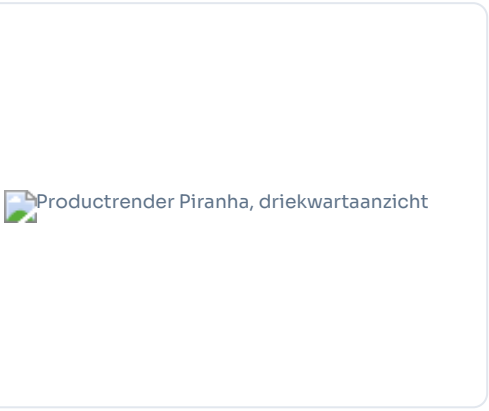
HEAVY DUTY LED WORK LAMP

Piranha



Shown: Piranha 9 DC, titanium-based e-coating, 14° lens, high tensile 316L bracket.

CE | IP69K | IK10 | Class II | C5 ISO 9223 | Ta −45 … +50 °C | 90–305 / 180–528 VAC | 12 and 24 VDC | Deutsch DT04-2P | Vibration 6 G | Crane Light Director | 5-year warranty

The indestructible work lamp of the range. 8,400 lumens, IP69K, IK10 and a 316L bracket that swings from -45 to +90 degrees without a stop, for machines, cranes and heavy plant.

LUMINOUS FLUX	POWER	WEIGHT
8,400 lm	70 W	3.1 kg
INGRESS	**IMPACT**	**SUPPLY**
IP69K	IK10	12 and 24 VDC

Values apply to the standard version at 6500 K, Ta 25 °C, including lens losses and driver consumption. 6500 K delivers the same luminous flux as 4000 K.

WHY IT IS SPECIFIED

IK10 and IP69K where things actually hit. A work lamp on a haul truck or a crane cab is struck by material, by tools and by a pressure washer every week. The Piranha is rated for all three.

A bracket with a range no other work lamp has. The 316L bracket rotates without limit from -45 to +90 degrees, so the mounting position can be decided by the structure instead of by the lighting.

Built heavier than its size suggests. At 3.1 kg the Piranha weighs almost as much as the far larger Snapper. That is not an accident, it is the reason it lasts.

WHERE IT IS USED

- Mining haul trucks and excavators
- Loaders, dozers and rough terrain machines
- Crane cabs, booms and service positions
- Service and maintenance vehicles
- Grinding, digging and material handling zones
- Machine and process area task lighting
- Ship gangways and mooring stations
- Engine rooms and pump rooms
- Walkways, stairs and access platforms
- Conveyor and transfer point lighting
- Vehicle inspection pits and wash bays

VERSIONS

	Piranha 9 AC	Piranha 9 DC	Piranha 6 DC
Code	PIAC01	PIDC02	PIDC01
Flux	8,400 lm	8,200 lm	6,300 lm
Power	70 W	70 W	55 W
Supply	90–305 / 180–528 VAC	20–32 VDC	9–35 VDC, 12 or 24 V
Driver	Remote BLD075	On board	On board
Weight	3.1 kg	3.1 kg	3.1 kg

There is no Piranha 6 in AC and there will not be one. For 316L see the **Piranha SS**, for high ambient temperatures the **Goby HT** or the **Snapper HT**.

Light output and optics

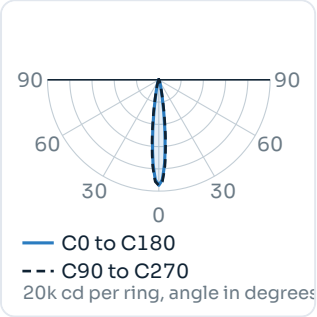
Values apply to the standard configuration at Ta 25 °C and include lens losses and driver consumption. Photometry is measured in house to IES LM-79 and the files are downloadable per optic from the product page.

BEAM CHARACTERISTICS

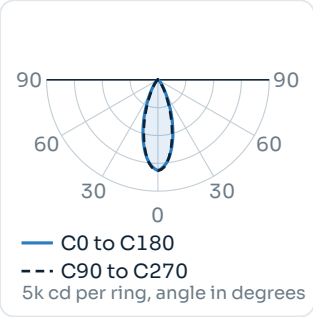
Lens	Distribution	Beam angle 50 % of peak	Field angle 10 % of peak	Typical use
14°	Spot, symmetric	13°	27°	Long throw from a machine or a boom onto a distant work point
38°	Medium, symmetric	37°	69°	The general purpose choice: machine areas, decks, platforms
69°	Wide, symmetric	72°	103°	Close range over a wide field: cabs, walkways, engine rooms
14° × 46°	Flare, asymmetric	13° × 45°	30° × 70°	Throws far forward and stays wide across: haul roads, gangways
No lens (.NOP)	Very wide, symmetric	136°	168°	Very close range, machine interiors and confined spaces

The beam angle is the full angle between the two directions where the intensity has fallen to 50 % of the peak. The field angle uses 10 %. Both are read from the IES files, available per optic on the product page. Lens combinations within one luminaire are possible, and the optic is part of the order code as a suffix, for example .38.

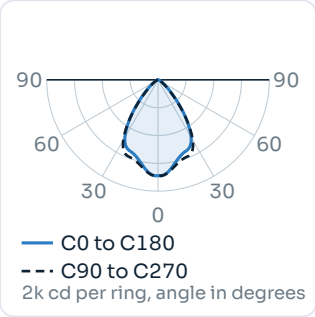
LIGHT DISTRIBUTION



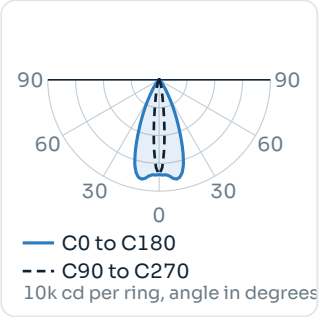
14° spot



38° medium



69° wide



14° × 46° flare

OBTRUSIVE LIGHT

ULOR at 0° tilt	**0 %**
Amber 2200 K	Available on every optic, for light sensitive surroundings
Bi-colour 4000 K with amber 2200 K	Switchable in operation, for fog, dust and night regimes

Nothing is emitted above the horizontal at 0° tilt. That is the figure a permitting authority asks for when a site borders a residential area or a protected zone, and it is the starting point for any assessment against NEN-EN 12464-2 and the NSVV guidance on obtrusive light. Where the site condition demands a cut off optic rather than a controlled floodlight, see the DarkLicht range.

COLOUR AND CONSISTENCY

Colour temperatures	6500 K, 5000 K, 4000 K, 2700 K, amber 2200 K
Flux at 6500 K	Identical to 4000 K
Bi-colour	4000 K with amber 2200 K, switchable in operation
Colour rendering	Ra > 70 standard, optionally 80 or 90
Colour consistency	MacAdam step 3 or better
LED service life	TM-21 L90B05 > 360,000 h at 50 °C

Full specification

All values apply to the standard configuration at 25 °C ambient, including lens losses and driver consumption. A hyphen means the entry does not apply to that version.

	Piranha 9 AC	Piranha 9 DC	Piranha 6 DC
PERFORMANCE			
Luminous flux	8,400 lm	8,200 lm	6,300 lm
Power consumption	70 W	70 W	55 W
Efficacy	120 lm/W	117 lm/W	115 lm/W
ELECTRICAL AND DRIVER			
Supply voltage range	90–305 or 180–528 VAC	20–32 VDC, 24 V nominal	9–35 VDC, 12 or 24 V nominal
Current draw	0.6 A at 120 V · 0.3 A at 220 to 277 V · 0.2 A at 380 to 480 V	2.9 A at 24 V	2.3 A at 24 V · 4.6 A at 12 V
Power factor at full load	> 0.9 at 65 to 100 % load	-	-
Inrush current at 220 V	66 A peak, T50 170 µs	-	-
Luminaires per MCB	B16 11 · C16 19 · C25 30 · D16 32	-	-
Surge protection	6 kV line to line, 10 kV line to earth (IEC 61000-4-5)	-	-
Dimming	0–10 V, PWM, DALI-2, or over NFC	On request	On request
Driver	Remote BLD075, 131 × 68 × 33.5 mm, 650 g. Fits the DRB-1	DC drivers on board	DC drivers on board
Reverse polarity and surge	-	Protected	Protected
CONSTRUCTION			
Housing	Cast aluminium, less than 0.08 % copper		
Surface finish	Conversion layer plus 2-layer titanium-based e-coating		
Colour	Titanium Black		
Bracket	High tensile 316L stainless steel, unlimited rotation from -45° to +90°		
Front	Polycarbonate IK10 as standard, chemically hardened glass IK09 on request		
Protection class	Class II		
Ingress protection	IP66, IP67, IP68 and IP69K, each class tested separately		
Impact resistance	IK10 with polycarbonate, IK09 with glass (IEC 62262)		
Corrosion class	C5 industrial and marine (ISO 9223)		
Vibration and shock	6 G at resonant frequency (IEC 60068-2-6), shock tested to IEC 60068-2-27		
DURABILITY AND DIMENSIONS			
Ambient temperature	−45 to +50 °C		
LED service life	TM-21 L90B05 > 360,000 h at 50 °C		
Cable and termination	H07BQ-F, 4 cores (2 × 1.5 mm² + 2 × 0.5 mm²), 0.3 m	H07BQ-F, 2 cores (2 × 1.5 mm²), 0.3 m	H07BQ-F, 2 cores (2 × 1.5 mm²), 0.3 m
Dimensions	135 mm wide, 152 mm over the hinge bolts, 150 mm high on the foot, 131.5 mm deep including bracket		
Weight	3.1 kg incl. bracket		
Warranty	5 years on the complete luminaire		

Power is a driver setting. Every AC version can be ordered programmed to a lower wattage by adding the wanted power as a suffix to the article code. DC versions run at a fixed constant current, so another power level there is a custom build. High voltage DC between 250 and 740 V is available on request.

Mechanics, mounting and driver

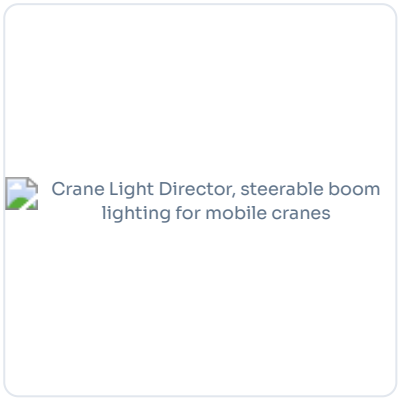
All drawings are to scale and dimensioned in millimetres. DXF and STEP models are available on request.

BRACKET AND ROTATION



Incl. bracket	135 mm wide, 152 mm over the hinge bolts, 150 mm high on the foot, 131.5 mm deep
Weight	3.1 kg with bracket
Material	High tensile 316L stainless steel
Rotation	Unlimited from -45° to +90°
Why that range	On a machine the structure decides the position, not the lighting designer
316L version	166 × 166 × 102 mm, 5.0 kg, see the Piranha SS

CRANE LIGHT DIRECTOR



What it is	Steerable boom lighting for mobile cranes, fitted as a retrofit
Piranha on the system	8,400 lm per tilting module
Other luminaires	Goby Mini, Goby, DarkLicht S and Marlin
Control	From the cabin, over a LoRa controller or a cabin switch
Supply	12 and 24 V DC from the machine, or 230 and 400 V AC from site power

MOUNTING AND ACCESSORIES

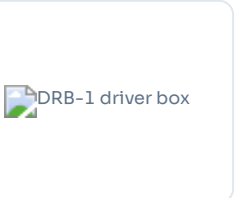
Standard bracket	High tensile 316L, supplied as standard
Crane Light Director	On the DC versions, steerable boom system. Separate datasheet
Deutsch DT04-2P	Fitted on every DC version, aluminium and 316L
Dual Driver Mount · Drivermount Bracket SS	Custom build on request, no folder code
Glass front	Chemically hardened glass instead of polycarbonate, IK09
Cable	Lengths beyond 0.3 m on request, same H07BQ-F type
316L housing	See the Piranha SS datasheet

REMOTE DRIVER, AC VERSION

Type	BLD075, 90–305 VAC or 127–420 VDC
Case temperature	Tc −40 to +90 °C
Lifetime	≥ 100,000 h at Tc 75 °C
MTBF	≥ 320,000 h at 75 °C case
Size and weight	131 × 68 × 33.5 mm, 650 g
DC versions	Drivers on board, no external box

On DC there is nothing external at all. The DC versions run the drivers on the board inside the housing, with reverse polarity and surge protection, so a machine gets one component instead of three.

DRB DRIVER BOX



Use	Optional housing for the remote driver on the AC version
DRB-1	One driver up to 320 W. 276 × 194 × 86.5 mm, 4.2 kg, IP66 and IP67
Ingress protection	IP66 and IP67
DC versions	Not applicable

Ordering, standards and documents

ORDER CODE

Example **PIDC02-65K.38**

Piranha 9, DC, 6500 K, 38° optic

PIAC01	Piranha 9, AC, remote BLD075
PIDC02	Piranha 9, DC, 20–32 VDC
PIDC01	Piranha 6, DC, 9–35 VDC, 12 or 24 V
PISS01 · PISS02	316L stainless steel versions
65K · 50K · 40K · 27K · 22K	6500 K · 5000 K · 4000 K · 2700 K · amber 2200 K
.14 · .38 · .69 · .14x46 · .NOP	Optic suffix, .NOP is supplied without optics

The optic suffix follows the colour temperature. Front material, bracket and cable length are confirmed at order. The Piranha 6 in 316L does not yet have an article code.

COMBINATIONS

Amber 2200 K with any optic	Possible
Bi-colour with DALI-2	AC version
Crane Light Director	DC versions
Glass front, IK09	Any version
Piranha 6 in AC	Not available
High temperature	Not in aluminium. A 316L Piranha HT is a custom build, article code not yet issued. See also the Goby HT

STANDARDS AND VERIFICATION

Subject	Standard	Verification
Luminaire safety	IEC/EN 60598-1, -2-5	In-house test
EMC emission and immunity	EN 55015, EN 61547	Third party test
Ingress	IEC 60529 and ISO 20653. IP66, IP67, IP68, IP69K	In-house test
Impact and vibration	IEC 62262 IK10 with polycarbonate · IEC 60068-2-6 at 6 G	In-house test
Shock and corrosion	IEC 60068-2-27 · ISO 9223 class C5, industrial and marine	In-house test
Photometry	IES LM-79, IES files per optic	In-house test
Substances	RoHS, REACH	Self-declaration

BEFORE YOU ORDER

A sample luminaire to hang before you commit to a project quantity.

Five years warranty on the complete luminaire.

A DIALux calculation from our engineers, on your site drawing.

WHERE IT EARNS ITS PLACE

The Piranha earns its place on the machine. A work lamp on heavy plant is not a light fitting, it is a component that has to survive the same duty cycle as the hydraulics around it. It is specified where the machine is expensive, the downtime is expensive, and nobody wants to talk about the lighting again.

QR-code naar de productpagina van de Piranha

PRODUCT PAGE

IES files and revision history, DXF and STEP on request, and project references.
jelproducts.nl/en/products/piranha

Notes. Values are for the standard configuration; a bi-colour or high-CRI build changes the luminous flux and the quotation states the figure that applies. Luminaires per MCB is the manufacturer figure for ABB S200 at 220 V, a guide for engineering and not a substitute for the installation calculation. North American models on request. The JEL range is not ATEX or Ex certified.