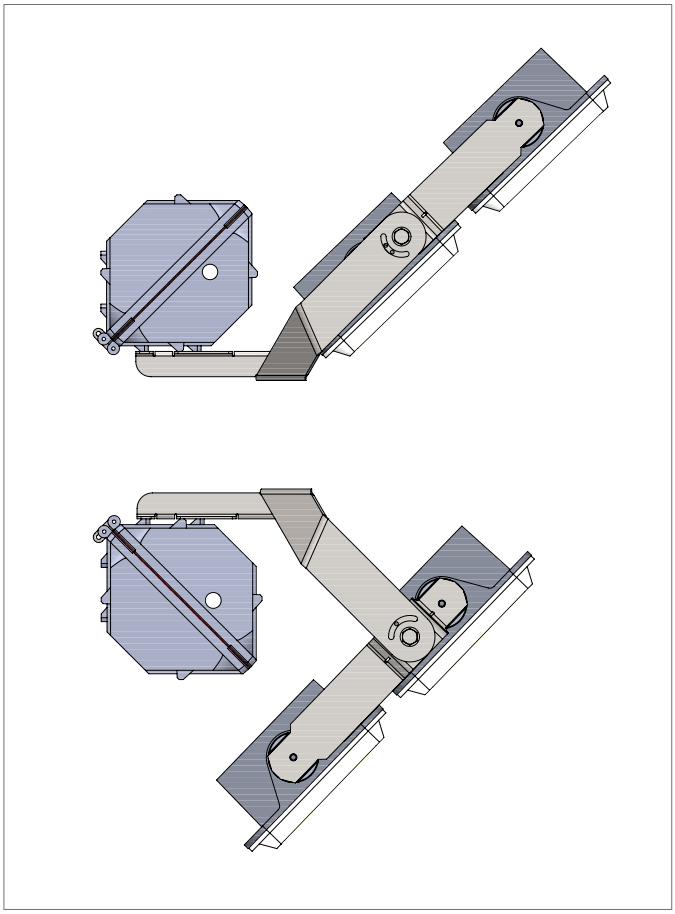
Key Features



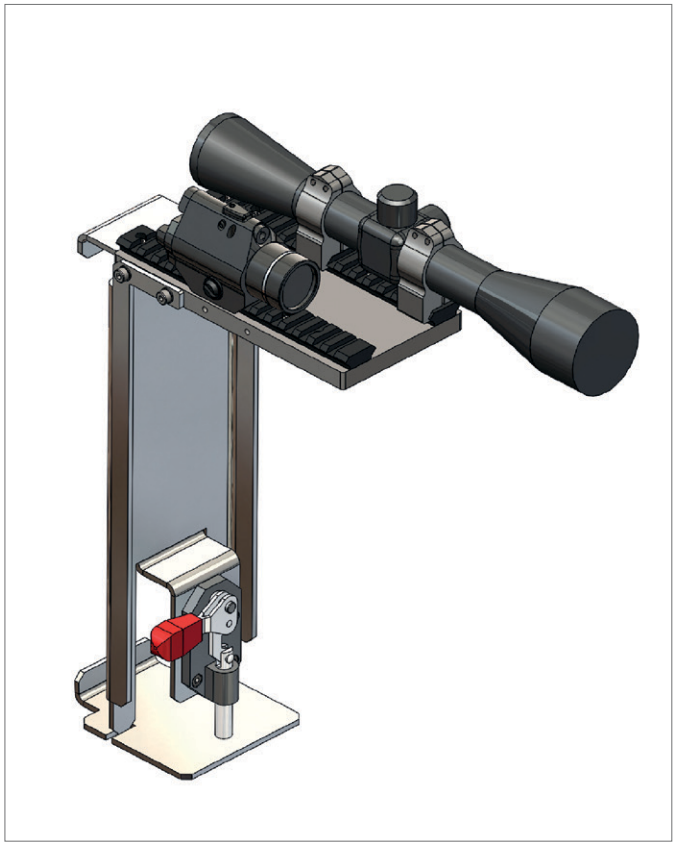
The gearbox is mounted on the stirrup, making it easily accessible, thereby simplifying maintenance



The LED engine is covered by a protector to prolong the floodlight's lifetime and performance

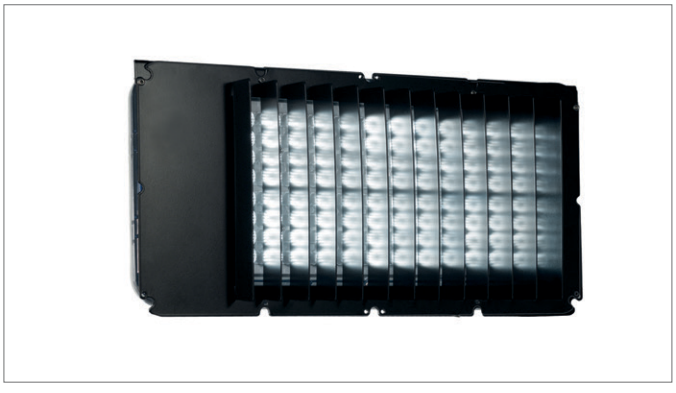


Optional retrofit stirrup – can be used in overslung or underslung configuration (OMNIBLAST-2-E MIDI & MAXI only)



The aiming scope accessory allows for accurate aiming of each floodlight on the field

Optional white powder-coated aluminium hood for spill light and upward lighting reduction



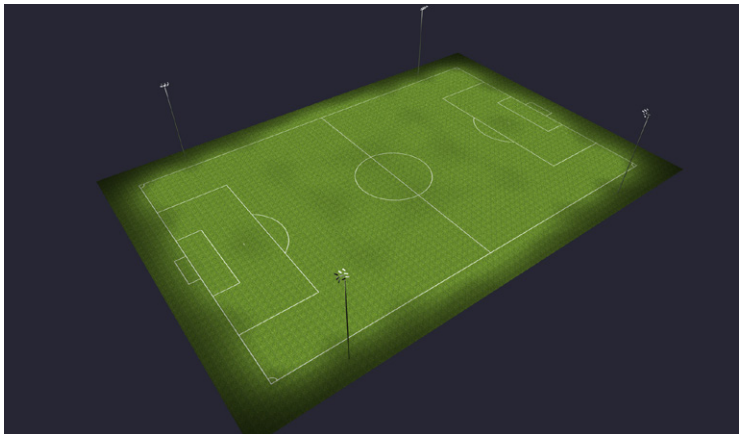
Optional black powder-coated aluminium vertical louvres for optimised glare control

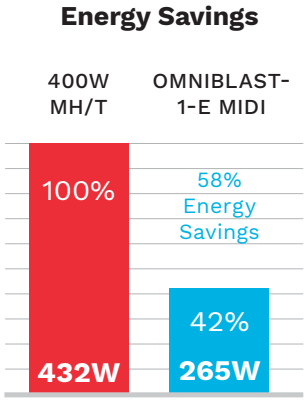
Case Studies

SPORTS DESIGN CALCULATOR

Click to download

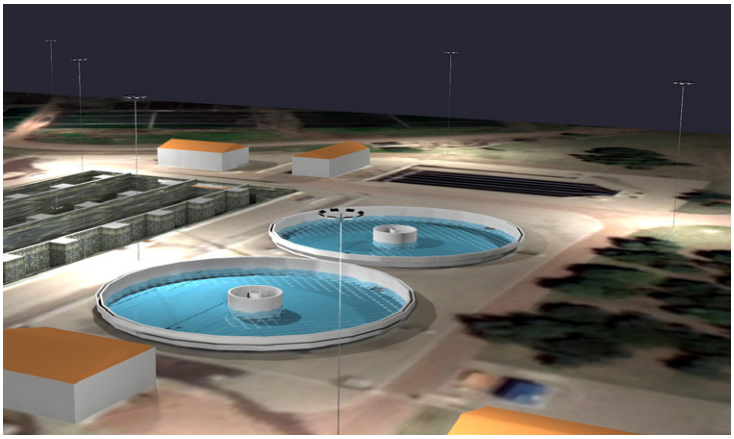
Recreational Sports - Soccer Field

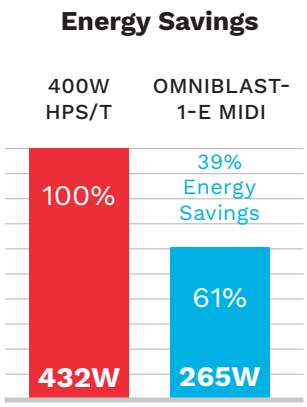




	Luminaire fitted with 400W Metal Halide lamp		OMNIBLAST-1-E MIDI 265W
Number of fittings over 4x20m masts	52		36
Energy used (kW)	22.46		9.54
Energy saved (kW)		**12.92**	

Waste Water Plant

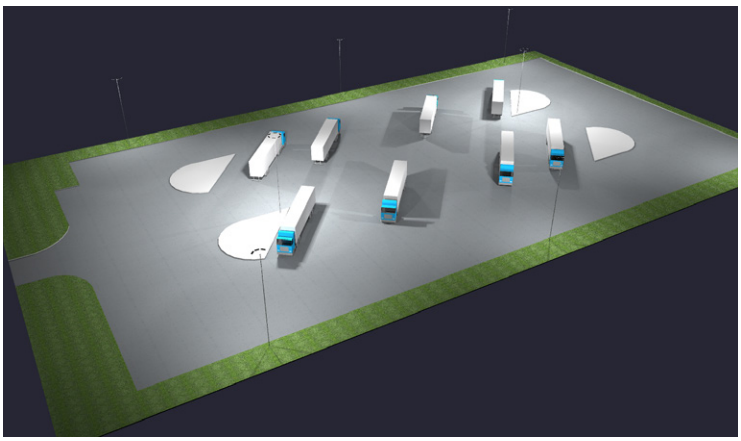


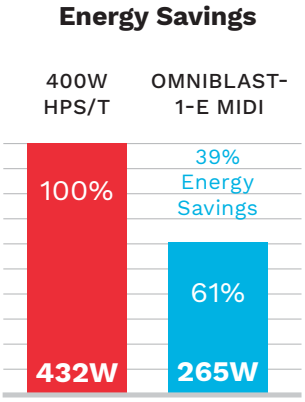


	Luminaire fitted with 400W High-Pressure Sodium lamp		OMNIBLAST-1-E MIDI 265W
Number of fittings	80		80
Energy used (kW)	34.56		21.2
Energy saved (kW)		**13.36**	

Please note: Above calculations are for demonstration purposes, please contact us for detailed energy saving and return of investment calculations.

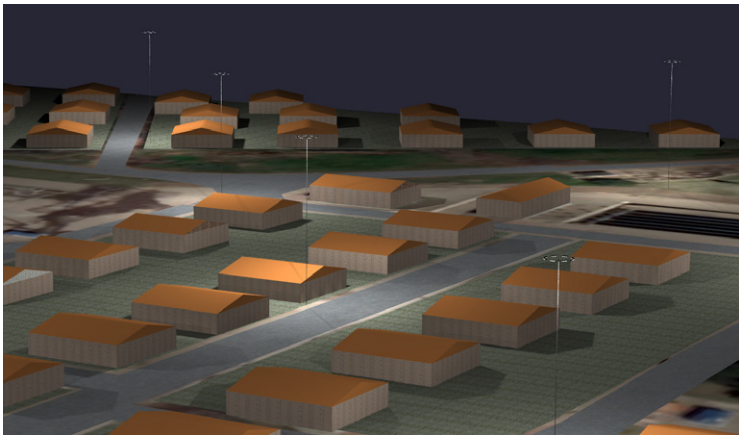
Industrial Area

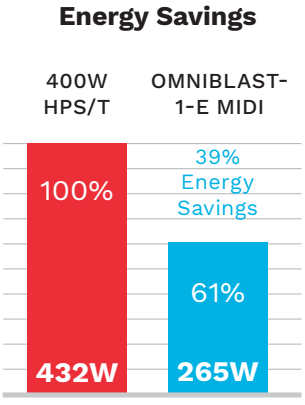




	Luminaire fitted with 400W High-Pressure Sodium lamp		OMNIBLAST-1-E MIDI 265W
Number of fittings	12		12
Energy used (kW)	5.18		3.18
Energy saved (kW)		**2**	

Triangular Highmast Lighting



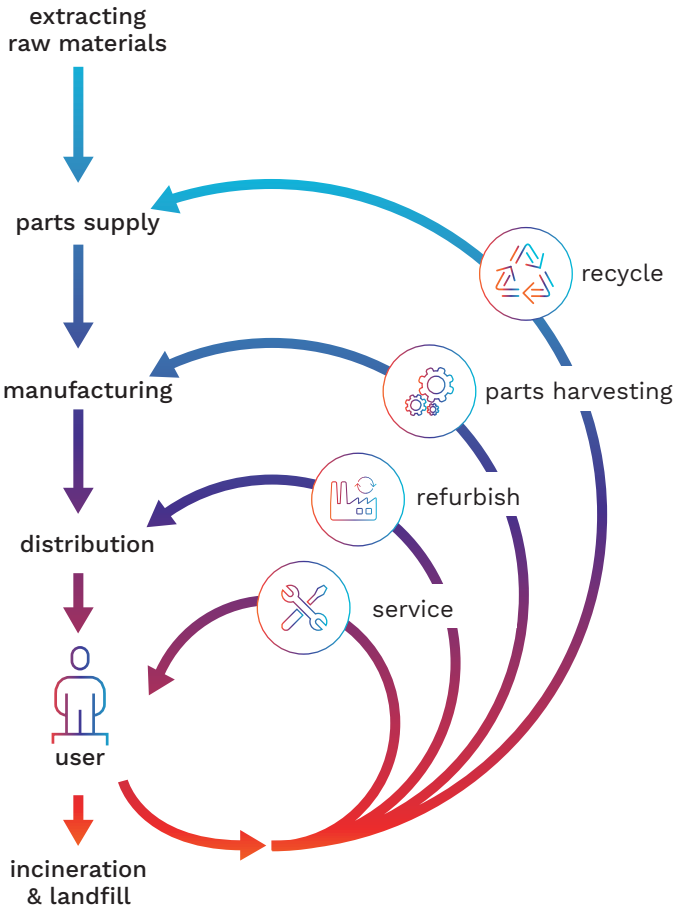


	Luminaire fitted with 400W High-Pressure Sodium lamp		OMNIBLAST-1-E MIDI 265W
Number of fittings	72		72
Energy used (kW)	31.10		19.08
Energy saved (kW)		**12.02**	

Please note: Above calculations are for demonstration purposes, please contact us for detailed energy saving and return of investment calculations.

CIRCLELIGHT

Circularity concept



OMNIBLAST-E

Circularity focuses on reducing the environmental burden by valorising the flow of all materials.

It is mainly defined in opposition to the traditional linear economy: take, make and dispose. In a circular economy, products are part of a value network where they will be used for as long as possible.

Then, depending on their characteristics, they can be reused, refurbished, upgraded or recycled.

BEKA Schréder takes circular economy into account, right from the offset. Before we start to design our products, we incorporate it into their DNA.

After a careful analysis of the potential circularity of our luminaires, we decided to introduce a “circular lighting” product label. This label acts as a circular indicator for our customers.

It clearly designates products that are optimised for circular economy through 12 objective criteria.

Circular highlights:

- Equipped with a completely replaceable LED engine
- Materials with a high rate of recyclability

Star rating:

It was designed to be cost-efficient

It was built to last but not with circular economy requirements

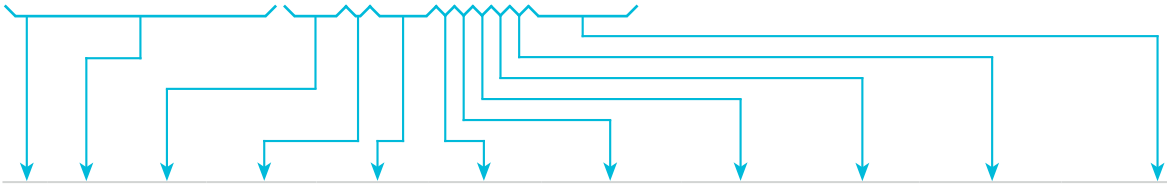
It was developed to meet most of circular economy requirements

It was developed to fully meet circular economy requirements

Ordering Information

Example:

OMNIBLAST2E MA 1365C5188SSA1P7DDALI



ID	Module	Watt	LED Colour	Optic[1]	Stirrup	Gear Location	Finish	Surge Protection	Protector	Switching/Dimming Control	Other Options
OMNIBLAST[1-2-3]E MD	1 2 3	206 226 265[2] 305[2] 412 451 530[2] 618 824 795[2] 1235	**C** Cool white (5700K) **N** Neutral white (4000K)	2259[3] 5188 5355 5356 5357 5357-W 5358 5359 5366 5405 5407	**S** Standard stirrup **O** Overslung stirrup **U** Under-slung stirrup	**S** Gear box stirrup mounted **U**[3] U-bracket	**A** Aluminium finish (unpainted)	**1** 10kV **2** 20kV **2** 20kV (Plug-in version)	**G** Glass	**DALI** DALI Dim **1-10** 1-10V Dim **3D** NEMA 3-Pin complete with dummy link **7D** NEMA 7-Pin complete with dummy link **3I** NEMA 3-Pin complete with plug-in 20kV surge protection **7I** NEMA 7-Pin complete with plug-in 20kV surge protection **CM** Schréder EXEDRA CM	**Z2**[4] Zone 2 **Z21/22** Zone 21/22
OMNIBLAST[1-2-3]E MA	1 2 3	455[2] 704 910[2] 1408 1365[2] 2112	**C** Cool white (5700K) **N** Neutral white (4000K)	5188 5355 5356 5357 5357-W 5358 5359 5366 5405 5407	**S** Standard stirrup **O** Overslung stirrup **U** Under-slung stirrup	**S** Gear box stirrup mounted **R** Remote gear (with junction box)	**A** Aluminium finish (unpainted)	**1** 10kV **2** 20kV **2** 20kV (Plug-in version)	**G** Glass **P** Polycarbonate		-

[1] Custom combinations of lenses/optics to suit the project are available on request.
[2] For Optic 5188 only
[3] For OMNIBLAST-1-E MIDI and OMNIBLAST-2-E MIDI versions only
[4] For OMNIBLAST-1-E MIDI version only

Custom Options

Accessories	Aiming scope
	Hood
	Vertical louvres
Switching/Dimming Control	Integrated Schréder ITERRA

BEKA Schréder

Experts in lightability™

SABS ISO 9001

www.beka-schreder.co.za

Designed and manufactured by BEKA Schréder (Pty) Ltd

LOCALLY manufactured

2023-11