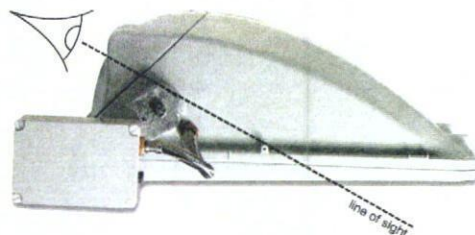


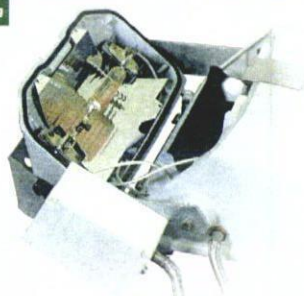
Aiming



Two aiming methods:

1. In-built line of sight aiming feature
2. Aluminium aiming protractor ensures optimum targeting of individual floodlights to achieve the desired lighting levels (1 supplied with each installation).

Relamping



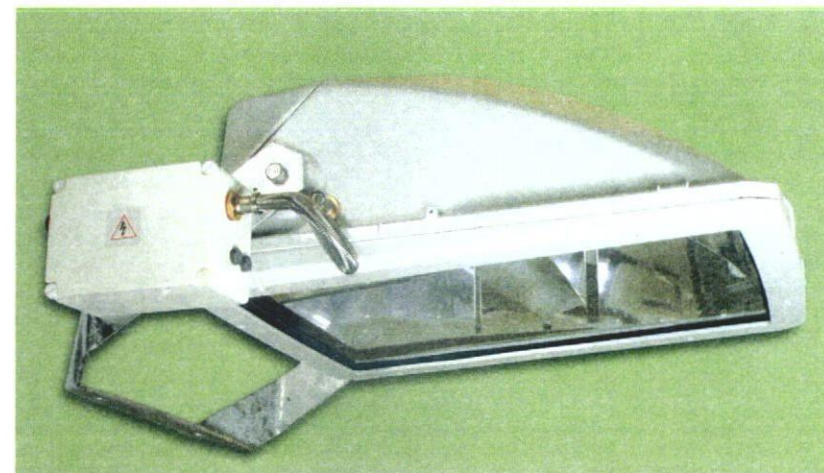
Simple lamp changing via opening back cover using a clip system ensures ease of maintenance. Positive closure via large stainless steel catch.

Registered design in the following countries

Austria	RegD No 38431
Benelux	RegD No 32055-01
Canada	RegD No 92129
China	RegD No 00301204.2
Denmark	RegD No MR2000796
Eire	RegD No D13051
France	RegD No 001139
Germany	RegD No 49911610.0
Greece	RegD No 6000682
Hong Kong	RegD No 9911680.2M001
India	RegD No 182049
Spain	RegD No 147552
Sweden	RegD No 66654
Switzerland	RegD No 126663
UK	RegD No 2086396
USA	Patent No D441889



IP66



Challenger¹ floodlight range includes a double asymmetric distribution, triple stepped reflector featuring Flat Glass Technology. Designed for lighting outdoor sports grounds and smaller sports stadiums where light pollution control is an essential requirement. For use with double ended 2KW or 1KW Metal Halide lamps.

Featuring:

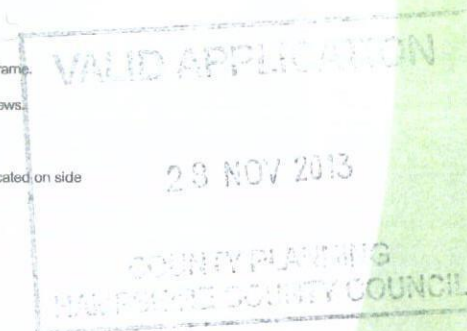
- Body of high-pressure die cast aluminium, finished in light grey (RAL 7035), Polyester powder coating
- Narrow, medium and wide beam, asymmetric light distributions.
- Reflector system of high purity, polished and anodised aluminium. Incorporating an internal baffle to improve efficiency and reduce glare.
- In-built line of sight aiming feature
- Toughened front glass, secured within aluminium frame.
- Galvanised steel stirrup, with additional locking screws.
- Sealed to IP66; with silicone rubber gasketing.
- Electrical connection box (IP66) housing Ignitor, located on side of stirrup, fitted with 2 x Gortex "hi-flo" breathers.



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Abacus
LEADERS IN LIGHTING

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As Abacus maintains a policy of continuous development and improvement of its products, the right to amend any part of the specifications is strictly reserved.





Abacus Light Control System

A combination of efficient lighting design and careful floodlight design has rewarded Abacus with an international reputation for pioneering high performance floodlighting combined with effective control of light pollution.

Specific to **Challenger 1** the Abacus Light Control System consists of a series of complementary measures to effectively control light pollution.

1. Double Asymmetric Reflector

The double asymmetric reflector is designed to ensure full flow of light over the lit area from each floodlight. With the main beam emitted from the floodlight at an angle of 60° forward from the normal to the front glass, it results in a flatter appearance (FIG 1). The benefit is that less of the reflector is visible to spectators and onlookers, resulting in low glare to the surrounding locality.

The triple stepped reflector design and the internal baffle produces sharp run back above high peak resulting in greater overspill containment and minimal intrusion to adjacent areas bordering the installation (FIG 2)

2. Internal Baffle

The internal baffle re-directs upward stray light back into the floodlight beam, providing increased efficiency. At angles above the beam the baffle shields direct lamp glare. (FIG 3)

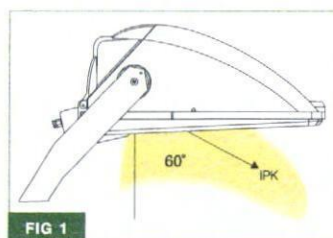


FIG 1

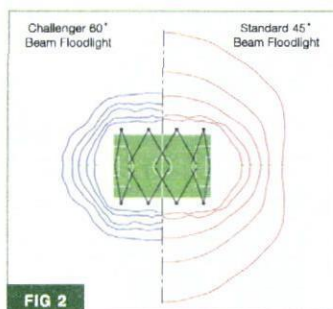


FIG 2

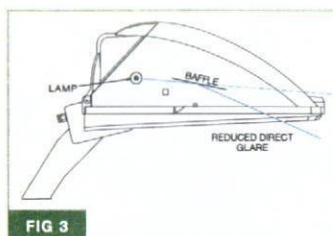
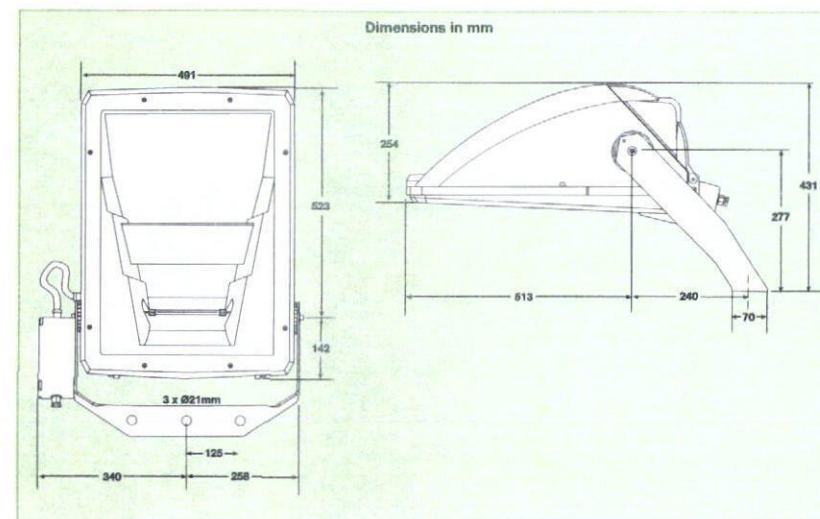


FIG 3



Model No.	Beam Type	Lamp Wattage & Type	Lamp Manufacturer	Lamp Holder
AL5761	Narrow	MHN-LA 2000W/400V/842 & 956	Philips	X528 cable
AL5762	Medium	MHN-LA 2000W/400V/842 & 956	Philips	X528 cable
AL5763	Wide	MHN-LA 2000W/400V/842 & 956	Philips	X528 cable
AL5764	Narrow	HQI-TS 2000W/N/L	Osram	K12s-7 cable
AL5765	Medium	HQI-TS 2000W/N/L	Osram	K12s-7 cable
AL5766	Wide	HQI-TS 2000W/N/L	Osram	K12s-7 cable
AL5767	Narrow	MH-TS 2000W/L/K12/4K	Venture	K12s-7 cable
AL5768	Medium	MH-TS 2000W/L/K12/4K	Venture	K12s-7 cable
AL5769	Wide	MH-TS 2000W/L/K12/4K	Venture	K12s-7 cable
AL5770	Narrow	MHN-LA 1000W/400V/842 & 956	Philips	X528 cable
AL5771	Medium	MHN-LA 1000W/400V/842 & 956	Philips	X528 cable
AL5772	Wide	MHN-LA 1000W/400V/842 & 956	Philips	X528 cable

Weight: 20 Kg. Front wind area @ 60° setting (Flat Glass) - 0.126m².
70° max setting (+10° elevation) - 0.135m². Side wind area 0.108m²

Lamp Illustrations



Lamp technical data (2KW)	OSRAM	PHILIPS	PHILIPS	VENTURE
Lamp Ref:	HQI-TS2000WNL	MHN-LA2KW400V/842	MHN-LA2KW400V/956	MH-TS2000W/L/K12/4K
Colour Temperature:	4100K	4200K	5600K	4500K
Lamp Lumen Output: (Initial lm)	225,000 LLm	220,000 LLm	190,000 LLm	240,000 LLm
Lamp Current:	10.7A	9.6A	10.3A	10.3A
Supply Circuit 3-Phase:	380/400/415V	380/400/415V	380/400/415V	380/400/415V
Supply Current: Starting:	13A	8.3A	8.3A	13A
Running:	6.5A	5.6A	5.6A	6.5A
Total Circuit Power:	2180W	2105W	2113W	2150W
RA:	65	85	90	65